

# Appendix P: Responses to Comments on the Draft Programmatic Environmental Impact Statement

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## Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AC	alternating current
ACHP	Advisory Council on Historic Preservation
ADLS	Aircraft Detection Lighting System
AIS	Automatic Identification System
AMAPPS	Atlantic Marine Assessment Program for Protected Species
AMMM	avoidance, minimization, mitigation, and monitoring
APEs	areas of potential effects
ASMFC	Atlantic States Marine Fisheries Commission
BA	Biological Assessment
BIA	Biologically Important Areas
BMP	best management practice
BOEM	U.S. Department of the Interior Bureau of Ocean Energy Management
BSEE	U.S. Department of the Interior Bureau of Safety and Environmental Enforcement
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO <sub>2</sub>	carbon dioxide
COP	Construction and Operations Plan
CPAPARS	Consolidated Port Approaches Port Access Route Studies
CVOW	Coastal Virginia Offshore Wind
CWA	Clean Water Act
dB	Decibel
DC	direct current
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
DP	dynamic positioning
EA	Environmental Assessment
EFH	essential fish habitat
EMF	Electric and magnetic field
ESA	Endangered Species Act
ESPIS	Environmental Studies Program Information System
FAA	U.S. Department of Transportation Federal Aviation Administration
FMP	Fishery Management Plan
G&G	geophysical and geotechnical
GHG	greenhouse gas
HAPCs	Habitat Areas of Particular Concern
HDD	Horizontal directional drilling
HMS	Highly Migratory Species
HRG	high-resolution geophysical
html	Hypertext Markup Language
HVAC	high voltage alternating current
HVDC	high voltage direct current
IMO	International Maritime Organization
IPF	impact producing factor

Acronym/Abbreviation	Definition
Jones Act	Merchant Marine Act of 1920
KOP	Key Observation Point
MAFMC	Mid-Atlantic Fishery Management Council
MMPA	Marine Mammal Protection Act
MPRSA	Marine Protection, Research and Sanctuaries Act
MW/km <sup>2</sup>	megawatts per square kilometer
NAAQS	National Ambient Air Quality Standards
NABat	North American Bat Monitoring Program
NARW	North Atlantic right whale
NAS	noise attenuation system
NEFMC	New England Fishery Management Council
NEPA	National Environmental Policy Act
NHCC	Naval History and Heritage Command
NHL	National Historic Landmark
NHPA	National Historic Preservation Act
NJDEP	New Jersey Department of Environmental Protection
NMFS	National Marine Fisheries Service
NOA	Notice of Availability
NOAA	U.S. Department of Commerce National Oceanic and Atmospheric Administration
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NPS	U.S. Department of Interior National Park Service
NRHP	National Register of Historic Places
NSRA	Navigation Safety Risk Assessment
NVIC	Navigation and Vessel Inspection Circular
NY Bight	New York Bight
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSERDA	New York State Energy Research and Development Authority
O&M	operations and maintenance
O <sub>3</sub>	ozone
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
ORECs	offshore renewable energy credits
OSS	offshore substation
PAM	passive acoustic monitoring
PDE	Project Design Envelope
PDF	portable document format
PEIS	Programmatic Environmental Impact Statement
PM <sub>2.5</sub>	particulate matter with diameter of 2.5 microns and smaller
POI	point of interconnection
PSOs	protected species observers
PTS	Permanent Threshold Shift
ROD	Record of Decision
ROSA	Responsible Offshore Science Alliance
ROW	right-of-way

Acronym/Abbreviation	Definition
RP	recommended practice
RPDE	Representative Project Design Envelope
RSZ	rotor-swept zone
RWSC	Regional Wildlife Science Collaborative
SAP	Site Assessment Plan
SAR	search and rescue
SCRAM	Stochastic Collision Risk Assessment for Movement
SHPOs	State Historic Preservation Officers
T&Cs	Terms and Conditions
TCPs	traditional cultural properties
THPOs	Tribal Historic Preservation Officers
UME	Unusual Mortality Event
USACE	U.S. Army Corps of Engineers
USC	United States Code
USCG	U.S. Coast Guard
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WEA	Wind Energy Area
WTG	wind turbine generator

## P.1 Introduction

On January 12, 2024, the U.S. Department of the Interior (DOI) Bureau of Ocean Energy Management (BOEM) published a Notice of Availability (NOA) for the New York Bight (NY Bight) Draft Programmatic Environmental Impact Statement (PEIS), consistent with the regulations implementing the National Environmental Policy Act (NEPA) (42 United States Code [USC] 4321 et seq.), to assess the potential impacts of the Proposed Action and alternatives. The Draft PEIS was made available in electronic form for public viewing at <https://www.boem.gov/renewable-energy/state-activities/new-york-bight>, and hard copies or electronic copies were delivered to other entities as specified in Appendix N, *Distribution List*, of the Draft PEIS. The NEPA review process requires agencies to allow the public the opportunity to comment on a Draft PEIS. The NOA initiated a 45-day public comment period for the Draft PEIS. BOEM extended the comment period in response to requests from Tribal Nations and stakeholders. The extended comment period closed on March 13, 2024. This appendix describes the Draft PEIS public comment processing methodology and definitions, includes responses to comments received on the Draft PEIS, and describes where specific updates to the Final PEIS can be found in the document.

## P.2 Objective

BOEM reviewed and considered all written and oral public submissions received during the Draft PEIS public review and comment period. BOEM's goal was to identify comments to be addressed in this Final PEIS and to categorize those comments based on the applicable resource areas or NEPA topics. This categorization scheme allowed subject matter experts to review comments directly related to their areas of expertise and allowed BOEM to generate statistics based on the resource areas or NEPA topics addressed in each of the comments. All public comment submissions received can be viewed online at <http://www.regulations.gov> by typing "BOEM-2024-0001" in the search field.

## P.3 Methodology

### P.3.1 Terminology

The following terminology is used throughout this appendix:

- **Submission:** The entire content submitted by a single person or group at a single time. For example, a 10-page letter from a citizen, an email with a portable document format (PDF) attachment, and a transcript of an oral comment given at a public hearing meeting were each considered to be a submission.
- **Comment:** A specific statement within a submission that expresses a sender's specific point of view, concern, question, or suggestion. A comment can consist of more than one sentence, as long as those grouped sentences express a single idea. One submission may contain many comments.

- Substantive Comment: Draft PEIS submissions were reviewed to identify and categorize “substantive” comments. To be substantive, a comment must relate to the reasonably foreseeable impacts of the Proposed Action, alternatives, or cumulative actions and do one or more of the following:
  - Question (with supporting rationale) the accuracy of information in the Draft PEIS.
  - Question (with supporting rationale) the adequacy of, methodology for, or assumptions used for the environmental analysis.
  - Present new information relevant to the analysis.
  - Present reasonable alternatives or mitigation measures other than those analyzed in the Draft PEIS.
  - Present or cause modifications to alternatives or mitigation measures analyzed in the Draft PEIS.
  - Correct factual errors in the content of the Draft PEIS.
- General Comment: General comments are comments other than substantive comments. General comments may: (1) express interest or concern regarding an impact topic without providing specific comments on the information, methods, or findings presented in the Draft PEIS; (2) express general support for or opposition to the Proposed Action or alternatives; or (3) comment on a topic unrelated to the Proposed Action or alternatives.

### **P.3.2 Comment Submittals**

Tribal governments, federal agencies, state/local governments, and the general public had the opportunity to provide comments on the Draft PEIS via the following mechanisms:

- Electronic submissions via [www.regulations.gov](http://www.regulations.gov) on docket number BOEM-2024-0001;
- Hard-copy comment letters submitted to BOEM via traditional mail; and
- Written or oral comments submitted at each of the public meetings.

BOEM held three in-person and two virtual public meetings via Zoom to solicit written and verbal comments to inform preparation of the Final PEIS. The meetings were free and open to the public. Locations and dates of these meetings are outlined in Table P.3-1.

**Table P.3-1. Public Meetings**

Date	Time	Location
January 31, 2024	5:00 p.m. Eastern Time	Zoom Webinar: <a href="https://kearnswest.zoom.us/webinar/register/WN_81Ha7GyxSXG-aNgk9EBajA">https://kearnswest.zoom.us/webinar/register/WN_81Ha7GyxSXG-aNgk9EBajA</a>
February 5, 2024	4:00 p.m. Eastern Time	UMass Dartmouth, The Marketplace, MacLean Campus Center, 285 Old Westport Rd, North Dartmouth, MA 02747
February 7, 2024	4:00 p.m. Eastern Time	Stony Brook University, Bauman Center for Leadership and Service, Benedict D013 Room C029, 200 Circle Rd, Stony Brook, NY 11790
February 8, 2024	4:00 p.m. Eastern Time	Clarion Hotel, 815 Route 37 West, Toms River, NJ 08755
February 13, 2024	1:00 p.m. Eastern Time	Zoom Webinar: <a href="https://kearnswest.zoom.us/webinar/register/WN__Bci_zhgRACj26jYkqrGIA">https://kearnswest.zoom.us/webinar/register/WN__Bci_zhgRACj26jYkqrGIA</a>

All submissions initially provided by methods other than [www.regulations.gov](http://www.regulations.gov), including the transcripts of comments recorded at each public meeting listed in Table P.3-1, were uploaded to the docket. Each submission, including testimony by individual speakers at the public meetings listed in Table P.3-1, was assigned a unique identification number. That unique Submission ID was retained throughout the comment management process, for both submissions and the individual comments within those submissions.

### **P.3.3 Comment Processing**

BOEM downloaded and reviewed all submissions from [regulations.gov](http://www.regulations.gov). These submissions were provided in Hypertext Markup Language (html) format, while attachments provided by stakeholders as part of their [regulations.gov](http://www.regulations.gov) submission were typically provided in PDF or Microsoft Word format. Text from all formats was parsed, coded, and exported into a single Microsoft Excel file that served as the primary submission database. In cases where an attachment did not contain comments specific to the docket for the NY Bight Draft PEIS, the attachment was retained separately for BOEM reference as applicable, linked to the main body of the submission through the unique Submission ID. Examples of this type of attachment include copies of comment letters that were originally submitted during the scoping period, copies of comment letters that were originally submitted on another docket, or attached photos, published reports, news articles, or other secondary material. The submission database also included information about each submission, including the submitter's contact information, submission date, and whether the submitter was a government entity or agency.

Each submission and all oral testimony were read to identify individual substantive and general comments (as defined under Section P.3.1, *Terminology*). Each comment was parsed, coded, and exported to a spreadsheet that served as the master comment database. Each comment then received a

unique comment ID number, tied to the Submission ID. For example, the third comment identified in regulations.gov submission 0007 was identified as BOEM-2024-0001-0007-0003.

Substantive comments from cooperating agencies were organized by agency and are presented verbatim in Section P.4, *Responses to Cooperating and Participating Agency Comments on the Draft PEIS*. Other agency, stakeholder, and public comments were each assigned to one section of the Draft PEIS, based on the document's table of contents, or to a general topic such as "NEPA/Public Involvement Process." Substantive comments are presented verbatim in Section P.5, *Responses to Other Agency, Stakeholder, and Public Comments on the Draft PEIS*. General comments are summarized in Section P.6, *General Comment Summaries and Responses*, and the specific submissions that contributed to a comment summary are identified by submission number. Tables P.4-1 through P.8-1 include 1,507 of the 1,568 total comments submitted during the Draft PEIS comment period.<sup>1</sup>

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<sup>1</sup> Additional comments from one cooperating agency and two tribes were submitted to BOEM internally and are not reflected in Appendix P per their request. However, their comments have been addressed in the Final PEIS, as appropriate.

## P.4 Responses to Cooperating and Participating Agency Comments on the Draft PEIS

### P.4.1 Cooperating and Participating Federal Agencies

#### P.4.1.1 National Park Service

**Table P.4-1. Responses to Comments from the National Park Service (BOEM-2024-0001-0471)**

Comment No.	Comment	Response
BOEM-2024-0001-0471-0001	Agency: NPS Commenter: NPS Section Title: Purpose of and Need for the Proposed Action Section #: 1.3 Page # 1-4 NPS is among the cooperating agencies participating in the PDEIS development process; would NPS continue to be engaged by BOEM on COP-specific NEPA reviews? NPS, as a bureau within DOI and cooperating Federal agency for the preparation of this EIS, has special expertise regarding the regulation of uses on NPS units and management of park system resources that includes compliance with the Park System Resource Protection Act (Public Law 113287, December 2014). NPS intends to support the decision to authorize mitigation and monitoring activities that are associated with park resources and their enjoyment on NPS lands and waters. Mitigation and monitoring activities on NPS lands and waters would include, but not be limited to, mitigation of impacts on National Historic properties, response activities should marine mammal strandings and/or disposals (burials) on NPS lands and waters increase, dark night skies, visitor experience, and economic impacts on leasees and other park partners operating within the park as a result of implementing the proposed plan.	BOEM will continue to engage with the U.S. Department of Interior National Park Service (NPS) for project-specific Construction and Operations Plan (COP) NEPA reviews.
BOEM-2024-0001-0471-0002	Agency: NPS Commenter: NPS Section Title: Purpose of and Need for the Proposed Action Section #: 1.3 Page #: 1-4 The Final Guidance for Effective Use of Programmatic NEPA Reviews ( <a href="https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Effective_Use_of_Programmatic_NEPA_Reviews_Final_Dec_2014_searchable.pdf">https://ceq.doe.gov/docs/ceq-regulations-and-guidance/Effective_Use_of_Programmatic_NEPA_Reviews_Final_Dec_2014_searchable.pdf</a> ) for makes it clear that the Federal agency	Comment noted. BOEM appropriately describes, in Chapter 1, <i>Introduction</i> , why BOEM is preparing a programmatic analysis of the six NY Bight lease areas and the objectives for the programmatic review.

Comment No.	Comment	Response
	program responsible for complying with NEPA has the discretion to determine whether a programmatic NEPA review is appropriate (79 FR 76986). Discussion of why a PDEIS was identified by BOEM is appropriate, but it is not a distinguishing characteristic among the alternatives presented.	
BOEM-2024-0001-0471-0003	Agency: NPS Commenter: NPS Section Title: Purpose of and Need for the Proposed Action Section #: 1.3 Page #: 1-6 Line #: 5 Section 108 of the Fiscal Responsibility Act of 2023 (42 USC 4336b) provides time limits for PCEs, as allowing the programmatic environmental review document as being able to be relied on for 5 years as long unless there are substantial new circumstances or information about the significance of adverse effects that bear on the analysis. The question then becomes: How would post-construction monitoring be evaluated in a timely manner to verify that it either supports continued use of the PDEIS evaluation or provides the foundation for re-evaluating the underlying assumptions of the original analysis?	Prior to initiating NEPA review for each COP in the NY Bight, BOEM will review the COP and the PEIS to determine if the proposed project is within the general parameters of analysis included in the PEIS. BOEM will also evaluate whether the information analyzed in the PEIS is sufficient, considering factors such as age of data and availability of site-specific information, to incorporate by reference the analysis from the PEIS. If necessary, BOEM will engage in further analysis at the COP NEPA stage.
BOEM-2024-0001-0471-0004	Agency: NPS Commenter: NPS Section Title: Relevant Existing NEPA and Consulting Documents Section #: 1.5 Page #: 1-7 If the decision to lease for exclusive right to submit COPs for WTG construction has already been made, then including any characterization of the existing conditions (i.e., no WTGs) would have already been described in the associated NEPA analysis for the selected action. Since that analysis was completed and alternative selected, have there been substantive changes in the baseline condition that need to be captured in the PDEIS?	The PEIS used the most relevant and current information available regarding baseline conditions, and any information in the existing NEPA and consultation documents that were incorporated by reference was used, as appropriate.
BOEM-2024-0001-0471-0005	Agency: NPS Commenter: NPS Section Title: Alternatives Analyzed in Detail Section #: 2.1 Page #: 2-1 The decision to lease for exclusive right to submit COPs for WTG construction has already been made and the lease stipulations dictate options for consolidating equipment alignment and other features of any WTG ( <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/ATLW-8-NY-Bight-Final-Lease-Sale-Decision-Memorandum.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/ATLW-8-NY-Bight-Final-Lease-Sale-Decision-Memorandum.pdf</a> ), so Alternative A: No Action Alternative in this	The No Action Alternative does not represent the minimum legal requirements for avoidance, minimization, mitigation, and monitoring (AMMM) measures and lease stipulations. As stated in PEIS Section 2.1.1, <i>Alternative A – No Action Alternative</i> , the No Action Alternative assumes that no offshore wind development occurs on any of the six NY Bight lease areas. The current resource conditions, trends, and impacts from ongoing and planned non-offshore wind and offshore wind activities under the No Action

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	PDEIS should describe how the minimum legal requirements for AMMMs would be met to meet the terms and conditions of that leasing decision. At this point in the decisionmaking process for the NY Bight lease and construction, it is disingenuous to represent not issuing the WTG leases and construction as the No Action Alternative. The content currently described under Alternative A would be more appropriate to describe the existing condition that would be altered to the extent previously characterized in the EIS for the lease issuance decision and supplemented with new or additional information to document a change in baseline condition.	Alternative serve as the baseline against which the direct and indirect impacts of all action alternatives are evaluated.
BOEM-2024-0001-0471-0006	Agency: NPS Commenter: NPS Section Title: Alternatives Analyzed in Detail Section #: 2.1 Page #: 2-1 On what basis would any COP for WTG construction be rejected?	The purpose of this PEIS is not to approve any projects; the decision to approve, approve with modifications, or disapprove a COP will not occur until after COPs are submitted and another level of NEPA analysis is completed. Any decision to disapprove a COP would be made at that time, and BOEM cannot speculate on what that might be based on.
BOEM-2024-0001-0471-0007	Agency: NPS Commenter: NPS Section Title: Alternatives Analyzed in Detail Section #: 2.1 Page #: 2-1 Figure/Table #: 2-1 Alternative B is not within the range of reasonable alternatives because it does not characterize the minimum legally required AMMMs for leasing and construction of wind farms in the NY Bight. As described in this table, "full build-out of six NY Bight projects without the application of any AMMM measures" should be among the alternatives considered but dismissed if any one AMMM is legally required.	Refer to response to comment BOEM-2024-0001-0371-0004. Alternative B considers the potential impacts of future offshore wind development for the NY Bight area without the AMMM measures identified in Appendix G, <i>Mitigation and Monitoring</i> , that could avoid, minimize, mitigate, and monitor those impacts. However, the analysis in Alternative B assumes that development of the NY Bight projects would be required to comply with federal and international requirements.
BOEM-2024-0001-0471-0008	Section Title: Alternatives Analyzed in Detail Section #: 2.1 Page #: 2-1 If a revised Alternative A: No Action Alternative is to represent the minimum legal requirements for AMMMs and any lease stipulations, then revised Action Alternatives could consider any AMMMs that are above and beyond the minimum legally required AMMMs that would further reduce adverse impacts on resources or values at a programmatic level.	BOEM declines to modify the No Action Alternative. As stated in PEIS Section 2.1.1, the No Action Alternative assumes that no offshore wind development occurs on any of the six NY Bight lease areas. The current resource conditions, trends, and impacts from ongoing and planned non-offshore wind and offshore wind activities under the No Action Alternative serve as the baseline against which the direct and indirect impacts of all action alternatives are evaluated. Refer to response to comment BOEM-2024-0001-0371-0004 for additional clarification on Alternative B and Alternative C.

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BOEM-2024-0001-0471-0009	<p>Section Title: Alternatives Analyzed in Detail Section #: 2.1.2.1.1 Page #: 2-5</p> <p>If BOEM's authority under OCSLA extends only to activities conducted on the OCS, then who would have enforcement responsibilities for the AMMMs to be implemented outside the OCS? How do the cost recovery terms included in the leases reimburse agencies with jurisdiction for enforcement of the AMMMs that are to be implemented outside the OCS</p>	<p>As stated in PEIS Appendix G, not all AMMM measures are within BOEM's statutory and regulatory authority, and those that are not may still be imposed by other governmental agencies. Table G-1 in Appendix G indicates who has the enforcement responsibilities for AMMM measures in the "Anticipated Enforcing Agency" column. Mitigation measures that entail actions outside the Outer Continental Shelf (OCS) have been identified as recommended practices (RPs) and have been moved to Table G-2. If state or other entities choose to enforce these RPs through their respective permitting processes, those agencies would be responsible for the cost of enforcement.</p>
BOEM-2024-0001-0471-0010	<p>Agency: NPS Commenter: NPS Section Title: Transition Interconnection Configurations Section #: 2.1.2.1.1 Page #: 2-13 Line #: 3-8</p> <p>As stated in this section, there are differing levels of environmental impacts that would result from the various combinations of transmission interconnection configurations. These would have meaningful differences that would provide the foundation for conducting impact analyses. These differences would be more meaningful than the current range of alternatives, where Alternative A has already been dismissed, Alternative B does not account for any legally required AMMMs, and Alternative C simply states that a wide range of AMMMs could become programmatic and applicable to all six leases.</p>	<p>As stated in PEIS Section 1.3, <i>Purpose of and Need for the Proposed Action</i>, BOEM's Proposed Action in the Final PEIS is to identify AMMM measures that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. At this programmatic stage, the PEIS does not approve any projects, and BOEM is not considering project-level details or individual alternatives or AMMM measures that are project-specific. Project-specific alternatives will be considered by BOEM and cooperating agencies at the COP NEPA stage. RP MUL-18 encourages lessees to coordinate their transmission infrastructure among their projects.</p> <p>Also, refer to response to comment BOEM-2024-0001-0371-0004 for additional clarification on Alternative B and revisions made to Alternative C regarding AMMM measures. Alternative B considers the potential impacts of future offshore wind development for the NY Bight area without the AMMM measures identified in Appendix G that could avoid, minimize, mitigate, and monitor those impacts. However, the analysis in Alternative B assumes that development of the NY Bight projects would be required to comply with federal and international requirements.</p>
BOEM-2024-0001-0471-0011	<p>Agency: NPS Commenter: NPS Section Title: Alternatives Considered but Not Analyzed in Detail Section #: 2.2 Page #: 2-19 Line#: Rows 2-3 Figure/Table#: 2-3</p>	<p>Refer to response to comment BOEM-2024-0001-0471-0010. BOEM does not consider co-location or sharing of corridors as an enforceable AMMM measure. BOEM considers co-locating or sharing of corridors to be an RP and encourages lessees to</p>

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	As stated in this section, there are differing levels of environmental impacts that would result from the various combinations of transmission interconnection configurations. These would have meaningful differences that would provide the foundation for conducting impact analyses. If co-location is to be promoted as a AMMM, then it needs to be analyzed for its benefit relative to not co-locating. As it stands now, this PDEIS dismisses the value of considering if and when co-locating cables or other wind farm-related features would actually result in more significant impacts to the human or natural environments. For example, to what extent would co-locating nearshore cables result in impacts that differ from not co-locating those cables? This analysis would be meaningful to any landowner in the vicinity of proposed cable crossings.	consider RPs in addition to the AMMM measures to further reduce impacts (see PEIS Appendix G, COMFIS-4, MUL-18, and MUL-23). Regarding landowners in the vicinity of cables onshore, as stated in PEIS Section 2.1.2.1.1, because the analysis in the PEIS was prepared before any of the NY Bight COPs were submitted by lessees, actual locations of landfall locations and onshore facilities are unknown at this time. Because the locations of cables on the OCS and those of landfalls and onshore facilities are unknown, the PEIS describes the types of impacts from construction and operation of transmission components generally, and largely defers the more specific analysis of these components and their locations to the COP-specific NEPA documents.
BOEM-2024-0001-0471-0012	Agency: NPS Commenter: NPS Section Title: Alternatives Considered but Not Analyzed in Detail Section #: 2.2 Page #: 2-19 Line #: Rows 2-6 Figure/Table #: 2-3 The rationale for dismissing these alternatives refers the reader back to Alternative C, relying very heavily on the idea that this alternative includes enough AMMMs to avoid speculative and unnecessary analysis. This conclusion can not be made from the range of alternatives presented in the PDEIS. The PDEIS provides no identification of thresholds or considerations for determining when co-locating any element of the wind farm would result in a quantifiable difference in conditions (e.g., temperature increase due to co-locating HVDC converters or not co-locating them). The matrix of AMMMs could be meaningfully different should the transmission interconnection configurations be different.	Refer to response to comments BOEM-2024-0001-0471-0010 and BOEM-2024-0001-0471-0011.
BOEM-2024-0001-0471-0013	Agency: NPS Commenter: NPS Section Title: Non-Routine Activities and Events Section #: 2.3 Page #: 2-21 Although non-routine activities and events are not possible to predict with certainty, are there aspects of how such events would be coordinated among agencies with jurisdiction that should be described in this section as common to all alternatives or aspects that would potentially differentiate the action alternatives?	Non-routine activities and events are analyzed in the PEIS for the resources and impact producing factors (IPF) where they apply and at a level consistent with a programmatic analysis. These activities and events would also be addressed in project-specific COP NEPA documents and may include more detailed information and analysis based on project-specific information. Information on coordination with agencies on these activities and events would be addressed in more detail in project-specific COP NEPA

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		documents when more detail on the offshore and onshore components, including specific locations of project components, is known.
BOEM-2024-0001-0471-0014	<p>Agency: NPS Commenter: NPS Section Title: Summary and Comparison of Impacts by Alternative Section #: 2.4</p> <p>The purpose of this section is to explain the impacts resulting from implementation of any alternative, summarizing conclusions that can only result after review of Chapters 3 and 4. This summary table could be appropriate to include at the end of Chapter 4 or a new Chapter 5. For Chapter 2: Alternatives, a summary of similarities and differences among the elements of alternatives that are currently detailed in Appendix G would be more informative, particularly because the current range of alternatives relies heavily on illustrating how Alternative C would offset impacts via inclusion of AMMMs programmatically.</p>	<p>Council on Environmental Quality (CEQ) NEPA implementing regulations at 40 Code of Federal Regulations (CFR) 1502.14 requires EISs to present the environmental impacts of the proposed action and alternatives in comparative form in the proposed action and alternatives section of the environmental impact statement (EIS) (PEIS Chapter 2). The impact conclusions presented in Chapter 2, Table 2-4, account for the implementation of AMMM measures under Alternative C. Also, refer to response to comment BOEM-2024-0001-0371-0004 for additional clarification on Alternative B and revisions made to Alternative C regarding AMMM measures.</p>
BOEM-2024-0001-0471-0015	<p>Agency: NPS Commenter: NPS Section Title: Summary and Comparison of Impacts by Alternative Section #: 2.4</p> <p>Figure/Table #: 2-4</p> <p>The relative value of implementing any AMMMs under Alternative C is not noticeably different when compared to impacts under Alternative B. Therefore, the basis for which BOEM identified the proposed action is Alternative C remains unclear as it relates to the purpose and need, as other questions listed on page 2-17.</p>	<p>The overall impact rating conclusions (as shown in PEIS Table 2-4 and Executive Summary Table ES-2) may not always be different under Alternative C when compared to Alternative B, while impacts for specific individual IPFs may be different. Depending on the specific IPF and the resource analyzed, there can be notable differences that change the impact determination for a specific IPF under Alternative C (see Lighting IPF in PEIS Section 3.5.3, <i>Birds</i>, under Alternative B and Alternative C). However, the overall impact rating conclusions for the resource encompasses all IPF impact conclusions. The details of the analysis for each IPF and the justification for the overall impact conclusion for a resource is found in the Chapter 3, <i>Affected Environment and Environmental Consequences</i>, resource sections.</p> <p>The Proposed Action for the Final PEIS is the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. Refer to response to comment BOEM-2024-0001-0371-0004 for additional clarification on revisions made to Alternative C regarding AMMM measures.</p>

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BOEM-2024-0001-0471-0016	Agency: NPS Commenter: NPS Section Title: Primary IPFs Discharge/Intakes Section #: 3.1 Page #: 3.1-2 Figure/Table #: 3.1-1 Types of discharges from the HVDC converter cooling system should include warmer water and associated thermal effects (according to chapter 2, page 2-8).	Additional analysis has been added to Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Discharges/intakes</i> , to further describe the warm water discharges.
BOEM-2024-0001-0471-0017	Section Title: Primary IPFs – Noise Section #: 3.1 Page #:3.1-4 Figure/Table #: 3.1-1 Does noise include broad range of sensitive receptors (e.g., more than human) and in all media (e.g., air, water)?	As described in Table 3.1-1, the Noise IPF captures impacts from both offshore and onshore activities and therefore describes impacts both in the air and water. Potential noise impacts are described for both human and animal receptors in various Chapter 3 resource sections.
BOEM-2024-0001-0471-0018	Agency: NPS Commenter: NPS Section Title: Impact Terminology Section #: 3.3.2 Page #: 3.3-3 Line #: 2 & Footnote Short-term effects are characterized as 3 years in the main text parenthetically and supplemented with a footnote that says 3 to 5 years. Clarification is needed to assist the reader to understand whether impacts that could occur during years 4 and 5 have been described as either short- or long-term effects.	BOEM has revised the parenthetical to include a 3–5 year range based on the footnote.
BOEM-2024-0001-0471-0019	Agency: NPS Commenter: NPS Section Title: Impact Analyses Section #: 3.4 In addition to its land base, NPS has jurisdiction over the water column on the intercoastal waterway side north of Fire Island National Seashore (NS) and jurisdiction from mean high tide to 1000 feet out, including the ocean bottom on the ocean side south of Fire Island. Gateway National Recreation Area (NRA) also includes ocean waters within its boundaries. The potential impacts within the boundaries of Fire Island NS and Gateway NRA from accidental discharges of fuel, trash, debris from construction/operation/decommissioning, discharge of bilge water and associated invasive species should be addressed. Notification and coordination with Fire Island and Gateway should be included in any proposed mitigation plans (e.g. spill response plans). This should be addressed throughout the DEIS as there are accidental release sections in all Affected Environment sections.	Comment noted. The “Accidental releases” IPF considers the impacts of accidental discharges of fuel, trash, and other debris. This IPF is included in Proposed Action (Alternative C) and alternatives analysis for resources where such impacts would be applicable. In addition, a project-specific COP NEPA review would revisit all potential impacts on land and water areas under NPS jurisdiction should the details in a project-specific COP indicate potential direct or indirect effect on these areas.

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BOEM-2024-0001-0471-0020	<p>Agency: NPS Commenter: NPS Section Title: Impacts of Six Projects Section #: 3.4.1.4.2 Page #: 3.4.1-20 Line #: 4</p> <p>To what extent would activation of the WTGs likely result in reduction in emission generation by fossil-fuel plants?</p> <p>Does lease, construction, and operation of the WTGs require a reduction in fossil-fuel plant operations?</p> <p>What evidence is used to support statements in this paragraph about electricity pricing, power plant dependence, and decisions to alter existing output or taking plants offline?</p> <p>If no mandate or evidence can support the conclusion that activating WTGs would actually result in a reduction of dependence on fossil-fuel plant operations, then the analysis must focus on how much additional impact would result if WTGs are activated and there is no change in fossil-fuel plant operations.</p> <p>There is too much uncertainty and speculation included in the current analysis to conclude that either Alternative B or C is preferable to Alternative A.</p>	<p>Leasing, construction, and operation of the wind turbine generators (WTG) do not require a reduction in fossil-fuel plant operations. However, the response of the grid to the introduction of wind energy is market-based: wind energy would displace fossil fuel energy to the extent that it is offered to the grid at a lower price than the bids from fossil-fueled energy sources. BOEM expects that wind energy would be bid at a lower price and consequently would be substituted for and not add to energy from fossil-fueled energy sources. If there were no reduction of fossil-fuel plant operations, then there would be no avoided emissions, and the project emissions would be as shown in Final PEIS Table 3.4.1-6 (<i>Operations and maintenance emissions from a single NY Bight project</i>).</p>
BOEM-2024-0001-0471-0021	<p>Agency: NPS Commenter: NPS Section Title: Impacts of Alt C Water Quality Discharges/Intakes Section #: 3.4.2.5.1 Page #: 3.4.2-23</p> <p>As described on pages 2-7 and 2-8, different equipment would be required on each OSS depending on whether HVAC or HVDC technology is used and HVDC cooling systems may employ an open loop system that discharges warmer water back into the ocean. Although MUL-21 requires the use of the best available technology, it does not exclude the potential use of open loop systems that would have thermal impacts on ocean water quality. These thermal impacts are not quantifiably characterized or analyzed in the PDEIS. The conclusion that measurable impacts are expected to be minimal is unsupported, as no measurements or reference to supporting research has been cited to provide a foundation for this impact analysis. Furthermore, other similar conclusions related to potential discharge impacts (e.g., benthic habitat, sea turtles) are also unsubstantiated.</p>	<p>MUL-21 is now included as an RP in Section 3.4.2.6 (see PEIS Appendix G for descriptions of RPs), but BOEM does encourage lessees to analyze and consider implementing all RPs to reduce impacts on environmental resources. Clean Water Act (CWA) Section 316(b) requires National Pollutant Discharge Elimination System (NPDES) permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts. The project-specific, COP-level NEPA analysis will provide further details.</p>
BOEM-2024-0001-0471-0022	<p>Agency: NPS Commenter: NPS Section Title: Benthic resources geographic analysis area Section #: 3.5.2-2 Figure/Table #: 3.5.2-1</p>	<p>Figure 3.5.2-1 was developed to display the geographic analysis area for benthic resources. Consistent with other figures in the</p>

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	The boundary for Gateway National Recreation Area and Fire Island National Seashore (including waters) should be delineated on this map so proximity to the submarine export cable can be seen; the same is true for other maps that include NPS lands in these documents.	PEIS displaying the geographic analysis area, it does not display site-specific features as that information is not needed and would distract from the purpose of the figure. In addition, as described in Chapter 2, the location of offshore export cables are not known so geographic features potentially affected by the cables cannot be depicted on figures. Future project-specific COP NEPA EIS documents will identify cable corridors and analyze their effects on environmental resources.
BOEM-2024-0001-0471-0023	<p>Agency: NPS Commenter: NPS Section Title: Recreation and Tourism Section #: 3.6.8.1.2 Page #: 3.6.8-3 Line #: 2</p> <p>Expectations of experiences in National Parks differ from other shoreline areas; therefore, the Peregrine Energy Group Inc (2008) report and other references may not adequately evaluate impacts of visible WTGs on beach use and the visitor experience of cultural landscapes, bathing beaches, night skies, and natural areas within the National Park properties that would be impacted by the proposed project. Gateway National Recreation Area's 2014 General Management Plan (<a href="https://www.nps.gov/gate/learn/management/gmp-2012.htm">https://www.nps.gov/gate/learn/management/gmp-2012.htm</a>) identifies management zones that provide a spectrum of visitor experiences from developed areas to remote natural areas. Evaluation of the proposed project impacts on recreation and tourism should account for the unique experiences that visitors expect at a coastal National Park and the management zones and range of visitor experiences identified in the Park's 2014 General Management Plan. The General Management Plan identifies darkness and night sky, feelings associated with open space in a high-density area, views of the New York Outer Harbor, contemplation of the physical environment, astronomy, and the beach experience as fundamental resources and values. The same considerations apply at Fire Island National Seashore, including in evaluating the impacts of the project on the Otis Pike Fire Island High Dunes Wilderness.</p>	Refer to response to comment BOEM-2024-0001-0466-0012 concerning visual resources.
BOEM-2024-0001-0471-0024	Agency: NPS Commenter: NPS Section Title: Recreation and Tourism Section #: 3.6.8.1.2 Page #: 3.6.8-4 Line #: 1	Refer to response to comment BOEM-2024-0001-0355-0020.

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	<p>Gateway National Recreation Area's 2014 General Management Plan (<a href="https://www.nps.gov/gate/learn/management/gmp-2012.htm">https://www.nps.gov/gate/learn/management/gmp-2012.htm</a>) identifies leasing as a primary tool for long-term rehabilitation and preservation of the Park's historic structures. The Park has executed 5 long-term leases for rehabilitation and adaptive re-use of historic structures within the Fort Hancock and Sandy Hook Proving Ground National Historic Landmark District. The Park is currently in negotiations and planning for leasing of more than 20 additional historic structures at Sandy Hook. The Park has issued a long-term lease for the rehabilitation and adaptive re-use of the historic bathhouse at Jacob Riis Park. Several years ago, the Park released a request for interest for leasing historic structures in the Fort Tilden Historic District and the USCG Station Far Rockaway Historic District and plans to move ahead with leasing in those areas of the Park in the future. Preservation of the leased historic structures is dependent upon the economic viability of the leasee. Impacts of the proposed project on recreation and tourism that support the leased facilities will impact the long-term viability of the leased properties and subsequently the capacity of the Park to maintain and preserve the historic structures. Impacts of the proposed project on historic structures within the existing and proposed leasing program should be evaluated in the PEIS.</p>	
BOEM-2024-0001-0471-0025	<p>Agency: NPS Commenter: NPS Section Title: Recreation and Tourism Section #: 3.6.8.1.2 Page #: 3.6.8-4 Line #: 1</p> <p>Although the New York and New Jersey shores in general have been extensively developed, the shores within National Park Service Units within the project area have not been extensively developed. Visitors come to these National Parks to experience more natural and undeveloped shorelines within the broader more highly developed landscape. Thus the impact of the proposed project on National Park Service Recreation and Tourism cannot be treated the same as the highly developed shoreline areas within the affected environment for recreation and tourism.</p>	Refer to response to comment BOEM-2024-0001-0355-0020.
BOEM-2024-0001-0471-0026	<p>Agency: NPS Commenter: NPS Section Title: Impacts of Alts B and C Recreation and Tourism Section #: 3.6.8.4 and 3.6.8.5</p>	Thank you for the comment. Helicopters, when used, would leave existing airports and follow all transportation/flight path

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	Would use of helicopters be anticipated to occur over NPS lands and waters? PEIS discusses use of helicopters during construction and O&M, which would be over 35 year lifespan of the project. PEIS does not provide characterization of potential noise impacts on NPS natural soundscape at Gateway National Recreation Area (a park fundamental resource) and human receptors enjoying the natural habitats and environments at Gateway National Recreation Area (a park fundamental value). NPS Resource Brief that provides a baseline characterization of the acoustic environs at this park are available in Wood 2015, "Acoustic Environment and Soundscape Resource Summary, Gateway National Recreation Area," accessible at <a href="https://irma.nps.gov/DataStore/Reference/Profile/2225921">https://irma.nps.gov/DataStore/Reference/Profile/2225921</a> . The park's fundamental resources and values are characterized here: <a href="http://npshistory.com/publications/foundation-documents/gate-fd-2017.pdf">http://npshistory.com/publications/foundation-documents/gate-fd-2017.pdf</a> .	restrictions required by transportation agencies. Most crew transport is expected to occur by vessels. Project-specific NEPA EIS documents will address helicopter use and any potential noise impacts in greater detail.
BOEM-2024-0001-0471-0027	Agency: NPS Commenter: NPS Section Title: Scenic and Visual Resources SLIA Affected Environment Section #: 3.6.9.1.1 Page #: 3.6.9-9 Figure/Table #: Table Footnote Please correct the footnote to state that Gateway National Recreation Area is a unit of the National Park System.	Comment noted and revision has been made.
BOEM-2024-0001-0471-0028	Agency: NPS Commenter: NPS Section Title: Scenic and Visual Resources SLIA Affected Environment Section #: 3.6.9.1.2 Page #: 3.6.9-18 Figure/Table #: 3.6.9-11 The table does not specifically state that there is consideration of both daytime and nighttime experiences for receptors. With approximately 9 million visitors annually, Gateway National Recreation is the 4th most visited park within the National Park System. Evaluation of impacts of the proposed action on scenic and visual resources must recognize that visitors to National Parks expect an experience that is different from many developed shorelines. Gateway National Recreation Area's 2014 General Management Plan ( <a href="https://www.nps.gov/gate/learn/management/gmp-2012.htm">https://www.nps.gov/gate/learn/management/gmp-2012.htm</a> ) identifies management zones that provide a spectrum of visitor experiences from developed areas to remote natural areas. Evaluation of the proposed project impacts on the scenic and visual	Thank you for your comment. Table 3.6.9-11 has been revised to recognize National Park visitor experiences and documented dark sky environments. The following language was added to High Sensitivity: "visitors to National Park System sites, where visitors expect a visual and sensory experience emphasizing a unique nature experience, protected views, and dark night skies. Dark sky environment is documented as high quality on the Bortel scale (Bortel 1-2)." The following language was added to Medium Sensitivity: "Dark sky environment is documented as moderate quality on the Bortel scale (Bortel 3-4)."

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	resources and visitor experience should account for the unique experiences that visitors expect at a coastal National Park and the management zones and range of visitor experiences identified in the Park's 2014 General Management Plan. The General Management Plan identifies darkness and night sky, feelings associated with open space in a high-density area, views of the New York Outer Harbor, contemplation of the physical environment, astronomy, and the beach experience as fundamental resources and values.	
BOEM-2024-0001-0471-0029	Agency: NPS Comment #: 27 Commenter: NPS Section Title: Description of the Affected Environment and Future Baseline Conditions Section #: 3.6.21 Page #: 3.6.2-6 When defining "cultural resource" the National Register of Historic Places should be identified as the regulatory basis for physical/tangible resources.	Thank you for this comment, but no changes were made for the following reasons: effects considered under NEPA include historic and cultural (40 C.F.R. § 1508.8); the term "cultural resources" covers a wider range of resources than "historic properties" as defined in 36 CFR 800.16(l)(1), such as sacred sites, archaeological sites not eligible for listing in the National Register of Historic Places, and archaeological collections; and Table 3.6.2-2 provides definitions for both "cultural resources" and "historic properties," with the latter referencing the aforementioned definition included in the Section 106 regulations.
BOEM-2024-0001-0471-0030	Agency: NPS Comment #: 28 Commenter: NPS Section Title: Description of the Affected Environment and Future Baseline Conditions Section #: 3.6.21 Page #: 3.6.2-6 Figure/Table #: 3.6.2-2 Again, when describing marine archeological resources the document is making a tangential reference to the National Register of Historic Places while avoiding any explicit reference. The 50-year time frame is based on the National Register of Historic Places and should be acknowledged.	Thank you for this comment, but no changes were made for the following reason: according to 30 CFR 585.113, "archaeological resource" means any material remains of human life or activities that are at least 50 years of age and are of archaeological interest (i.e., which are capable of providing scientific or humanistic understanding of past human behavior, cultural adaptation, and related topics through the application of scientific or scholarly techniques, such as controlled observation, contextual measurement, controlled collection, analysis, interpretation, and explanation). Please also refer to response BOEM-2024-0001-0471-0029.
BOEM-2024-0001-0471-0031	Agency: NPS Comment #: 29 Commenter: NPS Section Title: Description of the Affected Environment and Future Baseline Conditions Section #: 3.6.21 Page #: 3.6.2-8 Line #: 3 and 5 Potential historic properties should be characterized as "unidentified" or "unevaluated", aligning with verbiage used in federal regulations.	Thank you for this comment, but for the purposes of this programmatic NEPA document, the phrase "potential historic properties" in the context of "resources anticipated to be located in the Programmatic Visual APE" is appropriate (see page 3.6.2-8).

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BOEM-2024-0001-0471-0032	Agency: NPS Comment #: 30 Commenter: NPS Section Title: Description of the Affected Environment and Future Baseline Conditions Section #: 3.6.21 Page #: 3.6.2-8 Line #: 3 and 6 As defined by the National Register of Historic Places, property types include more than just buildings. This sentence is awkwardly phrased and does not align with the guidance provided in the NRHP.	Thank you for this comment, but no changes were made for the following reasons: effects considered under NEPA include historic and cultural (40 C.F.R. § 1508.8); the term “cultural resources” covers a wider range of resources than “historic properties” as defined in 36 CFR 800.16(l)(1); and the sentence already references non-building property types, including cultural landscapes and traditional cultural places.
BOEM-2024-0001-0471-0033	Agency: NPS Comment #: 31 Commenter: NPS Section Title: Description of the Affected Environment and Future Baseline Conditions Section #: 3.6.21 Using this document to tier the identification and analysis of impacts to cultural resources is negated by the fact that we lack sufficient information to allow for any of the prescribed process to occur at this early stage.	The programmatic approach is not intended to analyze impacts on specific cultural resources. The identification and specific analysis of effects on cultural resources will be required as part of each developer’s COP submission. The programmatic effort establishes a prescribed process to be applied to the analysis that will be required as part of that later stage of COP environmental review. BOEM is meeting the reasonable, good faith effort standard.
BOEM-2024-0001-0471-0034	Agency: NPS Comment #: 32 Commenter: NPS Section Title: Impact Level Definitions to Cultural Resources Section #: 3.6.22 Page #: 3.6.2-9 Figure/Table #: 3.6.2-3 The impact levels as correlated to an adverse effect versus a no adverse effect finding is narrowly defined and the framework is flawed. These categories don't translate to how impact assessments are made in real-world scenarios and are weighted towards a no adverse effect determination.	BOEM applies the National Historic Preservation Act (NHPA) Section 106 definition (36 CFR 800.5(a)(1)) of an adverse effect. Each undertaking has one effect finding. Through this analysis, individual properties are evaluated in the areas of potential effects (APEs) to make this one finding for the undertaking. Therefore, BOEM will make a finding of adverse effect for the undertaking even when some historic properties are not adversely affected but one or more historic properties are adversely affected. Procedurally, BOEM needs to provide this step in the event that there is a no adverse effect finding for the undertaking; however, none of the previous COP reviews to date have resulted in a finding of no adverse effect for the undertaking.
BOEM-2024-0001-0471-0035	Agency: NPS Comment #: 33 Commenter: NPS Section Title: Impact Level Definitions to Cultural Resources Figure/Table #: 3.6.2-3 The definition and criteria used for major impacts to cultural resources that “could” result in an adverse effect determination misrepresents the definition as stated in the federal regulations. Major impacts would result in an adverse effect and don’t have to impact all seven aspects of integrity, as noted in the table, to result in an adverse effect finding. The level of impacts presented in the table	BOEM would like to clarify that Table 3.6.2-3 reads “could occur,” not “could result in an adverse effect determination.” If there is a potential for an adverse effect, then the lead federal agency can make a finding of an adverse effect. This table defines the levels of potential impacts on cultural resources and is intended to cross-walk the potential scenarios resulting in findings between NEPA and NHPA. Furthermore, the description of major impacts as applied to historic properties under Section 106 of the NHPA does

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	provides a level of latitude that does not align with codified federal regulations.	not require all seven aspects of integrity to be diminished to result in an adverse effect finding, as the comment states.
BOEM-2024-0001-0471-0036	Agency: NPS Comment #: 34 Commenter: NPS Section Title: Cumulative Impacts of the No Action Alternative Section #: 3.6.2.3.2 Page #: 3.6.2-13 Line #: 3 and 9 The National Historic Preservation Act was enacted in 1966 and subsequently amended four times: 1976 (Pub. L. No. 94-422, 90 Stat. 1320), 1980 (Pub. L. No. 96-515, 94 Stat. 2987), 1992 (Pub. L. 102-575, 106 Stat. 4753), and 2016 (Pub. L. No. 96-515).	Thank you for the information about the NHPA.
BOEM-2024-0001-0471-0037	Agency: NPS Comment #: 35 Commenter: NPS Section Title: Cumulative Impacts of the No Action Alternative Section #: 3.6.2.3.2 Page #: 3.6.2-13 Line #: 3 and 7 If submerged maritime archeological resources at Gateway National Recreation Area waters were to be adversely impacted by activities, mitigative measures could be applied to other GATE resources if mitigating impacts to a particular maritime archeological resource is truly undoable, and as determined through consultation.	Thank you for this comment. BOEM will consult with NPS if there are any impacts on individual NPS units at the COP NEPA stage. As appropriate, BOEM will consider creative mitigation measures through consultation with the NPS for any historic properties that are adversely affected in NPS units.
BOEM-2024-0001-0471-0038	Agency: NPS Comment #: 36 Commenter: NPS Section Title: Socioeconomic Conditions and Cultural Resources Section #: 3.6.8.1.1 Page #: 3.6.8-2 Figure/Table #: 3.6.8-1 The delineated boundary excludes the bay abutting Staten Island and potentially impacted recreational areas in the vicinity, specifically those associated with Gateway National Recreation Area. It's not clear why Staten Island is included but not associated waters.	Thank you for your comment. The waters of the Gateway National Recreation Area are not included because BOEM does not anticipate that the offshore wind activities would impact the recreation and tourism quality of those waters. The waters of that area are included in other resource assessments.
BOEM-2024-0001-0471-0039	Agency: NPS Comment #: 37 Commenter: NPS Section Title: Socioeconomic Conditions and Cultural Resources Section #: 3.6.9.1 Page #: 3.6.9-7 Figure/Table #: 3.6.9-4 Fort Tilden Historic District and the Floyd Bennet Field are both missing from the map. Ensure that all Gateway NRA historic districts are reflected on the map.	Thank you for your comment. These sites have been added to Figure 3.6.9-7 and the more detailed maps in Appendix H, specifically Figures H-2, H-7, H-8, and H-13. Figure 3.6.9-7 shows the entire geographic analysis area; therefore, some of these smaller NPS sites are not visible at this scale.
BOEM-2024-0001-0471-0040	Agency: NPS Comment #: 38 Commenter: NPS Section Title: Socioeconomic Conditions and Cultural Resources Section #: 3.6.2 Page #: 3.6.2-1 Consider a heavy rewrite of this section in general. There are	Thank you for your comment. The commenter does not pose a question or raise specific issues with the environmental analysis.

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	recurring issues with basic concepts regarding cultural resource management and historic preservation that are not accurately presented in the narrative.	
BOEM-2024-0001-0471-0041	Agency: NPS Commenter: NPS Section Title: Socioeconomic Conditions and Cultural Resources Section #: 3.6.2 Page #: 3.6.2-2 If "BOEM expects each lessee to complete the requisite cultural resource technical studies" National Criteria for Evaluation should be used. Maintaining consistency across individual evaluations will be key. preliminary APE (PAPE) per the COP PDE, completion of associated cultural resource and historic property identification efforts, assessment of potential effects, and development of potential AMMM measures for identified historic properties.	As stated in the <i>Draft Programmatic Agreement Among The U.S. Department of the Interior, Bureau of Ocean Energy Management; The State Historic Preservation Officers of New York and New Jersey; and The Advisory Council on Historic Preservation Regarding Six Renewable Energy Projects (Leases OCS-A 0537, 0538, 0539, 0541, 0542, and 0544) Offshore New York and New Jersey Under Section 106 of the National Historic Preservation Act</i> (hereafter, the Draft Programmatic Agreement for the NY Bight), and consistent with all other offshore wind COP approval requirements, lessees are required to identify historic properties in the marine, terrestrial, and visual APEs; assess potential effects; and propose AMMM measures. These reports are then consulted upon during the Section 106 consultation. The cultural resource technical studies are required to meet the "reasonable and good faith effort" described in 800.4(b)(1) and to follow BOEM's "Guidelines for Providing Archaeological and Historic Property Information" as well as all applicable state guidelines and requirements. Additional information can be found in Stipulation I.B of the Draft Programmatic Agreement for the NY Bight.
BOEM-2024-0001-0471-0042	Agency: NPS Commenter: NPS Section Title: Socioeconomic Conditions and Cultural Resources Section #: 3.6.2 Page #: 3.6.2-3 The primary objective of the programmatic Section 106 review is to provide an opportunity for Section 106 consulting parties to identify historic properties early in project planning that could be avoided and/or minimized from project impacts and consult on and identify a consistent Section 106 consultation process that will allow Tribal Nations and consulting parties to consult as early as possible for each of the six project-level reviews.	Thank you for the comment. The commenter does not pose a question or raise issues with the environmental analysis. While the Section 106 Programmatic Agreement provides for a consistent review and consultation process for each of the six COP NEPA reviews, BOEM does not intend to identify any specific historic properties through this programmatic evaluation. Developers of individual leases will be required to undertake comprehensive identification of historic properties within the marine, terrestrial, and visual APEs, and BOEM will assess the effects of each project on those identified historic properties during the COP NEPA reviews and related consultations.
BOEM-2024-0001-0471-0043	Agency: NPS Commenter: NPS Section Title: Socioeconomic Conditions and Cultural Resources Section #: 3.6.2 Page #: 3.6.2-3	Thank you for your comment. Please refer to Stipulation I.B.2 through I.B.5 in the Draft Programmatic Agreement for the NY

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	In order to execute the PA and potential future MOA(s), APEs must be firmly established in order to identify all possibly impacted cultural resources. Please clarify.	Bight for the details of how the APEs for each project will be delineated during the COP stage reviews.
BOEM-2024-0001-0471-0044	Agency: NPS Commenter: NPS Section Title: Impact Level Definitions to Cultural Resources Section #: 3.6.2.2 Page #: 3.6.2-10 Figure/Table #: Table 3.6.2-4 Issue of what is later described as "accidental releases" such as unanticipated disturbance from fuel spills and associated cleanup activities should be added to this table.	Table 3.6.2-4 summarizes high-level disturbances. Accidental releases are classified under IPFs and are included in offshore seabed disturbance later in the text of Section 3.6.2.3 for Alternative A, Section 3.6.2.4.1 and 3.6.2.4.3 for Alternative B, and Section 3.6.2.5.1 for Alternative C (Proposed Action).
BOEM-2024-0001-0471-0045	Agency: NPS Commenter: NPS Section Title: Cumulative Impacts of the No Action Alternative Section #: 3.6.2.3.2 Page #: 3.6.2-17 Under 'Presence of Structures,' could they also be characterized as permanent intrusive visual elements to the viewsheds of cultural resources? Or is there a plan to remove them after their life cycle? Please clarify.	There is an expected lifecycle of these projects; see Decommissioning in Chapters 2 and 3. These are not considered permanent structures for the purposes of this PEIS. Lessees can request that facilities remain in place in the decommissioning application submitted to the U.S. Department of the Interior Bureau of Safety and Environmental Enforcement (BSEE (30 CFR 285.900-285.913)), but BOEM approves or does not approve the request (30 CFR 585.434). Unless otherwise determined during the decommissioning application review, NY Bight lessees would be required to remove or decommission all facilities, projects, cables, pipelines, and obstructions and clear the seabed of all obstructions created. Conceptual decommissioning would typically follow a "reverse installation" process, with turbine components or the offshore substation (OSS) topside structure removed prior to foundation removal.
BOEM-2024-0001-0471-0046	Agency: NPS Commenter: NPS Section Title: Cultural Resources Section #: 3.6.2 Page #: 3.6.2-16 Document states: "The impacts of construction and operational lighting would be limited to cultural resources subject to visual impacts and for which a dark nighttime sky is a contributing element to historical integrity." NPS disagree. We have raised this general issue with BOEM before on various wind project. Please consult with NPS Cultural Resource Specialists. NPS suggested rewording statements about night sky quality and protection being limited only to those cultural resources where was called out in the national register listing of the property. The night sky as an integral part of the	BOEM is demonstrating a reasonable and good faith effort with identifying and evaluating potential historic properties pursuant to the Section 106 regulations and is not required to evaluate if a dark night sky is a character-defining feature of each individual resource at this programmatic stage. BOEM will continue to consult with NPS cultural resource specialists regarding any potential concerns regarding nighttime operational lighting. The use of the term "cultural resources" was chosen by BOEM to reflect a broader range of resources than would be suggested by the use of the term historic properties and because it is a term used in NEPA. Please refer to the CEQ Advisory Council on Historic

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	cultural landscape and its importance was not acknowledged back when many historic properties were evaluated for the National Register. Now we know that the night sky resource is an integral component of the overall setting and feel of a historic property and/or cultural landscape, and can be of ethnographic importance and value to indigenous peoples. Dark skies / cultural landscapes are important to all historic sites, whether or not dark skies were recognized independently during designation of historic sites.	Preservation (ACHP) handbook, which defines key terms in NEPA and Section 106 reviews [https://www.achp.gov/integrating_nepa_106]. BOEM notes that it agrees with the NPS characterization of earlier National Register of Historic Places (NRHP) nominations as not being the only source of information for evaluating historic properties. BOEM does not solely rely on the character-defining features identified in NRHP nominations to determine whether a project would have an adverse effect on a particular historic property.
BOEM-2024-0001-0471-0047	Agency: NPS Commenter: NPS Section Title: Cultural Resources Section #: 3.6.3 Page #: 3.6.2-17 It's great to see that benefits of using ADLS are mentioned here. NPS would like to see the developer is committed in using ADLS.	Thank you for this comment. The Draft Programmatic Agreement for the NY Bight Appendix IV includes Aircraft Detection Lighting Systems (ADLS) as a standard minimization measure. At this programmatic evaluation stage, there are no COPs under review. ADLS will continue to be a standard minimization measure at the COP-level review stage.
BOEM-2024-0001-0471-0048	Agency: NPS Commenter: NPS Section Title: Scenic and Visual Resources Section #: 3.6.9 Include nighttime simulations for Fire Island or Sandy Hook, as the current PEIS does not. As those two units/locations are the most likely to be impacted, those visuals would be crucial for informing a decision. Moreover, the Wilderness area is one of the key resources at Fire Island likely to be impacted, yet there are no visual simulations from within the wilderness itself.	Nighttime simulations were created for Key Observation Point (KOP)-38 Robert Moses Field 5, which is less than a mile from Fire Island Lighthouse. Although 14.5 miles south of more sensitive wilderness environments on Fire Island, KOP-38 is 2 and 7 miles closer to lease area OCS-A 0544 and Empire Wind (OCS-A 0512), respectively, making it a more conservative point for comparison. KOP-38 is comparable to Sandy Hook for understanding nighttime impacts from Empire Wind but is 45 miles from NY Bight lease area OCS-A 0544. For the COP-level NEPA stage, additional analysis and KOPs will be considered.
BOEM-2024-0001-0471-0049	Agency: NPS Commenter: NPS Section Title: Scenic and Visual Resources Section #: 3.6.9 The potential cumulative impacts of all 6 areas within the Bight being developed seems significant, even with mitigation measures. Do they have a procedure for addressing cumulative effects, as individual development plans are proposed and, especially, if approved?	Cumulative impacts are analyzed for each alternative in Chapter 3.6.9 and in Appendix H.4. Table 3.6.9-27 and 3.6.9-28 show the additive changes as other leases areas are constructed for each NY Bight WTG height. To consider the six NY Bight projects from a cumulative perspective for Alternative B, please see Section 3.6.9.4.2, Impact of Six Projects. Because the NY Bight leases are far from shore (the closest distance is 20 nautical miles [37 kilometers] and the average distance is 32 nautical miles [59 kilometers]), their individual and collective visibility is greatly reduced. See Table 3.6.9-16, Magnitude of View Summary.

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BOEM-2024-0001-0471-0050	<p>Agency: NPS Commenter: NPS Section Title: Scenic and Visual Resources Section #: 3.6.9</p> <p>Please provide an ADLS efficacy analysis so that the impact from the flashing red lights can be quantified for the cases with and without ADLS.</p>	<p>Thank you for your comment. An efficacy analysis on an ADLS was not completed specifically for the programmatic evaluation of NY Bight. Nighttime visual impact is based on visual simulations and analysis of ADLS effectiveness conducted for Atlantic Shores South and Empire Wind (See Section 3.6.9.5, Impacts of Alternative C – Lighting). Impacts are based on 2018–2019 air traffic over the nearby Atlantic Shores South (OCS-A 0499) and Empire Wind (OCS-A 0512) lease areas, which are representative of New Jersey and New York, respectively, and hours of sunlight and darkness. The Atlantic Shores South (OCS-A 0499) ADLS-controlled obstruction lights would be activated for 9 hours over a 1-year period, 1 percent of the normal operating time that would occur without ADLS (Atlantic Shores 2022). The Empire Wind (OCS-A 0512) ADLS-controlled obstruction lights would be activated for 357 hours, 46 minutes, and 45 seconds over a 1-year period, 7.5 percent of the normal operating time that would occur without ADLS (Equinor 2022). A single NY Bight project is estimated to have similar or fewer shorter-duration synchronized flashing of ADLS, as compared to the standard continuous, medium-intensity red strobe U.S. Department of Transportation Federal Aviation Administration (FAA) warning system. The ADLS aviation hazard lighting would be in use for the duration of operations and maintenance (O&amp;M) of any of the NY Bight projects. VIS-7 would establish monitoring requirements for ADLS to determine the frequency of use and effectiveness of the ADLS system. The potential visibility of aviation lights is documented in Table H-42 and H-43 at Key Observation Points for each lease area and for each WTG height. In addition, the photo simulations available on the BOEM website (<a href="https://www.boem.gov/renewable-energy/state-activities/new-york-bight">https://www.boem.gov/renewable-energy/state-activities/new-york-bight</a>) quantify the number of WTG hubs (where the aviation light is located) visible for each KOP by lease area. An analysis of lighting effects will be conducted at the project-level NEPA stage and would include an analysis of ADLS lighting, if such lighting is part of the COP.</p>

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BOEM-2024-0001-0471-0051	Agency: NPS Commenter: NPS Viewshed impacts to FIIS Visual impacts were identified from the Fire Island Lighthouse and it is also stated that the structures would be visible from Watch Hill. This means that there will also be viewshed impacts to the Carrington Estate (NHPA listed) and the Fire Island Otis Pike wilderness area. BOEM is encouraged to use the visual impact analysis for Fire Island from Empire Wind 1 and 2 for the NY Bight Draft Programmatic EIS and to incorporate this analysis into an updated impact analysis for NHPA-listed properties.	Please see response to comment BOEM-2024-0001-0466-0011. At this programmatic stage, BOEM is not making any findings of effect on historic properties, including Fire Island Lighthouse. Findings of effect will occur during COP-level NEPA and NHPA Section 106 review.
BOEM-2024-0001-0471-0052	Agency: NPS Commenter: NPS Onshore cable impacts onshore cable locations are not discussed in this document. Given the potential impact that these connected onshore activities could have, we request that any landfall connections and related activities be explicitly excluded from NPS administered lands and existing or proposed designated wilderness areas to preserve the integrity of these protected lands and the purposes of the parks.	Thank you for the comment. Landfall locations for cables will be addressed in project-specific NEPA EIS documents. The PEIS does not have these locations to evaluate them.
BOEM-2024-0001-0471-0053	App D Planned Activities Agency: NPS Commenter: NPS Section #: D.2.9 Page #: D-14 Given the anticipated take of marine mammals resulting from implementation of the proposed action, the NPS and BOEM would need to establish an agreement or understanding to coordinate marine mammal stranding response activities (e.g., biological sample collection, euthanization, carcass burial, Tribal government consultations, cost recovery) that may occur on NPS lands and waters.	BOEM encourages NPS to reach out directly to the National Marine Fisheries Service (NMFS) regarding marine mammal stranding response on NPS properties. BOEM proposed activities are not anticipated to result in any stranding of marine mammals.
BOEM-2024-0001-0471-0054	App G Mitigation and Monitoring Agency: NPS Commenter: NPS Section #: 1 Page #: G-1 The assemblage of AMMMs presented is diverse, comprising at least four distinct categories: 1. Within a Federal agency's statutory and regulatory authority; 2. Mitigations required under NHPA Section 106; 3. Enforceable under state permitting requirements; 4. Voluntary. This paragraph explains that at some future time, BOEM may determine that any or all AMMMs might not be included in leases if a COP-analysis finds that implementation of such measure is not warranted or effective. Thus, it becomes very difficult (if not	BOEM has reviewed and considered public comments on AMMM measures and revised the measures as presented in Appendix G. In an effort to create a more efficient process, the PEIS analyzes AMMM measures that are commonly applied through the COP NEPA stage process. The Final PEIS would signal to lessees which AMMM measures would apply to one or more of the NY Bight projects. Refer to response to comment BOEM-2024-0001-0406-0004 regarding the revision of the purpose and need in the Final PEIS.

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	impossible) to understand how analysis of these AMMMs as part of Alternative C is meaningfully different from Alternative B.	
BOEM-2024-0001-0471-0055	Agency: NPS Commenter: NPS Section #: 3 Page #: G-1 How are the "Previously Applied as a COP Term and Condition" AMMMs relevant to the current PDEIS and/or leases issued for the NY Bight? These are terms and conditions of leases beyond the scope of this PDEIS, and the basis for their inclusion in any other BOEM-issued leases or relevance to any current/future leases in the NY Bight is not obvious or explained. Are these the lease stipulations (section 6 of <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/ATLW-8-NY-Bight-Final-Lease-Sale-Decision-Memorandum.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/ATLW-8-NY-Bight-Final-Lease-Sale-Decision-Memorandum.pdf</a> )? If so, they should be used to provide the foundation upon which the No Action Alternative is developed.	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012.
BOEM-2024-0001-0471-0056	Agency: NPS Commenter: NPS Section #: 4 Page #: G-1 Line #: 3 What monitoring duration would be required to determine that any single AMMM could or should be excluded from the AMMMs as not warranted or ineffective, and therefore excluded from COP-specific NEPA analysis? How would potentially lengthy transient dynamics be considered in the decisionmaking process of determining which AMMMs are deemed unwarranted or ineffective? What qualitative and quantitative thresholds, or metrics, would be used to conclude any particular AMMM would be unwarranted or ineffective?	In an effort to create a more efficient process, the PEIS analyzes AMMM measures that are commonly applied through the COP NEPA process. The Final PEIS would signal to lessees which AMMM measures would apply to one or more of the NY Bight projects. Refer to response to comment BOEM-2024-0001-0406-0004 regarding the revision of the purpose and need in the Final PEIS.
BOEM-2024-0001-0471-0057	Agency: NPS Commenter: NPS Page #: G-3 Line #: BB-3 Listed mitigation does not include painting one rotor black to enhance rotor visibility to birds, which has been shown to decrease collisions by 70%. May, Roel, T. Nygard T, U. Falkdalen, J. Astrom, O. Hamre, and B. G. Stokke. 2020. Paint it black; Efficacy of increased wind turbine rotor blade visibility to reduce avian fatalities. Ecology and Evolution. 10; 89278935	Thank you for the suggestion. The recent study (May et al 2020) found that painting a single blade black reduced eagle mortality at a land-based wind farm in Europe. Although promising, the study was small and needs to be replicated. Approximately a year ago, a similar study ( <a href="https://rewi.org/2024/01/24/painted-blade-study/">https://rewi.org/2024/01/24/painted-blade-study/</a> ) was started in the United States that BOEM will continue to monitor through the COP NEPA stage.
BOEM-2024-0001-0471-0058	Agency: NPS Commenter: NPS Page #: G-35 Line #: VIS-7 For work with potential impacts on NPS lands and waters, project shall comply with NPS and park lighting guidelines to reduce impacts to the night sky and wildlife. This will include, but is not limited to, energy efficient light sources in warm color hue such as amber or	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0466-0036.

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	yellow (2700K or warmer); shielding to direct light downward; lowest lumens possible; and fixtures with adaptive technology controls such as timers, motion detectors, hue adapters, and dimmers.	
BOEM-2024-0001-0471-0059	Agency: NPS Commenter: NPS How would new AMMMs be incorporated programmatically to the NY Bight leases?	As noted in Section 1.3, <i>Purpose and Need for the Proposed Action</i> , BOEM is evaluating as part of the PEIS AMMM measures that BOEM may require as conditions of approval for activities proposed by lessees in COPs submitted for the NY Bight lease areas. Refer to response to comment BOEM-2024-0001-0406-0004 regarding the revision of the purpose and need in the Final PEIS.
BOEM-2024-0001-0471-0060	AppH SLVIA Agency: NPS Commenter: NPS Section Title: Visual Impact Assessment Section #: H.3.2.1 Page #: H-78 Figure/Table #: H-33 The Sandy Hook Light is missing from the table. Please add. Agency: NPS Commenter: NPS Section Title: Magnitude Section #: H.3.2.2 Page #: H-80-81 Figure/Table #: H-34 and H-35 The Sandy Hook Light is missing from the table. Please add.	Forty KOPs were initially identified for analysis during scoping. Following the analysis, eight of these KOPs appeared outside of the affected viewshed and have been removed from the impact analysis. KOP-20 Sandy Hook Beach and KOP-34 Sandy Hook Observatory were two of the eight removed.
BOEM-2024-0001-0471-0061	Appl NHPA Summary Agency: NPS Commenter: NPS Section Title: NY Bright Programmatic Visual Impact Analysis Key Observation Points Section #: I.2.4.1 Page #: I-18 Figure/Table #: Table I-4 KOP No. 20 Sandy Hook Lighthouse NHL needs a simulation both during clear and cloudy days and nights.	The visual simulations presented in the Programmatic Visual Impact Analysis are examples and are not fully representative of all affected resources. Individual COP-level analysis will provide additional visual assessments, which may include daytime and nighttime simulations.
BOEM-2024-0001-0471-0062	Agency: NPS Commenter: NPS Section Title: Background Section #: I.1.1 Page #: I-1 Baseline data is information often employed to compare other data acquired afterward. It serves as a foundation of projects. Since "BOEM will not have the results of archaeological surveys prior to the issuance of leases or grants and, as such, will be conducting historic property identification and evaluation efforts in phases" the information gathered is unlikely to serve as a true baseline.	Appendix I, Section I.1.1 states that the current programmatic review of the six New York Bight leases "seeks to compile baseline information, where feasible," which does not indicate the intention to compile a comprehensive and final baseline as that is not feasible at this programmatic stage.
BOEM-2024-0001-0471-0063	Agency: NPS Commenter: NPS Section Title: Programmatic Area of Potential Effect Section #: I.1.3 Page #: I-4	Thank you for this comment, but it is not clear which part of the text is of concern. As a result, no changes were made.

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	National Criteria for Evaluation as described by the National Register of Historic Places should prevail when lessees complete the requisite cultural resource technical studies.	
BOEM-2024-0001-0471-0064	Agency: NPS Commenter: NPS Section Title: Marine Portion of the Programmatic APE Section #: I.1.3.1 Page #: I-7 Basing adverse effects on typical hypothetical activities cannot accurately reflect impacts.	Thank you for this comment, but BOEM does not intend to identify any specific impacts through this programmatic evaluation, as this evaluation does not yet include individual COPs. Developers of individual leases will be required to thoroughly propose processes, locations, schedules, and other pertinent data, and BOEM will assess the impacts of project activities at that time.
BOEM-2024-0001-0471-0065	Agency: NPS Commenter: NPS Section Title: Terrestrial Portion of Programmatic APE Section #: I.1.3.2 Page #: I-7 The terrestrial portion discussion fails to account for impacts other than ground disturbing activities, whereas elsewhere mitigations are discussed for "screening" of above ground components. Please resolve this issue in the document.	The Terrestrial APE only considers terrestrial ground disturbance with the potential to disturb archaeological historic properties. It is unclear from this comment how "screening" aboveground resources is relevant to protecting archaeological historic properties; therefore, no changes were made.
BOEM-2024-0001-0471-0066	Agency: NPS Commenter: NPS Section Title: Historic Aboveground Resources Section #: I.3.4 Page #: I-15 Under point no. 2 please make edits to "views and vistas" to more precisely define the differences between these two features.	Appendix I Section I.3.4 was revised to remove the word "vistas."
BOEM-2024-0001-0471-0067	Agency: NPS Commenter: NPS Section Title: Historic Aboveground Resources Section #: I.3.4 Page #: I-15 Under no. 5 add design to the aspects of integrity that could be impacted since a "vista" is a deliberate and controlled via design elements.	Please refer to the response to comment BOEM-2024-0001-0471-0066.
BOEM-2024-0001-0471-0068	Agency: NPS Commenter: NPS Section Title: NY Bright Programmatic Visual Impact Analysis Key Observation Points Section #: I.3.4.1 Page #: I-18 Figure/Table #: I-4 The correct name of the NHL is the "Sandy Hook Light". Please make this correction.	Thank you for this comment. The name for Sandy Hook Light was revised.
BOEM-2024-0001-0471-0069	Agency: NPS Commenter: NPS Please include Sandy Hook Proving Ground NHL district.	Thank you for this comment. Sandy Hook Proving Ground Historic District is noted to be a National Historic Landmark (NHL); however, Table I-4 only includes NHLs that are also KOPs. At this time, Sandy Hook Proving Ground Historic District is not a KOP due to the close proximity of Sandy Hook Light, which is a KOP.

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BOEM-2024-0001-0471-0070	<p>App K References</p> <p>Agency: NPS Commenter: NPS Page #: K-1</p> <p>BOEM 2019 hyperlink  <a href="https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/IPFs-in-the-Offshore-Wind-Cumulative-Impacts-Scenario-on-the-N-OCS.pdf">https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/IPFs-in-the-Offshore-Wind-Cumulative-Impacts-Scenario-on-the-N-OCS.pdf</a>.) did not function properly because the period at the end of the URL was included.</p>	Hyperlink for BOEM 2019 citation on page K-1 has been revised.

**Table P.4-2. Responses to Comments from the National Park Service (BOEM-2024-0001-0466)**

Comment No.	Comment	Response
BOEM-2024-0001-0466-0001	<p>[Bold: Comments] We are concerned that the DPEIS may be fatally flawed because it does not provide a range of reasonable alternatives. Alternative A (No Action Alternative) does not align with existing condition characterized in the EIS for the lease issuance decision. Alternative B does not characterize the minimum legally required AMMMs for leasing and construction of wind farms in the NY Bight and Alternative C is not noticeably different in impacts (when compared to Alternative B) so basis for selection of that alternative as proposed action is unclear. More specific comments are provided on the DPEIS tab of the excel file. If the DPEIS alternatives are flawed then tiered compliance would also be flawed. In addition, if the DPEIS is flawed NPS would not be able to adopt BOEM compliance if authorization of project elements on NPS lands is necessary. Related to the above paragraph and detailed in our comments in the spreadsheet the DPEIS is not well grounded in law and does not identify minimal legal requirements.</p>	<p>The analysis in the PEIS is not flawed. The No Action Alternative presents the potential impacts associated with ongoing and future activities absent the development of offshore wind in the NY Bight lease area. This has been updated to reflect the most current information going into the Final PEIS. BOEM has provided additional clarification on the purpose of Alternative B (see PEIS Chapter 2). Alternative B serves to compare how impacts would change with AMMM measures analyzed in Alternative C.</p> <p>Alternative B considers the potential impacts of future offshore wind development for the NY Bight area without the AMMM measures identified in Appendix G, <i>Mitigation and Monitoring</i>, that could avoid, minimize, mitigate, and monitor those impacts. However, the analysis in Alternative B assumes that development of the NY Bight projects would be required to comply with federal and international requirements. The PEIS will not result in the approval of any activities. As detailed in the PEIS, Alternative C may or may not be noticeably different than Alternative B. Depending on the specific IPF and the resource analyzed, there can be notable differences that can change the impact determination for an IPF under Alternative C (see Lighting IPF in PEIS Section 3.5.3, <i>Birds</i>, under Alternative B and Sub-alternative C1).</p>

Comment No.	Comment	Response
		Regarding the potential effects on National Park Service Lands and adopting BOEM compliance, because details on locations of onshore project components are not known for this programmatic environmental review, details on resource impacts, including any on National Park Service lands, are also not known in detail. These specific impact details would be assessed in project-specific COP NEPA documents for NY Bight lease areas that might be developed in the future. The AMMM measures in Alternative C are considered programmatic insofar as they may be applied to COPS for the six NY Bight lease areas, not because they necessarily will apply to COPS under BOEM's renewable energy program outside of the NY Bight lease areas. BOEM has modified the PEIS language describing the Proposed Action and refined language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not establishing a presumption at COP review that a lessee would need to rebut—but is identifying those AMMMs that BOEM may impose at the COP NEPA stage. By identifying and analyzing those AMMMs now, the expectation is that the analysis at the COP NEPA stage can be more streamlined and efficient.
BOEM-2024-0001-0466-0002	Given the potential impact that these connected onshore activities could have we request that any landfall connections and related activities be explicitly excluded from NPS administered lands and existing or proposed designated wilderness areas to preserve the integrity of these protected lands and the purposes of the parks.	Comment noted. Specific landfall connections will be determined at the COP NEPA stage and can be further discussed at that time.
BOEM-2024-0001-0466-0003	Visual impacts were identified from the Fire Island Lighthouse and it is also stated that the structures would be visible from Watch Hill. This means that there will also be viewshed impacts to the Carrington Estate (NHPA listed) and the Fire Island Otis Pike wilderness area. BOEM is encouraged to use the visual impact analysis for Fire Island from Empire Wind 1 and 2 for the NY Bight DPEIS and to incorporate this analysis into an updated impact analysis for NHPA-listed properties.	Thank you for your comment. For the COP-level NEPA stage, additional analysis will be considered. Visual impacts from the Carrington House can be correlated to KOP-37 Point O'Woods, which is approximately 2.88 miles southwest. At this programmatic stage, BOEM is not making any findings of effect on historic properties, including Fire Island Lighthouse. Findings of effect will occur during COP-level NEPA and NHPA Section 106 review.
BOEM-2024-0001-0466-0004	As requested in our previous letters Fire Island National Seashore and Gateway National Recreation Area should be identified on all the	Thank you for this suggestion, but BOEM does not intend to identify any specific historic properties through this programmatic

Comment No.	Comment	Response
	maps that show the NY Bight. The boundary of each park unit and its various districts should be outlined and labeled including boundaries as they extend into ocean and bayside waters. We also request that point locations are included for all National Historic Landmark (NHL) locations. We can assist in providing location data to fulfill this request.	evaluation. Developers of individual leases will be required to undertake comprehensive identification of historic properties within the marine, terrestrial, and visual APEs, and BOEM will assess the effects of each project on those identified historic properties during the COP-level reviews.
BOEM-2024-0001-0466-0005	[Bold: NPS Units and Program Lands in the NY Bight] NPS manages two National Parks in the NY Bight Fire Island National Seashore and Gateway National Recreation Area and has program responsibilities for numerous National Historic Landmarks (NHLs) in the NY Bight identified pursuant to the National Historic Preservation Act of 1966 (NHPA) (54 U.S.C. 300101 et seq.). NPS has provided information on each of these areas below to satisfy BOEM's request for information on the topics listed in the NOI including a) biological resources including bats birds coastal fauna finfish invertebrates essential fish habitat marine mammals and sea turtles; b) physical resources and conditions; and c) socioeconomic and cultural resources including land use and coastal infrastructure recreation and tourism and scenic and visual resources as applicable and would like this information added where appropriate to the DPEIS.	Thank you for your comment. BOEM recognizes that there are numerous recreation areas and historic landmarks throughout the geographic analysis area for this PEIS, too many to name and characterize them all. For this PEIS, BOEM did not list and assess each one individually to the level of detail as will be required in a project-specific COP NEPA analysis. At that stage, additional project specifics (e.g., locations, size, timing) will be known that will enable that level of analysis for each of the six NY Bight lease areas.
BOEM-2024-0001-0466-0006	[Bold: Overview of Fire Island National Seashore] Fire Island National Seashore (the Seashore) lies along the south shore of Long Island in Suffolk County New York. The Seashore encompasses 19580 acres of upland tidal and submerged lands along a 26- mile stretch of the 32-mile barrier island part of a much larger system of barrier islands and bluffs stretching from New York City to the very eastern end of Long Island at Montauk Point. Easily accessed on Fire Island are nearly 1400 acres of federally designated Wilderness (The Otis Pike Fire Island High Dune Wilderness) that include an extensive dune system centuries-old maritime forests and solitary beaches. On the western end of the Seashore is the Fire Island Lighthouse. Nearby on Long Island adjacent to the Village of Mastic Beach the 613-acre William Floyd Estate preserves more than 250 years of history. The park maintains the historic house cultural landscape and archival collection that includes items pertaining to both the estate and the Seashore.	Refer to response to comment BOEM-2024-0001-0466-0005.

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	<p>Approximately 60 miles away from densely populated New York City lies the Fire Island Wilderness a landscape of wind-swept dunes and dynamic waves. The Fire Island Wilderness has been afforded the highest level of protection by Congress under the Wilderness Act of 1964 (16 U.S.C. 1131 et seq.) in order to preserve its unique and ever-changing ecosystems. In the Fire Island Wilderness forces of nature are allowed to take their course creating a refuge for wildlife and people alike. Interspersed among the federal lands within the Seashore on Fire Island are 17 residential communities that predate the Seashore's authorization. Resort development on Fire Island began as early as 1855 and a number of the island's communities were established prior to the 1930s. The Seashore's enabling legislation includes provisions for private land to be retained and developed if zoning requirements are met. No hard-surfaced roads connect the communities either to each other or to the mainland of Long Island. Communities are accessible mainly by passenger ferry or private boat. Vehicle use is restricted within the boundary of the Seashore. Without paved roads and with limited traffic the communities have retained much of their original character. Some of the communities have hotels or facilities for overnight guests while others are strictly residential. There are approximately 4200 developed properties on Fire Island with approximately 300 residents living on the island year-round. The number of year-round residents has slowly and steadily declined in recent years. Vehicle access is limited for year-round residents contractors and other service providers (telephone fuel garbage etc.) because all vehicles crossing federal lands must have a National Park Service driving permit. The population of Fire Island swells to approximately 30000 during the summer season with a total of two to three million visitors each year. In 2016 recreational visitation to sites and facilities owned or managed by the Seashore was 389075. The primary visitor facilities on Fire Island are the Fire Island Lighthouse Sailors Haven Watch Hill Talisman and the Wilderness Visitor Center. Fire Island Lighthouse is maintained and operated by the Fire Island Lighthouse Preservation Society an NPS cooperating association that offers tours and other visitor programming. Concessioners operate the marina at Sailors</p>	

Comment No.	Comment	Response
	<p>Haven as well as the marina and campground at Watch Hill. The Seashore offers lifeguard- protected swimming areas at Sailors Haven Talisman/Barrett Beach and Watch Hill. Also on Fire Island are ranger stations visitor contact facilities maintenance facilities and several units of park housing. At either end of Fire Island are major state and county beaches that receive sizable visitation and are accessible by vehicle. On Long Island the Seashore's headquarters are in Patchogue and include administrative offices a maintenance facility and a ferry terminal. The William Floyd Estate in Mastic includes the Old Mastic House several outbuildings and structures a cemetery curatorial storage facility preservation and maintenance shop and other natural and cultural resources.</p>	
BOEM-2024-0001-0466-0007	<p>[Bold: Wildlife at Fire Island National Seashore] Habitats within the Fire Island National Seashore are important refuge for a wide variety of migratory and resident birds. A total of 333 avian species have been observed within the Seashore; 67 have been documented to breed within the Seashore (Mitra and Putnam 1999 Trocki 2008). The Seashore is within the Atlantic Flyway a major North American migratory bird route that spans the northern habitats of the Arctic islands coastal Greenland and Canada to as far south as Jamaica and South America (Bird and Nature 2009). The Seashore provides a resting and feeding area for migratory birds traveling this route. Migrating and wintering birds of prey also are inhabitants of Fire Island National Seashore. The northern harrier (<i>Circus cyaneus</i>) and American osprey (<i>Pandion haliaetus</i>) may use marsh habitats on the island for nesting while short-eared owls (<i>Asio flammeus</i>) long-eared owls (<i>Asio otus</i>) and snowy owls (<i>Nyctea scandiaca</i>) are occasional winter inhabitants. Other birds of prey using the park may include the red-tailed hawk (<i>Buteo jamaicensis</i>) and the bald eagle (<i>Haliaeetus leucocephalus</i>) (Trocki 2008). Fire Island is one of the best-known hawk migration areas on the Eastern seaboard. Peregrine falcons (<i>Falco peregrinus</i>) merlins (<i>Falco coumbarius</i>) Cooper's hawks (<i>Accipiter cooperii</i>) sharpshinned hawks (<i>Accipiter striatus</i>) harriers (<i>Circus spp.</i>) and short-eared owls (<i>Asio flammeus</i>) also winter on Fire Island.</p>	<p>BOEM appreciates the NPS submitting detailed information for Fire Island National Seashore, which is within the birds geographic analysis area. Given that the onshore project components are generally unknown in this programmatic level analysis, BOEM intends to use this detailed information in any future COP-specific NEPA document developed for the NY Bight lease areas, as appropriate.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0466-0008	Nineteen species of marine mammals have been recorded within the boundaries of the Seashore. Identified species include whales porpoises dolphins and seals. The harbor seal ( <i>Phoca vitulina</i> ) is a regular winter visitor at both the Fire Island and Moriches Inlets. Three species of endangered whales have been reported in the waters offshore of Fire Island: fin whale ( <i>Balaenoptera physalus</i> ) humpback whale ( <i>Megaptera novaeangliae</i> ) and northern right whale ( <i>Eubalaena glacialis</i> ) (Trocki 2008).	This information has been incorporated into Section 3.5.6.1.
BOEM-2024-0001-0466-0009	Fire Island National Seashore is used by an array of special-status species including migratory birds butterflies (migratory Monarch Butterflies) and bats including the federally listed Northern Long-Eared Bat [Italics: <i>Myotis septentrionalis</i> ].	A sentence has been added to Section 3.5.4.1.1 highlighting Fire Island National Seashore.
BOEM-2024-0001-0466-0010	Federal- and state-listed species include the Piping Plover ( <i>Charadrius melodus</i> ) the roseate tern ( <i>Sterna dougallii</i> ) the least tern ( <i>Sterna antillarum</i> ) and the common tern ( <i>Sterna hirundo</i> ). All four are shorebirds that rely on maritime beach and dunes for nesting between March and July. Birds have been found to nest at differing locations from year to year but the Fire Island Wilderness and several of the bay islands appear to be the most popular nesting sites.	Refer to response to comment BOEM-2024-0001-0466-0007.
BOEM-2024-0001-0466-0011	[Bold: Visual Impacts at Fire Island] Visual impact assessments have been done in and around Fire Island for the Empire Wind 1 and 2 Projects. With this DPEIS there is an opportunity to provide a more comprehensive assessment of the cumulative visual impacts from development of the newly leased areas and Empire Wind. NPS recommends the following locations be included as Key Observation Points (KOPs) at the Seashore for this new analysis. Fire Island National Seashore: -Otis Pike Fire Island High Dune Wilderness: views to the southwest from the eastern and western areas of the Wilderness-Watch Hill: view from the ocean overlook-Sailors Haven: view from the ocean overlook-Fire Island Lighthouse Keepers Quarters: view from the Terrace area-Fire Island Lighthouse: view from the top of the lighthouse	Thank you for your comment. Several KOPs were selected for analysis within Fire Island National Seashore. Sailors Haven is approximately 1.4 miles northeast of KOP 37 Point O' Woods, and the Fire Island Lighthouse has two KOPs: KOP-32 Fire Island Lighthouse-top and KOP-33 Fire Island Lighthouse- bottom. Otis Peak High Dune Wilderness and Watch Hill are approximately 8 miles from KOP-37, which can be used as a proxy KOP for these locations. For the COP-level NEPA stage, additional analysis and KOPs will be considered.
BOEM-2024-0001-0466-0012	In regard to the Otis Pike Fire Island High Dune Wilderness protecting "wilderness character" is the bedrock of protecting Wilderness under	Thank you for your comment. The following paragraph has been added to the PEIS <i>Visual Resources</i> Section 3.6.9.1.1 <i>SLIA Affected</i>

Comment No.	Comment	Response
	<p>the Wilderness Act of 1964 (16 U.S.C. 1131 et seq.). Monitoring and managing wilderness responsibly derives from a framework that uses the five qualities of wilderness character from the legislation: 1. [Underline: Untrammeled]: Wilderness is essentially unhindered and free from modern human control or manipulation.2. [Underline: Natural]: Wilderness maintains ecological systems that are substantially free from the effects of modern civilization.3. [Underline: Undeveloped]: Wilderness retains its primeval character and influence and is essentially without permanent improvements or modern human occupation.4. [Underline: Opportunities for Solitude or Primitive and Unconfined Recreation]: Wilderness provides outstanding opportunities for remoteness from sights and sounds of people and modified areas for self-reliant recreation and freedom from restrictions on visitor behavior.5. [Underline: Other Features of Value]: Wilderness may contain ecological geological or other features of scientific educational scenic or historical value. At Fire Island the night sky looking south from the park's wilderness has always been one of the more stunning and important aspects related to wilderness character and wind turbine generator (WTG) night lighting may have an impact on the Natural Undeveloped Solitude and Other Features wilderness characteristics of the Fire Island wilderness area. Analysis of dark night skies impacts should consider potential impacts under the Wilderness Act. To meet this responsibility and to ensure these unique Wilderness resources are protected necessary information should be gathered for the PEIS to allow NPS to analyze potential impacts to the Wilderness at Fire Island. NPS staff can assist in more detailed discussions on this topic.</p>	<p><i>Environment</i>, to address potential night sky impacts at Fire Island during construction and O&amp;M.</p> <p>Night skies and natural darkness are also components of seascape and landscape character. The numeric Bortel scale measures the night sky's brightness/darkness. Class 1 represents the darkest skies available on Earth, whereas Class 9 is an urban brilliantly lit sky. Dark sky areas along the coast of New England are uncommon because of the dense urban development and associated light domes. However, Fire Island is recognized as being good star-gazing location with Class 4 Bortle rating for "bright suburban" allowing the central galaxy to appear visible only at the zenith and light pollution up to 35° according to the U.S. Light Pollution Map (<a href="http://www.lightpollutionmap.info">www.lightpollutionmap.info</a> n.d.). Although Fire Island has decent stargazing as compared to Long Island and New York City, residents need to travel 100 miles the Catskills to experience Class 3 rating and nearly 200 miles to the Adirondacks to experience Class 2 average dark sky. Morristown NHP is the nearest location where the National Park Service (NPS) is collecting data on night skies brightness and Cape Cod National Seashore the nearest collection point with high-quality night sky viewing. (<a href="https://www.nps.gov/subjects/nightskies/datacollectionsites.htm">https://www.nps.gov/subjects/nightskies/datacollectionsites.htm</a> )</p> <p>The location of the WTGs at the horizon and their associated, red-colored aviation hazard lighting will generally not be in the direction of stargazing and will not create a light dome like those created by urban area lighting.</p>
BOEM-2024-0001-0466-0013	<p>[Bold: Historic Properties at Fire Island National Seashore] Cultural landscapes that may be impacted at Fire Island include the most prominent of the Seashore's historic structures: the Fire Island Lighthouse and the Keepers Quarters which were completed in 1858 and 1859 respectively. These structures are built on a 15-foot-tall bluestone terrace whose materials were salvaged from the original 1825-1826 lighthouse and keeper's house which was demolished to build the current structures on the site. The extant Lighthouse is a 164-foot conical tower constructed of brick with a hyperbolic curved</p>	<p>Thank you for the information about historic properties present at NPS park units. The commenter does not pose a question or raise issues with the environmental analysis. BOEM does not intend to identify specific cultural resources through this programmatic evaluation. BOEM Subject Matter Experts will use the information in this comment and subsequent comments provided by the NPS concerning historic properties present at NPS park units to inform COP-level reviews. Developers of individual leases will be required to thoroughly identify cultural resources, and BOEM will assess the</p>

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	<p>profile and a cylindrical shape near its top. The upper portion features a granite cornice and an iron-railed projecting gallery. Since 1891 the tower has been painted with four alternating black and white bands which were kept in the same configuration when the tower was coated in reinforced concrete in 1912. The Keepers Quarters is a two-story rough-coursed granite building whose roof is a combination of a gable and a hip roof. There are 13 historic buildings or structures within two clusters (the Light Station and the Radio Compass Station) on the Light Station tract. Core buildings and structures for the Light Station cluster include the historic Lighthouse Keepers Quarters Terrace and Boat House (1939). Missing from the Light Station cluster are the coal/oil house wharf storehouse and power generation plant. The Radio Compass Station cluster is primarily comprised of the historic Lighthouse Annex Building (1906). This two-story structure with a hip roof (which has been enlarged twice) was originally built as a one-story dwelling. In addition to the Lighthouse Annex Building there are several contributing buildings and structures including the Lighthouse Annex Garage Tool House Oil House Store House the remains of the wireless station's Engine House and Battery House Foundation and several historic buildings and structures within the Radio Officer's residence. Visible concrete foundations and guy wire remnants mark the site of two large radio towers that were demolished in 1937. Another cultural landscape within the boundary of the Seashore is the Carrington Estate located off the Burma Road on federal lands to the west of the residential community of Fire Island Pines. The estate was the property of Broadway producer Frank Carrington who hosted a number of stage screen and literary celebrities during his period of residence and consists of two structures. The main house was constructed in 1909 by Mr. Carrington's father and was sold to the National Park Service by Mr. Carrington in 1969. The adjoining cottage was originally part of a lifesaving station and was moved near the main house in 1947 for use as a guest house. The property was listed on the National Register of Historic Places in 2014. The boardwalk to the beach at the estate provides views of the sea.</p>	<p>impacts of each project on those resources during the COP-level reviews.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0466-0014	[Bold: Overview of Gateway National Recreation Area] Gateway National Recreation Area (Gateway) brings the National Park Service experience to more than nine million visitors each year. As the fourth most visited unit within the National Park System Gateway preserves a mosaic of coastal ecosystems and natural areas interwoven with historic coastal defense and maritime sites in the New York Metropolitan area. Spanning three New York City boroughs and the northernmost portion of the New Jersey shore Gateway's park lands stand in sharp contrast to the nearby metropolitan area and offer abundant opportunities for residents and visitors to recreate and experience nature and historic settings. The Park covers more than 40 square miles in New York and New Jersey with nearly 27000 acres of land and waters under NPS management. Natural areas; water beaches and coastal views; historic coastal defense and maritime structures; diverse recreation opportunities; and educational and interpretive programming combine to create rich and varied visitor experiences at Gateway. Views of the New York Outer Harbor the oldest operating lighthouse in the United States coastal defense resources at Fort Hancock Fort Tilden and Fort Wadsworth public access to bay and ocean shorelines and darkness and night sky are some of the resources that are fundamental to the park's purpose and significance [NPS Gateway National Recreation Area General Management Plan of 2014 (Gateway GMP 2014)]. Unimpeded views are integral to the visitor experience along the park's 31 miles of ocean beaches dunes and water (Gateway GMP 2014).	Refer to response to comment BOEM-2024-0001-0466-0005.
BOEM-2024-0001-0466-0015	The Fort Hancock and Sandy Hook Proving Ground National Historic Landmark District comprises the entirety of the park's Sandy Hook Unit. Fort Hancock and Sandy Hook Proving Ground was designated a National Historic Landmark in December 1982. The district includes the cantonment area of Fort Hancock numerous batteries and the Proving Ground. Sandy Hook is significant in American History as the site of the Federal Reservation that played dual roles in United States Military History. The Sandy Hook Defenses (Fort Hancock) were the key fortification guarding the approaches to New York Harbor through the Nike Era. While the entire District is a fundamental park resource the Endicott/Taft-era batteries Parade Ground (including	Thank you for the information about historic resources present at NPS park units. The commenter does not pose a question or raise issues with the environmental analysis. See response to comment BOEM-2024-0001-0466-0013 above.

Comment No.	Comment	Response
	Officers' Row barracks and cultural landscape) and Nike Missile Launch and Radar Sites are individually identified as fundamental park resources within the Historic District (Gateway GMP 2014). The majority of the coastal fortifications found in the district face the ocean and/or New York Harbor and this association is important. The Sandy Hook Light was individually designated a National Historic Landmark in January 1964. Constructed in 1764 it is the oldest active lighthouse in the United States that is maintained today as an aid to navigation. The 1894 Spermaceti Cove Life Saving Station No. 2 is also located in the park's Sandy Hook Unit. The Life Saving Station was individually listed in the National Register in November 1981. The station which includes a watchtower and boat room was constructed as one of the earliest federally sponsored efforts to save life and property from shipwrecks.	
BOEM-2024-0001-0466-0016	The Fort Tilden Historic District is a fundamental park resource located in the Jamaica Bay Unit on the Rockaway Peninsula. Fort Tilden was listed in the National Register of Historic Places in April 1984 for its significance as a historic Army base commissioned in 1917 as part of the harbor defenses of New York. The original National Register boundary encompassed only the World War I and World War II gun emplacements and associated structures in the fortification area. In 2009 the Keeper of the National Register expanded the boundary to areas administered by the NPS including the fortification post and wharf areas in their entirety under National Register Criterion A for its significance in military history during the period 1916-1967 and is potentially eligible under Criterion D for archeological resources pending further archaeological study. The DOE found that Fort Tilden met Criterion Consideration G to address the Nike Hercules period and Cold War resources that were not yet 50 years old. Battery Harris Battery Kessler Construction Battery 220 and the Nike Missile Launch Site are individually recognized fundamental park resources within the Historic District (Gateway GMP 2014).	Thank you for the information about historic resources present at NPS park units. The commenter does not pose a question or raise issues with the environmental analysis. See response to comment BOEM-2024-0001-0466-0013 above.
BOEM-2024-0001-0466-0017	The Fort Wadsworth Historic District is a fundamental park resource located on the west side of the entrance to New York Harbor in the Staten Island Unit. The Fort Wadsworth Historic District was listed in	Thank you for the information about historic resources present at NPS park units. The commenter does not pose a question or raise

Comment No.	Comment	Response
	the National Register in July 2022. The former military reservation was established as part of the New York Harbor coastal defense system and contains 61 contributing resources including 33 buildings 17 structures and 13 sites. Included are a variety of defensive fortifications gun batteries and support structures. Battery Weed Fort Tompkins the Endicott-era batteries and the Torpedo-storage Building are individually identified as fundamental resources in the park's General Management Plan (Gateway GMP 2014). The two most significant fortifications in the district are Battery Weed (formerly Fort Richmond with a related sea wall) and Fort Tompkins both associated with the development of the Third System of American coastal defenses between 1847 and 1876. Each are individually listed in the National Register (Battery Weed in 1972 and Fort Tompkins Quadrangle in 1974).	issues with the environmental analysis. See response to comment BOEM-2024-0001-0466-0013 above.
BOEM-2024-0001-0466-0018	The Jacob Riis Park Historic District located in the Jamaica Bay Unit on the Rockaway Peninsula is a significant example of a public park constructed between 1932 and 1937 under the Works Progress Administration federal relief program. Contributing resources include a bathing pavilion and two central mall buildings that were described in the original 1977 nomination and nine other buildings described in the 1985 boundary increase of the district. On average more than 400000 visitors each year enjoy ocean views from the mile-long boardwalk and beach.	Thank you for the information about historic resources present at NPS park units. The commenter does not pose a question or raise issues with the environmental analysis. See response to comment BOEM-2024-0001-0466-0013 above.
BOEM-2024-0001-0466-0019	The Far Rockaway Coast Guard Station Historic District located just east of the Fort Tilden Historic District on the Rockaway Peninsula was determined eligible for the National Register of Historic Places by the New York State Historic Preservation Office (NY SHPO) in August 2004. Built between 1938 and 1945 it is significant for its association with the history of lifesaving services and for its distinctive Colonial Revival institutional architecture. The complex is representative of the architecture associated with the formative years of the modern United States Coast Guard.	Thank you for the information about historic resources present at NPS park units. The commenter does not pose a question or raise issues with the environmental analysis. See response to comment BOEM-2024-0001-0466-0013 above.
BOEM-2024-0001-0466-0020	The Breezy Point Surf Club Historic District and the Silver Gull Beach Club ocean front cabana complexes were determined eligible by the NY SHPO in 2012. The Silver Gull Beach Club Historic District is located	Thank you for the information about historic resources present at NPS park units. The commenter does not pose a question or raise

Comment No.	Comment	Response
	on the Atlantic Ocean shorefront immediately west of Fort Tilden on the Rockaway Peninsula. The district is an oceanfront cabana complex containing a total of 15 contributing (1 site 7 buildings 7 structures) and 10 noncontributing (5 buildings and 5 structures) resources. The Breezy Point Surf Club is an approximately 60-acre cabana complex containing 69 contributing buildings 11 contributing structures and 1 contributing site; most of these were constructed between 1937 and 1962. Both Historic Districts are located on the Rockaway Peninsula facing the Atlantic Ocean and each retains a high degree of integrity in terms of setting design materials workmanship feeling and association.	issues with the environmental analysis. See response to comment BOEM-2024-0001-0466-0013 above.
BOEM-2024-0001-0466-0021	The Miller Army Airfield Historic District was listed in the National Register of Historic Places in April 1980. The District totals about 3 acres on Staten Island and includes the double seaplane hangar apron and ramp and the Elm Tree Light. Miller Field was established in 19191921 as a 180-acre army airfield. Hangar No. 38 constructed in 1920 is important because of its association with early aviation history and the history of air coast defenses of New York. The Elm Tree Light an octagonal concrete beacon tower which stands near Hangar No. 38 was constructed by the Coast Guard in 1939 to replace an earlier tower. The significance of the Elm Tree Light lies in its direct association with the early lighthouse service.	Thank you for the information about historic resources present at NPS park units. The commenter does not pose a question or raise issues with the environmental analysis. See response to comment BOEM-2024-0001-0466-0013 above.
BOEM-2024-0001-0466-0022	The beach experience including access to ocean surf public access to bay and ocean shorelines and water-based activities such as surfing boating fishing and swimming are fundamental park resources (Gateway GMP 2014). In 2022 Gateway had more than 8.7 million visitors. Each year more than two million visitors go to the Sandy Hook Unit. Most of these visitors come to the Unit to enjoy the beaches viewsheds and water-based recreation. Riis Beach is a heavily visited recreational area in the park. The beaches of Breezy Point Fort Tilden Plumb Beach and Great Kills are also important areas for park visitors.	Refer to response to comment BOEM-2024-0001-0466-0005.
BOEM-2024-0001-0466-0023	[Bold: Wildlife at Gateway National Recreation Area] The Jamaica Bay and Sandy Hook Units of Gateway National Recreation Area provide important habitat for birds migrating along the North Atlantic Flyway.	BOEM appreciates the NPS submitting detailed information for Gateway National Recreation Area, which is within the birds geographic analysis area. Given that the onshore project

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	Fresh water wetland and maritime forests provide critical foraging habitat and a resting place on the Atlantic migratory flyway. Three hundred twenty-six (326) species of birds including 62 breeding species have been documented using the habitats of the Jamaica Bay Wildlife Refuge (U.S. Fish and Wildlife Service 1997). Research using nano-tags is being conducted by USFWS and Audubon to identify migratory routes of the federally listed piping plover and other shorebirds within the proposed project area. Offshore of Staten Island lie Hoffman and Swinburne Islands which are important habitat for colonial nesting waterbirds wading birds and seabirds. One hundred forty (140) acres of airfield at Floyd Bennett Field is managed as habitat for grassland birds.	components are generally unknown in this programmatic level analysis, BOEM intends to use this detailed information in any future COP-specific NEPA document developed for the NY Bight lease areas, as appropriate.
BOEM-2024-0001-0466-0024	Migratory bats found at Gateway include little brown myotis ( <i>Myotis lucifugus</i> ) silver-haired bat ( <i>Lasionycteris noctivagans</i> ) red bat ( <i>Lasiurus borealis</i> ) and hoary bat ( <i>Lasiurus cinereus</i> ).	These four bat species are identified as occurring in the bat geographic analysis area (see PEIS Table 3.5.1-1), which includes the Gateway National Recreation Area.
BOEM-2024-0001-0466-0025	Dolphins whales and seals sometimes travel in park-managed waters. Harbor seals are winter visitors to Sandy Hook Great Kills Harbor Hoffman and Swinburne Islands Jamaica Bay and the Rockaway Inlet area and use local docks the jetty at Breezy Point Tip and other locations as haul-out areas. Several marine mammals that use park-managed waters are listed species. These include sei ( <i>Balaenoptera borealis</i> ) blue ( <i>Balaenoptera musculus</i> ) fin ( <i>Balaenoptera physalus</i> ) humpback ( <i>Megaptera novaeangliae</i> ) and northern right whales ( <i>Eubalaena glacialis</i> ) as well as the state-listed harbor porpoise ( <i>Phocoena phocoena</i> ). All of the whale species are both state- and federally listed as endangered. Humpback whales occasionally feed in New York Bay adjacent to the Rockaway Inlet (USFWS 1997c) and sei humpback and sperm whales ( <i>Physeter macrocephalus</i> ) have been noted swimming in Raritan Bay. The endangered humpback whale occasionally feeds in New York Bay adjacent to the inlet and bottlenose dolphins and endangered sperm whales ( <i>Physeter macrocephalus</i> ) have been noted as strandings in the area.	This information has been incorporated into Section 3.5.6.1.
BOEM-2024-0001-0466-0026	The wildlife group for which the park is best known is birds particularly the waterbirds seabirds shorebirds and waterfowl that frequent its estuarine and coastal shorelines. The park is visited	Refer to response to comment BOEM-2024-0001-0466-0023.

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	<p>annually by 34 species of migratory shorebirds (Harrington pers. comm. n.d.). Jamaica Bay for example averages mid-winter ground counts of birds at about 11000 with a peak (during the years from 1980 to 1992) of 36000 (USFWS 1997b). The migratory and mid-winter concentrations of waterfowl in the Raritan/Sandy Hook Bay complex (which includes both Sandy Hook and the park sites on the shore of Staten Island) average over 60000 birds (USFWS 1997c). Breezy Point and Sandy Hook support some of the highest concentrations of beach-nesting birds in the entire New York Bight coastal region including threatened piping plovers and other rare bird species such as least terns black skimmers and common terns. Other nesting waterbirds at Breezy Point include great black-backed gull herring gull and American oystercatcher. The gulls terns and oystercatchers nesting at these park sites feed throughout Rockaway Inlet and Jamaica Bay. Breezy Point and Sandy Hook are also concentration areas for other migratory shorebirds waterfowl and raptors and other landbirds especially during the summer and fall migrations. The raptor banding station at Breezy Point banded 2414 raptors during the period from 1978 to 1987 and sighted 15715 raptors. The most numerous species sighted were American kestrel (<i>Falco sparverius</i>) and sharp-shinned hawk (<i>Accipiter striatus</i>) with a total of 9244 and 4373 birds respectively sighted during that period (USFWS 1997b). Spring hawk counts at Fort Hancock on Sandy Hook average nearly 5000 birds with the same two species dominating (USFWS 1997c). Other species consistently sighted include Cooper's hawk (<i>Accipiter cooperii</i>) northern harrier (<i>Circus cyaneus</i>) osprey (<i>Pandion haliaetus</i>) peregrine falcon (<i>Falco peregrinus</i>) and merlin (<i>Falco columbarius</i>).</p>	
BOEM-2024-0001-0466-0028	<p>Jamaica Bay's islands because they are somewhat isolated from predation support large numbers of colonial-nesting waterbirds as well as a variety of migratory species. At least 326 species of birds have been sighted at Jamaica Bay on its islands and at the wildlife refuge including confirmed breeding by 62 of those species (USFWS 1997b). A mixed-breed heronry on Canarsie Pol includes a variety of nesting waders including glossy ibis great egret snowy egret cattle egret black-crowned night-heron and tricolored heron. Recent</p>	<p>Refer to response to comment BOEM-2024-0001-0466-0023.</p>

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	<p>information from the New York City Audubon (Phillips pers. comm. 2013) indicates herons and egrets also nest at Elder's Point Subway Island and Little Egg and that breeding at Canarsie Pol has declined from predation by raccoons and human disturbance in recent years. Although no wading birds nested here in recent years Canarsie Pol also has nesting by the state-listed threatened common tern as well as by great black-backed gull herring gull and American oystercatcher. Common terns occur on several other islands in the bay including Jo Co Marsh and Silver Hole Marsh with smaller numbers at Duck Creek Marsh East High Meadow Ruffle Bar and Subway Island. An average of about 1000 common terns and a maximum of 1630 common terns nested on the combined seven colonies in Jamaica Bay between 1984 and 1996 (USFWS 1997b). Laughing gulls (<i>Larus atricilla</i>) recolonized Jamaica Bay in 1979; over 99.9 percent of nesting by this species in the state of New York from 1979 to 2007 was associated with the colony at Joco Island in the park. As of 2008 an estimated 1280 nests were active at this site (Washburn Lowney and Gosser 2012). Ospreys also nest in the Jamaica Bay Unit and elsewhere in the Park. Approximately 18 osprey pairs nest in Jamaica Bay 14 pairs at Sandy Hook and 1 pair on Staten Island. Clapper rails (<i>Rallus longirostris</i>) and common moorhens (<i>Gallinula chloropus</i>) nest in the saltmarshes. American oystercatchers nest at several islands in Jamaica Bay; they also have nested along the airport shoreline. A variety of other birds breed on the islands and uplands in the bay including one of only two New York State sites for and the northernmost nesting extent of the boat-tailed grackle (<i>Quiscalus major</i>). Shorebirds known to breed in or around Jamaica Bay include killdeer (<i>Charadrius vociferus</i>) American oystercatcher willet spotted sandpiper (<i>Actitis macularia</i>) upland sandpiper and American woodcock (<i>Scolopax minor</i>). In addition to providing wintering and nesting habitat Jamaica Bay is one of the most important migratory shorebird stopover sites in the New York Bight region especially during fall migration (July to November). The shorebirds use much of the bay during the migration stopovers but tend to focus on the intertidal areas during low tide and move to East and West Ponds on Ruler's Bar Hassock during higher tides. The water in East Pond is artificially lowered after July 1 each year. From</p>	

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	<p>1981 to 1990 there was an average of 27 and a maximum of 36 shorebird species counted at the East and West Ponds in the Jamaica Bay Wildlife Refuge during the fall. The most abundant shorebirds during that period were black-bellied plover (<i>Pluvialis squatarola</i>) semipalmated plover (<i>Charadrius semipalmatus</i>) greater yellowlegs (<i>Tringa melanoleuca</i>) ruddy turnstone (<i>Arenaria interpres</i>) sanderling (<i>Calidris alba</i>) semipalmated sandpiper (<i>Calidris pusilla</i>) least sandpiper (<i>Calidris minutilla</i>) dunlin (<i>Calidris alpina</i>) and short-billed dowitcher (<i>Limnodromus griseus</i>). Jamaica Bay is also important during spring migration (March to June) on the ponds for several of these same species as well as red knot (<i>Calidris canutus</i>). Hunting is prohibited in the park by virtue of its New York City location which may contribute to the high numbers of individual ducks and duck species. In one year-round survey of birds at Jamaica Bay 263000 individuals of 32 species were recorded (USFWS 1997b).</p>	
BOEM-2024-0001-0466-0029	<p>The combination of geographic location and configuration coupled with productive bay wetlands flats and waters in Raritan and Sandy Hook Bays make this another important migratory staging area in the park for many species of waterfowl on the Atlantic Flyway. Peak migration occurs in late October but November aerial counts in New Jersey waters still average nearly 45000 birds (USFWS 1997c). The number of horned grebes (<i>Podiceps auritus</i>) as well as common and red-throated loons (<i>Gavia immer</i> <i>G. stellata</i>) during migration is regionally significant. Especially notable are the overwintering scaup concentrations primarily greater scaup which have increased in this area recently and are an important component of the Atlantic Flyway population. Other significant species populations include Canada geese in the Raritan River and the Navesink system American black ducks canvasbacks (<i>Aythya valisineria</i>) mallards (<i>Anas platyrhynchos</i>) and brant along with lesser numbers of bufflehead oldsquaw (<i>Clangula hyemalis</i>) mergansers (primarily red-breasted mergansers [<i>Mergus serrator</i>]) common goldeneye (<i>Bucephala clangula</i>) and American wigeons (<i>Anas americana</i>). These waterfowl are not evenly distributed but rather tend to concentrate along the southern Raritan Bay and Staten Island shorelines where moderate-sized flocks of scaup and American black ducks and smaller groups of brant occur.</p>	Refer to response to comment BOEM-2024-0001-0466-0023.

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	Shrublands and woodlands can offer important feeding or resting habitat for songbirds (or "passerines") in the park such as sparrows warblers and other perching species. As noted above grasslands at Fort Hancock on Sandy Hook and open areas at Breezy Point support very large spring raptor migrations as well.	
BOEM-2024-0001-0466-0030	Grasslands at Floyd Bennett Field became habitat for certain open-country bird species after the airfield was decommissioned in 1950 and stayed that way until the last few decades when open areas began to transition into shrub and forest. In 1985 a portion of Floyd Bennett Field was cleared and mowed to create grasslands; about 140 acres are still maintained using these techniques. This area is unique in that it is a large grassland in the urban area of New York City supporting feeding and resting grassland species that are not seen elsewhere in the city. In addition several birds have or now use this habitat for nesting including grasshopper sparrow ( <i>Ammodramus savannarum</i> ) horned lark ( <i>Eremophila alpestris</i> ) eastern meadowlark ( <i>Sturnella magna</i> ) upland sandpiper savannah sparrow ( <i>Passerculus sandwichensis</i> ) northern harrier American kestrel and common barn owl ( <i>Tyto alba</i> ). Use of this area by grasshopper sparrows (a state-listed species) increased significantly in average abundance between 1984 and 1992. Since 1996 however there have been no grasshopper sparrows nesting at Floyd Bennett Field. Overwintering grassland birds at Floyd Bennett Field include northern harrier roughlegged hawk ( <i>Buteo lagopus</i> ) American kestrel common barn owl short-eared owl ( <i>Asio flammeus</i> ) horned lark eastern meadowlark and savannah sparrow. The bobolink ( <i>Dolichonyx oryzivorus</i> ) is a regular migrant visitor in the grasslands. Grassland birds especially upland sandpipers also use the grassland habitat along the runways at John F. Kennedy International Airport (USFWS 1997b). The combination of geographic location and configuration coupled with productive bay wetlands flats and waters in Raritan and Sandy Hook Bays make this another important migratory staging area in the park for many species of waterfowl on the Atlantic Flyway.	Refer to response to comment BOEM-2024-0001-0466-0023.
BOEM-2024-0001-0466-0031	[Bold: Visual Impacts at Gateway] The Gateway General Management Plan (GMP) of 2014 identifies views of the New York Harbor as a	Thank you for your comment. Five KOPs within the Gateway National Recreation Area were studied in the PEIS: KOP-26 Fort

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	<p>fundamental park resource. The PEIS should evaluate the maximum cumulative impacts of the new leasing areas and the Empire Wind Projects on the uninterrupted sea view from the seven ocean-front historic districts and 31 miles of ocean beaches dunes and water. NPS recommends the following locations be included as Key Observation Points (KOPs). Gateway National Recreation Area: -Sandy Hook Light: View from the top of the lighthouse looking southeast.-Sandy Hook beaches: View from B beach cross-over looking southeast.-Sandy Hook Observation Deck at Lot M: View from top of observation deck looking southeast.-Riis Park boardwalk: View from boardwalk in front of bathhouse looking southeast.-Battery Harris Fort Tilden: View from viewing platform looking southeast.-Fort Wadsworth: View from overlook looking southeast. NPS staff can assist in providing access to these areas.</p>	<p>Tilden/Jacob Riis Park (nighttime simulation available here: <a href="https://www.boem.gov/renewable-energy/state-activities/new-york-bight">https://www.boem.gov/renewable-energy/state-activities/new-york-bight</a> ), KOP-21 Great Kills, KOP-22 Roosevelt Pier, KOP-20 Sand Hook Beach, and KOP-34 Sandy Hook Observatory. It was determined that the NY Bight projects were not visible from the Staten Island Unit of the Gateway National Recreation Area; therefore, these KOPs were not included in the EIS analysis. The turbine blade tips of OCS-A 0544 are potentially visible from the Jamaica Bay Unit and the Sandy Hook Unit. KOP-20 Sandy Hook Beach and KOP-34 Sandy Hook Observatory were removed from the study because the project team was denied access to the outside viewing of the Sandy Hook Lighthouse to collect data and photography due to safety concerns. GIS viewshed analysis also determined that the NY Bight projects would have extremely low visibility from Sandy Hook. However, there are comparable views from other KOPs that were included in the analysis. Views from Sandy Hook Beach B (approximately 43.0 miles from OCS-A 0544) can be compared to KOP-19 Navasink Twin Lights Base and KOP-35 Twin Lights Light House, which, although 0.5 mile inland, has a 203-foot elevated view, creating similar viewing conditions with earth curvature. A visual simulation was created for KOP-35. The Gateway National Recreation Area does fall into cumulative impacts from the Empire Wind lease area OCS-A 0512, and KOP-26 Fort Tilden and KOP-35 Twin Lights Lighthouse are both analyzed for maximum cumulative impacts. For the COP-level NEPA stage, additional analysis and KOPs will be considered.</p>
BOEM-2024-0001-0466-0032	<p>[Bold: Historic Properties at Gateway National Recreation Area]Gateway possesses more than 800 historic buildings structures landscapes and archeological sites with hundreds of additional individual features that contribute to the character of these special places. Structures dedicated to ship navigation and lifesaving are well represented in the maritime cultural record of the area. The Sandy Hook Light a National Historic Landmark was first illuminated on June 11 1764 generated by 48 oil-fueled lamps. Today it is the oldest operating lighthouse in the United States and the only surviving one of the eleven lighthouse buildings dating to the colonial period. The</p>	<p>Thank you for the information about historic resources present at NPS park units. The commenter does not pose a question or raise issues with the environmental analysis. See response to comment BOEM-2024-0001-0466-0013 above.</p>

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	<p>Elm Tree Light a contributing structure at Miller Army Airfield Historic District has undergone several transformations. The current Elm Tree Light was constructed by the U.S. Coast Guard in 1939 to replace an earlier tower that had served as a mark for sailing vessels in the late 18th century (Wren 1974; NPS 1979a). The first Fort Tompkins lighthouse was replaced in 1893 with a new light constructed on the top of Battery Weed to provide better protection of the shipping lane through the Narrows. The light was visible for 14 nautical miles. The light was decommissioned in 1965 (Olmsted Center for Landscape Preservation 2008). By the 19th century lifesaving stations were being constructed across the harbor area that would prove crucial for saving shipwreck victims. The extant Spermaceti Cove Life Saving Station (1894) was identified as Station No. 2 at the Sandy Hook Unit. The station was decommissioned in 1949 as an active U.S. Coast Guard Station. Additional lifesaving stations built in 1848 1855 1872 and 1891 on Sandy Hook no longer exist. The Far Rockaway Coast Guard Station complex served as an important lifesaving site for the numerous marine accidents and shipwrecks on the Rockaway Peninsula during the 19th and early 20th centuries. Seacoast fortifications along the New York Harbor area date to the early days of discovery and colonization of the New Jersey and New York coastlines. Since the Colonial period the defense of New York Harbor was considered critical for commerce and the defense of the United States. The fortifications included a variety of forts and batteries dating back to the late 18th century and continuing through the Cold War era. Technological advances in weaponry and construction techniques through time resulted in greatly improved fortifications some of which were built over earlier outdated structures. Both commercial and military aviation were quickly evolving after World War I. The early history of aviation in the United States is well represented in several Gateway facilities dating back to the early 20th century including Floyd Bennett Field Miller Army Airfield and the Rockaway Naval Air Station (now the site of Jacob Riis Park).</p>	
BOEM-2024-0001-0466-0033	<p>[Bold: Benthic Environment] Both Fire Island and Gateway have jurisdiction over activities occurring along the coastline and in their respective jurisdictional marine waters. NPS is responsible for the</p>	<p>Thank you for your comment. More detailed benthic mapping and descriptions would be addressed in project-specific COPs and</p>

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	<p>protection of resources in its jurisdictional waters including but not limited to biologic geologic historic and cultural resources. Of note the coastal and marine areas of both parks have known and unknown submerged archaeological resources related to historic activities and events of importance to area Federal Indian Tribes. From an ecological perspective the benthic environments within these coastal and marine jurisdictional areas include a variety of resources of concern to the NPS including physical benthic habitat characteristics as well as the biotic communities associated with them (e.g. aquatic vegetation and fauna living in and depending on these habitats) all of which affect and are affected by the water column. Limited information is available for the submerged benthic habitats; however seafloor habitat mapping projects were completed for both Fire Island National Seashore and the Sandy Hook unit of Gateway in response to Hurricane Sandy. Offshore wind development can impact benthic ecosystems in a variety of ways depending on the location and development phase. In addition to direct impacts such development may result in indirect impacts associated with artificial reef effects seafloor disturbance and the introduction of energy emissions (e.g. noise vibrations and electromagnetic fields) that could have long- term impacts on benthic ecosystem structure and function. Reports associated with the Empire Wind Projects include data such as bottom surface features sediment characteristics and vegetative and macrofaunal species distributions descriptions and management interest; results of these reports and other local benthic analyses including cumulative impacts to seagrass beds (and suitable habitat as indicated by historical seagrass distribution) and other declining benthic resources should be considered as part of the analysis of potential impacts to the benthic environment. If construction or operation activities would occur in or near the marine and coastal environments of Fire Island or Gateway additional collaboration would be required to ensure those activities do not disturb any sensitive park benthic resources. The NOI does not address the issue of potential landfall locations for power cables from the newly leased areas. This would seem to be a topic that should be addressed in the PEIS.</p>	<p>would include potential export cables and landfall locations for each of the lease areas.</p>

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BOEM-2024-0001-0466-0034	<p>[Bold: Marine Life Birds and Bats] A synopsis of wildlife resources of concern to the Parks is provided below and more detailed park-specific information is available for many resources. We request this information be considered in more detailed analyses and discussions with applicable agencies such as the U.S. Fish and Wildlife Service (USFWS) National Oceanic and Atmospheric Administration (NOAA) and its National Marine Fisheries Service (NMFS) regarding appropriate AMMM measures to avoid adverse impacts to these species. The New York State Energy Research and Development Authority (NYSERDA) State of the Science Workshops on Wildlife and Offshore Wind Energy reports also provide a good summary of questions related to potential offshore wind impacts to some of these resources of concern to the NPS and other groups (e.g. benthic habitat fish and invertebrates sea turtles marine mammals bats and birds). These resources could be affected by a range of stressors and environmental changes associated with various stages of project development (e.g. pre-construction construction operation decommissioning). We look forward to being able to review and comment in the future when more detailed information and analyses are provided in the PEIS. Overall as the marine environment is built out by the newly leased offshore wind project areas in the NY Bight as well as by the Empire Wind Projects the potential cumulative impacts to marine mammals and sea turtles will be of significant importance. The PEIS should serve to highlight these potential impacts and the AMMM measures that could be applied across the NY Bight. Many of the potentially affected species do not occur in areas where utility-scale offshore wind exists today (e.g. Europe) and so there is no parallel data from which to draw conclusions. Due to U.S. Coast Guard regulations the bases of the turbines will be lit and could become an attractant that alters current navigation patterns. Similarly the turbines may disrupt the marine acoustic environment for acoustic sensitive species such as whales which in turn may inhibit communication or change patterns of behavior; little is known about the potential impacts of other potential disruptions to the marine environment such as vibrations and electromagnetic fields associated with wind turbines and cables. These animals are already</p>	<p>AMMM measure BB-3 includes monitoring the potential impacts on birds and bats through the life of the New York Bight projects. More detailed and project-specific AMMM measures could be evaluated at the project-specific COP NEPA review stage to further address potential project-specific impacts on biological resources, including birds and bats.</p>

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	<p>experiencing changes in migratory patterns related to climate change (e.g. changes in water temperatures and food source availability) which have potentially led to stranding and cold stunning events occurring more regularly in the Atlantic and an expansion of turtle nesting north of previously recognized nesting sites. The NPS defers to USFWS NOAA and its NMFS for their expert opinions regarding permitting under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 et seq.) Migratory Bird Treaty Act of 1918 (16 U.S.C. 703 et seq.) and related laws and regulations. The NPS nonetheless has jurisdiction over those animals that occur within its boundaries and to the degree possible protects those individuals and populations. As such NPS has a strong interest in potential disruptions to those individuals and populations that frequent the Parks and recommends that the relevant agencies develop monitoring plans as a subset of the AMMM measures so that all can benefit from scientific data in this emerging area of study.</p>	
BOEM-2024-0001-0466-0035	<p>[Bold: Night Skies]Protecting the night sky is a critical role NPS pursues at Fire Island National Seashore and Gateway National Recreation Area. Despite the presence of the New York and New Jersey metropolitan areas both Parks provide some of the darkest nighttime skies available to visitors and residents alike and night skies are identified as a fundamental resource in the Gateway GMP of 2014. Night skies are an important resource for Fire Island Gateway and NHLs such as the lighthouses affecting aspects such as biological and cultural properties the wilderness and historic setting and the visitor experience and enjoyment. The opportunity to enjoy starry night skies and other nocturnal phenomenon as well as landscape features of the park under natural light from the night sky is an integral part of an overall visitor experience. Night skies are one of the many resources protected under the National Park Service Organic Act. The important role that natural cycles of light and dark play in natural resource processes and the evolution of species is well established and therefore the NPS protects natural darkness and other components of natural lightscapes in parks by minimizing light from park facilities and by educating and working cooperatively with</p>	See response to comment BOEM-2024-0001-0466-0012.

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	neighboring communities local governments and the public to minimize the use of outdoor lighting wherever possible considering public safety and other park management objectives. NPS night skies and natural sounds experts can assist BOEM in addressing these topics in the PEIS.	
BOEM-2024-0001-0466-0036	<p>NPS recommends the following potential AMMM measures: -Projects should be required where possible to implement an Aircraft Detection Lighting System (ADLS; or a similar system) to turn the aviation obstruction lights on and off in response to detection of nearby aircraft.-ADLS efficacy analysis should be conducted so that the impact from the aviation warning lights can be quantified for the cases with and without ADLS.-Security lighting should be directed downward and shielded. Some lights could have motion sensors added.-Lighting principles:</p> <ul style="list-style-type: none"> <li>a. Control -- lights should be off when not needed. This applies to both construction and operations phases.</li> <li>b. Brightness the minimum lumen output needed should be used</li> <li>c. Warm color-temperature light -- use amber lights when possible instead of white light.-Lighting plans for both construction and operations should be required in project specific EISs.-Visual simulations should be required using both static images and light-flashing animation at night from multiple KOPs for offshore wind projects as they are developed.</li> </ul>	<p>AMMM measure MUL-37 requires lessees to use ADLS. Additionally, AMMM measure VIS-7 addresses ADLS efficacy through monitoring the frequency that ADLS is operative during the project's operations. Lessees are required to implement BOEM lighting and marking guidelines, and U.S. Coast Guard (USCG) and FAA lighting and marking requirements. Project-specific lighting will be analyzed during COP NEPA reviews. The visual simulations necessary for COP NEPA review are decided on a project-by-project basis depending on if the project is concealed below the visible horizon.</p>
BOEM-2024-0001-0466-0037	<p>[Bold: Visual Impacts to NHLs] There are numerous NHLs in the New York and New Jersey area that could be visually impacted by the wind turbine generators and/or by offshore substations or by onshore infrastructure as the new lease areas and Empire Wind 1 and 2 are developed. We recommend the following NHLs be included in the PEIS including the assessment of potential visual impacts. -Empire State Building NHL: View from iconic Observation Deck on 86th floor with sweeping 360-degree views on Manhattan including NY Harbor.-Green-Wood Cemetery NHL: Located on the highest elevation in Brooklyn-Twin Lights Historic Site NHL: Highlands NJ 246 above sea level on the headlands of Navesink Highlands and directly overlooking Sandy Hook Bay the entrance to New York Harbor</p>	<p>Thank you for your comment. KOP-19 Navasink Twin Lights Base, KOP-35 Twin Lights Light House, and KOP-39 Empire State Building Observation Deck were all evaluated as part of the PEIS. Both KOP-35 and KOP-39 are included in the cumulative impact evaluation. For the COP-level NEPA stage, additional analysis and KOPs will be considered.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0466-0038	<p>[Bold: Overview of Area National Historic Landmarks and the NY Bight PDEIS]National Historic Landmarks are historic properties that illustrate the heritage of the United States. The NPS has specific responsibilities with regards to administration of the NHL Program. The over 2600 NHLs found in the U.S. today come in many forms: historic buildings sites structures objects and districts. Each NHL represents an outstanding aspect of American history and culture. Of note federal funding or licensing of activities that affect historic properties are regulated principally by Section 106 and Section 110(f) of the NHPA. Other federal effects are listed in 36 CFR 65.2. Under Sections 106 and 110(f) of the Act federal agencies must "take into account" the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on the undertaking and its effects. Implementing regulations of the ACHP may be found in 36 CFR 800 "Protection of Historic Properties" which establishes a process of consultation with the SHPO and the ACHP leading in most instances to agreement on how the undertaking will proceed. Steps in the process include identification and evaluation of historic properties that may be affected assessment of the effects of the federal action and resolution of any adverse effects that would occur. If a federal activity will "directly and adversely affect" a Landmark Section 110(f) of the Act also calls for federal agencies to undertake "such planning and actions as may be necessary to minimize harm to such Landmark." As with Section 106 the agency must provide the Advisory Council with a reasonable opportunity to comment.</p>	<p>Thank you for the information about the NHL program. BOEM has complied and will continue to comply with all requirements under Section 106 and 110(f) regarding NHLs. The commenter does not pose a question or raise issues with the environmental analysis. See response to comment BOEM-2024-0001-0466-0013 above.</p>

**Table P.4-3. Responses to Comments from the U.S. Fish and Wildlife Service (BOEM-2024-0001-0400)**

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BOEM-2024-0001-0400-0001	BOEM is preparing a Programmatic Biological Assessment (BA) that the Service will review pursuant to Section 7(a)(2) of the ESA. The Service has been consulting with BOEM regarding the BA which (among others) includes the six New York Bight lease areas. The Service will continue coordinating with BOEM as additional information is received. Impact determinations to federally listed species that the Service has jurisdiction over should not be included within future NEPA documentation without concurrence from the Service or an explanation that BOEM is still seeking our concurrence.	On June 20, 2024, BOEM initiated consultation with the USFWS on a Programmatic Framework ESA Section 7 consultation, and the PEIS has been edited to reflect this.
BOEM-2024-0001-0400-0002	<p>The Service continues to maintain the position that insufficient evidence exists to demonstrate that the wider spacing of offshore wind turbines and intermittence/patchiness of projects will result in negligible impacts to bats. We also continue to maintain the position that there is currently a large amount of uncertainty regarding bat activity in offshore environments during any climatic conditions that overall makes it difficult to support the conclusion of negligible impacts reached in Chapter 3.5.1 of the DPEIS. BOEM continues to state that the cumulative impacts of the no action alternative (which considers other offshore wind projects) would be negligible to bats. However due to the reasons stated throughout Service comments on the preliminary Draft PEIS and our continuing comments in Enclosure A the Service continues to disagree with negligible impact determinations.</p> <p>Additionally it is unclear why the cumulative impacts of the no action alternative (which considers the construction of 2252 wind turbine generators and associated structures with planned offshore wind projects) was explained to have negligible impacts to bats but the impacts of the proposed New York Bight alternatives are expected to have negligible to minor impacts to bats. The Service recommends that all impact determinations to bats are listed as minor or greater.</p>	<p>BOEM acknowledges that there is no study that looked at offshore wind turbine spacing and bat migration. However, unless new information becomes available on this matter, BOEM maintains that this is a reasonable hypothesis: that wider spacing of offshore wind turbines and intermittence/patchiness of projects will result in negligible impacts on bats. But more importantly, the literature, studies, and offshore bat surveys documented and described in PEIS Section 3.5.1, <i>Bats</i>, show that bat presence in the offshore environment is low and represents a very small percentage of total populations onshore. As such, BOEM anticipates the risk to bats from any offshore IPF is low (regardless of weather conditions). Therefore, BOEM maintains the negligible determination for potential impacts on bats in the offshore environment.</p> <p>Regarding the “negligible” impact determination for cumulative impacts under the No Action Alternative – the impact determination should have been “negligible to minor.” The negligible determination is more applicable to impacts in the offshore environment (see paragraph above) while the minor impact determination is applicable to the onshore environment where there is more uncertainty on project locations and amount/quality of habitat removal. This is the same reasoning for both Alternatives B and C, and should also have been included</p>

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		under cumulative impacts for the No Action Alternative. The PEIS has been revised to include “minor” for cumulative impacts under the No Action Alternative.
BOEM-2024-0001-0400-0003	<p>The Service continues to recommend that disclaimers of information gaps are clearly articulated throughout the birds section (Chapter 3.5.3) of the DPEIS.</p> <p>Also due to the reasons previously stated in our preliminary DPEIS review letter and our additional comments from the Service's Migratory Birds Team in Enclosure A the Service continues to disagree with BOEM's "moderate beneficial impacts" determination. As such we continue to recommend that this determination is removed from the DPEIS.</p>	<p>Regarding data gaps, BOEM cites original works in Section 3.5.3, and those works disclose the data gaps and uncertainties that may exist. Identifying every data gap or uncertainty throughout the resource section would be redundant and affect flow of writing/reading; and would pose issues regarding page length, which is already constrained due to NEPA regulatory requirements (40 CFR 1502.7 <i>Page Limits</i>). BOEM also notes that the PEIS does not ignore uncertainties and data gaps, as there is an entire PEIS appendix (Appendix E, <i>Analysis of Incomplete and Unavailable Information</i>) that addresses incomplete and unavailable information for every resource analyzed in the PEIS, as required by NEPA regulations. In accordance with 40 CFR 1502.21, when an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an EIS and when information is incomplete or unavailable, the agency must make clear that such information is lacking; BOEM has done so in PEIS Appendix E, and the discussion for birds is in Section E.1.5, <i>Birds</i>. As BOEM states in Section E.1.5, there will always be some level of incomplete information on the distribution and habitat use of birds in the offshore portions of the geographic analysis area, as well as for the potential for collision risk and avoidance behaviors for some of the bird species. However, BOEM concludes the PEIS is sufficient to support sound scientific judgments and informed decision-making related to bird distribution and use of the offshore portions of the geographic analysis area as well as to the potential for collision risk and avoidance behaviors, and does not believe that there is incomplete or unavailable information on birds that is essential to making a reasoned choice among alternatives. Furthermore, BOEM continues to collect information on bird presence in the offshore environment to help inform the assessment of potential impacts on birds from construction and operation of offshore wind farms. In addition, COP-specific NEPA documents for NY Bight lease areas that might be developed in</p>

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		<p>the future would include project-specific bird information based on the most current and relevant bird information available at that time.</p> <p>Regarding the “moderate beneficial” impact determination, to ensure a complete analysis of the presence of structures IPF, BOEM is retaining the beneficial effects discussion and determination of “moderate beneficial” related to derelict fishing gear and the creation of habitat for structure-oriented or hard-bottom species (typically referred to as “reef effect”). These beneficial effects have been observed and are documented with citations in the PEIS. BOEM understands that there could be a potential relationship between bird attraction to these areas and adverse effects related to interactions with WTGs (e.g., collisions), which is why BOEM included statements of this related risk immediately after the discussion of the beneficial effects (see PEIS page 3.5.3-17, where BOEM states “<i>Conversely, increased foraging opportunities could attract marine birds, potentially exposing those individuals to increased collision risk associated with operating WTGs</i>” and “<i>In contrast, the presence of structures may also increase recreational fishing and, thus, expose individual birds to harm from fishing line and hooks</i>”). Therefore, BOEM discloses the full potential impact and believes it is reasonable to state that there could be potential beneficial effects on birds because it is possible that a bird could be attracted to these areas near WTGs to utilize the habitat and never collide with any part of the structure.</p>
BOEM-2024-0001-0400-0004	<p>USFWS Draft Programmatic Environmental Impact Statement Comments: The Service continues to support our position that there is not enough evidence to support that the wider spacing of offshore wind turbines and intermittence/patchiness of projects will result in negligible impacts to bats. The Madsen et al. (2012) study that was added in to support BOEM's position is about bird movement not bats. Given the biological differences between birds and bats the study does not appear applicable to analyzing impacts to bats. Additionally the Madsen et al. (2012) study analyzed movements of common eider (<i>Somateria mollissima</i>) in the Western Baltic Sea</p>	<p>Refer to response to comment BOEM-2024-0001-0400-0002.</p>

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	<p>located south of Denmark. While the information from Madsen et al. (2012) is potentially useful for heavy-bodied waterfowl it inadequately (or does not at all for bats) addresses behavioral responses of other species within the proposed lease areas. Due to the lack of evidence the Service recommends that BOEM removes their assumptions that wider spacing and intermittence of projects will result in negligible impacts to bats. The Service recommends that BOEM explains that there is currently not enough information to determine how spacing and intermittence of projects will impact bats (e.g. likelihood of collision or injury rates increased usage of energy expenditures etc.) and edits the remaining portions of the Draft PEIS as necessary to reflect that.</p>	
BOEM-2024-0001-0400-0005	<p>USFWS Draft Programmatic Environmental Impact Statement Comments: The Service appreciates the inclusion of potential impacts to bats due to roosting on wind turbine generators. However the Service continues to support the position that there is currently a large amount of uncertainty regarding bat activity in offshore environments during any climatic conditions that overall makes it difficult to support the conclusion of negligible impacts reached in this section of the Draft PEIS. As previously explained if bats were to experience adverse conditions over the ocean barring returning to land there are likely no suitable locations for them to roost or to wait out the weather. It is not clear how BOEM is suggesting that bats will reduce their activity offshore during these conditions. If the bats reduce their activities during adverse weather conditions and attempt to roost on the wind turbine generators they may collide with the blades and be injured or die. It is unclear how this is supportive of BOEM's position that there will be negligible impact to bats. If there is evidence to support that bats migrating in offshore environments fly to terrestrial environments to reduce their activities during adverse climatic conditions that would be helpful to include in BOEM's analysis.</p> <p>The Service recommends that BOEM provides clarity on how bats flying over the proposed offshore wind areas will reduce their activity during adverse climatic conditions. This should include an explanation as to whether bats are expected to fly towards terrestrial</p>	<p>Impacts on bats in the offshore environment should be viewed in the context of bat presence in the offshore environment. Based on best-available information, including literature, studies, and offshore bat surveys documented and described in PEIS Section 3.5.1, bat presence in the offshore environment is low and represents a very small percentage of total populations onshore. As such, BOEM anticipates the risk to bat species from offshore IPFs is low (regardless of weather conditions).</p> <p>Regarding adverse weather conditions, the PEIS is simply stating that bats are found in lower numbers when winds are higher, temperatures are colder, and during rain (including in the offshore environment), which is based on the cited literature (Arnett et al. 2008; Erickson et al. 2002; Sjollema et al. 2014; Dominion Energy 2022). In a scenario where a bat along the coastline intended on migrating out from the coastline to offshore waters, any high winds, cooler temperatures, and rain along the near coastal area would likely deter the bat from migrating offshore, thus avoiding exposure to turbines should turbines be present in the intended migration path. If a bat is already migrating far offshore and encounters weather conditions that include higher winds, lower temperatures, and rain, it is unknown what that bat would do. They tend to avoid these climatic conditions, so they could attempt to fly back to shore or look for a structure to seek shelter and rest (e.g., buoy, ship). Ultimately, the fate of a bat cannot be</p>

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	environments and seek shelter rest on the proposed offshore wind structures (which could increase collision risk) fly away from those conditions or do something else. If there is no evidence to support what bats flying over the ocean will do during adverse climatic conditions BOEM should explain that uncertainty within the PEIS and analyze the possibility of those conditions being adverse to bats.	predicted in this situation because it depends on the location offshore where the climatic conditions are encountered, how far the individual is from shore, and the type of structure they might land on, if a structure is even present. If the structure is a wind turbine, then the bat would be at risk because, as documented in PEIS Section 3.5.1.3.3, bats have been found to use offshore structures to provide shelter from adverse weather or to rest after a long flight (see Solick and Newman 2021), and have been found to roost in the nacelles of turbines, albeit closer to shore than the locations considered in the PEIS (see Ahlen et al. 2009). However, because bat presence in the offshore environment is low and represents a very small percentage of populations onshore, the risk would be low and no population effects would be anticipated. BOEM will continue to collect information on bat presence in the offshore environment to help inform the assessment of potential impacts on bats from construction and operation of offshore wind farms.
BOEM-2024-0001-0400-0006	USFWS Draft Programmatic Environmental Impact Statement Comments: The Service appreciates the inclusion of the bird and bat post- construction monitoring plan in BB-3. BOEM continues to state that the cumulative impacts of the no action alternative (which considers other offshore wind projects) would be negligible to bats. However due to the reasons stated throughout Service comments on the preliminary Draft PEIS and our continuing comments above the Service continues to disagree with negligible impact determinations. Additionally it is unclear why the cumulative impacts of the no action alternative (which considers the construction of 2252 wind turbine generators and associated structures with planned offshore wind projects) was explained to have negligible impacts to bats but the impacts of the proposed New York Bight alternatives are expected to have negligible to minor impacts to bats. The Service recommends that all impact determinations to bats are listed as minor or greater.	Refer to response to comment BOEM-2024-0001-0400-0002.
BOEM-2024-0001-0400-0007	USFWS Draft Programmatic Environmental Impact Statement Comments: For BB-1: We recommend the usage of the Injury and	BOEM has revised BB-1 to include usage of the IMR system for reporting.

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	Mortality Reporting (IMR) System to report all occurrences of all species of bird and bat carcasses.	
BOEM-2024-0001-0400-0008	USFWS Draft Programmatic Environmental Impact Statement Comments: The Service continues to recommend that disclaimers of information gaps are clearly articulated throughout the birds section of the Draft PEIS. For example BOEM is still stating the following in Chapter 3.5.3.3 that we expressed concerns about in our original comment: "Generally only a small percentage of a species' seasonal population would potentially encounter operating WTGs during annual migration Table 3.5.3-1)." We appreciate the inclusion to note that the data is referring to seabird populations but that is not clear while reading that sentence. The Service recommends adding in the following sentence (or something like it) after the sentence of concern mentioned above "However the 47 species listed in Table 3.5.3-1 do not account for the songbirds shorebirds raptors and other species that are known to migrate across the Atlantic Outer Continental Shelf. Particularly this likely excludes species that migrate nocturnally and that have not been detected during boat-based or aerial surveys. Additional studies are required to fill in these data gaps."	Refer to response to comment BOEM-2024-0001-0400-0003 regarding articulating data gaps throughout the PEIS bird section. In response to previous USFWS comments, BOEM clarified in the PEIS that Table 3.5.3-1 is specific to seabirds (including the title of the table). As stated in PEIS Table 3.5.3-2, other non-sea birds, such as songbirds, almost exclusively use terrestrial, freshwater, and coastal habitats and do not use the offshore marine system except during migration. Further, the PEIS states that within the Atlantic Flyway, much of the bird activity is concentrated along the coastline (Watts 2010). Waterbirds use a corridor between the coast and several kilometers out onto the OCS, whereas land birds tend to use a wider corridor extending from the coastline to tens of kilometers inland (Watts 2010). Although both groups may occur over land or water within the flyway and may extend considerable distances from shore, the highest diversity and density are centered on the shoreline. Overall, and as described in the PEIS, current information indicates an overall low abundance of all bird types on the OCS, with much higher abundances along the nearshore areas of the coastline.
BOEM-2024-0001-0400-0009	USFWS Draft Programmatic Environmental Impact Statement Comments: The Service continues to support our position that BOEM elaborates on this section to clarify the claim that multiple course corrections or an altered route for avoidance will not result in significant effects. As previously mentioned it does not appear that this subject has been studied enough to support BOEM's statement. Additional Comments from Region 5 Migratory Birds Team: Even if it is the best available science it is still insufficient for making definitive statements about the broader community such as the last two sentences: "As such adverse impacts of additional energy expenditure due to minor course corrections or complete avoidance of the lease areas would not be expected to be biologically significant. Any additional flight distances would likely be small for most migrating birds when compared with the overall distances traveled and no	Refer to response to comment BOEM-2024-0001-0400-0003 regarding articulating data gaps throughout the PEIS bird section.

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	individual fitness or population-level effects would be anticipated." As suggested in the original comment these statements should be reworded to better reflect that lack of data and thus uncertainty related to the subject.	
BOEM-2024-0001-0400-0010	USFWS Draft Programmatic Environmental Impact Statement Comments: The Service appreciates the inclusion of AMMM Measure BB-3. However the Service continues to support our recommendation that a disclaimer is included as mentioned in our original comment.	Refer to response to comment BOEM-2024-0001-0400-0003 for a discussion on data gaps, uncertainties, and incomplete and unavailable information. BOEM notes that BB-3 is an AMMM measure that has been previously applied on other offshore wind approvals and has been updated to align with the most current agreed-upon language with USFWS.
BOEM-2024-0001-0400-0011	Section #: 3.5.3 USFWS Draft Programmatic Environmental Impact Statement Comments: Due to reasons previously stated and our additional comments from the Migratory Birds Team below the Service continues to disagree with BOEM's "moderate beneficial impacts" determination. As such we continue to recommend that it is removed from the Draft PEIS.	Refer to the second paragraph of response to comment BOEM-2024-0001-0400-0003.
BOEM-2024-0001-0400-0012	The Service is still concerned that derelict fishing gear is anticipated to get tangled and gather around WTG turbines but simultaneously foraging opportunities around the WTG are supposed to increase for marine birds. If the foraging opportunities at WTGs are better than surrounding areas then birds will be attracted to the turbines and have an increased risk 1) of direct collision with turbines and/or 2) have increased risk of entanglement with debris while foraging around turbine bases especially for deep diving species.	Refer to the second paragraph of response to comment BOEM-2024-0001-0400-0003.
BOEM-2024-0001-0400-0013	USFWS Draft Programmatic Environmental Impact Statement Comments: Within the presence of structures section of Chapter 3.5.3.3.3 BOEM explains that "Potential annual bird kills from WTG collisions would be relatively low compared to other causes of migratory bird deaths throughout the United States. For instance feral cats are the primary cause of migratory bird deaths in the United States (2.4 billion per year) followed by collisions with building glass (599 million per year) collisions with vehicles (214.5 million per year) poison (72 million per year) collisions with electrical lines (25.5 million	BOEM included the USFWS bird mortality data in the PEIS to provide context for potential bird mortality that could occur from offshore wind. BOEM notes that the PEIS paragraph before the one cited by the commenter (page 3.5.3-16) states that the USFWS estimates an average of 320,000 birds killed annually in the United States from onshore wind farms (totaling 49,000 turbines); this is approximately 0.001 percent of all bird mortality from all causes (based on mortality data provided by USFWS at <a href="https://www.fws.gov/library/collections/threats-birds">https://www.fws.gov/library/collections/threats-birds</a> ). With the

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	<p>per year) collisions with communication towers (6.6 million per year) and electrocutions (5.6 million per year) (USFWS 2021)."Please consider take from wind turbines in an additive context to other sources of anthropogenic bird mortality. Many of the species harmed by the other factors listed here are declining and adding additional mortality to these populations may cause steeper declines and/or prevent populations from recovery. This sort of justification for acceptable take for wind development should be reconsidered.</p>	<p>current understanding that bird presence in the offshore environment is low compared to onshore/nearshore, and knowing that onshore wind turbines cause a fraction of a percent of all bird deaths annually and the total number of anticipated offshore WTGs on the OCS is much smaller than the number onshore, BOEM does not think it is unreasonable to consider this information as a factor in concluding that offshore WTGs are unlikely to have a measurable effects on bird populations (even in an additive context).</p> <p>BOEM understands that bird species protected under the Endangered Species Act (ESA) are more sensitive to potential impacts, and BOEM is addressing those concerns in more detail as part of their consultation with the USFWS on a Programmatic Framework ESA Section 7 consultation, which was initiated on June 20, 2024.</p>
BOEM-2024-0001-0400-0014	<p>Section #: 3.5.3.1 USFWS Draft Programmatic Environmental Impact Statement Comments: For Paragraph 1 on this page: Please provide an explanation of how the analysis in Table 3.5.3-1 was conducted. Without an explanation it is not possible to interpret the importance of the values in the table.</p>	<p>The detailed description/explanation of the methods and results that generated the information in PEIS Table 3.5.3-1 can be found in Winship et al. (2018), which is the reference for Table 3.5.3-1. The body of the Winship et al. (2018) report can be accessed at BOEM's website at <a href="https://espis.boem.gov/final%20reports/BOEM_2018-010.pdf">https://espis.boem.gov/final%20reports/BOEM_2018-010.pdf</a>.</p> <p>The data in Table 3.5.3-1 was taken directly from the 47 pages of tables in Appendix D of the Winship et al. (2018) report, which can be accessed on BOEM's website at <a href="https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/AppendixD.pdf">https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/AppendixD.pdf</a>.</p> <p>However, BOEM notes that the Winship et al. 2018 report has been updated with new data (see Winship et al. 2023 in the PEIS) that has replaced the Winship et al. 2018 data in the PEIS. Therefore, Table 3.5.3-1 has been updated with this new information. Winship et al. 2023 can be found at <a href="https://espis.boem.gov/Final%20Reports/BOEM_2023-060.pdf">https://espis.boem.gov/Final%20Reports/BOEM_2023-060.pdf</a>; the data shown in PEIS Table 3.5.3-1 can be found in Appendix H.</p>

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BOEM-2024-0001-0400-0015	Section #: 3.5.3.1 USFWS Draft Programmatic Environmental Impact Statement Comments: How did this table contribute to the impact determinations? If it was used for more than background information there is a need to explain how these percentages of the "population" would be used to support negligible minor moderate major impact determinations.	The bird population data in PEIS Table 3.5.3-1 is used to show the estimated bird presence in all anticipated offshore wind energy development on the OCS. As shown in the table, the population percentage of each bird species that overlaps with these areas is very low, ranging from 0 to 4.1 percent, with most species' populations below 1 percent. With such low percentages of bird populations potentially exposed to all anticipated offshore wind development on the OCS, BOEM believes it is reasonable to conclude that the impact or risk would be low for these bird populations. If the potential impacts are put into the context of the impact definitions defined in PEIS Table 3.5.3-3, it is reasonable to conclude that bird impacts are unlikely to be measurable or would be so small that they would be extremely difficult or impossible to discern or measure, and would never reach the level of affecting populations.
BOEM-2024-0001-0400-0016	Section #: 3.5.3.1 USFWS Draft Programmatic Environmental Impact Statement Comments: For Paragraph 2 on this page: These datasets and UD's are from a small sample size of birds captured from the mid-Atlantic and therefore are not representative of the entire Atlantic populations and should not be used to determine absence from a given location.	Based on the full context of the comment in the original comment table submitted, it is unclear what specific page is being referenced in the comment, but it appears to be PEIS page 3.5.3-7. The second paragraph on this page discusses satellite telemetry information for the surf scoter, red-throated loon, and northern gannet. This data is only one piece of information/data presented in PEIS Section 3.5.3.1 regarding bird use of the offshore environment. In this section, BOEM has presented all relevant and best available information/data on bird use in the geographic analysis area of the offshore environment. BOEM understands there are data gaps, uncertainties, and incomplete and unavailable information (refer to response to comment BOEM-2024-0001-0400-0003 on this matter).
BOEM-2024-0001-0400-0017	Section #: 3.5.3.1 USFWS Draft Programmatic Environmental Impact Statement Comments: For the "Petrel Group" in this table: Leach's storm-petrels breed in the northern hemisphere and winter in the southern hemisphere Wilson's storm-petrels are the opposite as described in this table.	BOEM has deleted leach's storm-petrel as an example of a petrel that breeds in the southern hemisphere from PEIS Table 3.5.3-2.

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BOEM-2024-0001-0400-0018	Section #: 3.5.3.1 USFWS Draft Programmatic Environmental Impact Statement Comments: For paragraph 1 on this page: Many species take a transoceanic route during migration (La Sorte et al. 2016 Stabile et al 2017). For example Blackpoll warblers make extended flights from the US East coast south across large expanses of the Atlantic Ocean to South America (DeLuca et al 2019). More data is needed to understand land bird migration patterns in offshore areas.	Refer to response to comment BOEM-2024-0001-0400-0003 for a discussion on data gaps, uncertainties, and incomplete and unavailable information.
BOEM-2024-0001-0400-0019	Section #: 3.5.3.1 USFWS Draft Programmatic Environmental Impact Statement Comments: For Paragraph 3 on this page: Morphology alone should not be used to make such a broad statement about flight patterns in a specific area. There is evidence from eBird (see: <a href="https://ebird.org/map/baleag?neg=true&amp;env.minX=&amp;env.minY=&amp;env.maxX=&amp;env.maxY=&amp;zh=false&amp;gp=false&amp;ev=Z&amp;excludeExX=false&amp;excludeExAll=false&amp;mr=1-12&amp;bmo=1&amp;emo=12&amp;yr=all&amp;byr=1900&amp;eyr=2024">https://ebird.org/map/baleag?neg=true&amp;env.minX=&amp;env.minY=&amp;env.maxX=&amp;env.maxY=&amp;zh=false&amp;gp=false&amp;ev=Z&amp;excludeExX=false&amp;excludeExAll=false&amp;mr=1-12&amp;bmo=1&amp;emo=12&amp;yr=all&amp;byr=1900&amp;eyr=2024</a> ) that suggest bald eagles make flights over ocean including one record in the NY Bight and several in the Gulf of Maine. We would like to see this sentence revised to suggest the potential for bald eagles to be offshore.	BOEM has revised the text on bald eagles and included eBird bald eagle observations along the New Jersey and New York coastlines, and the single observation about 40 miles (64 kilometers) offshore New Jersey in the New York Bight area.
BOEM-2024-0001-0400-0020	USFWS Draft Programmatic Environmental Impact Statement Comments: For table 3.5.3-3: It is challenging to assess the accuracy of impact determinations when there is a lack of definitions associated with these benchmarks. For example there should be a clear definition or understanding of the "population" "population-level effects" and different effect types (i.e. "severe" "long-term" or "population-level").	For more information on impact terminology used in PEIS Chapter 3, see PEIS Section 3.3.2, <i>Impact Terminology</i> .
BOEM-2024-0001-0400-0021	Section #: 3.5.3.3.3 USFWS Draft Programmatic Environmental Impact Statement Comments: For paragraph 2 on this page regarding "Lighting": Why would this not be expected to increase collision risk? Avian vessel strikes largely occur during the night or twilight hours when visibility is reduced and birds are exposed to artificial lighting (Black 2005 Merkel 2010). Many bird species are known to be attracted to artificial lighting at night including many seabird and landbird species (Hppop et al. 2016 Rodriguez et al. 2017). Poor weather conditions increase the risk of avian collision (Black 2005 Merkel 2010 Ronconi et al. 2015).	BOEM has revised the text to clearly indicate the collision risk from construction vessel lighting.

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BOEM-2024-0001-0400-0022	Section #: 3.5.3.3.3 USFWS Draft Programmatic Environmental Impact Statement Comments: For paragraph 1 on this page: This study focuses on a single species and relies heavily on simulation not empirical data and therefore should not be used to make definitive statements about the entire community.	BOEM acknowledges the study focuses on a single species and relies on simulation (refer to response to comment BOEM-2024-0001-0400-0003 for a discussion on data gaps, uncertainties, and incomplete and unavailable information). However, additional studies are referenced later in the section, including the Vattenfall (2023) study on page 3.5.3-21. Vattenfall recently studied bird movements within an offshore wind farm. The purpose of the study was to improve the understanding of seabird flight behavior inside an offshore wind farm with a focus on the bird-breeding period and post-breeding period when densities are highest. The study was robust in that seabirds were tracked inside the array with video cameras and radar tracks, which allowed for measuring avoidance movements with high confidence and at the species level. Detailed statistical analyses of the seabird flight data were enabled both by the large sample sizes and by the high temporal resolution in the combined radar track and video camera data. Meso-avoidance behavior showed that species avoided the rotor-swept zone (RSZ) by flying in between the turbines, with very few avoiding the RSZ by changing their flight altitude to fly either below or above the rotors. The most frequently recorded adjustment under micro-avoidance behavior was birds flying along the plane of the rotor; other adjustments included crossing the rotor either obliquely or perpendicularly, with some birds crossing the rotor swept area without making any adjustments to the spinning rotors. The study concluded that, together with the recorded high levels of micro-avoidance in all species (>0.96), seabirds would be exposed to very low risks of collision in offshore wind farms during daylight hours. This was substantiated by the fact that no collisions or even narrow escapes were recorded in over 10,000 bird videos during the 2 years of monitoring covering the April–October period. The study’s calculated micro-avoidance rate (>0.96) is similar to Skov et al. (2018) (also cited in the PEIS).
BOEM-2024-0001-0400-0023	Section #: 3.5.3.3.3 USFWS Draft Programmatic Environmental Impact Statement Comments: For Paragraph 2 on this page: Currently there is no evidence to suggest offshore mortality rates will be similar to onshore rates because the conditions are extremely different (e.g. it	BOEM has revised the presence of structures IPF section in PEIS Section 3.5.3.3.3, which resulted in this removal of the paragraph. Refer to response to comment BOEM-2024-0001-0400-0013 on

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	is an entirely different ecosystem with different bird behaviors and movement patterns there is a very different species composition and the wind turbines are much larger). Therefore we feel it is inappropriate to definitively state that this is a worst-case scenario and recommend the removal of this statement.	why BOEM believes the USFWS turbine mortality data is a reasonable factor to consider for offshore wind.
BOEM-2024-0001-0400-0024	Section #: 3.5.3.3.3 USFWS Draft Programmatic Environmental Impact Statement Comments: For Paragraph 4 on this page: Migrating birds typically fly at altitudes above the rotor swept zone; however they will gradually descend or climb at the beginning or end of each migration bout exposing them to lower altitudes or fly at lower altitudes during inclement weather (Lao et al. 2020 Elmore et al. 2021).	BOEM has revised the presence of structures IPF section in PEIS Section 3.5.3.3.3, which resulted in this removal of the paragraph.
BOEM-2024-0001-0400-0025	Section #: 3.5.3.3.3 USFWS Draft Programmatic Environmental Impact Statement Comments: For Paragraphs 3 to 4 on this page: The entanglement of derelict fishing gear around wind energy related structures may not be a benefit for marine birds as stated. If the foraging opportunities at WTGs are better than surrounding areas due to a reef effect then birds will be attracted to the turbines and have an increased risk 1) of direct collision with turbines and/or 2) have increased risk of entanglement with debris while foraging around turbine bases. Many marine birds dive deep and hunting prey in a mass of derelict fishing gear increases the chance of entanglement.	Refer to the second paragraph of response to comment BOEM-2024-0001-0400-0003.
BOEM-2024-0001-0400-0026	Section #: 3.5.3.4.1 USFWS Draft Programmatic Environmental Impact Statement Comments: For Paragraph 2 on this page regarding Lighting: Avian mortality has been reported on offshore energy platforms and structures from a variety of species including landbirds shorebirds rails Procellariids and Larids due to collision with structures while flying towards artificial lighting (Ronconi et al. 2015 Hppop et al. 2016 Gjerdrum et al. 2021). Poor weather conditions increase the risk of avian collision (Black 2005 Merkel 2010 Ronconi et al. 2015). Developers should be aware of strategies to reduce collisions of birds during inclement weather at night as well as inclement weather conditions which may increase collisions.	AMMM measure BIR-2 (see PEIS Appendix G) would require lessees to incorporate light reduction measures to avoid and minimize light attraction and bird collision impacts. Additional measures may be required as part of BOEM's terms and conditions for approvals of COPs for specific NY Bight lease areas that might be developed in the future, should BOEM decide to approve a COP.

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BOEM-2024-0001-0400-0027	Section #: 3.5.3.4.1 USFWS Draft Programmatic Environmental Impact Statement Comments: For Paragraph 3 on this page: How is it known that "impacts from suspended sediments would be short term and localized"? Please provide a citation. Otherwise this sentence should be changed to be less definitive.	Sediment disturbed by construction activities in water settle once the construction is complete. Therefore, the sediment is suspended for a short period of time and in the general area of disturbance, which means potential impacts on foraging birds that happen to be in the area during construction could be affected during that short period of time. There is a more detailed analysis on the suspension of sediment and recovery of benthic assemblages in PEIS Section 3.4.2, <i>Water Quality</i> , and Section 3.5.2, <i>Benthic Resources</i> .
BOEM-2024-0001-0400-0028	Section #: 3.5.3.4.1USFWS Draft Programmatic Environmental Impact Statement Comments: For Paragraph 3 on this page: This is based off of information derived when Wind turbine generators (WTG) were not offshore. We don't know if WTGs may attract birds through perching or foraging opportunities. More information from multi-sensor systems is needed to validate attraction as well as avoidance after construction.	Attraction to WTGs is mentioned in PEIS Section 3.5.3, Birds. BOEM recognizes that monitoring after construction may be necessary. Based on COP approvals to date, BOEM anticipates monitoring may be part of the terms and conditions of a future COP approval for any of the NY Bight lease areas, and adaptive management may be required if impacts deviate substantially from the impact analysis in the PEIS.
BOEM-2024-0001-0400-0029	Section Title: Table G-1. Adaptive mitigation for birds and bats. Section #: BB-3USFWS Draft Programmatic Environmental Impact Statement Comments: For clarification our original recommendation was to "Either work with the Service to develop a metric or remove the word substantially from the sentence. That word can be interpreted differently depending on the resource being impacted."	Thank you for your comment. BB-3 has been revised.
BOEM-2024-0001-0400-0030	Section #: Appendix G USFWS Draft Programmatic Environmental Impact Statement Comments: For Measure ID BB-1: Given their status under the Bald and Golden Eagle Protection Act bald and golden eagles should be included as species with immediate reporting requirements.	BOEM has revised BB-1 to include mention of eagles protected under the Bald and Golden Eagle Protection Act.
BOEM-2024-0001-0400-0031	Section #: Appendix G USFWS Draft Programmatic Environmental Impact Statement Comments: For Measure ID BB-2: Developers should also report any other form of tag such as MOTUS or satellite	BOEM has revised BB-2 to include reporting of any other form of tag such as MOTUS or satellite.
BOEM-2024-0001-0400-0032	Section #: Appendix G USFWS Draft Programmatic Environmental Impact Statement Comments: For Measure ID BB-2: Post-construction data (both survey and tracking data) will be of significantly lower value without pre-construction monitoring data.	Available preconstruction data could be incorporated in future COPs and analyzed at the project-level COP NEPA review and consultation stage.

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	Obtaining both pre- and post-construction data is particularly critical for understanding displacement one of the three main "issues" impacting birds outlined in Table 3.5.3-4 of the DPEIS. Therefore we strongly recommend that all post-construction monitoring is coupled with pre- construction data collection.	
BOEM-2024-0001-0400-0033	Section #: Appendix G USFWS Draft Programmatic Environmental Impact Statement Comments: For Measure ID BB-3: Since displacement (i.e. functional habitat loss) is one of the two primary negative effects of offshore wind we feel that the list of goals for the BBPCMP should include an additional goal that explicitly addresses displacement (e.g. "(4) to understand the magnitude and variation in potential displacement effects for the resident avian community").	Habitat displacement is project-specific and would be determined at the project-specific COP NEPA and consultations stage.
BOEM-2024-0001-0400-0034	Section #: Appendix G USFWS Draft Programmatic Environmental Impact Statement Comments: For Measure ID BB-3: We recommend incorporating non-listed species into tagging efforts along with listed species. Many non-listed species are of conservation concern and lacking movement information. We recommend coordinating tracking projects with the RWSC (Regional Wildlife Science Collaborative).	Thank you for your comment. BOEM has revised BB-3 to include "other species of concern".
BOEM-2024-0001-0400-0035	Section #: Appendix G USFWS Draft Programmatic Environmental Impact Statement Comments: For Measure ID BB-3: In order to detect displacement effects it is important to survey an additional buffer around lease areas. Please include the need to survey a 4-20 km buffer for digital aerial surveys	Buffers for digital aerial survey are project-specific and would be determined at the project-specific COP NEPA and consultations stage.
BOEM-2024-0001-0400-0036	Section #: Appendix G USFWS Draft Programmatic Environmental Impact Statement Comments: For Measure ID BB-3: Please consider non-listed species in addition to listed species.	Thank you for your comment. BOEM has revised BB-3 to include "other species of concern".
BOEM-2024-0001-0400-0037	Section #: Appendix G USFWS Draft Programmatic Environmental Impact Statement Comments: Please ensure that "Nbat" is corrected to "North American Bat Monitoring Program (NABat).	Appendix G has been revised to replace Nbat with North American Bat Monitoring Program (NABat).
BOEM-2024-0001-0400-0038	USFWS Draft Programmatic Environmental Impact Statement Comments: BOEM did not respond to this comment. However a response was not necessary. The Services comment is applicable to the Draft Programmatic Environmental Impact Statement and ESA Section 7(a)(2) consultation.	Comment noted.

P.4.1.3 U.S. Environmental Protection Agency

**Table P.4-4. Responses to Comments from the U.S. Environmental Protection Agency (BOEM-2024-0001-0435)**

Comment No.	Comment	Response
BOEM-2024-0001-0435-0001	EPA acknowledges the purpose of the Draft Programmatic Environmental Impact Statement (PEIS) is to allow for tiering and reduce the need for redundant analyses for the six offshore lease areas. As such the Draft PEIS does not include the same level of detail as a project-specific environmental review. However EPA suggests that the Final PEIS clarify in the executive summary section the intended distinctions in the type of information to be provided in future NEPA documents. Although this is provided in Appendix C it would be helpful to include a brief description within the body of the PEIS. Additionally we recommend that the executive summary section also address what the public review process will entail for the subsequent construction and operations plan (COP)-specific NEPA documents.	Appendix C is referenced in the Executive Summary, Chapter 1, and in each Chapter 3 resource section, and it effectively points readers to the detailed recommendations by resource topic regarding how the PEIS may be incorporated by reference in the future COP-specific NEPA documents. Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&M, and conceptual decommissioning of the project. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will consider the best available data and information that reflect the state of the science at the time of publication. The COP-specific NEPA process will follow BOEM's public involvement process, which will include holding a public comment period at the start of the NEPA process (scoping) and following the release of the Draft NEPA document whereby members of the public and agencies can provide input to help inform the NEPA process. Additionally, throughout the NEPA process, BOEM works closely with cooperating state and federal agencies and tribal governments to assist with assessing impacts and identifying mitigation measures.
BOEM-2024-0001-0435-0002	The Draft PEIS makes impact determinations for resource categories (ex. Air Quality Environmental Justice Wetlands Benthic etc.) where site-specific information and evidence (including modeling) is necessary in order to support that determination. Given the limited information available it is unclear how such impact determinations can be reasonably made. We are concerned that future tiered documents will rely on unsubstantiated impacts determinations presented in the Draft PEIS. We recommend that the Final PEIS clarify that COP-specific NEPA documents will not just adopt the impacts determinations from the Draft PEIS. Rather we expect that the future COP-specific NEPA documents will evaluate these resource areas	Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&M, and conceptual decommissioning of the project. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will consider the best available data and information that reflect the state of the science at the time of publication. At the time of the COP-level NEPA analysis, BOEM will determine to what extent information in the PEIS can be incorporated by reference into the COP-level NEPA document.

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	based on an appropriate level of analysis informed by site-specific data to arrive at an impact determination. EPA recommends that BOEM make it clear that this additional information be presented for public review at the project specific level.	For each resource area, Appendix C, <i>Tiering Guidance</i> , summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area.
BOEM-2024-0001-0435-0003	Further EPA suggests that COP-specific NEPA documents provide a detailed discussion of impact determinations before and after the implementation of AMMMs. Given the broad and vague nature of the proposed AMMMs it is not clear how BOEM is able to substantiate impact level comparisons between the deferment of AMMMs (Alternative B) and the adoption of AMMMs (Alternative C) as it is expected that even if deferred many of the AMMMs would be applied on a lease-by-lease basis.	Refer to response to comment BOEM-2024-0001-0371-0004. The analyses in the PEIS do discuss impacts after implementation of AMMM measures. Depending on the specific IPF and the resource analyzed, there can be notable differences that change the impact determination for an IPF with implementation of AMMM measures under Alternative C. For example, see the Lighting IPF analysis for birds (PEIS Section 3.5.3) under Alternative B and Alternative C, where the impact was reduced from moderate to minor with implementation of an AMMM measure under Sub-alternative C. Future COP-specific NEPA documents for NY Bight lease areas would assess impacts in the context of any AMMM measures that would be implemented.
BOEM-2024-0001-0435-0004	As is stated in the Draft PEIS alternatives should "avoid or substantially lessen one or more significant socioeconomic or environmental effects." Although Alternative B is helpful for comparison of impacts between the full build with and without AMMMs it is not clear that Alternative B is an alternative that would meaningfully reduce impacts of the project. This is displayed in Table ES-2 as there are only 5 resource areas where the impact rating differs between Alternative B and Alternative C. EPA suggests that BOEM reframe the alternatives to better align with CEQ regulations at 40 CFR 1502.14(a) and DOI regulations at 43 CFR 46.420(b-c).	Refer to response to comment BOEM-2024-0001-0371-0004. The overall impact rating conclusions (as shown in PEIS Table 2-4 and <i>Executive Summary</i> Table ES-2) may not always be different under Alternative C when compared to Alternative B, while impacts for specific individual IPFs may be different. Depending on the specific IPF and the resource analyzed, there can be notable differences that change the impact determination for a specific IPF under Alternative C (see the Lighting IPF in PEIS Section 3.5.3, <i>Birds</i> , under Alternative B and Sub-alternative C1). However, the overall impact rating conclusions for the resource encompasses all IPF impact conclusions. The details of the analysis for each IPF and the justification for the overall impact conclusion for a resource is found in the Chapter 3 resource sections.
BOEM-2024-0001-0435-0005	Appendix C provides a description of how this PEIS will vary with tiered COP-specific NEPA documents. We encourage BOEM to provide a summary of resource areas where the adoption of AMMMs will mostly be based on information determined in COP-specific NEPA documents and those resource areas where AMMMs will include	Refer to response to comment BOEM-2024-0001-0371-0004 regarding revisions made to Alternative C and AMMM measures. Sub-alternative C1 analyzes the AMMM measures that BOEM has required as conditions of approval for previous activities proposed by lessees in COPs submitted for the Atlantic OCS or through

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	regulatory requirements such as Section 7 National Marine Fisheries Service (NMFS) Consultation requirements. Additionally EPA suggests that a complete list of Plans to be required as part of the AMMMs be included in the PEIS.	related consultations. The applicability of these AMMM measures will depend on the project-specific COP submittals for the NY Bight, and BOEM cannot speculate how a future COP will fit within the PEIS. For special purpose statutes (e.g., ESA), the list of AMMM measures in PEIS Appendix G, Table G-1, does include AMMM measures that BOEM has proposed or that have been required by resource agencies to address impacts. Project-specific COP NEPA documents may also include additional AMMM measures beyond the AMMM measures in this PEIS to address project-specific impacts. The plans that are part of AMMM measures can be found in the AMMM measures listed in PEIS Appendix G, Table G-1.
BOEM-2024-0001-0435-0006	Appendix E provides an explanation of incomplete or unavailable information for each resource area. A statement similar to "Therefore BOEM believes that the analysis provided in the Draft PEIS is sufficient to make a reasoned choice among the alternatives in terms of coastal habitat and fauna" is made for each resource area. This is a confusing statement as it's not clear if further information will be needed to decide between alternatives in COP-specific NEPA documents. As much of the impact analysis for each resource area is being pushed to COP-specific NEPA documents this should be clarified.	Appendix E is applicable to the analysis detailed in the PEIS for the six NY Bight lease areas. Site-specific impacts associated with the construction and installation, O&M, and conceptual decommissioning of these facilities that deviate from the broad-scale analysis presented in the PEIS will be analyzed in subsequent COP NEPA EIS documents. Each COP NEPA EIS will consider the best available data and information that reflect the state of the science at the time of publication.
BOEM-2024-0001-0435-0007	The PEIS should include clarification on the timing of the Draft PEIS in relation to the issuance of COPs for each lease areas. It is EPA's understanding that COPs for the NY Bight lease areas have begun being submitted in early 2024.	BOEM's authority under the Outer Continental Shelf Lands Act (OCSLA) requires BOEM to review COPs once they are submitted by a developer. The timeline for COP submittal by the developer and the timing of the COP-level NEPA analysis varies depending on the lease area.
BOEM-2024-0001-0435-0008	Glauconite can create significant issues for offshore wind development. It is currently unclear whether geotechnical studies have been conducted to determine the presence of glauconite sands. We recommend conducting such studies as early as possible to inform the viable alternatives and potential impacts.	The PEIS acknowledges the possibility for glauconite soils to be present in the NY Bight lease areas and identifies potential impacts associated with glauconite. Thank you for your comment. These details will be addressed at the COP-specific level.
BOEM-2024-0001-0435-0009	COP-specific NEPA documents should provide additional information on the Unexploded ordnance (UXO) mitigation activities especially related to remediation for agency review. This should include but is	Appendix C, <i>Tiering Guidance</i> , summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that will be included in

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	not limited to siting criteria mapping identification/classification of UXO type and discussion of whether/how each UXO will be monitored once relocated.	the NEPA EIS analysis for each resource area, including Other Uses. Each lease area will undergo project-specific environmental analyses through the development and submittal of a Site Assessment Plan (SAP) and a COP. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include detailed evaluation of impacts and will consider the best available data and information that reflect the state of the science at the time of publication.
BOEM-2024-0001-0435-0010	There are inconsistencies within the Draft PEIS with respect to the specified time for construction. For example, Figure 1-2 indicates that construction for projects typically occurs between 0-2 years as has been the documented constructed period in prior EISs issued by BOEM for offshore wind projects. However in 2.1.2.1.1 the Draft PEIS states that construction for offshore wind projects can take on average 3 to 5 years. We recommend these discrepancies in the timeframe for construction be clarified in the Final PEIS.	BOEM revised Figure 1-2 to show that construction could take up to 5 years. Construction timelines for each NY Bight project is expected to vary and could be more or less than the schedule estimates provided in the Draft PEIS. The project-level NEPA reviews will analyze construction impacts based on the schedules provided in each COP.
BOEM-2024-0001-0435-0011	Alternatives Since all projects will be required to implement avoidance minimization and mitigation measures (either as required by this PEIS or COP-specific NEPA documents) it is unclear how there are differences in the impacts between Alternative B and Alternative C.	Refer to response to comment BOEM-2024-0001-0371-0004.
BOEM-2024-0001-0435-0012	EPA recommends that BOEM consider additional alternatives (some of which were dismissed from consideration) that would allow for a more meaningful comparison of impact minimization efforts.	Refer to response to comment BOEM-2024-0001-0371-0004.
BOEM-2024-0001-0435-0013	The PEIS should make clear if there may be differences in the efficacy of AMMMs between the alternatives.	Refer to responses to comments BOEM-2024-0001-0371-0004 and BOEM-2024-0001-0435-0003.
BOEM-2024-0001-0435-0014	The No Action alternative is intended to serve as a baseline for comparison to alternatives and evaluation of impacts. It's not clear how a No Action of not building the NY Bight Projects corresponds to an action alternative of the adoption of AMMMs. EPA recommends that future NEPA analyses include action alternatives that clearly address the purpose and need of the project as well as a No Action alternative that allows for meaningful evaluation of impacts.	As stated in PEIS Section 2.1, <i>Alternatives Analyzed in Detail</i> , the No Action Alternative analyzes the potential impacts from ongoing and planned non-offshore wind and offshore wind activities without development in the six NY Bight lease areas. Any potential environmental and socioeconomic impacts, including benefits, associated with offshore wind development of the six NY Bight lease areas as described under Alternative B or the AMMM

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		measures as described under the Proposed Action, would not occur. As clarified in PEIS Chapter 2, Alternative B serves to compare how impacts would change with AMMM measures analyzed in Sub-alternatives C1 and C2. BOEM will not approve any projects at the COP-NEPA stage without AMMM measures. Project-specific COP NEPA documents would also address the No Action Alternative, which will serve as the baseline against which the direct and indirect impacts of all action alternatives are evaluated for that specific project.
BOEM-2024-0001-0435-0015	Air Quality EPA recommends encouraging lessees to require the best available technology for marine vessels and non-road equipment. Many of the AMMMs for air quality seek to address this. It could be strengthened by broadening AQ-7 (Onshore measures: diesel engine emissions standards) to apply to marine vessel engines in addition to onshore equipment. If zero-emissions options are not available non-road equipment should meet "Tier 4 Final" standards rather than simply "Tier 4." This is relevant for some non-road equipment and is distinct from Tier 4 interim standards which allow for higher emissions of nitrogen oxides. For marine engines the highest tier may be Tier 4 or Tier 3 depending on the engine size.	BOEM has revised AQ-7 and included the CFR language for marine engine standards and the distinction between Tier 4 Final and Tier 4 Interim standards for non-road equipment.
BOEM-2024-0001-0435-0016	Page 3.4.1-9 states that "Construction activity would occur at different locations and could overlap temporally with activities at other locations including operational activities at previously constructed projects. As a result air quality impacts would be minor shifting spatially and temporally across the air quality geographic analysis area." The geographic or temporal variability does not necessarily result in only minor air quality impacts. The impact of other ongoing offshore wind activities included in the No Action Alternative have not been fully assessed.	The commenter is correct that geographic or temporal variability does not necessarily result in only minor air quality impacts. However, such variability can decrease the likelihood of impacts due to multiple emission sources operating at the same location for an extended time. Data are not available to evaluate impacts quantitatively from multiple projects across the air quality analysis area.
BOEM-2024-0001-0435-0017	Page 3.4.1-14 states that "A NY Bight project must demonstrate compliance with the NAAQS and must demonstrate no adverse impact on air quality related values (AQRV). The Outer Continental Shelf (OCS) air permitting process includes air dispersion modeling of emissions to demonstrate compliance with the NAAQS. As part of the AQRV analysis a NY Bight project must demonstrate that significant	For each project proposed for the NY Bight, the applicant will be responsible for performing the air quality analysis in accordance with BOEM and U.S. Environmental Protection Agency (USEPA) requirements and guidance.

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	visibility degradation at a Class I area would not occur as a result of increased haze or plumes." EPA reminds BOEM that the OCS air permitting process does not necessarily cover all air emissions associated with the project. NY Bight projects must conduct full analyses of all direct and indirect air emissions in order to determine the severity of the air quality impacts.	
BOEM-2024-0001-0435-0018	Additionally please note for future COP-specific NEPA documents that the AQRVs includes visibility and acid deposition at the Class I area and are regulated by the Federal Land Manager (FLM) of that Class I area. In this case the Brigantine Wildlife Refuge is nearby. The FLM for Brigantine Wildlife Refuge is the US Fish and Wildlife Service (USFWS). o Additionally the visibility impairment is not limited to the Class I area but could also include other scenic vistas such as the Statue of Liberty. The scenic vista depends on the location of the source.	For each project proposed for the NY Bight, the applicant will be responsible for evaluating impacts on AQRVs at applicable Class I areas and at Class II areas designated by the FLM.
BOEM-2024-0001-0435-0019	BOEM anticipates that the air quality impacts associated with the project would be minor. However this remains largely unsubstantiated based on the information presented in the Draft PEIS. As currently written it is not clear whether a NAAQS violation may occur. Specifically Table 3.4.1-6. includes an estimate of criteria pollutant emissions from construction which are not annualized but total. Overall the analysis should ensure that any of the NY projects will not cause or contribute to a violation of any applicable NAAQS Prevention of Significant Deterioration (PSD) increment state air quality standards or other relevant standard during construction as well as determine if emissions would adversely impact air quality. We recommend the PEIS include a table with emissions of criteria pollutants in comparison with the NAAQS to clearly demonstrate whether a violation of NAAQS may occur.	For each project proposed for the NY Bight, the applicant will be responsible for performing the air quality analysis to demonstrate compliance with the National Ambient Air Quality Standards (NAAQS). The requested table is not included in the Final PEIS because emissions are expressed in units of mass per time (e.g., tons per year) and cannot be compared to the NAAQS, which are in units of mass per unit volume (e.g., micrograms per cubic meter [ $\mu\text{g}/\text{m}^3$ ]) or volume per unit volume (e.g., parts per billion).
BOEM-2024-0001-0435-0020	Additionally although any given NY Bight project would have lower emissions than otherwise might be generated from another fossil fuel source there are still sizable emissions that are not negligible. This is further supported by BOEM's claims that it would take nearly the entire lifetime of the project (28 years of operation) to offset NOx emissions resulting from construction operations and	A determination of "minor" (as well as the distinction between "minor" and "moderate") is a qualitative evaluation. Because emissions levels alone do not determine concentrations, setting an impact level based on emissions is subjective.

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	decommissioning. In light of this statement it is unclear how a minor impacts determination may be made.	
BOEM-2024-0001-0435-0021	We recommend separating the greenhouse gas (GHG) and climate change section from the Air Quality section. This would aid in making relevant information regarding avoided and offset GHG emissions more readily accessible as GHG emissions are discussed throughout the Air Quality Section but the impact level definitions do not incorporate parameters to evaluate the significance of GHG reductions. We recommend evaluating GHG separately from NAAQs pollutants and developing impact level definitions specific to GHGs.	Because no project has greenhouse gas (GHG) emissions large enough to make a measurable difference to climate impacts, BOEM does not assign impact ratings specifically to GHG emissions.
BOEM-2024-0001-0435-0022	Table 3.4.1-9 presents the net emissions of CO2 for a single NY Bight project. EPA recommends that BOEM specify whether this refers to CO2eq. Additionally the Draft PEIS could benefit from a clarifying statement on how the total lifetime net emissions for the no action (emissions from the grid in absence of one NY bight project) was calculated.	The emissions in Table 3.4.1-9 are carbon dioxide (CO <sub>2</sub> ) not CO <sub>2</sub> equivalent. The table data are labeled properly as CO <sub>2</sub> . The lifetime net emissions for the No Action Alternative (which has no avoided emissions) represents the amount of emissions that would occur from the grid (as configured in 2018) to produce the same quantity of electrical energy as would have been produced by one NY Bight project. This information has been added to Final PEIS Section 3.4.1, <i>Air Quality and Greenhouse Gas Emissions</i> , as well.
BOEM-2024-0001-0435-0023	The Draft PEIS concludes that air quality impacts due to a single NY Bight project within the air quality geographic analysis area are anticipated to be small relative to larger emission sources such as fossil-fuel power plants. In support of this claim footnote 5 provides the annual operational emissions from a single NY Bight project expressed as a percentage of the emissions from fossil-fuel power plants in New Jersey based on the USEPA 2020 National Emissions Inventory (USEPA 2023). As stated in CEQ's interim National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change "NEPA requires more than a statement that emissions from a proposed Federal action or its alternatives represent only a small fraction of global or domestic emissions. Such a statement merely notes the nature of the climate change challenge and is not a useful basis for deciding whether or to what extent to consider climate change effects under NEPA this approach does not reveal anything beyond the nature of the climate	The comparisons in footnote 5 apply to criteria pollutants, not GHGs, and are included to provide perspective on emissions from one NY Bight project relative to regional emissions from the fossil-fuel power plant sector. The CEQ guidance quoted by the commenter applies to GHGs, does not apply to criteria pollutants, and is not relevant to criteria pollutants outside the climate change context.

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	change challenge itself the fact that diverse individual sources of emissions each make a relatively small addition to global atmospheric GHG concentrations that collectively have a large effect."	
BOEM-2024-0001-0435-0024	Additionally the manufacturing of components and transit of vessels from other locations may contribute to emissions including global GHG emissions. It is not clear whether these emissions are currently included in the assessment. Where emissions cannot be reasonably estimated information such as lifecycle information may be useful (e.g. <a href="https://www.nrel.gov/analysis/life-cycle-assessment.html">https://www.nrel.gov/analysis/life-cycle-assessment.html</a> .) EPA suggests including a full accounting of direct and indirect emissions including upstream emissions that may result from the proposed action.	As stated in Final PEIS Section 3.4.1.4.1, emissions from manufacturing and other "upstream" sources are not included in the analysis. However, life cycle considerations are discussed in Section 3.4.1.4.1. As indicated in Section 3.4.1.4.1, although wind energy has higher upstream emissions than many other generation methods, its life-cycle GHG emissions are orders of magnitude lower than from other generation methods.
BOEM-2024-0001-0435-0025	EPA also recommends that GHG emissions for each alternative be provided to form a basis for comparison across alternatives.	Final PEIS Section 3.4.1.4.1 provides emissions for Alternative B. Section 3.4.1.5 discusses emissions for Alternative C and states that the estimated emissions with Sub-alternatives C1 and C2 would be the same as for Alternative B.
BOEM-2024-0001-0435-0026	Although at this time there is limited information on the potential ports to be utilized by each of the lease areas we recommend that future COP-specific NEPA documents carefully consider how impacts to port communities areas with pre-existing air quality impairments and low income and disadvantaged communities will be addressed as the projects proceed. We also note that while operation and maintenance facilities at or near some or all of the identified ports would be used for multiple offshore wind projects and have utility that is independent of any single project the impacts associated with the development or expansion of these facilities should be considered. To facilitate a clear analysis of air quality impacts we again recommend showing maximum modeled concentrations or emissions estimates from construction and operations and maintenance activities in comparison with NAAQS or other standards. This information should be provided in subsequent COP-specific NEPA documents.	Future COP-specific NEPA documents will consider air quality impacts on the relevant port areas and environmental justice communities.
BOEM-2024-0001-0435-0027	Section 3.4.1.4.3 states: "BOEM is considering conducting or participating in a regional modeling study that would assess	This study has not received financial support and will not commence prior to the issuance of the Final PEIS. BOEM intends

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	development impacts of six NY Bight projects along with other planned and reasonably foreseeable projects." EPA encourages BOEM to perform the study as the quantitative results would be a critical piece of evidence in the cumulative impacts section of the Final PEIS.	to revisit the matter of conducting a regional modeling study at a subsequent time.
BOEM-2024-0001-0435-0028	Climate change can make ecosystems resources and communities more susceptible as well as lessen resilience to other environmental impacts apart from climate change. In some instances this may exacerbate the environmental effects of the proposed action. We recommend that the climate change section in future COP-specific NEPA documents include consideration of climate resiliency measures particularly for infrastructure that may be vulnerable to the impacts associated with climate change (such as sea level rise more frequent storms etc.). This discussion would provide additional details regarding the durability of the proposed infrastructure (including wind turbine generators and buried cables at all locations) in the face of more severe weather and more severe sea states.	Future COP-specific NEPA documents will consider climate resiliency measures and the durability of the proposed infrastructure.
BOEM-2024-0001-0435-0029	Water and Natural Resources. The COP-specific NEPA documents should describe how AMMMs and any additional mitigation will be coordinated with current efforts to preserve the quality of water resources (for example the Barnegat Bay Comprehensive Conservation and Management Plan.)	Thank you for your comment. This coordination would be included in the COP-specific NEPA documents.
BOEM-2024-0001-0435-0030	The National Pollutant Discharge Elimination System (NPDES) permit program under the Clean Water Act (CWA) addresses water pollution by regulating point sources that discharge pollutants to waters of the United States. EPA recommends that BOEM and the lessees coordinate with EPA as project design progresses in order to determine the necessity of a NPDES permit. COP-specific NEPA documents should address any potential discharges from onshore or offshore project components (including wind turbine generators or offshore substations) and indicating whether they may be subject to NPDES permits.	Thank you for your comment. Section 3.4.2.3.2 provides a discussion of circumstances and activities that would require an NPDES permit. CWA Section 316(b) requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts. More specific information would be included in the project-specific COP-level NEPA analysis.
BOEM-2024-0001-0435-0031	In the discussion of water quality impacts associated with cable emplacement and maintenance the Draft PEIS applies the findings of the sediment transport model for Empire Wind in assessing the	A statement has been added to the Final PEIS Section, 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative</i> , to make clear to the reader that a project-specific, COP-level NEPA analysis will

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	<p>implications of sediment suspension. The Draft PEIS should articulate the assumptions made in applying these results to the New York Bight lease areas and should disclose potentially different existing conditions that may make the findings of this model inapplicable to the sites being evaluated. Additionally EPA would look to future COP-specific NEPA documents to evaluate whether there may be regions within each lease area or corresponding near and on-shore components that may be more sensitive to sediment deposition or suspended sediment (such as tidal wetlands along the shoreline and shellfish harvesting areas). Subsequent COP-Specific NEPA documents should carefully assess potential impacts to these sensitive resources. Additionally EPA recommends a pre-and post- construction bathymetric survey be provided to ensure the sediment resettles over the proposed cables rather than disturb nearby benthic habitat.</p>	<p>provide greater details of the specific New York Bight lease areas and the possible impacts on resources from sediment resuspension and transport. Through the application of RP MUL-27, BOEM encourages lessees to explore ways to minimize potential impacts related to sediment disturbance.</p>
BOEM-2024-0001-0435-0032	<p>Furthermore the EPA recommends that subsequent COP-specific NEPA documents consider the following components related to water quality: o Port expansion could include dredging deepening and construction of new berths resulting in impacts on water quality through accidental spills leaks or discharges or sedimentation during port use. Any potential increases in erosion related to dredging should be addressed. EPA encourages BOEM to consider beneficial use of dredged material to the extent practicable. The PEIS should also include a discussion of potential disposal sites if known as each disposal alternative may have different requirements and/or result in potentially different impacts Waters of the U.S. and water quality. Specific information about cable corridors is not yet known. While EPA is generally supportive of the concept of shared or common cable corridors to reduce potential impacts to benthic resources and wetlands given the cable ranges included within the representative project design envelope we are not able to meaningfully assess the extent of impacts to arrive at a conclusion. Subsequent analyses should quantitatively evaluate the acreage of benthic habitats wetlands submerged aquatic vegetation and other sensitive resources/areas associated with various potential cable corridors routes to inform a determination of impacts. A map showing the coinciding resource areas intersected by cable corridors would also be</p>	<p>Thank you for your comment. Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Port Utilization</i>, provides an assessment of the impacts on water quality from port utilization and possible port improvements. Port improvement projects are described in Appendix D, Section D.2.5. If the individual projects include other port improvement activities or components, the project-specific, COP-level NEPA analysis will provide further details.</p> <p>Analysis of impacts on benthic resources is provided in Section 3.5.2. The analysis of wetland impacts are provided in Section 3.5.8. Text has been added to Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of Structures</i> IPF regarding emissions from anodes. Additionally, AMMM measure WQ-1 requires lessees to avoid using zinc sacrificial anodes on external components of WTG and OSS foundations to reduce the release of metal contaminants in the water column.</p>

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	informative in demonstrating the potential scale of impacts associated with cable emplacement. o No consideration for impacts of turbine port infrastructure on wetlands is included in the analysis. Furthermore given the broad scope of the wetland impacts there is no consideration for the cumulative effects of the wetland impacts region wide. It is recommended that there be additional consideration of the cumulative impacts on wetlands including any impacts to wetlands' ability for natural inland migration as a consequence of project impacts. o Protective measures for corrosion of offshore wind structures have different potentials for emissions (e.g. galvanic anodes emitting metals such as aluminum zinc and indium; organic coatings releasing organic compounds due to weathering or leaching). While the current understanding is that chemical emissions from offshore wind structures is likely low the effects of multiple projects is not known. We recommend that BOEM consider commitments to water quality monitoring to better understand potential impacts and how they can be avoided or managed if necessary.	
BOEM-2024-0001-0435-0033	In future COP-specific NEPA documents EPA recommends that BOEM provide additional information documenting the anticipated location and type of scour protection to be used throughout the project area. Additionally if the scour systems are to be removed EPA recommends including this removal in a management plan that includes measures to avoid impacts to the seafloor bed as well as indicating where the material will be placed.	Thank you for the comment. The project-specific, COP-level NEPA analysis will provide greater details regarding location and type of scour protection. Additionally, any decommissioning activities, including the removal of scour protection, would be included in the decommissioning application required by BSEE.
BOEM-2024-0001-0435-0034	Additionally the COP-specific NEPA document should include sufficient information on how the selected project alternative is consistent with the CWA Section 404(b)(1) Guidelines to support permitting by the U.S. Army Corps of Engineers. Such a discussion would demonstrate how the proposed/selected alternative qualifies as the least environmentally damaging practicable alternative.	Thank you for the comment. The project-specific COP-level NEPA analysis will provide greater details on CWA Section 404(b)(1) guidelines for project alternatives.
BOEM-2024-0001-0435-0035	Land Use and Coastal Infrastructure The PEIS states that Port Utilization will result in minor beneficial impacts to land use and coastal infrastructure through economic activity and increased employment opportunities. EPA urges BOEM to consider impacts	The specific ports that the NY Bight projects will utilize are not yet known, nor are potential port upgrades that might be required. The PEIS analyzes representative ports to describe the types of impacts that could result from port utilization. Ongoing and

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	related to port upgrades and construction that will be required to facilitate their use as part of the NY Bight full build.	planned port upgrades within the geographic analysis are identified in Appendix D, <i>Planned Activities Scenario</i> , and are evaluated as part of the cumulative impact analysis. Specific port-related impacts will be analyzed at the COP NEPA stage when specific ports are chosen for each individual project.
BOEM-2024-0001-0435-0036	Indian Nation Coordination In the COP-specific NEPA documents EPA recommends including any lease area specific coordination with Indian Nations such as information received in public meetings or information received after the PEIS is finalized.	BOEM will continue to consult with Tribal Nations through the COP-specific environmental review process and will include summaries of Tribal coordination efforts and formal government-to-government consultation conducted for each COP in the respective NEPA documents.
BOEM-2024-0001-0435-0037	Environmental Justice (EJ) and Impacted Communities EPA recommends making the “Environmental Justice Community Mitigation Resources Plan” and the “Environmental Justice Communications Plan” available for federal cooperating agency and public review.	BOEM is exploring mechanisms to ensure plans and reports submitted under EJ-1 (now EJ-1a in the Final PEIS) will be made publicly available with a point of contact for the lessees.
BOEM-2024-0001-0435-0038	Additionally several of the AMMMs require substantial involvement from communities impacted by NY Bight projects. The document or the plans developed as per the AMMMs should make clear how public participate will be encouraged and what will happen if the public does not provide substantial feedback in the required AMMMs.	Refer to response to comment BOEM-2024-0001-0406-0021-c. EJ-1 (now EJ-1a in the Final PEIS), and EJ-3 have been revised to reflect community-based organization comments and now better reflect requirements to coordinate with residents and organizations in the creation of the plans. BOEM expects lessees to utilize best practices for meaningful engagement, and reporting requirements of the AMMM measures can still be submitted explaining what engagement activities occurred to seek coordination with EJ communities. Note that EJ-2 has been revised to be an RP as an "Environmental Justice Impact Mitigation Resources Plan" and includes language recommending coordination with residents and organizations in the development of the plan.
BOEM-2024-0001-0435-0039	EPA recommends that the final PEIS should be adjusted to reflect guidance from the Executive Order 14096 Revitalizing Our Nation's Commitment to Environmental Justice for All (April 21 2023) Section 3 (i) each agency shall "identify analyze and address disproportionate and adverse human health and environmental effects (including risks) and hazards of Federal activities on communities with environmental	BOEM agrees with EPA's comment. The draft was written prior to the Executive Order. The Final PEIS reflects guidance from EO 14096. Resource areas found to have minor and moderate impacts should be included in COP NEPA analysis of disproportionate and adverse effects.

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	justice concerns." EPA encourages BOEM to revise the analysis of disproportionate and adverse effects to include consideration of resource areas found to have minor and moderate impacts. It is possible that minor or moderate impacts could constitute a disproportionate and adverse impact.	
BOEM-2024-0001-0435-0040	With respect to EJ-4 EPA recommends that BOEM provide additional justification for the derivation of the specified financial contribution to the compensatory mitigation fund. The timeframe for the funding coverage should also be clarified to address how construction and decommissioning periods (which may result in some of the largest impacts) may be included. Additionally it would be helpful to provide further information on the proposed allocation methodology and measures being considered to ensure equitable distribution of funds.	Refer to response to comment BOEM-2024-0001-0319-0004.
BOEM-2024-0001-0435-0041	Furthermore we strongly encourage BOEM to revise the current narrow criteria when defining "eligible impacts" for this mitigation measure. In particular we urge BOEM to include minor and moderate impacts when defining "eligible impacts" as these may still constitute a disproportionate and adverse impact to communities with EJ concerns. We would also suggest that BOEM further clarify what is meant by "direct" and "not otherwise mitigated." It's not clear if for example traffic related to port activity for a NY Bight lease area project would be considered direct as this is something that would make sense to include in such a mitigation measure. Additionally it is not clear what level of mitigation would constitute an impact being "otherwise mitigated" and therefore preclude it from being further mitigated through EJ-4. EPA suggests that BOEM more clearly identify how BOEM will decide what impacts will be considered for mitigation under EJ-4.	Refer to response to comment BOEM-2024-0001-0319-0004.
BOEM-2024-0001-0435-0042	The PEIS should clearly and effectively define the "reference community" and the "affected community" used in the environmental justice analysis. These definitions are used to determine whether there are disproportionate and adverse impacts by comparing the impacts to the affected community with the impacts to the reference community. A well-defined affected community will accurately reflect the demographic characteristics of the populations likely to be	BOEM acknowledges that the PEIS does not provide the specificity needed to determine whether there are disproportionate and adverse impacts or conduct a site-specific cumulative impact assessment (see section 3.6.4.2 on Scope of the Environmental Justice Analysis). The project-specific COP NEPA documents should include more detailed information that can better assess potentially affected communities and compare them with the

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	adversely impacted by the proposed project. A well-defined reference community will reflect the characteristics of the general population (e.g. municipal regional state).	appropriate level of demographic characteristics to determine whether there are disproportionate and adverse impacts from one project, or if there are cumulative impacts from multiple projects. The project-specific NEPA documents will also be subject to public comment.
BOEM-2024-0001-0435-0043	Additionally the PEIS would benefit from a baseline description of current existing stressors/pollution burden within these communities to better assess cumulative effects.	Thank you for your comment. Section B.5 of Appendix B, <i>Supplemental Information and Additional Figures and Tables</i> , has been revised to include baseline environmental conditions for each of the counties in the geographic analysis area exceeding environmental justice thresholds as identified in Section 3.6.4, <i>Environmental Justice</i> . BOEM acknowledges that the PEIS does not provide the specificity needed to determine whether there are disproportionate and adverse cumulative impacts for potentially affected communities with environmental justice concerns (see Section 3.6.4.2 on Scope of the Environmental Justice Analysis). The project-specific COP NEPA documents should include more localized baseline assessments of existing stressors/pollution burden in the proposed locations for the permit activities.
BOEM-2024-0001-0435-0044	The PEIS states in several locations that "A single NY Bight project could benefit environmental justice populations by displacing fossil fuel power-generating capacity within or near the geographic analysis area including at port locations." This statement is potentially misleading as it is not clear how BOEM and the leases would ensure that those fossil fuel power generating locations near environmental justice populations would be the ones displaced.	Thank you for your comment. The Final PEIS has been revised to communicate the conditions necessary for site-specific displacement of fossil fuel power-generating capacity. To the extent possible at the time of the COP NEPA documents, the COP NEPA documents should address how potential benefits may be felt by the population in and around the geographic analysis area.
BOEM-2024-0001-0435-0045	The COP-specific NEPA documents should provide an analysis of increased traffic around ports for both the construction and operation and maintenance phase of the project. As is stated in the PEIS this analysis will be specific to the ports selected for use and it is premature to state that impacts will be short-term.	BOEM agrees that the COP NEPA documents should provide an analysis of impacts of increased traffic around relevant ports throughout the project phases. Port vehicular traffic will be analyzed as a part of each project-specific COP NEPA document, including the cumulative impact of each project. Due to lack of location-specific information at this stage, the Final PEIS has been amended, and determination of short-term impacts related to air emissions and port traffic have been removed (Section 3.6, <i>Environmental Justice</i> , subsections 3.6.4.5.2 and 3.6.5.4.3). Increases in construction emissions will be short-term.

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BOEM-2024-0001-0435-0046	The PEIS states several benefits that can be expected as a result of the development of the NY Bight Offshore Wind Projects. It is helpful to include these benefits in the PEIS as part of the analysis but EPA would like to state that benefits to the project cannot be used to offset impacts. A full analysis of impacts should be included in the COP specific NEPA documents.	BOEM acknowledges that project benefits cannot be used to offset project impacts. Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&M, and conceptual decommissioning of the project.
BOEM-2024-0001-0435-0047	Additionally per Executive Order 13045 on Children's Health EPA recommends that BOEM consider impacts to places where children live learn and play such as homes schools and playgrounds. Future COP-specific NEPA documents should identify proximity to sensitive receptors and should implement AMMMs near these locations in order to be protective of children's health.	BOEM agrees that children's health and other sensitive populations should be addressed in future COP-specific NEPA documents.
BOEM-2024-0001-0435-0048	Further the EJ analysis seems to compare county demographic data to state demographic data a broad scope that may not be an appropriate geographic comparison as it may dilute the presence of low-income communities that would be directly impacted by the project. The PEIS includes figures that represent more granular scales and text indicating that more community-based analysis will be conducted when the project scope is more fully defined but it is not clear how this will be incorporated into the EJ analysis. EPA recommends that BOEM consider census block groups or another appropriate geographic unit to capture localized impacts and most accurately reflect the potential presence of low-income communities and communities of color as is suggested in the Promising Practices For EJ Methodologies In NEPA Reviews (2016) report.	BOEM agrees that the PEIS does not include the specificity needed to make determinations regarding disproportionate and adverse effects at the community level (see Section 3.6.4.2 on Scope of the Environmental Justice Analysis). COP NEPA documents should include location specific demographic data on a more granular scale once the project scope is clearly defined. The COP NEPA documents should consider examining the smallest geography, census block groups, to capture localized impacts and ensure that siting decisions will not cause disproportionate and adverse impacts on the basis of demographic characteristics.
BOEM-2024-0001-0435-0049	There are several locations within the draft PEIS that broadly discuss dredged material disposal (2-12 3.1-2 3.4.2-8 3.5.2-22 D-12 and several locations within D1). Ocean disposal of dredged material excavated from the navigable waters of the United States requires an MPRSA permit (issued by USACE but reviewed and concurred by the EPA). We therefore recommend including a brief description of the MPRSA potentially under section 1.4 Regulatory Overview. Including brief information about the MPRSA in the Regulatory Overview will help any parties involved in offshore wind development determine	BOEM has added text to the Final PEIS and determined that the most appropriate place for this information is the discharges discussion in Table 3.1-1. Lessees would need to comply with all permitting requirements during the project-specific environmental review.

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	applicable laws and regulations and coordinate with USACE and/or EPA as necessary.	
BOEM-2024-0001-0435-0050	Table 3.1-1: Primary IPFs lists "dredged material ocean disposal" as one of the Sources or Activities that could produce an impact associated with offshore wind development. The MPRSA's applicability to dredged material disposal should be included in the description similar to the descriptions provided regarding NPDES permit requirements.	Text in Table 3.1-1 has been revised to include the Marine Protection, Research and Sanctuaries Act (MPRSA).
BOEM-2024-0001-0435-0051	The PEIS refers to unexploded ordinances in several locations however there is no mention of the National Guidance for Industry on Responding to Munitions and Explosives of Concern in U.S. Federal Waters developed by the U.S. Committee on the Marine Transportation System. After inviting public comment in the Federal Register the comment period on the National Guidance has now closed and it should be issued imminently. The National Guidance is intended to identify and help to coordinate federal statutory and regulatory authorities that approve regulate or permit the detonation removal or mitigation of munitions and explosives of concern (MEC) on the outer continental shelf. The EPA recommends that the final version of this PEIS refer to if not include text from the National Guidance.	Discussion of the National Guidance for Industry on Responding to Munitions and Explosives of Concern in the U.S. Federal Waters has been added to Section 3.6.7.1.2.
BOEM-2024-0001-0435-0052	There are several mentions in the document that refer to managing and/or modifying sand waves occurring on the seafloor (e.g. 2-12 3.5.2-22 3.5.5-21 3.5.5-36 and D1-17). In one example page 3.5.5-21 the document states that "[s]and waves that are dredged would likely be redeposited in areas containing similar sediments." The Final EIS should note that this type of activity may fall under the purview of the MPRSA if material is dredged or excavated from sand waves in the navigable waters of the United States. Project proponent should coordinate with USACE and/or EPA as necessary.	Text modifications were made within Section 3.5.2.4. "This type of activity may fall under the purview of the MPRSA if the material is dredged or excavated from sand waves in the navigable waters of the United States, lessees would coordinate with USACE and/or EPA as needed."
BOEM-2024-0001-0435-0053	The potential for adverse marine impacts of the given alternatives primarily focus on impacts to marine mammals and ESA listed species. EPA recommends that the document expand consideration to and discuss the potential for adverse impacts to the marine environment	Analysis of potential impacts from the Proposed Action (Alternative C) and alternatives on the broader marine environment and other marine uses are found throughout the PEIS in the various resource topics that include the marine

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	generally and other uses of the ocean. The sections describing the cumulative impacts of the alternatives would be appropriate places to discuss these broader considerations.	environment (e.g., PEIS Section 3.4.2, <i>Water Quality</i> , Section 3.5.2, <i>Benthic Resources</i> ). In addition, PEIS Section 3.6.7, <i>Other Uses</i> , discusses potential impacts on other uses not addressed in other sections of the PEIS, including marine minerals, national security and military use, aviation and air traffic, cables and pipelines, radar systems, and scientific research and surveys.

#### P.4.1.4 U.S. Coast Guard

**Table P.4-5. Responses to Comments from the U.S. Coast Guard (BOEM-2024-0001-0370)**

Comment No.	Comment	Response
BOEM-2024-0001-0370-0001	The USCG does not oppose the Proposed Action Alternative and recommends all Proposed Action avoidance minimization mitigation and monitoring (AMMM) measures pertaining to Navigation and Vessel Traffic be made mandatory. Additionally the USCG offers the following recommendations. Turbine Layout Proposed Action AMMM measures for consistent turbine layout marking and lighting incorrectly states turbines should have [Underline: one of the two lines] of orientation per lease area spaced at least 1 nautical mile (nm) apart to support navigation safety and Search and Rescue (SAR). Per Navigation and Vessel Inspection Circular (NVIC) 02-23 the Coast Guard recommends each windfarm be organized in straight rows and columns creating a grid pattern consisting of two lines of orientation with at least 1 nm between turbines. Each windfarm's bathymetric circumstances are different and spacing of less than 1 nm may be unavoidable but programmatic AMMM measures applied throughout the NYB should align with NVIC 02-23. Deviations from this guidance should be assessed during project-specific environmental impact assessments and Navigation Safety Risk Assessments (NSRA) on a case-by-case basis for each lease area.	MUL-25 is now an RP. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs. MUL-25 has been revised to be in alignment with Navigation and Vessel Inspection Circular 02-23, in which the Coast Guard recommends "each windfarm be organized in straight rows and columns, creating a grid pattern consisting of two lines of orientation." NVIC 02-23 does not create a requirement for 1 nm spacing between turbines.
BOEM-2024-0001-0370-0002	Marine Casualty Data In its assessment of affected environment and environmental consequences BOEM claimed to review pollution search and rescue and vessel incident data from 2017 to 2018. NVIC 02-23 recommends 20 years of marine casualty data in the study area	Search and rescue (SAR) incident data for 20 years has been incorporated in Table 3.6.6-3 to meet the requirements of Navigation and Vessel Inspection Circular (NVIC) 02-23. Navigation Safety Risk Assessments (NSRA) for each individual COP will still be

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	to provide an incident change analysis resulting from project development. One year of data is insufficient. If BOEM does not assess 20 years of data in the PEIS this assessment should not be tiered to or incorporated by reference and it is critical all future projects within the NYB study area carry out NSRAs in accordance with NVIC 02-23.	required, and project-specific NEPA analysis will be conducted for each COP.
BOEM-2024-0001-0370-0003	Project-specific NSRAs The USCG acknowledges National Environment Policy Act analysis for individual Construction and Operation Plans will tier to or incorporate by reference the NYB PEIS. However the assessment of potential increases in the likelihood for vessels to be involved in a collision or allision must be determined through project specific NSRAs. The NYB Draft PEIS uses NSRA data from ongoing projects in the vicinity of the NYB which is not an accurate assessment of impacts from future projects to be located within the NYB. All six NYB lease areas will have unique vessel traffic characteristics which must be assessed independently through project specific NSRAs as agreed upon by the USCG and BOEM (see Memorandum of Agreement OCS-06).	BOEM developed the PEIS prior to the issuance of any COPs and therefore relied on existing information, including COPs and NSRAs of nearby lease areas, to inform its analysis in the PEIS. As noted in Chapter 1, <i>Introduction</i> , the PEIS will not approve any projects, and all projects will be subject to additional project-specific NEPA analysis. The project-specific NSRAs will be developed in accordance with the current guidance, which includes future vessel traffic assessments. The project-specific NSRAs will be used to inform the COP-specific NEPA analysis.

#### P.4.1.5 National Marine Fisheries Service

**Table P.4-6. Responses to Comments from the National Marine Fisheries Service (BOEM-2024-0001-0371)**

Comment No.	Comment	Response
BOEM-2024-0001-0371-0001	[Bold: Analysis Structure and the Representative Project Design Envelope] The structure of the PEIS creates challenges for meeting BOEM's stated objectives for the document and for accurately characterizing potential resource impacts. The representative project design envelope (RPDE) approach does not provide a realistic estimate of actual build out in each lease area. Instead it considers a design envelope for one project and applies that to the six lease areas to assess the theoretical impacts of full build out rather than considering the lease-specific footprint and unique characteristics of each lease area. The analysis does not consider individual resources or habitats present among the leases nor does it include a detailed	The purpose of the PEIS is to present a programmatic analysis of the six NY Bight lease areas to characterize the types of impacts that could occur and mitigation measures that could minimize those effects. A detailed area-specific analysis that considers all potential impacts of development is more appropriate at the COP-specific stage when project details are known and site-specific survey data is available. Where information was available, impacts unique to each lease area were analyzed. Because project-specific details nor surveys have been prepared for each lease area, the level of information requested in the comment is limited. Regarding the Representative Project Design Envelope (RPDE) not

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	analysis of cumulative impacts resulting from a representative full build-out of all six leases. Where a cumulative analysis of impacts is provided it does not include further discussion of the effects and presents a limited assessment of the implications of the impacts. A detailed area- specific analysis that considers all potential impacts of development in the NYB would allow for a comprehensive evaluation of potential cumulative effects and the identification of specific AMMMMs to reduce those effects. We recommend BOEM update the PEIS to highlight and assess whenever possible resources and impacts that are unique to each of the existing NYB leases based on information currently available for these lease areas. This would allow for a full review of anticipated effects to protected species habitat fisheries and navigational conflicts across all lease areas to support the identification of appropriate AMMMMs. Such an approach would also provide a robust baseline to facilitate tiering of this analysis for project-specific decisions consistent with BOEM's intent and guidance for programmatic analyses.	being realistic, as stated in Section 2.1.2.1, the RPDE is not associated with any particular lease area and is instead representative of development that could occur associated with any of the six NY Bight lease areas. The RPDE was developed with input from the six NY Bight lessees, American Clean Power, National Renewable Energy Laboratory, and the States of New York and New Jersey.
BOEM-2024-0001-0371-0002	[Bold: AMMMMs Analysis] The structure of action alternatives is a critical element of the document because it drives the comparative analysis of potential impacts to NOAA trust resources discloses trade-offs and supports development of effective mitigation measures. We support BOEM's description of Alternative A the No Action Alternative as a "true no action" under which no development would occur. This alternative will establish a baseline against which the action alternatives can be evaluated and is consistent with the approach that we have developed in coordination with BOEM in which the existing baseline for the No Action Alternative will only include past and ongoing activities and their effects.	Comment noted.
BOEM-2024-0001-0371-0003	We continue to support the inclusion, analysis, and use of a full build-out scenario without AMMMMs at the PEIS stage for analysis and discussion of potential impacts of development in the lease areas without the AMMMMs. Alternative B is intended to allow for a comparison to the impacts that could result from the programmatic adoption of AMMMMs under Alternative C. However, as written Alternative B assumes deferred adoption of AMMMMs to the COP	Refer to response to comment BOEM-2024-0001-0371-0004.

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	<p>stage functionally equivalent to current practices for project reviews. This leaves Alternative B essentially functioning as a second No Action Alternative. While this has the potential to be useful for the purposes of comparison it leaves the document with a very limited range of action alternatives realistically capable of selection. The PEIS should clarify the distinction between adopting a suite of AMMMs at this stage in the process versus at the project-specific COP stage. Below we suggest a path for expanding the range of reasonable alternatives and for providing more meaningful comparisons between alternatives.</p>	
BOEM-2024-0001-0371-0004	<p>To allow for a more meaningful comparative analysis we continue to recommend expanding the range of alternatives by updating Alternative C to include sub-alternatives with different combinations of AMMMs to expand the range of action alternatives that could be selected. Individual projects will still be required to implement a host of AMMMs through compliance with applicable statutes (e.g. the Endangered Species Act (ESA) the Marine Mammal Protection Act (MMPA) the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Outer Continental Shelf Lands Act (OCSLA)). Many standard measures associated with these statutes are fairly predictable based on our experience with offshore wind projects that have undergone review. Most of the AMMMs included in the PEIS fall into the more standard AMMMs category in contrast to a more programmatic approach to reducing impacts. This approach along with the design of Alternative B make it difficult to identify the potential effectiveness of adopting programmatic AMMMs under Alternative C. Sub- alternatives under Alternative C could evaluate sets of AMMMs ranging from minimum standard measures to levels of mitigation that may have more profound effects at the programmatic level. This approach would allow for consideration of measures that may reduce effects of construction (e.g. time of year restrictions for pile installation) alone and in combination with measures that may reduce effects of project operations (e.g. limiting locations of turbine foundations). However regardless of whether additional sub-alternatives are added we</p>	<p>BOEM has provided additional clarification on the purpose of Alternative B and has revised Alternative C to group AMMM measures into sub-alternatives (see Final PEIS Chapter 2). Alternative B serves to compare how impacts would change with the AMMM measures analyzed in Alternative C. Selection of Alternative B in the Record of Decision (ROD) would defer identification of AMMM measures to the COP-specific NEPA stage. The PEIS would not result in the approval of any activities, and BOEM would not approve any COP without implementation of mitigation measures. Alternative C has been divided into two sub-alternatives: Sub-alternative C1 and Sub-alternative C2. Sub-alternative C1 analyzes the AMMM measures that BOEM has required as conditions of approval for previous activities proposed by lessees in COPs submitted for the Atlantic OCS or through related consultations. Sub-alternative C2 analyzes the AMMM measures under Sub-alternative C1 plus the AMMM measures that have not previously been applied. These AMMM measures that have not been previously applied may be less familiar to the offshore wind industry but could further avoid and minimize impacts on resources if applied. In addition, BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. Any previously identified AMMM measure that is an RP has been removed from Alternative C. BOEM encourages lessees to analyze and consider implementing these RPs as they may further avoid and minimize impacts on resources but will not require them as a condition of</p>

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	<p>recommend that BOEM ensure the PEIS includes a more complete analysis of Alternative C as discussed further below.</p> <p>As currently written Alternative C is intended to cover all AMMMs outlined in Appendix G. However in our view this list of AMMMs should be expanded. Further the document as currently drafted does not address important aspects of the AMMMs that are included in Appendix G. For example despite the overlap of projects with the Mid-Atlantic Cold Pool the PEIS does not consider or analyze effects to the Cold Pool from build out in the NYB and does not include any potential AMMMs that may minimize adverse effects. Additionally while each section of the PEIS includes a suite of mitigation measures under each resource area those sections do not examine how these measures will be applied nor their efficacy based upon the RPDE parameters summarized in the PEIS. We recommend that the analysis include a comparative description of when and how each AMMM would be implemented and the expected change in impacts due to implementing each measure. This would help BOEM to make an informed decision when selecting which AMMMs will and will not be adopted at the programmatic level.</p>	<p>COP approval. AMMM measures from Sub-alternative C1 or C2, or a combination of both, may be required as conditions of approval for activities proposed by lessees in COPs submitted for the six NY Bight lease areas. BOEM may also require additional or different measures based on future, site-specific NEPA analysis of project-specific COPs.</p> <p>The PEIS addressed cold pools in Section 3.5.4, <i>Benthic Resources</i>; Section 3.5.5, <i>Finfish, Invertebrates, and Essential Fish Habitat</i>; and Section 3.5.6, <i>Marine Mammals</i>.</p>
BOEM-2024-0001-0371-0005	<p>Many of the current AMMMs are vague which makes it difficult to understand how they would result in meaningful reductions of adverse impacts from a project. Others are composed well but do not provide a clear linkage between the AMMM and an avoidance minimization or monitoring of a particular impact. For example for BEN-2 (scour protection inspection) there is no clear linkage between the requirement to routinely inspect scour protection features (e.g. concrete mattresses rock etc.) and a reduction of adverse impacts to benthic habitats or Essential Fish Habitat (EFH). The efficacy of a standardized set of AMMMs will be limited if there is no clarity and specificity in the substance and timing of the measures and how they would be implemented to reduce adverse impacts. For example one measure listed in Appendix G proposes a monitoring plan to avoid or reduce impacts to scallop populations (COMFIS-3) but it is unclear if this would be required in advance of Lessee submission of COPs or associated evaluation of project-specific impacts. If not required prior to project planning this limits the likelihood of altering project</p>	<p>BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. Any previously identified AMMM measure that is now an RP has been removed from Alternative C. BEN-2 was reclassified as MUL-41 because the measure does not directly mitigate impacts on benthic habitats or essential fish habitat (EFH). COMFIS-3 has also been updated for clarification. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C and RPs. Project-specific NEPA analysis for individual COPs could apply revised, additional, or different AMMM measures as needed.</p>

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	<p>components in a timely manner to minimize impacts to scallop populations or associated fisheries. While we support AMMMMs that facilitate collection of additional data to assess and avoid impacts if this type of data collection requirement is not put in place until the COP approval this and similar AMMMMs would be more likely to avoid and mitigate impacts for future projects instead of the existing six leases several of which are in the advanced planning and COP submission stages and have already begun development of initial project plans. Providing a broader range of AMMMMs and clarifying which AMMMMs will be mandatory conditions for all COP approvals and which ones may be required based on the details of a specific COP will provide predictable parameters for developers to follow and allow for a more robust analysis of the effectiveness of the AMMMMs at a programmatic level. There are several AMMMMs identified that do not implement any requirements or identify specific parameters that dictate Lessee adoption but rather defer to the Lessee to consider how they may or may not be incorporated into project planning. This approach creates challenges for evaluating the effectiveness of these AMMMMs. This is particularly true for the analysis of impacts to EFH in which the PEIS concludes there is no difference in impacts to EFH whether or not AMMMMs are adopted (Alternative B vs. C). This may be due to the fact that many of the AMMMMs aimed at minimizing habitat impacts do not include specific actions but defer to the Lessee to consider how to implement such AMMMMs (e.g. BEN-1 boulder avoidance/relocation; MUL-23). While we certainly support the consideration of avoiding sensitive habitats in project planning (as described in AMMMM MUL-23) the ultimate effectiveness of this AMMMM and any potential reduction in impacts to sensitive habitats would not be determined until the COP review stage. Additionally the EFH analysis and impact determination is primarily driven by the presence of structures yet there are no specific AMMMMs identified in Appendix G that would require avoidance or minimization of impacts to EFH from the presence of structures. As a result this lack of specific required action for avoidance/minimization for some AMMMMs limits BOEM's ability to meet the objective to analyze programmatic AMMMMs for the six</p>	

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	<p>NYB lease areas. We note the AMMMs identified do not appear to follow the standard stepwise approach for mitigation consistent with NOAA's 2022 Administrative Order on Mitigation Policy[Footnote 1: Available at <a href="https://www.noaa.gov/organization/administration/noaa-administrative-orders-chapter-216-program-management/nao-216-123-noaa-mitigation-policy-for-trust-resources">https://www.noaa.gov/organization/administration/noaa-administrative-orders-chapter-216-program-management/nao-216-123-noaa-mitigation-policy-for-trust-resources</a>]. Such an approach first focuses on avoiding adverse impacts to high value habitats and resources. Following avoidance this approach would then call for minimizing the impact of activities by limiting the degree or magnitude of the impact action or its implementation. Finally any remaining adverse impacts that cannot be avoided or minimized should be offset or compensated for by replacement/replication or providing equivalent substitute resources or environments. This approach is also described in the 2024 NMFS-BOEM Right Whale and Offshore Wind Strategy. Following this approach would provide more clarity on how the AMMMs would be implemented and ultimately modify the level of project impacts. We note that offsets and compensation may not be legally possible for all impacts including for example potential impacts to endangered species such as the North Atlantic right whale. As such avoidance may be the only option for certain impacts.</p>	
BOEM-2024-0001-0371-0006	<p>[Bold: Relationship Between PEIS and COP-specific Analyses] We understand that BOEM intends to use the final PEIS as the basis for tiering individual COP- specific analyses and that it will be incorporated by reference into future NEPA documents. However we have concerns that the current approach and level of detail in the draft PEIS will create challenges for tiering and limit meaningful uses of the PEIS. Appendix C is intended to describe how BOEM will approach tiering off of the PEIS and incorporation by reference but this section and Table C-1 remain vague. The document is also inconsistent and unclear in descriptions of what it means for AMMMs to be formally adopted how those measures will be applied and when those AMMMs would be effective. We appreciate BOEM's explanation that "the Record of Decision (ROD) for the PEIS will state which of the AMMMs analyzed in the PEIS BOEM</p>	<p>BOEM has revised Alternative C to group AMMM measures into sub-alternatives (see Final PEIS Chapter 2): Sub-alternative C1 and Sub-alternative C2. Sub-alternative C1 analyzes the AMMM measures that BOEM has required as conditions of approval for previous activities proposed by lessees in COPs submitted for the Atlantic OCS or through related consultations. Sub-alternative C2 analyzes the AMMM measures under Sub-alternative C1 plus AMMM measures that have not previously been applied. These AMMM measures that have not been previously applied may be less familiar to the offshore wind industry but could further avoid and minimize impacts on resources if applied. BOEM intends to use AMMM measures identified at the programmatic stage to inform the selection of appropriate AMMM measures at the COP decision stage. BOEM may require the</p>

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	<p>has committed to adopting and for those that are not adopted the reasons why." However the PEIS also describes adopted measures as those which BOEM "would require as conditions of approval for activities proposed by lessees unless future COP-specific NEPA analysis shows that implementation of such measures is not warranted or effective" while other sections note that "BOEM may require" the selected measures. Without a definition of "adoption" for the purposes of these measures as well as clarity on whether selected AMMMs will be required or remain optional for BOEM to require of individual Lessees it is difficult to determine whether the document will provide value for tiering project-specific analyses. Expanding the scope of sub-alternatives to evaluate commitment to various types and "mixes" of AMMMs at the programmatic stage would facilitate a meaningful comparative analysis.</p> <p>We also request the document clarify how BOEM intends to handle any AMMMs not adopted in the PEIS. It is unclear if AMMMs that are not adopted will still be considered at the COP-specific NEPA stage and how the PEIS may be considered in BOEM's decision to require certain AMMMs in the project-specific regulatory process. We recommend BOEM incorporate more details in Appendix C and describe the AMMM adoption process consistently throughout the document so it is clear what the PEIS may mean for future project-specific regulatory processes.</p>	<p>AMMM measures from Sub-alternatives C1 or C2, or a combination of both, at the COP decision stage. BOEM may also require additional or different measures based on future, site-specific NEPA analysis of specific COPs.</p> <p>BOEM reviewed all AMMM measures in Appendix G and identified some measures that are RPs for the offshore wind industry. BOEM encourages lessees to analyze and consider implementing these RPs as they may further avoid and minimize impacts on resources.</p>
BOEM-2024-0001-0371-0007	<p>Executive Summary Section: ES.6 PDF Page: 35 Comment: Cumulative impacts to NARW from the No Action Alternative are stated as negligible to major here but in Chapters 2 and 3 it is stated only as major. Impacts should be described uniformly throughout the document. Section: ES.7PDF Page: 35Comment: Alternative B: Impacts to non-NARW mysticetes are stated to be negligible to moderate here and in Chapters 2 and 3 is reads only minor to moderate. Impacts should be described uniformly throughout the document.</p>	<p>Section 3.5.6, <i>Marine Mammals</i>, as well as the Executive Summary have been reviewed to ensure consistency in the impact determinations provided.</p>
BOEM-2024-0001-0371-0008	<p>Section: ES.2PDF Page: 27Comment: The PEIS notes that "BOEM may require additional or different measures based on future site-specific NEPA analysis or the parameters of specific COPs." In the case that an</p>	<p>Refer to response to comment BOEM-2024-0001-0371-0006.</p>

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	AMMMM is not appropriate for a specific lease area as this statement suggests the site-specific NEPA analyses can document and explain how a different AMMMM would be a better fit in that situation. It is reasonable to assume that the six NYB leases may have different characteristics which may affect applicable AMMMMs for that project. As we note in our comments elsewhere we recommend that all the AMMMMs under consideration in Alternative C be considered as mandatory for each lease area in order to ensure a meaningful analysis of the potential efficacy of the suite of AMMMMs that BOEM will adopt through the PEIS ROD. In addition this would also help achieve the goal of the PEIS to reduce redundancies across COP-specific NEPA analyses.	
BOEM-2024-0001-0371-0009	Section 1 Section: 1.9 PDF Page: 48 Comment: As described in more detail in our comment letter we recommend the AMMMs follow the standard stepwise approach for mitigation which first focuses on avoiding adverse impacts to high value habitats and resources. Following avoidance this approach would then call for minimizing the impact of activities by limiting the degree or magnitude of the impact action or its implementation. Finally any remaining adverse impacts that cannot be avoided or minimized should be offset or compensated for by replacement/replication or providing equivalent substitute resources or environments. This approach is also described in the 2024 NMFS-BOEM Right Whale and Offshore Wind Strategy. Avoidance measures should be required prior to project planning which would increase the likelihood of altering project components in a timely manner to minimize impacts to our trust resources.	BOEM agrees that compensatory mitigation is the last step in mitigation hierarchy and that the project-specific COP NEPA stage will evaluate site-specific avoidance and minimization measures.
BOEM-2024-0001-0371-0010	Section 2 Section: 2.4 PDF Page: 83 Comment: It is unclear to NMFS why the cumulative impacts to NARW are stated as major for the no action alternative but are stated as a range of impacts for the action alternatives. Please be consistent in the way impact determinations are made (i.e. singular versus range). It appears that the same IPFs apply to both the action and no action alternatives.	The marine mammal PEIS section as well as the Executive Summary have been reviewed to ensure consistency in the impact determinations provided.
BOEM-2024-0001-0371-0011	Section: 2.4 PDF Page: 83 Comment: Alternative C: NMFS is concerned with the impact determination for NARW as reduced from major from the No Action Alternative. Consistent with comments on	As described in Section 3.1, <i>Impact-Producing Factors</i> , the No Action Alternative and action alternatives analysis include the current conditions and future baseline conditions. The No Action

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	<p>OSW EISs if the status quo is expected to be major impacts no AMMM measures would address the ongoing and planned actions of the status quo. Therefore NMFS requests this be changed to major impacts for NARW. Additionally this is a different conclusion from what is in Table ES-2 where it reads impacts would be moderate but matches the conclusions in Chapter 3. Section: 2.4PDF Page: 83</p> <p>Comment: Alternative C: NMFS requests this sentence clarify which marine mammals are anticipated to be impacted "Impacts resulting from pile-driving noise would be reduced to minor for one project and remain the same moderate for six projects under Alternative C."</p>	<p>Alternative and action alternatives <i>cumulative</i> analyses include ongoing and planned non-offshore wind and offshore wind activities. However, the action alternatives analysis does not include the ongoing and planned non-offshore and offshore wind activities. Therefore, the impact determinations for the action alternatives analysis can be less than the cumulative impacts of the No Action Alternative. The action alternatives cumulative analysis, on the other hand, would always have the same or greater impact determinations than the No Action Alternative cumulative analysis due to the inclusion of ongoing and planned non-offshore and offshore wind activities. Please refer to Figures 3-1 through 3-4. The marine mammal PEIS section as well as the Executive Summary have been reviewed to ensure consistency in the impact determinations provided. Additionally, the impacts for Alternative C were reduced from major because this includes the implementation of AMMM measures (including vessel strike avoidance measures) for all vessels associated with the representative offshore wind projects assessed in Alternative C, such that BOEM does not believe vessel strikes would occur for North Atlantic right whale (NARW). Because all six projects under Alternative C would follow these same AMMM measures, the risk is not expected to increase to major between one and six projects because the implementation of these AMMM measures for NARW vessel strike avoidance would continue to be effective such that vessel strike would not occur. The only scenarios in which BOEM considers vessel strike a major impact for NARW are Alternative A and cumulative impacts for Alternatives B and C because the non-offshore wind-related vessel traffic would not follow the same AMMM measure requirements as OSW vessels and ongoing Unusual Mortality Events (UME) for NARW suggest vessel strikes are occurring and therefore cannot be discounted. Text has been updated and clarified throughout all alternatives to clarify that the driver of the major impact determination is the non-offshore wind vessel traffic, and any alternatives considering ONLY offshore wind vessels would have reduced impacts with implementation of the AMMM measures.</p>

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BOEM-2024-0001-0371-0012	<p>Section 3.5.2 Benthic Resources Section: Global PDF Page: Comment: BOEM dismissed the Benthic Habitat Impact Minimization alternative NMFS suggested in our scoping comments due to the unknown location of cables at this stage. However including areas as off-limits to development as part of a potential AMMM would allow analysis of the benefits of avoiding these areas. This would add value to a programmatic analysis of benthic habitat impacts in the NYB overall. Below is detail about Prime Fishing Grounds and overlap of lease areas with the mid-shelf scarp (MSS):We recommend avoiding the Mid-Shelf Scarp (MSS) for development. The MSS is a regional-scale bathymetric feature of high slope (rapid change in depth) that bounds the eastern side of the Mid-Shelf Wedge. Bathymetric features such as the MSS act as congregation areas for many species of finfish shellfish and diverse invertebrate species that are essential to marine ecosystem functioning. Seafloor features like the MSS modify physical processes - such as hydrodynamic flow and nutrient concentration - and ecological patterns; commercial and recreational fishers often target these areas which can have high catch-per-unit-effort. It appears that eastern portions of Lease Area OCS-A 0538 and OCS-A 0539 overlap with the MSS. This area of overlap also includes a large designated Prime Fishing Ground known as "The Wall" which appears to be a reference to the rapid change in depth of the MSS. Avoiding development on the MSS is important because changes to the complex physical structure of this feature may lead to long- term or permanent adverse impacts on species use and productivity. Development should be avoided on the MSS and within 1600 meters on either side of the MSS (3200 meter bidirectional buffer of the centerline of the MSS).More specifically portions of Lease Area OCS-A 0538 primarily blocks/aliquots 6315 6316E 6316I 6316J 6316M 6316N 6366A 6366E 6365 6415D and 6415C overlap with the MSS. Additionally the southern tip of Lease Area OCS-A 0539 primarily blocks/aliquots 6611H 6611K and 6611J also appear to overlap with the MSS. Much of the MSS follows the -50 meter bathymetric contour but should be identified and mapped with high-resolution site-specific surveys for projects that may overlap with the feature. Development should be avoided on the MSS and within 1600 meters on either side</p>	<p>Thank you for your comment. The NY Bight lease areas were designed to avoid certain commercial fishing activity based on stakeholder inputs and task force meetings held from 2017 to 2021. The Final Lease Sale Decision Memorandum explains that areas were removed from the leases to avoid the MSS (<a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/ATLW-8-NY-Bight-Final-Lease-Sale-Decision-Memorandum.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/ATLW-8-NY-Bight-Final-Lease-Sale-Decision-Memorandum.pdf</a>). BOEM will evaluate project-specific impacts based on the project-specific COP before issuing an ROD. Benthic mapping and sampling will inform the project-specific details and design including the type of foundation proposed and how much scour would be required, as well as the bedforms present and any plans for disturbance of the bedforms. The project-specific COP NEPA EIS analyses will also address potential impacts in various habitats from the proposed project.</p> <p>The caveat stating that the characteristics of the NY and NJ Wind Energy Areas (WEA) may not be present in the six leases covered by this PEIS and new features may be in the NY Bight WEAs that are not already present in the NY and NJ WEAs, has been added. At the programmatic level, too many details about each potential project remain unknown to be able to provide a more robust impact analysis of the NY Bight projects. Refer to the response to comment BOEM-2024-0001-0346-0013 for a response to larval transport and hydrodynamic changes.</p> <p>Miles et al. 2021 studied the potential effects of offshore wind farms on the Mid-Atlantic Bight Cold Pool (Miles T., S. Murphy, J. Kohut, S. Borsetti, D. Munroe. 2021. Offshore Wind Energy and the Mid-Atlantic Cold Pool: A Review of Potential Interactions. Marine Technology Society Journal 55:72-87). See discussion in Section 3.5.6.3.3.</p> <p>The cumulative impacts analysis for the Proposed Action considers the full build out of the six New York Bight lease areas in combination with other reasonably foreseeable planned activities, including offshore wind activities, within the geographic analysis area for each Chapter 3 resource topic.</p>

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	<p>of the MSS (3200 meter bidirectional buffer of the centerline of the MSS).</p> <p>Section: Global PDF Page: Comment: This section would benefit from inclusion of more specific and quantitative analysis and direct discussion of effects. The addition of figures as visual aids is strongly recommended. At present the section provides an overly broad description of the activities with impacts and effects that appear to be understated or minimized. For example it would be helpful to show a summary of benthic habitat conversion from existing bottom to bottom occupied by WTG and OSS foundations and associated scour protection based upon type and size. Additionally there is little discussion of the effects and implications of mobile bedform removal during seabed preparation activities. Further it would be beneficial to provide a similar or greater level of description of the resources bedforms and characteristics of the 6 leases included in the PEIS consistent with what was provided in descriptions of the New York and New Jersey WEAs (see 3.5.2.1.1 pg 3.5.2-5). It is also recommended that the document more clearly state that the characteristics of the NY and NJ WEAs may not be present in the 6 leases covered by this PEIS and that in reverse the 6 leases may include benthic features and resources not present in the NY and NJ WEAs.</p> <p>Section: Global PDF Page: Comment: When discussing the impacts of one or all 6 projects it would be helpful to distinguish the geographic location of the impact(s) - the OCS nearshore estuarine or riverine areas. This reduces uncertainty in understanding the potential impacts and effects from a particular IPF where impacts and effects may differ from the same IPF by location and habitat type. For example cable preparation and installation in estuarine habitats with finer sediments seagrasses and shellfish reefs will be impacted differently (more severely) than non-vegetated mostly sandy habitats of the OCS. In estuaries sediment transport and disturbance of sensitive resources will not have the same recovery times (if recovery is possible) as the environments of the OCS and these differences are not clear from the current format of the document. We recommend</p>	

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	<p>the document more clearly provide separate discussions of IPFs and effects for the OCS nearshore estuarine and riverine environments.</p> <p>Section: Global PDF Page: Comment: A robust substantive discussion of the cumulative and synergistic regional impacts of IPFs from 6 projects is needed under Alt. B. This should be followed by a clearly defined relationship between specific AMMMs and cumulative regional impacts under Alt. C. Subsequent examples in this spreadsheet should be used as a reference for areas deficient in discussion and should be carried throughout. This includes but is not limited to: discussion of changing hydrodynamics and wake effects; regional cumulative impacts on larval transport; distribution formation and breakdown of bedforms; formation and breakdown of the mid-Atlantic Cold Pool (a model should be developed similar to the one described for Rhode Island and Massachusetts leases); cumulative regional effects from cable and converter station heat; and cable EMF. Although these IPFs were addressed there is little substantial supporting information for conclusions that on a single project or regional scale effects would be negligible or minor.</p>	
BOEM-2024-0001-0371-0013	<p>Section: 3.5.2 PDF Page: 174 Comment: Please provide a resource or other evidence to support the statement that sediment transport would likely be on a spatial scale of less than 10 miles.</p> <p>Section: 3.5.2.1 PDF Page: 176 Comment: Please provide clarity and consistency in describing the analysis area. For example are estuaries and rivers included?</p> <p>Section: 3.5.2.1 PDF Page: 176 Comment: Please elaborate on the importance of the Gulf Stream Labrador Current and the Mid-Atlantic Cold Pool as regional oceanographic features. This should include but is not limited to the importance of the Cold Pool's stratification on nutrients and primary production commercial and recreational species distribution and tempering the impacts of hurricanes. Please also include a clearer description of the geographic extent of the Cold Pool as it relates to the 6 leases in this PEIS. A more robust description of the regional oceanographic conditions is warranted.</p> <p>Section: 3.5.2.1 PDF Page: 177 Comment: NMFS recommends updating the figure to make leases transparent so that the underlying</p>	<p>As stated in Section 3.5.2, “Although sediment transport beyond 10 miles (16.1 kilometers) is possible, sediment transport related to the NY Bight project activities would likely be on a smaller spatial scale than 10 miles (16.1 kilometers); project-specific sediment transport modeling would be required to verify this.”</p> <p>This is based on sediment transport modeling conducted for other proposed offshore wind farms, which found that sediment deposition from the seafloor disturbance during cable emplacement was estimated to fall very close to the disturbance. Empire Wind results found deposition of 0.004 inch (0.01 centimeter) within 246 feet (75 meters). Atlantic Shores found deposition of <math>\geq 0.04</math> inch (1 millimeters) in thickness would occur within 656 feet (200 meters) from the Monmouth ECC centerline, within 164 feet (50 meters) of the Atlantic ECC centerline, and within 361 feet (110 meters) of the centerline for jet trenching installation of the interarray cables.</p> <p>The geographic analysis area includes offshore waters from Montauk Point on Long Island, New York, southwest into the NY</p>

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	<p>seabed topography can be seen or providing a second figure with only lease area borders (thin black line).</p> <p>Section: 3.5.2.1.1 PDF Page: 178 Comment: Please provide a figure showing the mid-shelf scarp as it overlays with leases 0538 and 0539 and elaborate on the importance of the feature for species community composition and fishing grounds (see Global comment above).</p> <p>Section: 3.5.2.1.1 PDF Page: 179 Comment: BOEM states that winter storms can reshape the upper 20-39 inches of sediments within a few hours. Please provide analysis on how this normal process may be altered by the introduction of structure to the OCS and the effects of the altered process on benthic bedforms benthic resources and Essential Fish Habitat.</p> <p>Section: 3.5.2.1.1 PDF Page: 179 Comment: Guida et al. 2017 should not be exclusively relied upon as a proxy to characterize the 6 leases in the PEIS. Instead a study similar to or exceeding in complexity should be conducted for the leases discussed in the PEIS. Additionally trawl and other survey data are available from NMFS state agencies and academic partners to provide insights on non-commercial species distribution (non-targeted but collected species). USGS and NOAA should be consulted for outer continental shelf bedform and benthic habitat characteristics. Publications such as Sylvia Nordfjord John A. Goff James A. Austin Laurie Schuur Duncan Shallow stratigraphy and complex transgressive ravinement on the New Jersey middle and outer continental shelf Marine Geology Volume 266 Issues 14 2009 Pages 232-243 is an excellent starting point that includes additional valuable references.</p>	<p>Bight, and west to Cape May, New Jersey, and includes both the offshore project areas and potential export cable corridors that may traverse inshore benthic habitats in coastal inlets, estuaries, and bays in state waters. Terrestrial resources in coastal areas are discussed in further detail in Section 3.5.4, <i>Coastal Habitat and Fauna</i>; tidal wetlands are discussed in Section 3.5.8, <i>Wetlands</i>. Text was added to address the Mid-Atlantic Bight Cold Pool in Section 3.5.2.1.</p> <p>Updated figures will occur within project-specific COPs, once benthic mapping and sampling have been conducted, and will be used to inform the project-specific details and design. Unfortunately, no studies exist to analyze what role offshore wind farm monopiles play in the alteration of the upper seafloor sediment during winter storms.</p> <p>Project-specific COPs will contain more details about the results of benthic surveys and sediment samples associated with that particular lease area. Nordfjord et al. 2009 is already cited within Section 3.5.2.1.</p>
BOEM-2024-0001-0371-0014	<p>Section: 3.5.2.1.2 PDF Page: 181 Comment: A minor point of clarification - although eelgrass is a dominant species in estuarine environments widgeon grass is increasingly prevalent in brackish and estuarine waters and in some cases is out-competing eelgrass. Additionally maps of SAV resources in New Jersey estuaries are available on the NJ Dept. of Environmental Protection website.</p> <p>Section: 3.5.2.1.2 PDF Page: 182 Comment: Please include a discussion of other prevalent commercial and recreational bivalves</p>	<p>Thank you for your comment. Widgeon grass is mentioned as being present within NY and NJ estuarine waters. Mapping of nearshore marine and estuarine habitats will occur in project-specific COPs, once export cable corridors and landfalls are proposed.</p> <p>Section 3.6.1 provides discussion of commercial and for-hire recreational bivalves.</p>

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	including hard clams ( <i>Mercenaria mercenaria</i> ) soft clams ( <i>Mya arenaria</i> ) and bay scallops ( <i>Argopecten irradians</i> ) and their habitats.	
BOEM-2024-0001-0371-0015	<p>Section: 3.5.2.3.2 PDF Page: 185 Comment: The determination that accidental releases of fuel fluids or hazardous materials would cause harm to benthic species is understated. Please elaborate by including additional discussion and analysis of direct indirect and cumulative impacts to a variety of species groups (bivalves crustaceans soft corals etc.) Please provide references to support the discussion.</p> <p>Section: 3.5.2.3.2 PDF Page: 186 &amp; 187 Comment: Please elaborate on the implications of route clearance for removing debris and bedforms prior to cable placement and the effects on benthic habitats. Depending on the bedform the disturbance may be minor or significant (such as elimination of the bedform).</p> <p>Section: 3.5.2.3.2 PDF Page: 187 Comment: Please provide a description of articulated pipes as a cable protection measure - this appears to be a new measure.</p> <p>Section: 3.5.2.3.2 PDF Page: 187 Comment: The impacts of cable placement in sensitive habitats such as SAV and shellfish reefs appears to be understated and minimized. Please elaborate on these impacts and effects including typical timeframes for recovery habitat conversion and effects on Essential Fish Habitat or Habitat of Particular Concern status (may be cross-referenced with the section on Finfish &amp; EFH).</p> <p>Section: 3.5.2.3.2 PDF Page: 188 Comment: Supporting evidence is needed for the assertion that disturbance of sand waves sand shoals ridge and trough formations would be a minor impact and of short duration. Although bedforms are naturally dynamic features the time scale for the formation or breakdown of larger scale features is significant sometimes on the scale of decades or more. For example ripples and mega ripple may form move degrade over periods of weeks to years whereas sand shoals and ridge and trough complexes are formed move and degrade over decades to centuries. Excavations of sand borrow pits for beach nourishment often do not regenerate short-term. Additionally analysis has not been provided to explore the hydrodynamic alterations from WTG and OSS foundations and those effects on mobile bedform reformation.</p>	<p>Text was added to Section 3.5.2.4.1 to include that the risk of a spill from an offshore structure would be low and collisions and allisions are anticipated to be unlikely based on prevention factors.</p> <p>Project-specific COPs will address any proposed seabed clearance activities. At the programmatic level this can only be handled in an abstract, general way. Altering large bedforms is likely to have a greater impact than altering minor bedforms.</p> <p>Cable protection approaches include rock placement, concrete mattresses, frond mattresses, rock bags, and seabed spacers, according to the RPDE parameters provided in Table 2-2. Text has been edited.</p> <p>Horizontal directional drilling (HDD) methods would likely be used to install offshore export cables and avoid affected sensitive nearshore and intertidal habitats or seagrass beds. Trenchless installation would likely occur from an offshore punch-out location from the cable landing.</p> <p>Shoal habitats occur in high-energy environments and migrate in a generally southwest direction within the NY Bight area (Rutecki et al. 2014).</p> <p>Field testing of the recovery from sand removal of a total of 4,610,00 cubic yards (3,525,000 cubic meters) from Sandbridge Shoal, Virginia, concluded that sand dredging had no or no long-term impact on macrofaunal abundance. They stated, "It is likely that a combination of storm events, which periodically completely rework surface sediments, and benthic recruitment events, which when large and successful can structure surface sediments, are constantly shaping and reshaping the substrate" (Hobbs C. H., III. 2006. Field Testing of a Physical/Biological Monitoring Methodology for Offshore Dredging and Mining Operations. Marine Minerals Branch, Herndon, VA. Report No. MMS 2005-056. p.). The proposed activities would not remove sediment from the shoal, but would rather disturb it for cable emplacement. There is an ongoing BOEM-funded study to investigate these potential</p>

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	<p>Section: 3.5.2.3.2 PDF Page: 188 Comment: Please discuss the impact of DC cables on the natural geomagnetic field through resulting changes to EMF and the effects to benthic species.</p> <p>Section: 3.5.2.3.2 PDF Page: 189 Comment: Please provide examples of EMF impacts to invertebrate taxa rather than a generalization of negligible effects.</p> <p>Section: 3.5.2.3.2 PDF Page: 189 &amp; 191 Comment: The section on Noise should be updated to include known values of noise production and sound dissemination from pile driving and other equipment.</p> <p>Section: 3.5.2.3.2 PDF Page: 190 Comment: The discussion on noise transmission and stress/behavior effects is broad and understated. Please elaborate further with a discussion of specific time scales definitions of 'proximity' and examples of stress-induced behavioral changes (bivalve opening/closure burial reduced feeding etc.). See for example Jzquel Y. Cones S. Jensen F.H. et al. Pile driving repeatedly impacts the giant scallop (<i>Placopecten magellanicus</i>). <i>Sci Rep</i> 12 15380 (2022). <a href="https://doi.org/10.1038/s41598-022-19838-6">https://doi.org/10.1038/s41598-022-19838-6</a>. Please elaborate on the anticipated differing effects if any based upon pile diameter hammer energy (especially in glauconite sands) and what 'local acoustic conditions' means. [Embedded Hyperlink: <a href="https://doi.org/10.1038/s41598-022-19838-6">https://doi.org/10.1038/s41598-022-19838-6</a>]</p> <p>Section: 3.5.2.3.2 PDF Page: 191 Comment: Please include a brief discussion of the current and proposed construction and/or expansion activities at ports referenced in this section.</p> <p>Section: 3.5.2.3.2 PDF Page: 192 Comment: Please provide a more thorough discussion of the anticipated hydrodynamic changes from the presence of structures and the effects on benthic resources. This should include a discussion on the consequences for benthic resources (larval transport effects food supply variability species distribution etc.). Please also provide evidence to support the statement that such disturbances are likely to be localized vary seasonally and have minor impacts as there appear to be numerous assumptions without support.</p> <p>Section: Global PDF Page: Comment: The above examples of improvements are also applicable to the subsequent sections on Alts</p>	<p>changes within the NY bight (<a href="https://www.boem.gov/sites/default/files/documents/environmental-studies/MM-20-01_2.pdf">https://www.boem.gov/sites/default/files/documents/environmental-studies/MM-20-01_2.pdf</a>).</p> <p>Electric and magnetic field (EMF) levels from direct current (DC) cables above 50 milligausses (5.0 microteslas) would result primarily from exposed cable, which is not expected for offshore wind projects, and would occur close to (i.e., within 25 feet [7.6 meters] of) the cable. High voltage direct current (HVDC) cables can produce higher EMF levels, up to 207 milligausses (20.7 microteslas); however, this level was associated with shallower cable burial depths, and cables buried deeper under the seafloor would produce EMF closer to 4 milligausses (0.4 microteslas) (Hutchison et al. 2018).</p> <p>EMFs are discussed in Section 3.5.2.3 under cumulative impacts as other offshore wind farms are planned within the NY Bight. Newer references of studies on DC cables emitting EMF have been added. As other ongoing and planned offshore wind projects are set to take place within the NY Bight, several ports plan to expand, such as South Brooklyn Marine Terminal where Empire Wind 1 plans to make landfall, and a new O&amp;M facility is proposed in Atlantic City, New Jersey, to support Atlantic Shore. These are some examples of port expansion projects that are generally referred to in Section 3.5.2.3.2 of the NY Bight PEIS.</p> <p>Refer to response to comment BOEM-2024-0001-0331-0037 for hydrodynamic changes.</p> <p>Text has been added to Section 3.5.2.3.2 to help characterize impact pile-driving noise, though the reader is referred to Appendix J, <i>Introduction to Sound and Acoustic Assessment</i>, for a more comprehensive description. Additionally, information from Jézéquel et al. (2022) has been incorporated into this section.</p>

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	B and C and should be carried through in the discussions of impacts from one project 6 projects cumulative impacts and cumulative impacts with AMMMs.	
BOEM-2024-0001-0371-0016	<p>Section: 3.5.2.4.1 PDF Page: 197 Comment: In addition to the discussion of invertebrate taxa recovery rates from sand mining operations please also include information on the recovery rates of the borrow areas themselves and discuss how this relates to the anticipated recovery of bedforms eliminated through the pre-sweeping process. When discussing the recovery rates of bedforms please more clearly distinguish the anticipated recovery based upon bedform type and size - large regional features (eg. ridge and trough formations) will not rebuild/recover on the same spatial or temporal scale as smaller ripples or mega ripples.</p> <p>Section: 3.5.2.4.1 PDF Page: 199 Comment: An example of where detail is needed per the Global comment above: "The predicted thermal effect is a small rise in temperature within a few centimeters of the cable." Please provide the predicted temperature increase.</p> <p>Section: 3.5.2.4.1 PDF Page: 200 Comment: Please elaborate on the relationship between WTG foundation type and noise transfer from the nacelle to the seafloor. What foundation type transfers the least noise? Is this the foundation type anticipated for use in the NY Bight?</p> <p>Section: 3.5.2.4.1 PDF Page: 201 Comment: Please provide supporting evidence that port expansion and redevelopment is expected to have negligible effects on benthic resources despite the likelihood of dredging filling bulkhead installation etc.</p> <p>Section: 3.5.2.4.2 PDF Page: 204 Comment: Please provide supporting evidence for the determination that the impacts from EMF cable heat survey gear utilization and port development would be negligible from 6 projects. Without supporting evidence it appears unlikely that full build out of 6 offshore wind farms in the NY Bight would result in undetectable impacts and effects from those IPFs. A substantially more robust discussion with supporting evidence is needed for the regional cumulative impacts and effects of these IPFs on benthic resources (flora fauna and bedforms) in the OCS nearshore and estuarine environments.</p>	<p>Refer to response to comment BOEM-2024-0001-0371-0015 for discussion of sand mining activities.</p> <p>Ports are typically very disturbed habitats, given the presence and movements of vessels from within the port. Therefore, although port expansion projects are anticipated, the benthic species within the port are accustomed to the disturbances. Mobile organisms would likely move out of the port, while sessile organisms would likely recover once the turbidity and sediment deposition pass. Text has been added to Section 3.5.2.4.1 to address cable heat in more detail. Survey gear utilization is a minimal impact as sampling stations are spaced out and the size of the collected samples is very small relative to the size of the WEA. Project-specific COPs will address this in more detail, and include details on the nearshore and estuarine environments once the export cable routes and landfall is proposed. Port improvement and expansion projects take place on a routine basis within heavily trafficked ports of New York and New Jersey. As stated above, the species that inhabit port environments are accustomed to disturbance and are likely to fully recover or temporarily move out of the area before or as a result of the disturbance. Activities associated with the proposed NY Bight projects included in the PEIS do not increase port impacts appreciably compared to background levels.</p> <p>Based on data from Tougaard et al. (2020), concrete foundations would produce the lowest sound levels during turbine operations (compared to steel monopile and jacket foundations). However, concrete foundations are often using in very shallow waters and would not be applicable for the WTG proposed for the NY Bight projects. Therefore, for the purposes of the PEIS, it was assumed that steel foundations, similar to those described for other approved offshore wind projects in this region, would be used for these NY Bight projects. However, during the project-specific COP NEPA analysis, developers will identify the specifics of their</p>

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	Section: 3.5.2.5 PDF Page: 206 Comment: Please update the table of AMMMs to include a clear linkage between the measure proposed and the anticipated benefit to benthic resources. For example in BEN-2 it is not clear how requiring regular scour protection inspection avoids minimizes mitigates or monitors adverse impacts and effects to benthic resources. It would helpful for the reader to be told that the measure is considered avoidance minimization mitigation or monitoring.	proposed foundations and re-assess if a different material is proposed.
BOEM-2024-0001-0371-0017	Section 3.5.5. Finfish Invertebrates and EFH Section: 3.5.5 PDF Page: Global Comment: This EIS repeatedly states (for example section 3.5.5.5.2) that AMMMs would generally reduce impacts on finfish inverts and EFH but the impact determinations remain unchanged. Further the impact determinations remain unchanged between 1 and 6 project build-outs. The EIS is concluding that regardless of AMMMs adopted and regardless of projects constructed impacts will remain unchanged if that is the case then the AMMMs are not functioning as intended. Section: 3.5.5PDF Page: Global Comment: Repeatedly (for example section 3.5.5.5.5) this EIS identifies the presence of structures as the primary driver of major impacts. As a result we recommend developing and incorporating additional AMMMs in regards to the presence of structures.	BOEM has considered all comments on AMMM measures and has made several changes to address potential impacts on resources as provided in Appendix G and analyzed in Alternative C. Alternative C describes how impacts would be reduced with application of AMMM measures, but overall impact levels may not be reduced for all IPFs as impacts would still result from construction and O&M phases of project facilities. During project-specific COP NEPA analyses, additional mitigation measures can be considered for inclusion to address project-specific impacts.
BOEM-2024-0001-0371-0018	Section: 3.5.5.1.2 PDF Page: 266 Comment: Hydrodynamic conditions are important in determining habitat suitability within the region. More discussion about how hydrodynamic regimes in particular in regards to the Mid-Atlantic Cold Pool determine habitat suitability and influence species abundance and distribution across the GAA should be included. Section: 3.5.5.2 PDF Page: 275 Comment: (Table 3.5.5-5) Please ensure that the impact conclusions throughout this section are in alignment with the definitions provided. By the definitions provided any impact to a HAPC SAV included or complex habitat could never be considered minor since that would equate to an impact on 'sensitive habitats'. Additionally any habitat impact that is longer than 'short-term' could not be considered anything less than 'moderate'.	Additional information about the Mid-Atlantic Bight Cold Pool has also been included in Final PEIS Sections 3.4.2.1, 3.4.2.3, 3.5.2.4, and 3.5.5. <i>Impacts of the Proposed Action on Benthic Resources</i> , under the Presence of structures IPF. Changes in cold pool dynamics resulting from future activities, should they occur, could conceivably result in changes in habitat suitability and fish community structure, but the extent and significance of these potential effects are unknown. Any impact on sensitive habitats is moderate at a minimum. However, per definition, minor impacts could be short to long term as could moderate and major impacts. Habitat areas of particular concern (HAPCs) (including SAV and complex habitats) are defined as subsets of EFH that provide important ecological functions or are especially vulnerable to degradation. No

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	<p>Section: 3.5.5.3.1 PDF Page: 277 Comment: Please provide a citation to references that support the assumption that long-range migratory finfish would be precluded from many of the temporary and short-term impacts associated with offshore impacts as this appears to be based on numerous assumptions that lack support.</p> <p>Section: 3.5.5.4.2 PDF Page: 302 Comment: The discussion on the impacts from pile driving and subsequent exposure to noise focuses exclusively on the magnitude of decibel exposure from pile driving activities while omitting all discussion on duration of exposure. The duration of noise exposure is critically important in understanding cumulative impacts from pile-driving activities. This is particularly important in areas such as the GAA with longfin squid EFH as squid have short life and reproductive cycles and repeated noise exposure from pile-driving activities over the course of multiple years (and spawning seasons) could significantly degrade the quality of squid EFH available for spawning.</p> <p>Section: 3.5.5.4.2 PDF Page: 302 Comment: In the discussion on impacts from the presence of structures please include discussion on how the six proposed projects will impact the hydrodynamic regimes within the GAA. Specifically include discussion about potential impacts on the Mid-Atlantic Cold Pool and associated dependent species. Additionally this discussion should include analysis on the cumulative impact of the six projects in concert with the other regionally approved and expected projects on regional hydrodynamic regimes.</p> <p>Section: 3.5.5.4.5 PDF Page: 304 Comment: In the discussion on cumulative impacts of Alternative B; the conclusion states that impact rating could be decreased if construction of the NY Bight projects is staggered. Additional analysis and discussion of impacts and anticipated minimization (via staggered construction) on specific species and habitats should be included.</p>	<p>designated HAPCs are located within the NY Bight lease areas; however, summer flounder and sandbar shark HAPCs (Figure 3.5.5-2) may overlap with potential NY Bight offshore export cable corridors and vessel routes to the identified representative ports (see Chapter 2). RP MUL-23 includes avoiding cable emplacement in sensitive areas such as SAV habitat, and AMMM measures MUL-2 and MUL-27 include avoiding bottom interactions by enacting anchoring plans or using dynamic positioning (DP) vessels. Based on their status as migratory species, this species group is not expected to be in a sustained habitat or location for a prolonged period of time.</p> <p>Research specific to noise impacts on squid was reviewed during the preparation of the Draft PEIS, and the discussion is included in the cumulative impacts discussion in the Impact and Vibratory Pile Driving section (Section 3.5.6.4.1) (research by Stanley et al. 2023 and Cones et al. 2022). The Final PEIS considers the best available data and information that reflect the state of the science at the time of publication of the PEIS. A discussion of uncertainty about the impacts of underwater noise is included in Appendix E. Future research will be incorporated into subsequent COP NEPA analyses as information becomes available.</p> <p>Discussion related to the current research on the potential impacts of the NY Bight projects on the Mid-Atlantic Bight Cold Pool is included in Section 3.5.5.4.2. Future project-specific COP NEPA documents will focus on providing site- and project-specific analyses that were not already addressed by the PEIS.</p> <p>The timing of the construction of each of the six NY Bight projects is not known and depends on many factors outside the scope of the PEIS. As projects are developed, future project-specific COP NEPA documents may discuss potential overlaps in site development activity, if applicable.</p>
BOEM-2024-0001-0371-0019	<p>Section: 3.5.5.5.1 PDF Page: 307 Comment 1: Under the initial discussion on impacts from IPFs from Alternative C the text states that impacts would be reduced compared to Alternative B however the impact determinations (negligible to major) remains unchanged. Therefore either the text should be revised to say the impacts from</p>	<p>Through the utilization of the described AMMM measures, the quantity and extent of impacts related to the IPFs would be reduced; however, the identified AMMM measures would not completely remove or reduce these impact determinations.</p>

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	<p>the IPFs would not be reduced or further discussion must be provided on which impacts are being reduced and the impact determinations should be updated.</p> <p>Section: 3.5.5.5.1 PDF Page: 307 Comment 2: Under the initial discussion on impacts from IPFs from Alternative C the text identifies AMMMs BEN-1 MUL-4 MUL-12 and MUL-23 as the most effective at minimizing impacts on sensitive benthic and EFH resources however the AMMMs referenced lack any specific restrictions or parameters dictating the extent of adoption. Specific restrictions and parameters outlining the extent of adoption of each AMMM identified should be included to support this assertion.</p> <p>Section: 3.5.5.5.1 PDF Page: 309 Comment 3: Under noise - please include more discussion about the interaction between pile driving activities noise and presence of glauconite with each other.</p> <p>Section: 3.5.5.5.1 PDF Page: 310 Comment 5: Under Presence of Structures - The colonization of artificial hard bottom habitat created from project installation has the potential to be dominated by invasive species. This risk will be elevated in areas where <i>Didendum vexillum</i> is present and is fragmented across broad areas during sea bed prep activities (i.e. boulder relocation) for cable installation. Further the subsequent cable armoring will create novel hard bottom habitats for invasive species to spread and colonize along the cable corridors which may have been converted from unsuitable soft bottom habitat prior to installation. Cumulatively this could result in less resiliency to the spread of invasive species within the region. More discussion on the risks associated with habitat conversion fragmentation and invasive species spread should be included here.</p> <p>Section: 3.5.5.5.2 PDF Page: 310 Comment: This section describes the IPFs as being the same whether one or six projects are constructed however that fails to address how IPFs change and interact with each other cumulatively and introduce more regionally detectable impacts and mechanisms such as wind wake effects and the potential confounded associated ecological impacts. Further discussion and analysis should be added to describe these compounding IPFs and how they impact EFH finfish and inverts on a regional scale.</p>	<p>The measures are identified and described in Table 3.5.5-8. Details about the specific activities will be addressed during project-specific COP NEPA analysis.</p> <p>Text within Section 3.5.5.5.1 (page 3.5.5-42) has been enhanced to discuss the correlation between the presence of glauconite sand and the potential need to use increased level of hammer strike energy during pile-driving operation for WTG installation. Potential colonization by non-indigenous biota altering benthic or epipelagic communities is discussed in the <i>Presence of structures</i> subsection of 3.5.5.3.3.</p> <p>Thank you for your comment. Section 3.5.5.3.3 has been updated to include assessment of hydrodynamic effects of ongoing and planned offshore wind projects.</p>

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BOEM-2024-0001-0371-0020	<p>Section 3.5.6 Marine Mammals Section: 3.5.6 PDF Page: Comment: Note that due to workload this section did not receive a complete review by MMPA and ESA SMEs.</p> <p>Section: PDF Page: Comment: Please revisit all determinations for the NARW in each sub-section particularly Alternative C. The NARW has a small population size and therefore all impacts would be greater on this already at risk species. AMMMs decrease impact levels but in most cases cannot remove risk entirely so any negative impact to one individual may have population-level effects. This is not well represented throughout the section. Section: 3.5.6.1 PDF Page: 319 Comment: It is unclear how this list was made and how the species to include were decided upon. The paragraph states "species considered likely to occur in the NYB project area" however the previous table (3.5.6-1) lists relative occurrence in the offshore project area. The Sei Whale and the Atlantic White Sided Dolphin are included on the list but are both reported to be "Uncommon" in the project area by the table. Along the same lines the Short Finned Pilot Whale and Blue Whale are also reported as "Uncommon" are discussed later on in the section but are not included in the list. This is inconsistent and requires clarification. Section: 3.5.6.1 PDF Page: 320 Comment: Roberts revised the models in 2023 newer source now available; the most up to date version of the model should be used to inform the FEIS . Section: 3.5.6.1 PDF Page: 322 Comment: Please add the BIAs identified by Van Parjis et al. 2015: BIAs for fin whale feeding have been identified off Rhode Island Sound between March and October and year-round for Georges Bank Cape Cod Bay and the Gulf of Maine BIAs for sei whale feeding have been identified from the Gulf of Maine to the continental shelf off Georges Bank between the months of March and November BIAs for minke whale feeding have been identified on Georges Bank in Cape Cod Bay and the Gulf of Maine between the months of March and November. Section: 3.5.6.1 PDF Page: 322 Comment: Please add that the NARW feeds primarily on Calanus spp. (Stone et al.1988; Kann and Wishner 1995; Woodley and Gaskin 1996). Also that Sei whales are often sighted in conjunction with right whales during the spring when they are both feeding on copepods. Section: 3.5.6.1 PDF Page: 325 Comment: Please add that</p>	<p>The sub-sections in Alternative C have been reviewed specifically for NARW, and based on available science BOEM concludes that no major effects on NARW would occur due to impacts of Alternative C. For additional information, please see response to comment BOEM-2024-0001-0371-0011.</p> <p>The species listed on page 3.5.6-7 are those likely to occur in the offshore project area defined in the first paragraph of Section 3.5.6, and text has been updated to denote: "The 14 species considered likely to occur in the offshore project area include" to be consistent with terminology. Additionally to maintain consistency, short-finned pilot whales and blue whales have been added to that list. Similarly, harp seals were added to the list. The newer information from Roberts et al. (2023) has been incorporated into the PEIS.</p> <p>Information about fin whale, sei whale, and minke whale Biologically Important Areas (BIA) has been added to Section 3.5.6.1.1 for ESA whales and 3.5.6.1.2 for non-ESA whales. Both the note about NARW preferred prey species and sei whales foraging in conjunction with NARW because they target the same zooplankton species has been added to Section 3.5.6.1.1. A note about the 2022 pinniped UME event in Maine between June and July 2022 based on the webpage last updated on April 23, 2024 (<a href="https://www.fisheries.noaa.gov/marine-life-distress/2022-pinniped-unusual-mortality-event-maine-closed">https://www.fisheries.noaa.gov/marine-life-distress/2022-pinniped-unusual-mortality-event-maine-closed</a>) has been added to Section 3.5.6.1.2.</p> <p>The risk of GI tract injuries has been added to the discussion of potential non-auditory injuries in Section 3.5.6.1.3.</p>

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	<p>since June 2022 another UME for harbor and gray seals has been declared by NMFS off the southern and central coast of Maine with 322 seal strandings between June and December 18 2022 (NOAA Fisheries 2023). Preliminary testing has found some of the harbor and gray seals affected by the June 2022 UME to be positive for highly pathogenic avian influenza H5N1. Section: 3.5.6.1.3 PDF Page: 327</p> <p>Comment: Please add that gastrointestinal injuries are also possible from explosive sources. (Reference: Criteria and Thresholds for U.S. Navy Acoustic and Explosive Effects Analysis (Phase III) (2017)- "The gas-containing organs (lungs and gastrointestinal tract) are most vulnerable to primary blast injury. " )</p>	
BOEM-2024-0001-0371-0021	<p>Section: 3.5.6.2 PDF Page: 334 Comment: The purpose of this table is unclear. Are these issues that are currently affecting marine mammals based on current trends? Please provide additional detail. In addition some impact indicators provide a level of impact for an issue while others describe how the issue is assessed. Water quality impact indicator for example lists how the issue is assessed. It seems that this is the more appropriate type of information to be stored in this table than what for example is provided for underwater noise. Please consider having each impact indicator in the same format. Also please define how seabed and water column alteration is different from habitat alteration. Section: 3.5.6.2PDF Page: 334Comment: The source provided for this table links to the recommendation for project pile driving sound exposure. That document does not discuss all issues provided in this table. Please update or provide additional sources.</p>	<p>The issues and indicators table in Section 3.5.6.2 has been revised in response to this comment. The footnote on the table is connected to the noise impact indicator source, not the source for the entire table.</p>
BOEM-2024-0001-0371-0022	<p>Section: 3.5.6.3.1 PDF Page: 335 Comment: It would be beneficial to include a more thorough analysis of each IPF relative to the No Action Alternative. Section: 3.5.6.3.3 PDF Page: 341 Comment: It would be beneficial to include more detail on intake/entrainment impact on plankton as it is a prey source for many marine mammals including the NARW. Section: 3.5.6.3.3 PDF Page: 341 Comment: More detail should be provided on EMF for HVDC cables as some are proposed in the GAA and (as stated) they emit 10 times more magnetic field than HVAC. Section: 3.5.6.3.3 PDF Page: 343 Comment: Entanglements can</p>	<p>Impacts of the No Action Alternative would be comparable to those discussed in Section 3.5.6.3.3 for the cumulative impacts, which provide a detailed discussion of each IPF. Additional information on intake effects for prey species for NARW has been added to Section 3.5.6.3.3 on page 3.5.6-30. Text in the discussion of survey gear utilization in Section 3.5.6.3.3 on page 3.5.6-32 has been updated to include the statement about any body parts/multiple body parts being affected.</p>

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	<p>occur on any body part as well as multiple body parts. Section: 3.5.6.3.3 PDF Page: 344 Comment: Please include that gear utilization from planned non-offshore wind activities could result in major long-term impacts for NARW if a NARW is entangled because impacts on individual NARWs could have severe population-level effects and compromise the viability of the species. Section: 3.5.6.3.3 PDF Page: 356 Comment: Please note that sound levels from wind turbine operations are likely to increase somewhat with increasing generator size and power ratings while the newer use of direct-drive technology is expected to lower underwater noise levels substantially. Section: 3.5.6.3.3 PDF Page: 356 Comment: Please provide sources for "researchers" as well as additional detail. Masking effects for what species? More information is necessary here. Section: 3.5.6.3.3 PDF Page: 359 Comment: Ocean Wind 1 has determined the cumulative impact of port utilization for the no action alternative is major for the NARW and moderate for other species. Ports discussed are very similar so it is unclear why NYB has determined the impact to be so much lower (minor for all species including the NARW). Please provide more detail or re-consider the impact determination. This also applies to subsequent Port Utilization sections. Section: 3.5.6.3.3 PDF Page: 359 Comment: Please review recent information/comments provided by NMFS on other OSW EISs and in Biological Opinions regarding effects of presence of structures and operations of WTGs. We consider this section to require updates to ensure that it reflects the best available scientific information (note that this comment is relevant to fish and sea turtles as well as marine mammal chapter) Section: 3.5.6.3.3 PDF Page: 359 Comment: Please add that an increase in offshore wind farms may weaken the regional thermocline and affect heat storage atmospheric CO2 uptake and benthic resupply of oxygen gas (Dorrell et al. 2022). Section: 3.5.6.3.3 PDF Page: 360 Comment: "Tall vertical structures" are not the primary reason for the reduction of wind-driven mixing of surface waters. That would be energy extraction from the turbines. Section: 3.5.6.3.3 PDF Page: 361 Comment: Please provide a source that supports the claim that hydrodynamic effects will be limited to within 600 to 1300 feet down current of each monopile.</p>	<p>The discussion for gear utilization in Section 3.5.6.3.3 has been updated as requested to discuss non-offshore wind activities that would have major effects on NARW. Text in Alternatives B and C has also been checked to be consistent with this determination. The note about use of direct drive technology reducing sound levels even for larger turbine sizes has been added to the WTG noise discussion on page 3.5.6-48.</p> <p>This information comes from Lucke et al. (2007), and text has been updated to clarify that these are the researchers being referred to in the WTG operational noise masking discussion.</p> <p>The presence of structures discussion in Section 3.5.6.3.3 has been updated to include additional sources such as Jonhson et al. (2021), Floeter et al. (2022), Raghukumar et al. (2023), and NASEM (2023), and subsequent text has been updated to expand discussions as needed.</p> <p>The conclusion about thermoclines and heat storage from Dorrell et al. (2022) has been added to the discussion of the presence of structures in Section 3.5.6.3.3.</p> <p>Text in Section 3.5.6.3.3 referring to tall vertical structures has been updated as follows: "Human-made structures, such as bottom-founded foundations and operational WTG associated with offshore wind projects, alter local water flow..."</p> <p>The section has been updated with additional/newer references to clarify this range so this statement has been removed/replaced with results from Johnson et al. (2021) and Schultze et al. (2020).</p>

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BOEM-2024-0001-0371-0023	<p>Section: 3.5.6.4.1 PDF Page: 372 Comment: Please add that marine mammal species that are more likely to forage near the benthic organisms such as certain delphinids have more potential to experience EMF above baseline levels (Tricas and Gill 2011). Section: 3.5.6.4.1 PDF Page: 376 Comment: Please provide information on the possible behavioral responses from vessel noise such as the onset of avoidance behavior changes in acoustic behavior diving and subsurface interval behavior and changes in vocal rates (Southall et al. 2021). Section: 3.5.6.4.1 PDF Page: 376 Comment: The impact determined for G&amp;G Survey Noise for Ocean Wind 1 with/including mitigation measures is minor. Please provide more detail as to how one NY Bight project without mitigation measures has a lower impact determination. Please apply this comment to all subsequent G&amp;G Survey Noise sections as masking and behavioral responses are possible for all species as a result of this noise LFCs in particular. Section: 3.5.6.4.2 PDF Page: 382 Comment: Some of the IPFs included in this list as "expected to be minor" were determined to have a negligible impact not minor. Also not all of the IPFs had the same impact determination for each species/group such as the NARW. For example survey gear utilization while minor for other species was higher for the NARW. This summary is misleading.</p>	<p>The risk of EMF exposure increasing for benthic foraging marine mammals has been added as requested to Section 3.5.6.4.1. A full discussion of the potential behavioral responses to vessel noise is provided in Section 3.5.6.3.3 and referenced in Section 3.5.6.4.1 to reduce redundancy in the document. BOEM agrees with the point raised by this comment regarding impacts from geophysical and geotechnical (G&amp;G) noise in Alternative B and has changed this to minor for all marine mammals. Masking and behavioral effects are discussed in detail in Section 3.5.6.3.3. Section 3.5.6.4.2 has been cross checked against Section 3.5.6.4.1 to ensure consistency with determinations.</p>
BOEM-2024-0001-0371-0024	<p>Section: 3.5.6.5 PDF Page: 389 Comment: (3.5.6-11) The first entry in the table for measure COMFIS-5 does not incorporate the redline edit reflected in the October 18 2023 DPEIS. It's missing the word "requiring." It should read "This measure proposes requiring during- and post-construction fisheries monitoring survey plan design follows the BOEM Fisheries Survey Guidelines." Section: 3.5.6.5 PDF Page: 404 -405 Comment: Here it reads impacts from one or six projects to mysticetes (including NARW) are expected to be "moderate for mysticetes (including the NARW) mainly resulting from UXO detonations and pile-driving noise because impacts would be noticeable and measurable and could result in population-level effects for some species;..." but it also reads that "For pile-driving BOEM expects impacts to be minor for non-NARW mysticetes..." Please verify the impacts from pile driving to mysticetes. Section: 3.5.6.5 PDF Page: 404 Comment: Alternative C: NMFS is concerned</p>	<p>COMFIS-5 has been reclassified as an RP. The cumulative impacts of Sub-alternatives C1 and C2 for NARW are expected to be major because serious injury or loss of an individual would result in population-level impacts that threaten the viability of the species if a vessel strike or entanglement were to occur. The proposed mitigation measures under Sub-alternatives C1 and C2 will eliminate the risk of Permanent Threshold Shift (PTS) for NARW due to UXO and impact pile-driving and will reduce the risk of vessel strikes such that the likelihood of one occurring is negligible. Because no PTS or vessel strike injuries are anticipated for NARW, no population-level effects are anticipated, and impacts were reduced from major to moderate.</p>

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	<p>with the impact determination for NARW as reduced from major from the No Action Alternative. Consistent with comments on OSW EISs if the status quo is expected to be major impacts for ongoing and planned activities no AMMM measures would reduce those impacts since they are tied to this proposed action. Therefore NMFS requests this be changed to major impacts for NARW. Additionally this is a different conclusion from what is in Table ES-2 and Chapter 2.</p>	
BOEM-2024-0001-0371-0025	<p>Section 3.5.7 Sea Turtles Section: 3.5.7 PDF Page: Global Comment: Note that due to workload this section did not receive a complete review by MMPA and ESA SMEs. Section: 3.5.7.1 PDF Page: 406 Comment: NMFS and USFWS have not designated DPSs for leatherback sea turtles because the species is listed as endangered throughout its global range (85 Federal Register 48332). 'Leatherback sea turtle Northwest Atlantic subpopulation' is more appropriate. Please also incorporate this change into table 3.5.7-1. Section: 3.5.7.1 PDF Page: 409 Comment: More recent AMAPPS survey data is available than 2017; please update the data and references in the FEIS. Section: 3.5.7.1 PDF Page: 410 Comment: Please add that visual sighting data may be limited because this small species is difficult to observe using typical aerial survey methods (Kraus et al. 2016) Section: 3.5.7.1 PDF Page: 410 Comment: Please add that Leatherback sea turtles dive the deepest of all sea turtles to forage and are more tolerant of cooler oceanic temperatures. In addition Please add that Bailey et al. 2012 found that oceanographic features such as mesoscale eddies convergence zones and areas of upwelling attracted foraging leatherbacks as these features are often associated with aggregations of jellyfish. Section: 3.5.7.1 PDF Page: 412 Comment: Please add that studies have indicated that the Mid-Atlantic Bight of the Atlantic OCS is an important a seasonal foraging ground for approximately 40000 to 60000 juvenile and adult loggerheads during summer months (NEFSC and SEFSC 2011). Section: 3.5.7.1 PDF Page: 412 Comment: Please add that sea turtles are wide-ranging and long-lived making population estimates difficult and survey methods vary depending on species (TEWG 200 NMFS and USFWS 2015). Because they have large ranges and highly migratory behaviors these factors can have impacts on individuals over broad</p>	<p>Text regarding the leatherback sea turtle population in Section 3.5.7.1 on page 3.5.7-1 has been updated to include the suggested recommendation, and Table 3.5.7-1 has been similarly revised as requested.</p> <p>The most recent Atlantic Marine Assessment Program for Protected Species (AMAPPS) reports have been reviewed and incorporated into this section where appropriate.</p> <p>A statement regarding difficulty in detection of Kemp's ridley sea turtles due to their size has been incorporated into Section 3.5.7.1. The requested leatherback information has been incorporated in Section 3.5.7.1.</p> <p>Loggerhead foraging information has been incorporated into Section 3.5.7.1.</p> <p>The following text has been added to the beginning of Section 3.5.7.3.1: "Because sea turtles have large ranges and highly migratory behaviors, these IPFs can have impacts on individuals over broad geographical scales. Therefore, in addition to the current conditions and trend of sea turtles in the geographic analysis area, these populations are also affected by factors beyond the geographic analysis area. However, the assessment in this PEIS focuses on those stressors currently present within the geographic analysis area, and any effects on the populations outside this region are considered as part of the species ongoing vulnerability affecting the species risk."</p>

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	geographical scales. In addition the current condition and trend of sea turtles are also affected by factors beyond the geographic analysis area.	
BOEM-2024-0001-0371-0026	Section: 3.5.7.3.3 PDF Page: 424 Comment: It would be beneficial to include the estimated distances of planned export and inter array cables. Section: 3.5.7.3.3 PDF Page: 429 Comment: Please remove the phrase "dredging impacts on sea turtles are relatively uncommon" and begin the sentence after the semicolon. This statement is not descriptive and is misleading as written. Section: 3.5.7.3.3 PDF Page: 431 Comment: Please add that project decommissioning such as the removal of the monopile foundations and scour and cable protection would reverse the artificial reef effect provided by these structures and remove or disperse the associated biological community. Section: 3.5.7.3.3 PDF Page: 433 Comment: Please add that while sea turtles are capable of remaining submerged for long periods they appear to rapidly consume oxygen stores when entangled and forcibly submerged in fishing gear (Lutcavage and Lutz 1997).	The estimated areas for the planned export and interarray cables are provided in Appendix D, Table D2-2. The dredging statement for sea turtles was removed as requested. A statement about decommissioning effects reversing potential benefits has been added to Sections 3.5.7.3.3 and 3.5.7.4. A statement about sea turtles consuming oxygen stores when entangled was added to Section 3.5.7.3.3.
BOEM-2024-0001-0371-0027	Section: 3.5.7.4.1 PDF Page: 435 Comment: Please add that even though the impact of one NY Bight project "would be of low intensity short term and localized" ingestion of debris by a sea turtle can be fatal for the individual. Section: 3.5.7.4.1 PDF Page: 435 Comment: Please add that dredging could contribute additional impacts on sea turtles related to impingement entrainment and capture associated with mechanical and hydraulic dredging techniques. It would also be beneficial to discuss the different types of dredging that have the potential to be utilized for one project. Section: 3.5.7.4.1 PDF Page: 436 Comment: Please provide additional detail for explaining the negligible determination. Ocean Wind 1 determined the impact of EMF to be minor and that project proposed only HVAC. One NYB project has the potential to use HVDC which have considerably higher potential to adversely impact sea turtles than HVAC as stated. Section: 3.5.7.4.1 PDF Page: 442 Comment: Please add that periods of poor visibility or inclement weather would increase the collision risk for turtles because both turbid water and darkness would impede turtles' visual detection of approaching boats. Section: 3.5.7.4.1 PDF	Potential for fatal injuries due to ingestion of debris was added to the discussion in Section 3.5.7.4.1. Risk of impingement and entrainment due to mechanical dredging techniques was added in Section 3.5.7.4.1, as well as a summary of potential cable emplacement methods considered in this PEIS. Though EMF from HVDC is likely to be higher than high voltage alternating current (HVAC) cables, the potential impacts on sea turtles would still be limited to behavioral disturbances within a few feet from the cables due to the expected burial depth and more recent studies looking at HVDC effects on marine life. This negligible determination for one project in Alternative B is consistent with other recently published EISs, including Sunrise Wind and Empire Wind. A statement regarding increased vessel collision risk during poor visibility conditions for sea turtles has been added to Section 3.5.7.4.1. Requested information from the U.S. Navy Undersea Warfare Center has been incorporated into Section 3.5.7.4.1.

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	<p>Page: 442 Comment: Please add surface information provided by the U.S. Navy Undersea Warfare Center's dive distribution and group size parameter reports (Watwood and Buonantony 2012; Borcuk et al. 2017). These data suggest that loggerhead and green sea turtles spend 60 to 75 percent of the time within 32 feet (10 meters) of the surface leatherback sea turtles spend about 20 percent of the time within 32 feet (10 meters) of the water surface and there are insufficient data to quantify Kemp's ridley sea turtle activity. Any sea turtle found in the geographic analysis area could thus occur at or near the surface whether resting feeding or periodically surfacing to breathe which is where they are at risk of vessel strike. Section: 3.5.7.4.2 PDF Page: 443 Comment: While the impact determination may not change it is inaccurate to equate the chance of accidental release for one project with that of six projects. Bejarano et al. 2013 modeled that a release of 2000 gallons or less is likely to occur every 5 to 20 years. The more turbines that are in the water the more fluid there is in each turbine and thus the higher the opportunity there is for a potential spill. Section: 3.5.7.4.2 PDF Page: 443 Comment: The statement that the likelihood of impacts are so low to be discountable contradicts the preceding section which describes impacts for each IPF not all of which were determined to be negligible. Section: 3.5.7.5.4 PDF Page: 458 Comment: AMMMs are implemented to mitigate adverse impacts. Therefore they lessen adverse impacts and do not create "greater beneficial impacts" as stated. Please fix.</p>	<p>The introduction to Section 3.5.7.4.2 states: "There would be more potential for impacts for these IPFs due to the greater amount of offshore and onshore development under six NY Bight projects. Impacts for accidental releases, discharges/intakes, EMFs and cable heat, survey gear utilization, and lighting are expected to be the same as those discussed above for one NY Bight project." Therefore, BOEM acknowledges an increased risk of oil spills due to the increased number of project infrastructure in the water column; however, the likelihood is still low, and BOEM does not anticipate that effects would combine such that the overall impact determination would increase from one project to six. The statement has been updated to clarify as follows: "...the overall likelihood of impacts resulting from these IPFs for any one project remains the same as described in Section 3.5.7.4.2 regardless of the number of NY Bight projects considered." The statement has been updated as follows: "Impacts on sea turtles are anticipated to be similar as described under Alternative B. While the application of not previously applied AMMM measures for six NY Bight projects can reduce potential adverse impacts, the impact level determination is not expected to change under Sub-alternative C2."</p>
BOEM-2024-0001-0371-0028	<p>Section 3.6.1 Commercial and Recreational Fisheries Section: 3.6.1 PDF Page: Global Comment: Please insert a reference to and a discussion of fisheries for highly migratory species (tunas sharks swordfish etc.) which are managed by NMFS's Highly Migratory Species Division. These fisheries are affected by this action but are not referenced in the baseline description other than in Table 3.6.1-1. Section: 3.6.1 PDF Page: Global Comment: Throughout the document particularly under cable emplacement and/or presence of structures please include a discussion of cable preparation activities and cable armoring including UXO detection and removal and boulder</p>	<p>The Atlantic Highly Migratory Species (HMS) Fishery Management Plan (FMP) includes Atlantic billfish, Atlantic tunas, swordfish, and sharks (NMFS 2006, 2017). HMS species are referenced in Section 3.6.1.1.4. as well as Table 3.6.1-1. General text about seabed preparation activities and cable protection were included under the cable emplacement and maintenance IPF in Sections 3.6.1.3.2 and 3.6.1.4.1. Details about the specific activities will be addressed during the project-specific, COP-level NEPA analysis.</p>

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	relocation activities. Such activities are additional impacts that should be identified and considered in this document.	
BOEM-2024-0001-0371-0029	<p>Section: 3.6.1.1.1 PDF Page: 479 Comment: (Table 3.6.1-1) Please ensure that this table includes all species affected by this action and managed by the management bodies listed. Many of the species managed by the ASMFC are not listed in this table (e.g. Atlantic menhaden striped bass Jonah crab etc.).</p> <p>Section: 3.6.1.1.3 PDF Page: 485 Comment: Please ensure that all commercial fisheries affected by this action are adequately described in this section including associated tables such as Table 3.6.1-6. Similar to previous project-specific EISs this section relies exclusively on data from vessels issued permits by the NMFS Greater Atlantic Regional Fisheries Office (GARFO). Operations in fisheries such as Atlantic menhaden and other ASMFC-managed fisheries HMS species and species managed by the South Atlantic Fishery Management Council are not well represented in the GARFO data presented in this section. As a result baseline evaluations of fishery operations throughout the six lease areas are underestimated in this DEIS. Further in several tables “all others” data are included in lease-specific reports available on our website but are not included in either the landings or revenue tables. Integration of data for these other fisheries into the FEIS would increase the likelihood that the programmatic EIS can meet BOEM’s objectives.</p> <p>Section: 3.6.1.1.4 PDF Page: 514 Comment: (Figure 3.6.1-22) Please ensure that the “Prime Fishing Areas” identified by the New Jersey Department of Environmental Protection are included in this or a similar figure and discussed in the relevant text of this section. These areas include important fishing locations associated with bottom features that would be affected by this action. Evaluation of impacts to these areas including AMMMS to avoid such impacts should be included in the FEIS.</p>	<p>Species such as Atlantic menhaden, striped bass, and Jonah crab managed by the Atlantic States Marine Fisheries Commission (ASMFC) have been added to Table 3.6.1-1.</p> <p>Figure 3.6.1-22 has been updated to include the requested Prime Fishing Grounds data identified by the New Jersey Department of Environmental Protection (NJDEP).</p>
BOEM-2024-0001-0371-0030	<p>Section: 3.6.1.3.1 PDF Page: 516 Comment: Please describe current regional trends in stock biomass and fishery landings/revenues. Section 3.6.1.1 merely presents data without discussing trends in biomass or fishery operations. For example stock assessments could</p>	<p>While one NY Bight project is not anticipated to require port upgrades, some ports have planned improvements to accommodate offshore wind activities across the region, which are described in Appendix D. The impact determination is consistent</p>

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	<p>be referenced to describe biomass trends for important fishery species and patterns of landings/revenues could be described for the top fisheries. If this section concludes that such trends would continue it should summarize what those trends are. Section: 3.6.1.3.1 PDF Page: 518 Comment: Under anchoring please reflect the use of various anchoring techniques such as spud barges and jack-up vessels similar to the text in section 3.6.1.4.1 on page 3.6.1-47. Spud cans have been shown to result in long-term alteration of the bottom which could present operational impacts to mobile gear fishing unless filled in appropriately. Section: 3.6.1.3.1 PDF Page: 519 Comment: Under noise please include a discussion of vibrations transmitted through the foundation and into the seabed. Similar to noise sediment vibration has been shown to result in negative impacts to sessile species particularly shellfish which could have indirect impacts on associated fisheries. We have provided references to relevant scientific research in previous comments on project-specific EISs (OW1 Atl Shores South). Section: 3.6.1.3.2 PDF Page: 520 Comment: Under port utilization please revise impacts from “minor” to “moderate” to be consistent with impact level definitions in Table 3.6.1-17. Consistent with that table port utilization would disrupt fishery operations in affected ports and vessels would have to adjust somewhat for such disruptions over the long term and throughout the operational life of the project depending on the port. Thus port utilization would disrupt normal and routine functions of various fisheries operating out of affected ports and such impacts would be moderate. Section: 3.6.1.3.2 PDF Page: 520 Comment: Under presence of structures please summarize potential impacts to fishery landings and revenues impacted by ongoing projects to accurately characterize baseline impacts using the ongoing and planned projects listed in Table 3.6.1-19. This is similar to the approach for summarizing the landings/revenue exposed of the six leases affected by this action and can facilitate tiering by providing a more accurate baseline for the evaluation of the no action alternative and cumulative impacts. Such data are readily available in the NMFS reports referenced in this section.</p>	<p>with other EISs. More details and analyses will be included at the project-specific, COP-level NEPA analysis. Information about jack-up and spud barge effects has been included in the discussion of anchoring impacts in Section 3.6.1.3. Text has been added to address noise vibration to the seafloor and its potential effects, including recent studies on shellfish (scallop).</p>

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BOEM-2024-0001-0371-0031	<p>Section: 3.6.1.4 PDF Page: 522 Comment: Under anchoring please note that spud barges and jack-up vessels could leave long-term changes to the sea floor that could result in effects to fishing operations unless mitigated through the use of scour or fill. Section: 3.6.1.4 PDF Page: 523 Comment: Under cable emplacement please revise the impact conclusion to moderate instead of minor to be consistent with Table 3.6.1-17. If there are permanent impacts as noted remedial mitigation is needed to eliminate measurable effects. Thus impacts are more appropriately characterized as moderate per Table 3.6.1-17. Section: 3.6.1.4.2 PDF Page: 526 Comment: Under presence of structures please quantify the revenue exposure of fisheries that would be affected by development of wind projects in the six lease areas or reference the tables summarizing revenue exposure in previous sections. A quantitative evaluation of economic impacts for each lease area and the collective areas as a whole is possible along with the qualitative discussion provided herein. The data are available on our website (<a href="https://www.fisheries.noaa.gov/resource/data/socioeconomic-impacts-atlantic-offshore-wind-development?utm_medium=email&amp;utm_source=govdelivery">https://www.fisheries.noaa.gov/resource/data/socioeconomic-impacts-atlantic-offshore-wind-development?utm_medium=email&amp;utm_source=govdelivery</a>) and should be incorporated into this DEIS. In a worst case scenario where all previous fishing activities would be displaced from the proposed lease areas historic revenue exposure could be used to assess potential impacts to commercial fishing operations under Alternative B absent any AMMMs. This would be consistent with an upper bound estimate of impacts found in conventional programmatic EISs and would facilitate tiering for future project-specific impact evaluations. Because the only data presented in this DEIS is from GARFO-permitted vessels such impacts would not be fully reflective of potential impacts to all affected fisheries and should be supplemented with additional sources for other affected fisheries. Also research by Changsheng Chen (<a href="https://tethys.pnnl.gov/publications/assessing-potential-impacts-offshore-wind-facilities-regional-sea-scallop-laval-early">https://tethys.pnnl.gov/publications/assessing-potential-impacts-offshore-wind-facilities-regional-sea-scallop-laval-early</a> and <a href="https://s3.us-east-1.amazonaws.com/nefmc.org/Doc.14.a-UMASSD-WHOI_short_report_05_6_12_2021_revison.pdf">https://s3.us-east-1.amazonaws.com/nefmc.org/Doc.14.a-UMASSD-WHOI_short_report_05_6_12_2021_revison.pdf</a>) notes</p>	<p>BOEM has reviewed the impact determinations and found them to be consistent with other EISs. Further details will be provided during the project-specific, COP-level NEPA analysis. Revenue exposure cannot be quantified at the programmatic level, but will be addressed during the project-specific COP-level NEPA analysis. Chen 2021 has been cited in discussion about potential changes in larval distribution from the presence of structures.</p>

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	<p>that it is possible to estimate and evaluate oceanographic impacts on larval distribution. The results of that work and other similar research should be included in this section (or the no action alternative) as an example of the potential consequences to fishery resources and associated fisheries.[Embedded Hyperlink: <a href="https://s3.us-east-1.amazonaws.com/nefmc.org/Doc.14.a-UMASSD_WHOI_short_report_05_6_12_2021_revison.pdf">https://s3.us-east-1.amazonaws.com/nefmc.org/Doc.14.a-UMASSD_WHOI_short_report_05_6_12_2021_revison.pdf</a>)] Section: 3.6.1.4.3 PDF Page: 526 Comment: Please provide data such as cumulative fisheries revenue exposure tables and justification to support the conclusion that the six NY Bight projects when combined with other reasonable foreseeable actions would not "alter the overall state of commercial fisheries and for-hire recreational fishing." This section only includes qualitative general descriptions of potential impacts and does not attempt to quantify the cumulative impacts similar to how cumulative fishery impacts are assessed in project-specific EISs through cumulative revenue exposure tables. Such data are readily available to be integrated into the FEIS. To support the conclusions noted on this page and facilitate tiering of project-specific analysis additional information is needed even if such impacts would not change the overall qualitative impact ratings.</p>	
BOEM-2024-0001-0371-0032	<p>Section: 3.6.1.5 PDF Page: 528 Comment: Please include more detail describing how individual AMMMs would avoid minimize mitigate or monitor impacts to commercial and for-hire fisheries or move this table below the supporting text that follows. Many of the proposed AMMMs are not described in a manner that would identify how they relate to fishery operations and how they would avoid minimize mitigate or monitor fishery impacts. For example MUL-24 proposes an undefined adaptive management plan for NMFS trust resources to address as yet unknown issues or information rendering this AMMMM of minimal utility. Similarly MUL-5 proposes to use undefined equipment technology and best practices to reduce noise while MUL-26 proposes a generic environmental monitoring plan that could define mitigation and monitoring measures for all impacts to all resources affected by these leases. MUL-23 proposes adjustments to project design to minimize undefined impacts on environmental resources. However such adjustments are undefined and it is not</p>	<p>AMMM measures included in Alternative C in the Draft PEIS have been subcategorized into previously applied and not previously applied. In addition, some AMMM measures in the Draft PEIS are now recommended RPs for the Final PEIS; these RPs are not part of the Proposed Action. MUL-24 was removed from the Final PEIS based on comments received on the Draft PEIS. MUL-5, MUL-23, MUL-25, and MUL-26 are now recommended RPs for lessees to consider in their projects and can be found in Section 3.6.1.7. The table referred to in the comment is meant to be a summary of the AMMM measures for commercial fisheries and for-hire recreational fishing, and the full text of each AMMM measure is included in Appendix G.</p>

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	likely that they could be made in a timely manner to avoid or minimize impacts to fishery operations given that many lessees have already proposed design parameters making project revisions later in the process (after final AMMMs are defined through this action) costly and increasing the possibility for project delays. MUL-25 proposes consistent turbine grid layouts and at least one line of orientation spaced at least 1 nm apart. However individual lessees have already proposed different layouts and spacing even for adjacent leases while several do not include at least one line of orientation with turbines 1 nm apart which contradicts the purpose utility and efficacy of this AMMM. The description of COMFIS-2 provides some detail that enables the reader to better understand how this measure would reduce impacts to fisheries. Additional detail of this nature or text similar to the descriptions of AMMMs in Appendix G would help the reader understand how the AMMMs could minimize impacts to fishery operations.	
BOEM-2024-0001-0371-0032-a	Section: 3.6.1.5 PDF Page: 528 Comment: (Table 3.6.1-20) Under COMFIS-1 please reference gear loss and damage compensation plans implemented in previous projects to maximize consistency and effectiveness of this AMMM. Absent further details it is possible that a lessee would implement a gear loss and damage compensation plan that would differ from previous measures implemented for approved projects which could cause confusion and increase burden on affected entities.	Thank you for your comment. COMFIS-1 is now an RP that recommends that lessees implement a gear loss and damage compensatory program and consult BOEM's draft guidance ( <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf</a> ).
BOEM-2024-0001-0371-0032-b	Section: 3.6.1.5 PDF Page: 528 Comment: (Table 3.6.1-20) Under COMFIS-3 please provide additional detail about how such a monitoring plan would avoid or reduce impacts to scallop populations. We also recommend that a similar AMMM be listed for other fishery populations that are affected by the lease areas particularly Atlantic surf clam and ocean quahog populations. Additional detail about the objectives of the monitoring plan and how/when it would be implemented is needed to evaluate its effectiveness. A monitoring plan would take time to develop execute and consider the results which would delay the implementation of any efforts to avoid or reduce impacts to scallop populations and	Based on comments received on the Draft PEIS, COMFIS-3 has been broadened to include the development and implementation of a Fisheries and Benthic Monitoring Plan.

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	targeted commercial fisheries. Given that many of the six NY Bight lessees have already proposed turbine layouts and spacing this AMMMM is unlikely to be effective at avoiding or reducing impacts because the resulting data may not be available in time to modify project proposals before the project is approved and construction would begin.	
BOEM-2024-0001-0371-0032-c	Section: 3.6.1.5 PDF Page: 528 Comment: (Table 3.6.1-20) Please include an AMMMM for fisheries operational monitoring program. COMFIS-5 proposes that lessees follow the Fisheries Survey Guidelines for monitoring. This guidance covers biological monitoring it does not cover fisheries operation monitoring. This would ensure impact evaluations are not exceeding what is anticipated and improve compensation mitigation by ensuring accurate predictions. NMFS staff may be able to provide technical assistance with the development of any fisheries operational monitoring program AMMMM	The suggested AMMMM measure is beyond the scope of this PEIS and beyond BOEM's jurisdictional authority.
BOEM-2024-0001-0371-0032-d	Section: 3.6.1.5.1 PDF Page: 529 Comment: Please provide sufficient information to support and justify conclusions in this and subsequent sections (e.g. Section 3.6.1.5.4) that the proposed AMMMMs would reduce impacts on fisheries operations from all IPFs analyzed in Alternative B. While the additional discussion of how such AMMMMs relate to fishery operations and IPFs is helpful it is still unclear how such AMMMMs would eliminate the possibility of measurable effects and warrant changing impact conclusions from major to moderate. Even if measurable effects would be eliminated by the implementation of these AMMMMs this document does not guarantee that BOEM will require individual AMMMMs or all of these AMMMMs. Further the text in this section indicates that many would not affect impacts to fishery operations. As we have seen in previous projects the details of the compensation plans are needed to determine their effectiveness at mitigating income losses including whether all fishery operations are included in the compensation plan and eligibility requirements or limitations. Without additional detail including what actions each AMMMM may entail and when such actions would be taken (see comments above on specific AMMMMs)	Alternative C has been divided into two sub-alternatives: Sub-alternative C1 and Sub-alternative C2. Sub-alternative C1 analyzes the AMMM measures that BOEM has required as conditions of approval for previous activities proposed by lessees in COPs submitted for the Atlantic OCS or through related consultations. Sub-alternative C2 analyzes the AMMM measures under Sub-alternative C1 plus the AMMM measures that have not previously been applied. These AMMM measures that have not been previously applied may be less familiar to the offshore wind industry but could further avoid and minimize impacts on resources if applied. In addition, BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. Any previously identified AMMM measure that is an RP has been removed from Alternative C. BOEM encourages lessees to analyze and consider implementing these RPs as they may further avoid and minimize impacts on resources. AMMM measures from Sub-alternative C1 or C2, or a combination of both, may be required as conditions of approval for activities proposed by lessees in project-specific COPs

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	it is difficult to evaluate the effectiveness of most of the proposed AMMMs. Text in Section 3.6.1.5.4 concludes that the cumulative impacts of Alternative C would continue to be major because some operations would experience substantial disruptions indefinitely even with AMMMs. For consistency this section should differentiate how this action for the six lease areas based on the proposed AMMMs would not result in a similar outcome.	submitted for the six NY Bight lease areas. BOEM may also require additional or different measures based on future, site-specific NEPA analysis of project-specific COPs. The overall impact rating conclusions (as shown in PEIS Table 2-4 and Executive Summary Table ES-2) may not always be different under Alternative C when compared to Alternative B, while impacts for specific individual IPFs may be different. Depending on the specific IPF and the resource analyzed, there can be notable differences that change the impact determination for a specific IPF under Alternative C. However, the overall impact rating conclusions for the resource encompasses all IPF impact conclusions. The details of the analysis for each IPF and the justification for the overall impact conclusion for a resource are found in the Chapter 3 resource sections.
BOEM-2024-0001-0371-0033	Section: App G PDF Page: 215 Comment: (Table G-1) Please consider addressing the Environmental Justice Issue described in Table 3.6.4-3 "Potential job and income losses due to disruption of ocean and coastal areas (e.g. commercial fisheries for-hire recreational fishing recreational fishing/tourism) or cultural disruption (subsistence fishing and tribal fishing)" as an AMMM explicitly. The language under EJ compensation (AMMM EJ-4) reads as if commercial and for-hire fisheries do not need to be considered/qualify under this measure with this description of this compensation program: "to address disproportionate and adverse impacts on EJ populations directly tied to OCS offshore wind activities as related to the impact analysis discussed in the COP-specific NEPA review [Bold Italics: that has not been addressed through another mitigation measure.]" The language for COM-FIS 6 AMMM addresses only lost revenue from fishing not loss of jobs cultural disruption or other social factors. Therefore there is a gap in mitigation measures to address this impact. Please clarify that the scope of this compensation plan would cover these social factors. If not please consider a measure that would address this through fair mitigation/compensation.	Refer to response to comment BOEM-2024-0001-0319-0004.

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BOEM-2024-0001-0371-0034	Section 3.6.7 Other Uses Section: 3.6.7.1.6 PDF Page: 678 Comment: If this is including surveys in the entire GAA as stated the Seal Abundance and Turtle Ecology Surveys should be included.	Text has been added to Section 3.6.7.1.6 accordingly.
BOEM-2024-0001-0371-0035	Section: 3.6.7.3.1 PDF Page: 682 Comment: Please provide detail to support the claim that impacts of the No Action Alternative would be of lower intensity than those described for the cumulative impacts. Section: 3.6.7.3.2 PDF Page: 686 Comment: Please add "in survey strata" after sampling. (...by precluding NOAA survey vessels and aircraft from sampling [Bold: in survey strata];) Section: 3.6.7.3.2 PDF Page: 687 Comment: Please add that this implementation strategy also defines stakeholders partners and other ocean users that will be engaged throughout the process and identifies potential resources for successful implementation through the duration of wind energy development in the Northeast U.S. region.	Text has been revised in Section 3.6.7.3.1 in the Final PEIS to remove reference to the No Action Alternative being of lower intensity. The suggested changes to Section 3.6.7.3.2 have been made.
BOEM-2024-0001-0371-0036	Section: 3.6.7.4.1 PDF Page: 691 Comment: Please change "could" to "would" as there is no uncertainty. (One NY Bight project [Crossout: could] [Bold: would] affect survey operations by excluding certain portions of the lease area...) Section: 3.6.7.4.3 PDF Page: 692 Comment: Consider structuring this section in the same format as section 3.6.7.4.1. The labeling of each section is beneficial. Section: 3.6.7.4.4 PDF Page: 694 Comment: Please add " as well as on the commercial fisheries community" after research. (...on fisheries and protected-species research [Bold: as well as on the commercial fisheries community].)	The suggested changes to Sections 2.6.7.4.1, 3.6.7.4.3, and 3.6.7.4.4 have been made.
BOEM-2024-0001-0371-0037	Section: 3.6.7.5 PDF Page: 695 Comment: (Table 3.6.7-6) Please add "to mitigate impacts at the project and regional level." This information is included in the full description of the measure in Appendix G but is omitted here in the summary. It would be beneficial to include in this section as well. Section: 3.6.7.5.2 PDF Page: 697 Comment: Mention of the impact of OU-7 for six projects is omitted from this section please add.	The suggested change to Table 3.6.7-6 has been made. Discussion of OU-7 has been removed from Section 3.6.7.5.2.
BOEM-2024-0001-0371-0038	Section: 3.6.7.1.5 PDF Page: 667 Comment: Comment from NOAA/NOS/IOOS: Please replace the 3 instances of the word	The suggested change has been made.

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	<p>"SeaSonde" on this page with the word "oceanographic". SeaSonde is the product name of just one kind of oceanographic HF-radar manufactured by CODAR Ocean Sensors Ltd. There are other types of oceanographic HF-radars produced by other manufacturers within the New York Bight geographic analysis area too so an inclusive term should be used instead of calling out one specific radar make/model.</p>	
BOEM-2024-0001-0371-0043-b	<p>Section: 3.6.7.5 PDF Page: 695 Comment: Comment from NOAA/NOS/IOOS: In Table 3.6.7-6 the Measure ID #OU-1 and OU-5 should be combined into a single Measure OU-1 in accordance with the COP Terms &amp; Conditions of other OSW projects that have only required a single measure to mitigate interference to oceanographic high-frequency radars (HFRs) in the NOAA IOOS HFR National Network. The updated language to use for that unified Measure Summary which reflects the language used for other OSW geographic analysis area is as follows:[<i>Italic: "This measure proposes establishing a mitigation agreement with the NOAA IOOS Office to reduce interference of project activities with oceanographic high-frequency radar systems. Options to mitigate these effects include sharing near real-time telemetry of ocean surface current and wave data into the public domain via NOAA IOOS and sharing information about the operational state of each WTG."</i>]</p> <p>Section: 3.6.7.5.1 PDF Page: 695-696 Comment: Comment from NOAA/NOS/IOOS: (1) In accordance with the prior comment about combining AMMM measures #OU-1 and OU-5 into a single measure please delete all references to OU-5.(2) In the paragraph on "Presence of structures" replace the following sentences on AMMM measure OU-1:"AMMM measure OU-1 could result in the reduction of impacts for SeaSonde radar systems as data sharing (i.e. turbine orientation and rate nacelle bearing angles and other information about the operational state of each turbine) between turbine and radar operators would allow for the turbine information to be included in the radar signal processing system leading to more accurate radar readings. Modifying existing SeaSonde radars systems with signal processing enhancements and antennae modifications would increase the accuracy of radar readings for ocean current data gathering (Colburn et al. 2020). Wind farm curtailment agreements</p>	See response to comment BOEM-2024-0001-0371-0052.

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	<p>identified under AMMM measure OU-1 require wind farms to cease operations during emergency circumstances which would further reduce radar interference. "with the following text which reflects just a single measure to mitigate interference to oceanographic high-frequency radars (HFRs) in the NOAA IOOS HFR National Network in accordance with the COP Terms &amp; Conditions of other OSW projects:[Italics: "AMMM measure OU-1 would require an oceanographic high-frequency (HF) radar data interference mitigation agreement between the NY Bight lessee and the Surface Currents Program of NOAA's IOOS Office. The lessee in consultation with the NOAA IOOS Office would be responsible for determining if a project would cause HF-radar interference to a degree to which HF-radar performance is no longer within the specific radar systems' operational parameters or fails to meet NOAA IOOS's objectives. The mitigation agreement would provide surface current and wave measurements and only if necessary further information about the operational state of the WTGs to NOAA IOOS to ensure that any impacts on HF-radar systems are adequately mitigated thereby reducing impacts on these radar systems."](3) In accordance with the prior comments on combining AMMM measures #OU-1 and OU-5 into a single measure please delete the (now redundant) paragraph relating to AMMM measure OU-5 that reads as follows: "AMMM measure OU-5 would require a high-frequency data interference mitigation agreement between the NY Bight lessee and the Surface Currents Program of NOAA's IOOS Office. The lessee would be responsible for determining if a project would cause radar interference to a degree to which radar performance is no longer within the specific radar systems' operational parameters or fails to meet NOAA IOOS's objectives. The mitigation agreement would allow for NOAA IOOS to ensure that any impacts on NOAA IOOS's radar systems are adequately mitigated thereby reducing impacts on these radar systems."</p>	
BOEM-2024-0001-0371-0044	<p>Appendix A Section: A.2 and A.3 PDF Page: 3 – 10 Comment: Comment from NOAA ONMS: Appendix A Consultations and Coordination. The areas currently under consideration for the proposed designation of the Hudson Canyon National Marine</p>	<p>Thank you for your comment. Once the COP is submitted for OCS-0537, BOEM will coordinate with U.S. Department of Commerce National Oceanic and Atmospheric Administration (NOAA) ONMS</p>

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	Sanctuary will be directly adjacent to parts of the proposed lease areas. There are potential impacts to sanctuary resources during construction and installation for the project location OCS-0537. As such the NOAA Office of National Marine Sanctuaries (ONMS) should be a consulting agency.	related to the proposed designation of the Hudson Canyon National Marine Sanctuary as part of the COP NEPA EIS analysis.
BOEM-2024-0001-0371-0045	Appendix C Section: Appendix C: Tiering Guidance PDF Page: Global Comment: (Table C-1) It would be helpful for readers and provide greater guidance to the COP-specific NEPA analysis if BOEM included in this section a list of all anticipated COP-specific activities. Each "Impact Analysis" section in Table C-1 asserts that COP-specific NEPA analysis will include quantitative impact analysis based on the relevant IPFs associated with disturbance from each "offshore activity." Specific reference to all the anticipated offshore activities will provide greater guidance for what should be expected in the COP-specific NEPA analysis which will reference this programmatic.	Appendix C is intended to provide high-level information regarding the type of information BOEM anticipates could be incorporated by reference and the additional analysis that is expected at the COP-level NEPA. However, each COP will need to be evaluated to determine what type of activities are proposed and to what extent the PEIS can be incorporated by reference. BOEM is required to analyze each COP as proposed by the developer and does not make decisions on specific offshore activities unless the activities are included in the COP. Examples of COP-specific NEPA analysis can be found in the Final EISs for Empire Wind ( <a href="https://www.boem.gov/renewable-energy/state-activities/empire-wind">https://www.boem.gov/renewable-energy/state-activities/empire-wind</a> ), Ocean Wind 1 ( <a href="https://www.boem.gov/renewable-energy/state-activities/ocean-wind-1">https://www.boem.gov/renewable-energy/state-activities/ocean-wind-1</a> ), Vineyard Wind 1 ( <a href="https://www.boem.gov/renewable-energy/state-activities/vineyard-wind-1">https://www.boem.gov/renewable-energy/state-activities/vineyard-wind-1</a> ), Sunrise Wind ( <a href="https://www.boem.gov/renewable-energy/state-activities/sunrise-wind">https://www.boem.gov/renewable-energy/state-activities/sunrise-wind</a> ), and Revolution Wind ( <a href="https://www.boem.gov/renewable-energy/state-activities/revolution-wind">https://www.boem.gov/renewable-energy/state-activities/revolution-wind</a> ).
BOEM-2024-0001-0371-0046-a	Section: PDF Page: General Comment: Please include an AMMMM that requires the lessee to monitor changes to fishery operations within the lease area as a result of project-specific operations and the effectiveness of any fishery mitigation/compensation plans.	The suggested AMMM measure is beyond the scope of this PEIS and beyond BOEM's jurisdictional authority.
BOEM-2024-0001-0371-0046-b	Section: PDF Page: General Comment: Please include an AMMMM that requires the lessee to mitigate the social and cultural impacts to fishing communities associated with changes to fishing operations as a result of project-specific operations. This could include community development funds or other measures that could be combined with an AMMMM associated with fishery mitigation/compensation.	The proposed AMMM measure goes beyond BOEM's jurisdictional authority with regard to community development funds. Specific fisheries compensatory mitigation would occur at the project-specific COP NEPA review and consultations stage. Environmental Justice populations who fish are covered by other AMMM measures and RPs (see specifically EJ-1a and EJ-3).

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BOEM-2024-0001-0371-0046-c	<p>Appendix G Section: PDF Page: General Comment: A "plan" is a detailed proposal for conducting actions or activities including how what where and when certain actions are being proposed how these actions were developed and decisions related to the actions were made. A plan or plans should be submitted during the regulatory/consultation processes for interagency review. "Reports" are accounts of actions that have been undertaken or observed; a report occurs after an action has taken place (or is underway). At present it is unclear how BOEM can evaluate the effectiveness of a plan at avoiding/minimizing impacts versus requiring substantive avoidance/minimizing of impacts via an AMMMM. Section: PDF Page: General Comment: Noting that a separate effort is underway to evaluate the AMMMs in the context of the planned framework programmatic ESA consultation and that we will be continuing to work with BOEM on the ones relevant to protected species and habitats in that context. Section: PDF Page: General Comment: A number of AMMMs appear to be "voluntary" or require the "consideration" (but not implementation) of planning that could avoid/minimize impacts. We recommend that these AMMMs be modified to be required so that the effectiveness of these measures at avoiding/minimizing impacts can be analyzed. If they remain voluntary then the effects analysis must clearly indicate that the voluntary measure will have no effect on mitigating adverse effects. We recommend all AMMMs be considered mandatory and as the introduction to this section states exceptions can be described and explained if "During NEPA review of individual COPs BOEM may identify AMMM measures that do not apply to a specific COP if it can be demonstrated that implementation is not warranted or effective." (p G-1) Section: PDF Page: General Comment: Please include an AMMMM that requires the lessee to monitor changes to fishery operations within the lease area as a result of project-specific operations and the effectiveness of any fishery mitigation/compensation plans. Section: PDF Page: General Comment: Please include an AMMMM that requires the lessee to mitigate the social and cultural impacts to fishing communities associated with changes to fishing operations as a result of project-</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as Terms and Conditions (T&amp;Cs) or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs, and AMMM measures not previously applied as T&amp;Cs.</p> <p>Regarding specific recommendations for new mitigation measures, monitoring changes to fishery operations is beyond the scope of this PEIS; mitigation of social and cultural impacts from project-specific operations occurs through fisheries compensatory mitigation (COMFIS-6), and there is one RP to encourage supporting compensatory funding (COMFIS-7). Note that COMFIS-1 (Compensation for gear loss and damage) was combined into COMFIS-6. BOEM continues to do research and understand potential socio-economic impacts of these projects.</p> <p>Avoidance of sensitive habitats, estuarine environments, and embayments during project activities such as plowing, trenching, and dredge material disposal will be determined at the project-specific stage in EFH consultations.</p>

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	specific operations. This could include community development funds or other measures that could be combined with an AMMMM associated with fishery mitigation/compensation. Section: PDF Page: General Comment: Please include an AMMMM that requires construction activities such as plowing trenching and dredging avoid known sensitive habitats and features such as SAV shellfish NJDEP-designed prime fishing grounds etc. Section: PDF Page: General Comment: Please include an AMMMM that requires dredge material disposal activities avoid known sensitive habitats and features such as SAV shellfish NJDEP-designed prime fishing grounds wetlands etc. Section: PDF Page: General Comment: Please include an AMMMM that requires avoiding development/construction in estuarine environments and embayments.	
BOEM-2024-0001-0371-0046-d	Section: PDF Page: General Comment: Please include an AMMMM that requires construction activities such as plowing trenching and dredging avoid known sensitive habitats and features such as SAV shellfish NJDEP-designed prime fishing grounds etc.	Thank you for your comment. Avoidance of specific sensitive habitats will occur at the project-specific level consultations.
BOEM-2024-0001-0371-0046-e	Section: PDF Page: General Comment: Please include an AMMMM that requires dredge material disposal activities avoid known sensitive habitats and features such as SAV shellfish NJDEP-designed prime fishing grounds wetlands etc.	Thank you for your comment. Avoidance of specific sensitive habitats will occur at the project-specific level consultations.
BOEM-2024-0001-0371-0046-f	Section: PDF Page: General Comment: Please include an AMMMM that requires avoiding development/construction in estuarine environments and embayments.	Thank you for your comment. Avoidance of specific sensitive habitats will occur at the project-specific level consultations.
BOEM-2024-0001-0371-0047	Section: PDF Page: 210 Comment: BEN 1: Relocated boulders represent a permanent change to benthic habitat. Please include the effect of boulder relocation in the benthic habitat monitoring plan. Section: PDF Page: 210 Comment: BEN-1: NMFS recommends modifying this AMMM. In order to minimize impacts of boulder relocation on EFH boulders should be relocated to the periphery of the nearest delineated habitat of similar complexity and boulder density. It is unclear why minimization of relocation distance outside of the required relocation zone would equate to a minimized impact to EFH. Section: PDF Page: 210 Comment: BEN-1: Since lessees are	Thank you for your comment. Please refer to the response to comment BOEM-2024-0001-0439-0037. Minor edits have been made to BEN-1. A more detailed measure could be developed in the future as a result of project-specific information and consultations.

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	being instructed to avoid boulders please include in this AMMM measure that if avoidance is not possible the lessee must provide rationale why avoidance was not possible.	
BOEM-2024-0001-0371-0048-a	Section: PDF Page: 211 Comment: Under COMFIS-1 please consider referencing any boulders relocated as a result of project operations (e.g. cable emplacement and wind turbine installation preparation). Marked or unmarked bounders relocated as a result of the project construction activities can lead to gear loss and damage and associated reduction in fishery revenue. This impact should also be considered as part of this AMMM measure and not just be limited to manmade infrastructure components (e.g. mattresses cables turbines) owned by the lessee. We suggest editing the last sentence in the AMMM to read as follows: "For example the Lessee should consider compensation for damaged gear resulting from interactions between the fishing industry and non-marked/non-charted or marked/charted property (e.g. concrete mattresses) of the Lessee as well as gear damaged by charted and non-charted boulders that are relocated as result of project activities."	COMFIS-1 has been combined into COMFIS-6, Fisheries compensatory mitigation. AMMM measures BEN-1 and MUL-40 (previously NAV-1) also contain requirements for boulder avoidance, identification, relocation, and reporting. Nautical maps will be updated with the concrete mattress location. Cable, scour protections, and offshore wind infrastructure in general will all be charted.
BOEM-2024-0001-0371-0048-b	Section: PDF Page: 211 Comment: Please consider modifying COMFIS-3 or creating a new AMMM measure to include a monitoring program for other important fishery resources besides scallops located within the lease areas particularly Atlantic surf clam and ocean quahog resources. COMFIS-3 should also reference and be consistent with BOEM fisheries survey guidelines to the extent that they do not conflict with the intent and purpose of the AMMMM itself. Finally this should reflect and/or reference other similar AMMMMs such as COMFIS-5 and MUL-26.	Thank you for your comment. Based on comments received on the Draft PEIS, COMFIS-3 has been broadened to include a Fisheries and Benthic Monitoring Plan, which includes Atlantic surf clam and ocean quahog. This plan includes fisheries and benthic resources generally. See response to comment BOEM-2024-0001-0371-0048-a for more information on the distinction between COMFIS-3, COMFIS-5, and MUL-26.
BOEM-2024-0001-0371-0048-c	Section: PDF Page: 211 Comment: COM-FIS-4 Fisheries Mitigation states that there is no anticipated enforcing agency because it is "voluntary". However this mitigation measure is critical as it effects the health safety and economic viability of individual operators who have historically used this area. This is an important AMMMM and should be enforced; it should not be a voluntary measure. Coexistence with existing uses including fisheries is a goal of both of	Thank you for your comment. Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of

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	our agencies with respect to offshore wind development but it would be increasingly limited without this AMMMM being enforceable.	the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs. COMFIS-4 has been classified as an RP. Project-specific mitigation measures to reduce impacts will be considered at the project stage.
BOEM-2024-0001-0371-0048-d	Section: PDF Page: 211-212 Comment: COMFIS-4: Several of the static cable design elements and project design elements outlined in this AMMMM are crucial for reducing impacts and improving safety at sea. These planning elements should not be considered "voluntary"; NMFS recommends requiring lessees to provide explanations of their efforts to incorporate project and cable design elements; any instances where the Lessee believes there is technical (and/or economic) infeasibility should be supported by a technical feasibility analysis as appropriate for review by BOEM. In addition NMFS recommends emphasizing the value of shared cable corridors where technically and economically feasible to minimize the total area disturbed. This will have benefits to commercial fisheries Essential Fish Habitat and other resources.	Thank you for your comment. MUL-18 (Shared transmission corridor) is an RP encouraging lessees to coordinate transmission infrastructure among projects.
BOEM-2024-0001-0371-0048-e	Section: PDF Page: 212 Comment: Under COMFIS-5 please clarify the relationship of this AMMM measure with other related AMMMMs such as COMFIS-3 and MUL-26. Language listed in MUL-26 should be incorporated into other similar AMMMMs such as this one when possible. It is important to note that unlike COMFIS-3 and MUL-26 compliance with this AMMMM and BOEM's survey guidance is voluntary. We recommend that all surveys conducted to support individual projects should be consistent with BOEM's guidance and the ROSA fisheries survey framework guidelines.	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs. COMFIS-3 is an AMMM measure requiring lessees to develop and implement a Fisheries and Benthic Monitoring Plan. COMFIS-5 (Fisheries Survey Guidelines) and BEN-3 (Benthic Survey Guidelines) are RPs that encourage the lessee to follow BOEM's existing guidelines when developing the monitoring plan. MUL-26 has been revised in response to comments received on

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		the Draft PEIS. MUL-26 (Coordination for regional monitoring and surveys) is an RP that is not meant to be a duplicate requirement. This RP now encourages coordination for regional monitoring and surveys.
BOEM-2024-0001-0371-0048-f	Section: PDF Page: 212 Comment: COMFIS - 5. NMFS continues to be concerned about the potential for some survey methods/gear types to result in interactions with protected species including the potential for lethal entanglement. We encourage BOEM to develop mandatory AMMMs that would ensure that fisheries surveys are undertaken in a way that minimizes such risk (e.g. avoiding gill nets utilizing ropeless/on-demand technology for trap/pot surveys) and ensures that necessary ESA and/or MMPA consultations/authorizations are in place prior to any such surveys that may affect protected species.	The Fishery Survey Guidelines ( <a href="https://www.boem.gov/sites/default/files/documents/about-boem/Fishery-Survey-Guidelines.pdf">https://www.boem.gov/sites/default/files/documents/about-boem/Fishery-Survey-Guidelines.pdf</a> ) already account for use of ropeless technology, especially in proximity to protected species. In reviews for COP surveys with lessees and contractors, BOEM no longer supports the use of gillnets.
BOEM-2024-0001-0371-0048-g	Section: PDF Page: 212 Comment: COMFIS-6: The AMMM states "For losses to commercial and for-hire recreational fishermen the Fund must be based on the revenue exposure for fisheries." Exposure analysis does not cover all potential losses to fishing industry. Developers should be directed to analyze losses beyond historic fishing revenue within the lease areas ("revenue exposure") and work with fishing industry on potential monetary impacts beyond lost revenue - for example transit impacts and additional costs.	Thank you for your comment. Transit impacts and additional costs would come out through the claims process, not through the PEIS. Project details, such as design, will be analyzed during the COP NEPA stage. To the best of BOEM's abilities, development of corridors and transit access in lease and between leases to maintain fishing operations and vessel transit will be completed. BOEM is working with navigation subject matter experts and USCG to develop the corridors and transit access.
BOEM-2024-0001-0371-0049-a	Section: PDF Page: 216 Comment: MM-2 & MM-3: We recommend requiring real-time and long-term PAM monitoring plans that are submitted to BOEM BSEE and NMFS prior to implementation. The plan or plans could incorporate best practices as outlined by the RWSC. Also please consider requiring the use of passive acoustic receivers for acoustic telemetry as instruments to be included in the PAM monitoring plans (like STF-1 but required).	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs. BOEM's review and revision of AMMM measures has resulted in MM-2 becoming an RP. MM-3 has been revised with additional details about long-term passive acoustic monitoring (PAM).

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BOEM-2024-0001-0371-0049-b	Section: PDF Page: 216 Comment: MM-5: We recommend adding NMFS as a federal agency to review and provide comments on a lessee's NARW Strike Management Plan (only BOEM and BSEE are listed in the Description).	Thank you for your comment. BOEM will continue discussions with NMFS. Further communication and coordination will occur at the project-specific stage.
BOEM-2024-0001-0371-0049-c	Section: PDF Page: 216-217 Comment: MMST-1: Please be consistent when naming the federal agencies that can review and provide comments on a submitted Alternative Monitoring Plan. Sometimes NMFS BOEM and BSEE are listed (in the Description) and other times only BOEM and BSEE are listed. In any location the agencies are named please consistently list NMFS BOEM and BSEE as the federal agencies that can review and comment on a submitted Alternative Monitoring Plan.	Thank you for your comment. BOEM will continue discussions with NMFS. Further coordination and communication will occur at the project-specific stage.
BOEM-2024-0001-0371-0049-d	Section: PDF Page: 220-221 Comment: MMST-12: We recommend requiring something similar to an Alternative Monitoring Plan for geophysical surveys similar to MMST-1 when surveys are conducted in poor sighting conditions or at night.	Thank you for your comment. MMST-12 has been updated to include information about an Alternative Monitoring Plan for geophysical surveys.
BOEM-2024-0001-0371-0049-e	Section: PDF Page: 221-222 Comment: MMST-14: We recommend requiring something similar to an Alternative Monitoring Plan for vessel strike mitigation similar to MMST-1 when vessels are transiting in poor sighting conditions or at night.	Thank you for your comment. MMST-14 was updated to include any construction, operations, or decommissioning vessel transits associated with the project. Please see revised AMMM measure in the Final PEIS for additional detail.
BOEM-2024-0001-0371-0050-a	Section: PDF Page: 226 Comment: MUL-19: Please indicate the duration of the cable monitoring. Recommend monitoring for the lifetime of the project.	MUL-19 has been revised to clarify that monitoring would occur every 3 years until projects are decommissioned.
BOEM-2024-0001-0371-0050-b	Section: PDF Page: 225 Comment: MUL-12: If ecological design elements are incorporated please include the design specifications as part of the benthic and fisheries monitoring plans.	Thank you for your comment. Details regarding ecological design elements are project-specific and will be analyzed at the subsequent COP NEPA stage if proposed as part of the COP.
BOEM-2024-0001-0371-0050-c	Section: PDF Page: 225 Comment: MUL-15: We have several recommendations for marine debris monitoring: Please include the development of a marine debris mitigation plan and note the duration for the marine debris monitoring; we recommend monitoring for the lifetime of the wind project. In addition to annually monitoring at least 10 of the WTGs located closest to shore we recommend that each WTG should be inspected by ROV divers or	MUL-15 has been deleted and incorporated into MUL-1 and now clarifies that surveying and reporting must occur for the first 3 years following COP approval and every 5 years thereafter. MUL-1 also clarifies that lessees may conduct surveys by remotely operated vehicles, divers, or other means, but any images or videos taken during the survey must be submitted with the annual

Comment No.	Comment	Response
	other means at minimum once every 3 years. The WTG marine debris monitoring plan should clearly explain how each WTG will be routinely inspected and results of these inspections can be presented in annual monitoring reports. Please include any gear markings in the monitoring reports which will be important for determining their provenance.	report. BOEM does not plan to require monitoring for 10 WTGs closest to shore at this programmatic stage.
BOEM-2024-0001-0371-0050-d	Section: PDF Page: 225 Comment: MUL-18: As noted in out comment on COMFIS-4 NMFS recommends emphasizing the value of shared cable corridors where technically and economically feasible to minimize the total area disturbed. This will have benefits to commercial fisheries as well as to minimizing impacts to benthic habitat and Essential Fish Habitat. Effort to incorporate these planning elements should not be considered "voluntary"; NMFS recommends requiring lessees to provide explanation of their efforts to incorporate project and cable design elements; any instances where the Lessee believes there is technical (and/or economic) infeasibility should be supported by a technical feasibility analysis as appropriate for review by BOEM.	<p>Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have and have not been previously applied; BOEM believes these are all feasible. In addition, several AMMM measures were reclassified as RPs in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs as they may further avoid and minimize impacts. These RPs are also not part of the Proposed Action. MUL-18 is an RP.</p> <p>Additionally, Chapter 2 of the PEIS provides a discussion of transmission configuration options, and notes that transmission infrastructure may be developed, owned, and operated by either a transmission developer or a lessee. In the future, new projects may wish to coordinate with an existing project for purposes of running in parallel to existing infrastructure.</p> <p>BOEM regulations (30 CFR 585.200(b)) state, "A lease issued under this part confers on the lessee the rights to one or more project easements without further competition for the purpose of installing gathering, transmission, and distribution cables; pipelines; and appurtenances on the OCS as necessary for the full enjoyment of the lease." Although BOEM cannot limit a lessee's right to a project easement for submarine cables; BOEM can analyze in the project-specific COP NEPA documents the use of less impactful and/or shared cable corridors, where technically and economically feasible, to minimize resource impacts. Therefore, BOEM may condition COP approval of a project on the easement to an existing offshore transmission point of interconnection (POI).</p>

Comment No.	Comment	Response
BOEM-2024-0001-0371-0050-e	Section: PDF Page: 223 Comment: MUL-2: Habitat data collected from the project should be used to develop all plans including the anchoring plan referenced in this AMMMM; these plans should be submitted as part of the regulatory/consultation processes. The developer should collected habitat data and assess how they will avoid/minimize benthic impacts from anchoring. As written this is a post-ROD measure and the effectiveness of this measure cannot be analyzed.	Thank you for your comment. Fisheries and Benthic Monitoring Plan details can be found in COMFIS-3.
BOEM-2024-0001-0371-0051-a	Section: PDF Page: 234-235 Comment: MUL-38: We recommend adding NMFS as a federal agency that can review and provide feedback on a lessee's noise mitigation plan.	Thank you for your comment. After additional consideration, BOEM has removed MUL-38. Should BOEM consider this at a later date, it will consider adding NMFS as a federal agency that can review and provide feedback on a lessee's noise mitigation plan.
BOEM-2024-0001-0371-0051-b	MUL-12: Where applicable ASGA supports the use of nature-inclusive design elements to possibly provide benefits to marine habitats over traditional materials.	Thank you for your comment.
BOEM-2024-0001-0371-0051-c	Section: PDF Page: 227 Comment: MUL-23: As described above this appears to be a voluntary AMMMM or requires "consideration" but not implementation. This AMMMM should be changed to require the avoidance of known sensitive habitats or features including SAV the Mid-Shelf Scarp NJDEP-designated prime fishing areas hard bottom etc. Additionally this AMMMM should include language regarding reducing a project's footprint within a lease area in order to avoid landscape-scale/large sensitive habitats or features.	Thank you for your comment. MUL-23 has been classified as an RP in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs as they may further avoid and minimize impacts. These RPs are not part of the Proposed Action.
BOEM-2024-0001-0371-0051-d	Section: PDF Page: 227 Comment: Please consider revising MUL-24 to include TOYRs for non-protected species including important commercial and recreational species. TOYRs are useful at minimizing impacts to sensitive life stages of all NOAA trust resources especially larvae juveniles and spawning adults. Minimizing impacts to marine resources will also reduce indirect impacts to commercial and for-hire recreational fisheries and private recreational anglers.	Thank you for your comment. After further consideration, MUL-24 has been deleted because it is covered in other AMMM measures and through consultations.

Comment No.	Comment	Response
BOEM-2024-0001-0371-0051-e	Section: PDF Page: 227 Comment: MUL-24: It is unclear how this adaptive management plan will align with NMFS consultations. Please clarify how this intersects with the consultations and how NMFS would be consulted on this plan.	Thank you for your comment. After further consideration, MUL-24 has been removed.
BOEM-2024-0001-0371-0051-f	Section: PDF Page: 227-228 Comment: MUL-26: Please include in the monitoring plans efforts to evaluate the: effects of benthic habitat modification; effects of boulder relocations; effects of altered hydrodynamics; effects of ecological design elements if used; effects of impingement/entrainment at cooling water intake systems; thermal effects of water discharge at cooling water intake systems	MUL-26 has been revised in response to comments to encourage lessees to coordinate monitoring and survey efforts, meet regional data requirements and standards proposed by the Responsible Offshore Science Alliance (ROSA) and Regional Wildlife Science Collaborative (RWSC), and make results from monitoring publicly available. Additionally, MUL-23 has been classified as an RP in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs as they may further avoid and minimize impact. These RPs are not part of the Proposed Action.
BOEM-2024-0001-0371-0051-g	Section: PDF Page: 227-228 Comment: MUL-26: Please specify what the "other resource-specific monitoring plans" are in order to aid review of environmental monitoring plans. Baseline data collection should also be required as part of a monitoring plan.	MUL-26 has been revised in response to comments to encourage lessees to coordinate monitoring and survey efforts, meet regional data requirements and standards proposed by ROSA and RWSC, and make results from monitoring publicly available. Additionally, MUL-23 has been classified as an RP in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs as they may further avoid and minimize impact. These RPs are not part of the Proposed Action.
BOEM-2024-0001-0371-0051-h	Section: PDF Page: 229 Comment: MUL-30: If this AMMMM is meant to apply to both sea turtles and marine mammals please add marine mammals in to the description here; currently specifications only refer to protections for sea turtles. Or clarify that strike avoidance and shutdown zones during geophysical surveys to avoid impacts to marine mammals are covered in a different AMMMM.	MUL-30 was removed from the Final PEIS because it overlaps with MMST-12.
BOEM-2024-0001-0371-0051-i	Please include an AMMM related to avoiding construction activities during sensitive times of year for various species (time-of-year restrictions) such as migratory fishes (inshore/estuarine) longfin squid spawning (offshore/nearshore) winter flounder spawning/egg/larvae (estuarine) etc.	Time of year restrictions are determined at the project-specific stage through EFH consultation.
BOEM-2024-0001-0371-0052	Section: PDF Page: 235 Comment: In accordance with the prior comment on Section 3.6.7 about combining measures #OU-1 and OU-	The suggested revisions to the AMMM measure are too strict at this programmatic level review. This AMMM measure only

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	<p>5 into a single measure replace the entry in the "Description" cell associated with Measure ID OU-1 with the following unified language (that has been previously applied as a COP Term &amp; Condition) that was developed by the IOOS Surface Currents Program in consultation with NOAA's Office of General Counsel and provided to BOEM's Andrew McGuffin and team: [Italics: The Lessee will enter into a mitigation agreement with NOAA to mitigate operational impacts on oceanographic high-frequency (HF) radars including the following measures:1 HF-radar Interference Analysis and Mitigation. The Lessee's Project has the potential to interfere with oceanographic high-frequency (HF) radar systems in the U.S. Integrated Ocean Observing System (IOOS) which is managed by the IOOS Office within the National Oceanic and Atmospheric Administration (NOAA) pursuant to the Integrated Coastal and Ocean Observation System Act of 2009 (Pub. L. No. 111-11) as amended by the Coordinated Ocean Observation and Research Act of 2020 (Pub. L. No. 116-271 Title I) codified at 33 U.S.C. 36013610 (referred to herein as "IOOS HF-radar"). IOOS HF-radar measures the sea state including ocean surface current velocity and waves in near real time. These data have many vital uses ("mission objectives") including tracking and predicting the movement of spills of hazardous materials or other pollutants monitoring water quality and predicting sea state for safe marine navigation. The U.S. Coast Guard also integrates IOOS HF-radar data into its Search and Rescue systems. The Lessee's Project is within the measurement range of IOOS HF-radar systems.</p> <p>1.1 Mitigation Requirement Due to the potential interference with IOOS HF-radar and the risk to public health safety and the environment the Lessee must mitigate unacceptable interference with IOOS HF-radar from the Lessee's Project. Interference must be mitigated before commissioning the first WTG or blades start spinning whichever is earlier and interference mitigation must continue throughout operations and decommissioning until the point of decommissioning where all rotor blades are removed. Interference is considered unacceptable if as determined by BOEM in consultation with NOAA's IOOS Office IOOS HF-radar performance falls or may fall</p>	<p>requires lessees to coordinate with radar operators for impact assessment. Analysis of project-specific design during subsequent COP NEPA analysis would be required to determine whether mitigation is required. BOEM has merged OU-1 and OU-5 with some minor revisions.</p>

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	<p>outside any of the specific radar systems' operational parameters or fails or may fail to meet IOOS's mission objectives.</p> <p>1.2 Mitigation Review. The Lessee must submit to BOEM documentation demonstrating how it will mitigate unacceptable interference with IOOS HF-radar systems in accordance with the Mitigation Requirement. The Lessee must submit this documentation to BOEM (<a href="mailto:renewable_reporting@boem.gov">renewable_reporting@boem.gov</a>) at least 120 days prior to commissioning the first WTG or blades start spinning whichever is earlier. If after consultation with the NOAA IOOS Office BOEM deems the mitigation acceptable the Lessee must conduct activities in accordance with the proposed mitigations. If after consultation with NOAA IOOS Office BOEM deems the mitigation unacceptable the Lessee must resolve all comments on the documentation to BOEM's satisfaction.</p> <p>1.3 Mitigation Agreement. The Lessee is encouraged to enter into an agreement with the NOAA IOOS Office to implement mitigation measures and any such Mitigation Agreement may satisfy the requirement to mitigate unacceptable interference with IOOS HF-radar. The point of contact for the development of a Mitigation Agreement with the NOAA IOOS Office is the Surface Currents Program Manager whose contact information is available at <a href="https://ioos.noaa.gov/about/meet-the-ioos-program-office/">https://ioos.noaa.gov/about/meet-the-ioos-program-office/</a> and upon request from BOEM. If the parties reach a mitigation agreement the Lessee must submit it to BOEM at <a href="mailto:renewable_reporting@boem.gov">renewable_reporting@boem.gov</a>. The Lessee may satisfy its obligations under Section 1.2 by providing BOEM with an executed Mitigation Agreement between the Lessee and NOAA IOOS. If there is any discrepancy between Section 1.2 and the terms of a Mitigation Agreement the terms of the Mitigation Agreement will prevail.</p> <p>1.4 Mitigation Data Requirements Mitigation required under Section 1.2 must address the following:</p> <ul style="list-style-type: none"> <li>1.4.1 Before commissioning the first WTG or blades start spinning whichever is earlier and continuing throughout the life of the Lessee's Project until the point of decommissioning when all rotor blades are removed the Lessee must make publicly available via NOAA IOOS near real-time accurate numerical telemetry of</li> </ul>	

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	<p>surface current velocity wave height wave period wave direction and other oceanographic data measured at the Lessee's Project locations selected by the Lessee in coordination with the NOAA IOOS Office.1.4.2</p> <ul style="list-style-type: none"> <li>1.4.2 If requested by the NOAA IOOS Office the Lessee must share with IOOS accurate numerical time-series data of blade rotation rates nacelle bearing angles and other information about the operational state of each WTG in the Lessee's Project to aid interference mitigation.</li> </ul> <p>1.5 Additional Notification and Mitigation</p> <ul style="list-style-type: none"> <li>1.5.1 If at any time the NOAA IOOS Office or an HF-radar operator informs the Lessee that the Lessee's Project will cause unacceptable interference to an HF-radar system the Lessee must notify BOEM of the determination and propose new or modified mitigation pursuant to Section 1.5.2 as soon as possible and no later than 30 days from the date on which the determination was communicated.</li> <li>1.5.2 If a mitigation measure other than that identified in Section 1.2 is proposed then the Lessee must submit information on the proposed mitigation measure to BOEM for its review and concurrence. If after consultation with the NOAA IOOS Office BOEM deems the mitigation acceptable the Lessee must conduct activities in accordance with the proposed mitigations. The Lessee must resolve all comments on the documentation to BOEM's satisfaction in consultation with the NOAA IOOS Office prior to implementation of the mitigation.]</li> </ul> <p>Section: PDF Page: 235Comment: Add a check to the cell [Italics: "Previously Applied as a COP Term and Condition" associated with Measure ID OU-1. This is in accordance with the prior comment about replacing the entry in this Measure's "Description" cell with language from previous COPs that unifies measures OU-1 and OU-5.] Section: PDF Page: 236Comment: [Italics: Delete the row of the table associated with Measure ID OU-5 once you have updated the entry for OU-1 according to comment immediately above. That comment provides text that combines OU-1 and OU-5 in line with what was</p>	

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	done for other OSW geographic analysis areas so OU-5 may now be deleted]	
BOEM-2024-0001-0371-0053	<p>Section: PDF Page: 237 Comment: Please include AMMM measures that address private angler recreational fishing effects. For example private angler fishing seasons especially in NY and NJ go beyond the Rec-1 AMMM seasonality of Memorial Day to labor day. Key recreational species such as striped bass are important to private anglers fishing offshore and marinas and bait and tackle shops and the season extends through the fall into November. Please see the following resources from Hurricane Sandy in NY/NJ for economic impact of disruptions to bass species' prime fishing seasons. <a href="https://www.st.nmfs.noaa.gov/Assets/economics/documents/sandy/social-econ-hurricane-sandy.pdf">https://www.st.nmfs.noaa.gov/Assets/economics/documents/sandy/social-econ-hurricane-sandy.pdf</a>[Embedded Hyperlink: <a href="https://www.st.nmfs.noaa.gov/Assets/economics/documents/sandy/social-econ-hurricane-sandy.pdf">https://www.st.nmfs.noaa.gov/Assets/economics/documents/sandy/social-econ-hurricane-sandy.pdf</a>] Section: PDF Page: 237Comment: Please include AMMM measure that addresses avoiding and mitigating impacts to public fishing access sites that may overlap with onshore offshore wind infrastructure. These sites are not only important for recreation and tourism but minority populations and/or subsistence fishing. Public fishing site register can be found here: <a href="https://www.fisheries.noaa.gov/recreational-fishing-data/public-fishing-access-site-register">https://www.fisheries.noaa.gov/recreational-fishing-data/public-fishing-access-site-register</a>. Some states also have databases on public fishing sites/locations [Embedded Hyperlink: <a href="https://www.fisheries.noaa.gov/recreational-fishing-data/public-fishing-access-site-register">https://www.fisheries.noaa.gov/recreational-fishing-data/public-fishing-access-site-register</a>]</p>	<p>Thank you for your comment. COMFIS-6 requires that lessees establish a compensation/mitigation fund that includes for-hire recreational fishermen. Further discussions about fisheries compensatory mitigation will happen at project-level COP stage and consultation. Project-specific information such as onshore infrastructure that supports offshore wind and its proximity to public fishing access sites can be analyzed in the COP NEPA analysis.</p>
BOEM-2024-0001-0371-0054	<p>Section: PDF Page: 237 Comment: ST-2: Please note that the website <a href="https://seaturtlesightings.org/">https://seaturtlesightings.org/</a> is only for sea turtles in the New England region. This can be monitored for situational awareness particularly when vessels are traveling to and from New England. Section: PDF Page: 237Comment: STF-1: We recommend making this a requirement as opposed to voluntary. Understanding movement / mixing rates for fish stocks will become important for fisheries stock assessments with development of offshore wind farms. Also consider incorporating this into monitoring plans where sampling designs can be developed to ensure adequate and consistent sampling coverage.</p>	<p>Thank you for your comment. BOEM has reviewed STF-1 and determined it will remain as an RP. ST-2 has been incorporated into MMST-14 and removed from the Final PEIS.</p>

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	For example broader tagging studies should be part of monitoring plans to assess changes in species assemblages.	
BOEM-2024-0001-0371-0055	Additional Comments Section: PDF Page: Global Comment: Climate change is discussed throughout the document but not in the context of being an IPF which is not consistent with other EISs. Further climate change is identified as an IPF in BOEM's "National Environmental Policy Act Documentation for Impact-Producing Factors in the Offshore Wind Cumulative Impacts Scenario on the North Atlantic Outer Continental Shelf" and other EISs. Please either incorporate it as an IPF throughout the document or provide additional explanation for why climate change is not considered an IPF for this PEIS.	Thank you for your comment. In the NY Bight Final PEIS, BOEM analyzed potential climate change impacts on each resource as a part of the ongoing and future conditions under the No Action Alternative. The IPFs identified and analyzed in the NY Bight Final PEIS are directly associated with potential development in the NY Bight lease areas.
BOEM-2024-0001-0371-0056	Section: PDF Page: Global Comment: Comment from NOAA ONMS: The areas currently under consideration for the proposed Hudson Canyon National Marine Sanctuary are directly adjacent to parts of the proposed lease areas. There are potential impacts to sanctuary resources during construction and installation for the project location OCS-0537: high frequency noise and short term impacts from drilling and pile driving turbine construction; after construction there could be low frequency impact over the long term use of turbines in proximity to the sanctuary. Section: PDF Page: Global Comment: NOAA ONMS: Due to the proximity of the lease areas to the areas currently under consideration for the proposed Hudson Canyon National Marine Sanctuary it would be of benefit to require as a condition of any COP Approval notification to the NOAA ONMS and the Hudson Canyon Sanctuary Superintendent should there be any accidents and/or releases into the environment that could have the potential to impact Sanctuary resources.	BOEM will coordinate with NOAA on the status of the marine sanctuary and consider such measures at the COP-specific NEPA stage.
BOEM-2024-0001-0371-0057	Section: PDF Page: Global Comment: Marine mammal impact determinations are inconsistent throughout the document (ES Chapter 2 Chapter 3) and we request BOEM do a QC for consistency. Section: PDF Page: Global Comment: NMFS requests that everywhere impact statements currently read "non-NARW species" it specifies if the impact statement is specific to non-NARW mysticetes or to all marine mammal species.	This section, the Executive Summary, and Chapter 2 have been reviewed to ensure consistency in the impact determinations for marine mammals.

## P.4.2 Cooperating State Agencies

### P.4.2.1 New Jersey Department of Environmental Protection

**Table P.4-7. Responses to Comments from the New Jersey Department of Environmental Protection (BOEM-2024-0001-0448)**

Comment No.	Comment	Response
BOEM-2024-0001-0448-0001	<p>Marine Resources Administration</p> <p>Although New Jersey's Marine Resources Administration (MRA) supports the Proposed Action (Alternative C), <i>The adoption of programmatic avoidance minimization mitigation and monitoring (AMMM) measures that the Bureau of Ocean Energy Management (BOEM) may require as conditions of approval for activities proposed by lessees in Construction and Operations Plans (COPs) submitted for the six NY Bight lease areas</i>, BOEM should consider the feasibility and effectiveness of each measure being recommended. MRA understands and supports that if the COP-specific National Environmental Policy Act (NEPA) analysis shows that implementation of such measures is not warranted or effective that BOEM may require additional or different measures based on the subsequent site-specific NEPA analysis. The purpose of the Proposed Action is to identify issues, analyze the degree of potential impacts and adopt, as appropriate, AMMM measures. Two goals of the PEIS are analyzing potential impacts if development is authorized in the six NY Bight lease areas and analyzing programmatic AMMM measures for the six NY Bight lease areas. The MRA agrees that the BOEM-selected AMMM measures would be applicable to more than one NY Bight lease area are reasonable and enforceable and allow for flexibility where appropriate. Adoption of programmatic AMMM measures in the first-tier analysis while allowing for additions removals and revisions of these measures as appropriate in the individual second tier Environmental Reviews will help to spread out the effort for stakeholders who review these long and complex documents. This approach should also allow for incorporation of novel mitigation measures as they are developed that respond to the site-specific needs of the unique projects and locations. This tiered approach will facilitate consistency in reviews across projects provide some</p>	<p>BOEM acknowledges New Jersey's Marine Resources Administration's support of Alternative C. BOEM has considered all comments received on AMMM measures and made adjustments to the AMMM measures based on comments as presented in Final PEIS Appendix G. In the selection and analysis of AMMM measures, BOEM considered the feasibility and effectiveness of each measure.</p>

Comment No.	Comment	Response
	predictability reduce impacts to coastal resources and facilitate cooperation between projects.	
BOEM-2024-0001-0448-0002	As stated in Appendix G of the Draft Programmatic Environmental Impact Statement (PEIS) monitoring is critical to evaluating resources impacts and the effectiveness of AMMM measures. The introduction to Appendix G identifies how results may be used specifically "to (1) alter how an AMMM measure identified in the ROD is being implemented (2) revise or develop new mitigation or monitoring measures for which compliance would be required under the COPs for the six NY Bight lease areas (3) develop measures for future projects or (4) contribute to regional efforts for better understanding of the impacts and benefits resulting from offshore wind energy projects in the Atlantic (e.g. potential cumulative impact assessment tool)." This list highlights the importance of adaptive mitigation and is helpful in understanding why monitoring coordination of monitoring and accessibility of results is so important. Monitoring can only be used in these applications if monitoring is designed to answer scientific questions and results are made available and accessible as soon as possible. There should also be a mechanism identified for reviewing monitoring results in the context of each of these uses. The document might benefit from clarification of the overall goal for mitigation and how individual AMMMs are assessed. One might assume that a goal is to reduce impacts to the level of the no action alternative but that is not practical for marine fisheries since the no action alternative for fisheries has a major impact. It's also difficult to understand the value of individual mitigation measures on the affected environment. It seems reasonable to employ any practicable mitigation measure that reduces impacts without affecting the viability of the project not just those that alter the assessment of the impact for the resource with the very broad scale that is used.	Thank you for your comment. Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMMs that have and have not been previously applied; BOEM believes these are all feasible. In addition, several AMMM measures were reclassified as RPs in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are also not part of the Proposed Action. Overall, BOEM strives to take an adaptive approach to assessing impacts when the Project Design Envelope (PDE) is known and requiring mitigation measures.
BOEM-2024-0001-0448-0003	Mitigation regarding collection of information needed for understanding fishery impacts is described in COMFIS-5 Fishery Survey Guidelines. MRA recommends that this AMMM measure is broadened to include (1) a recommendation to participate in ongoing efforts to standardize and economize project-specific and regional	Thank you for your comment. MUL-26 has been revised in response to comments to encourage lessees to coordinate monitoring and survey efforts, meet regional data requirements and standards proposed by ROSA and RWSC, and make results from monitoring publicly available.

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	fisheries monitoring and research and (2) a recommendation that all fishery monitoring results are accessible as soon as practicable to stakeholders. Regional entities (e.g. the Responsible Offshore Science Alliance and the Regional Wildlife Science Consortium) have taken on the task of prioritizing standardizing and coordinating monitoring and supporting data governance across projects and this AMMM should also address the need for participation of lessees in these efforts.	
BOEM-2024-0001-0448-0004	Regarding specific resource-monitoring recommendations MRA recommends that Lessees develop an Atlantic surf clam monitoring plan. AMMM COMFIS-3 recommends that Lessees coordinate with NMFS and potentially impacted scallop fishermen to develop a Scallop Monitoring Plan. New Jersey's highly valuable surf clam industry could lose 15% of revenues to offshore wind and the Atlantic City NJ fleet could lose upwards of 25%[Footnote 1: Munroe D.M. Powell E.N. Klinck J.M. Scheld A.M. Borsetti S. Beckensteiner J. and Hofmann E.E. 2022. The Atlantic surf clam fishery and offshore wind energy development: 1. Model development and verification. ICES J. Mar. Sci. 79(6) 1787-1800.] [Footnote 2: Scheld A. M. Beckensteiner J. Munroe D. M. Powell E. N. Borsetti S. Hofmann E. E. and Klinck J. M. 2022a. The Atlantic Surf clam Fishery and Offshore Wind Energy Development: 2. Assessing Economic Impacts. ICES Journal of Marine Science 79 (6): 180114.]. Losses of these magnitudes and localized overfishing could have cascading impacts on secondary industries. Additionally a complicating factor is the shifting of the surf clam population north and east so using only existing data to evaluate the surf clam resources within the lease areas may severely underestimate the value of the stock. Surveys directed towards a broad age class of surf clam and ocean quahog will inform mitigation. The AMMM measures for Commercial Fisheries include other specific recommendations for mitigating impacts including reducing the risk of cable interactions reducing alteration to the seabed avoiding sensitive habitats use of nature-inclusive design charting obstructions AIS marking navigation training and reducing the size of the area of impact. For example AMMM measures COMFIS-2 and AMMM COMFIS-4 recommend scour protection that reduces the risk of creating new hangs to mitigate impacts to the use of mobile bottom	Thank you for your comment. Based on comments received on the Draft PEIS, COMFIS-3 has been broadened to include a Fisheries and Benthic Monitoring Plan, which includes Atlantic surfclam.

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	gear. As new information and technologies become available MRA looks forward to the availability and utility of additional mitigation measures for individual COPs. The recommendation to use shared cable corridors when possible in AMMM COMFIS-4 recognizes the importance of reducing the area of impacts and supports minimizing impacts to the abundant prime fishing areas identified by our state.	
BOEM-2024-0001-0448-0005	AMMM COMFIS-4 sets a minimum cable burial depth of 3 feet. It should be noted that shallower depths would be inconsistent with New Jerseys enforceable policies as the policies are likely to require 6 feet of burial depth in the near future. Projects installing cables within New Jersey state waters will have to comply with burial depths outlined in our rules and regulations at the time of permitting. MRA notes that a burial depth of 2m minimizes the risk of an anchor from a commercial fishing vessel contacting a cable[Footnote 3: Sharples M. 2011. Offshore Electrical Cable Burial for Wind Farms: State of the Art Standards and Guidance & Acceptable Burial Depths Separation Distances and Sand Wave Effect Bureau of Ocean Energy Management Regulation and Enforcement Offshore Electrical Cable Burial for Offshore Wind Farms on the OCS. <a href="https://www.bsee.gov/sites/bsee.gov/files/tap-technical-assessment-program//final-report-offshore-electrical- cable-burial-for-wind-farms.pdf">https://www.bsee.gov/sites/bsee.gov/files/tap-technical-assessment-program//final-report-offshore-electrical- cable-burial-for-wind-farms.pdf</a> ] reduces the risk of a hydraulic clam dredge interacting with the cable4 and provides more reduction in EMF between the cable and the seafloor. NJ's Third Offshore Wind Solicitation required HVDC-based cable and converter technology and future solicitations for Projects that will utilize NJ's Prebuild Infrastructure will also require HVDC technology. Deeper burial can reduce the higher risk of EMF effects3 of HVDC compared to HVAC.	Thank you for your comment. Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs. BOEM has classified COMFIS-4, Fisheries mitigation, as an RP.
BOEM-2024-0001-0448-0006	The MRA supports the measures described in COMFIS-6 regarding fisheries mitigation and the requirement for projects to establish a fund to compensate commercial and for-hire recreational fishermen for loss of income resulting from displacement from fishing grounds due to project construction and operations. It should be a requirement not just a recommendation that the fund is sufficient to allow compensation to shoreside businesses for losses indirectly	Thank you for your comment. COMFIS-6, Fisheries compensatory mitigation fund, should also allow for compensation to shoreside businesses for losses indirectly related to project development. Revenue exposure data compiled by NOAA/NMFS attempts to capture both commercial and party/charter information. In current T&Cs, these data are the minimum basis for Direct Compensation Program funding. BOEM anticipates that shoreside

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	related to project development. Recognizing the importance of sustaining fisheries and the fishing industry eleven east coast states have developed a detailed description of the need design and development of a trusted Regional Fund Administrator (RFA) for managing and distributing fisheries compensatory mitigation funds for offshore wind in a transparent and equitable manner. BOEM should recommend that lessees utilize and contribute to the Regional Compensation Fund once it is established.	service expected exposed revenue be based off a multiplier on the commercial and for-hire recreational fishing revenues to ensure proper funds are available. However, it should be incumbent upon the shoreside business or service to verify its loss. Additionally, a new RP (COMFIS-7) was created in response to comments to encourage lessees to participate in the Fisheries Compensation Fund. BOEM does not preclude the lessees of the NY Bight from using a regional fund administrator, provided the requirements set forth by BOEM are met. BOEM recognizes the advantages of a single fund, yet also recognizes that a lessee may prefer to better set the terms of a fund for its individual project.
BOEM-2024-0001-0448-0007	The MRA recognizes NOAA Fisheries as the lead agency for the protection of marine mammals and turtles and supports any recommendations provided by that agency regarding potential impacts and mitigation measures. MRA appreciates the strides that BOEM and NOAA have made towards coordinating passive acoustic monitoring in the Mid-Atlantic Region and coordination will continue to advance for these and other resources. Additionally the NJ Research and Monitoring Initiative supports these efforts and has plans to fund the deployment of PAM receivers off our coast that complement the work of other agencies and developers. Regional coordination should be expanded to include aerial surveys.	Thank you for your comment. BOEM may consider expanding regional coordination for aerial surveys. MUL-26 was updated to encourage coordination for regional monitoring and surveys.
BOEM-2024-0001-0448-0008	Land Resource Protection The Division of Land Resource Protection commends BOEM for including references to state specific jurisdictions. The NJDEP will continue to review and permit projects that are within the boundaries of New Jersey State waters and lands. The document outlines that WTGs and OSSs would be mounted on one or a combination of the following foundation types: monopile piled jacket suction bucket (could be mono-bucket suction- bucket jacket or tri-suction pile caissons) or gravity-based foundations (Figure 2-3 through Figure 2-6). Monopile and piled jacket are anticipated to be the most likely foundation types to be used for the NY Bight projects. The possible use of "floating foundations" as a mounting method was not discussed and should be further considered by BOEM. This method	The analysis in the PEIS is based on parameters of a representative project—the RPDE as described in Section 2.1.2.1—which includes multiple potential foundation options as identified with input from the six NY Bight lessees, American Clean Power, National Renewable Energy Laboratory, and the States of New York and New Jersey. Floating foundations were not identified during the development of the RPDE as being a potential foundation type considered in the NY Bight area. The NY Bight area has relatively shallow seabed depths and is suitable for fixed foundations. Floating foundations are a newer technology that is being considered in areas with deeper water, including offshore California and in the Gulf of Maine. The PEIS includes AMMM measures (see Appendix G) to minimize seabed disturbance

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	may reduce the impact to many of the biological resources outlined in chapter 3.5.	impacts and other aspects of foundation installation. During project-specific COP NEPA reviews, BOEM will consider project-specific alternatives to avoid and minimize impacts.
BOEM-2024-0001-0448-0009	<p>Endangered Nongame Species Program According to the DPEIS a study indicated that abandoned or lost fishing nests may get tangled in foundations therefore reducing abandoned gear in the OCS environment. The Endangered Nongame Species Program (ENSP) would like to see more data to support this assertion as there is not a valid benefit to birds without further data to indicate this is a regular occurrence. In reference to the Vattenfall 2023 study about bird movements within an offshore wind farm ENSP would be interested to see how nocturnal movements of birds through offshore wind farms could be studied once more wind farms are developed. In addition to the AMMM measures listed in table 3.5-3.6 ENSP would like BOEM to consider motion smear minimization using data from the 2020 study by Nygard - Efficacy of increased wind turbine visibility to reduce avian fatalities as well as the use of video cameras and radar to detect the rate of strikes avoidance behavior and possible attraction within the OSW farms (or best available technologies).</p>	<p>The beneficial effects of fishing nets/gear removal in the offshore environment (in this case with presence of WTGs) is cited in the PEIS (see Regular et al. 2013). While this study did not look at net/gear removal specific to WTG foundations, it did clearly demonstrate a beneficial effect from removal of nets and gear in the offshore environment. Assuming that WTG foundations would be a source of entanglement, it would be expected that birds in the offshore environment would experience some beneficial effect. BOEM would continue to use the most up-to-date and relevant literature on this potential impact as more offshore wind projects are evaluated on at the Atlantic OCS, including those in the NY Bight lease areas.</p> <p>Details on monitoring nocturnal movements of birds would be developed during the project-specific COP NEPA review, as appropriate. For example, if lessees were to implement RP BB-4, monitoring of nocturnal bird movements could be incorporated into the framework.</p> <p>BOEM previously looked into motion smear (for Ocean Wind 1 offshore New Jersey) and reviewed the commenter's cited study (BOEM notes that the study is actually May et al. 2020 and not Nygard, although Nygard is one of the authors). While BOEM acknowledges the May et al. (2020) study indicates a reduction in bird strikes with wind turbines with a black-painted blade, the results are preliminary, and eight turbines (half with black paint) is not a large sample size. In addition, relatively few bird carcasses were found both before and after painting the blades (a total of 42 dead birds at all eight turbines during the study period of 10 years). It is also not clear if the paint achieves the same results across different bird species, and its efficacy may be site specific. In addition, and more of a determining factor in the use of black paint on wind turbine blades in the United States, FAA's 2020 Obstruction Marking and Lighting Circular (70/7460-1M) includes a</p>

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		section (Section 13) on wind turbine paint requirements (for aviation safety) that states the darkest acceptable paint color is light gray, with preference of pure white. Black paint on wind turbines is not allowed under the FAA circular. BOEM would continue to evaluate technologies to reduce collisions if post-construction monitoring indicates action should be taken.
BOEM-2024-0001-0448-0010	Office of Environmental Justice As outlined in Section 3.4.1 Air Quality the document states that most of the emissions would occur during construction. Due to multiple offshore wind projects occurring simultaneously throughout the east coast construction related emissions could cause adverse air quality impacts in the localized areas surrounding the ports and facilities. Many of the ports and supporting facilities associated with offshore wind development are in or adjacent to NJ overburdened communities such as the Paulsboro Marine Terminal the Repauno Port and Rail Terminal and the New Jersey Wind Port. There is no consideration in this section or section 3.6.4 about possible adverse air quality effects in hyperlocal areas during the construction period. OEJ recommends that hyperlocal air quality impacts be investigated. If adverse impacts are found to occur it is recommended to implement air monitoring programs during construction as a strategy to justify mitigation methods in Overburdened Communities (OBCs) from the impacts of increasing commercial vessel traffic air traffic truck and worker vehicle traffic onshore facility operations etc. The need for monitoring is further highlighted by the DPEIS acknowledgement that conditions will vary.	BOEM acknowledges that the PEIS does not include the specificity needed to make location specific determinations (see Section 3.6.4.2 on scope of the environmental justice analysis). The ports identified in the PEIS may support NY Bight offshore wind development but are representative ports, not necessarily planned. BOEM agrees that hyperlocal air quality impacts should be considered by the COP-level NEPA documents to ensure there are not disproportionately adverse impacts on communities with environmental justice concerns. Table G-2 of Appendix G, <i>Mitigation and Monitoring</i> , provides a summary of the RP measures that BOEM encourages lessees to analyze and consider implementing to avoid or reduce impacts on air quality. Thank you for your recommendation to implement air monitoring programs as a strategy to justify mitigation measures in overburdened communities.
BOEM-2024-0001-0448-0011	Transmission/NJ Prebuild Infrastructure The NJ Board of Public Utilities is pursuing an approach to coordinate the construction of offshore wind transmission cables by developing common infrastructure that will house these power cables in shared underground transmission corridors consisting of duct banks and cable vaults for four transmission lines called the Prebuild Infrastructure. NJDEP encourages BOEM to incorporate the review of the coordinated transmission solutions into the New York Bight Final PEIS to the extent practicable.	BOEM notes in Section 2.1.2.1.1 of the Final PEIS that in New York and New Jersey, efforts are underway to develop transmission infrastructure that would allow multiple offshore wind projects to interconnect at an offshore (New York City Public Policy Transmission Need [PPTN]) and nearshore (New Jersey Board of Public Utilities [NJBPU] Prebuild Infrastructure [PBI]) POI. Appendix B, <i>Supplemental Information and Additional Figures and Tables</i> , provides additional detail regarding the transmission infrastructure development efforts in New York and New Jersey.

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		Appendix D, <i>Planned Activities Scenario</i> , has also been updated to describe the States of New Jersey and New York's public policies and offshore wind goals.

#### P.4.2.2 New Jersey Board of Public Utilities

**Table P.4-8. Responses to Comments from the New Jersey Board of Public Utilities (BOEM-2024-0001-0437)**

Comment No.	Comment	Response
BOEM-2024-0001-0437-0001	New Jersey is actively pursuing coordinated transmission solutions to efficiently integrate offshore wind power into the PJM system grid. Through the State Agreement Approach (SAA) NJBPU has awarded the Larrabee Tri-Collector Solution (LCS) to establish a new on-shore Point of Interconnection (POI). The LCS will be capable of incorporating at least 3742 MW of offshore wind capacity through up to four transmission lines. The Board is pursuing an approach to coordinate the construction of these lines by developing common infrastructure that will house these power cables in shared underground transmission corridors consisting of duct banks and cable vaults for four transmission lines. The Board is calling this common infrastructure the "Prebuild" or "PBI." Following discussions with stakeholders and technical experts Board Staff finds that employing the SAA in conjunction with this Prebuild work is necessary to maximize the benefits of SAA 1.0 and the LCS. The Board is currently in the process of soliciting PBI bids from transmission developers and will have further clarity on the precise cable routing of the PBI at the conclusion of the solicitation. This coordinated approach to transmission and associated common cable corridors will minimize environmental and community disturbances arising from on-shore transmission development. We encourage BOEM to incorporate the potential environmental benefits of these coordinated transmission solutions into the NY Bight PEIS.	BOEM notes in Section 2.1.2.1.1 of the Final PEIS that in New York and New Jersey, efforts are underway to develop transmission infrastructure that would allow multiple offshore wind projects to interconnect at an offshore (New York City PPTN) and nearshore (NJBPU PBI) POI. Appendix B, <i>Supplemental Information and Additional Figures and Tables</i> , provides additional detail regarding the transmission infrastructure development efforts in New York and New Jersey.
BOEM-2024-0001-0437-0002	The NJBPU also suggests that BOEM considers adding an alternative course of action that incorporates exclusively the avoidance minimization mitigation and monitoring (AMMM) measures which	Refer to response to comment BOEM-2024-0001-0371-0004.

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	are already approved and demonstrated to be commercially viable into the PEIS. The existing options including no AMMMs or all AMMMs which encompass untested or uneconomic measures represent only the end member cases; the latter of which may be overly burdensome for developers. Introducing a middle-ground alternative that includes proven commercially viable AMMMs would better align with established regulatory processes.	

#### P.4.2.3 New York State Department of State/Department of Environmental Conservation

**Table P.4-9. Responses to Comments from the New York State Department of State/Department of Environmental Conservation (BOEM-2024-0001-0317)**

Comment No.	Comment	Response
BOEM-2024-0001-0317-0001	<p>The Agencies recommend further consideration of the impacts to native hard-bottom habitat from the installation of cables and turbines. Impacts to native hard-bottom habitat are often permanent impacts negatively affecting species that utilize those areas. While scour protection may provide some mitigation for that loss it is not equal to the value of native hard bottom. Cable protection is not a suitable substitute for hard-bottom species to colonize. The impacts from hard bottom loss on a larger scale could be extremely detrimental to local marine species. [Footnote 10: Rochelle D. Seitz Hkan Wennhage Ulf Bergstrm Romuald N. Lipcius Tom Ysebaert Ecological value of coastal habitats for commercially and ecologically important species ICES Journal of Marine Science Volume 71 Issue 3 March/April 2014 Pages 648665 <a href="https://doi.org/10.1093/icesjms/fst152">https://doi.org/10.1093/icesjms/fst152</a>] The Agencies are not aware of studies concluding that introduced hard-bottom in the form of cable or scour protection will be able to replicate the biological value of native hard-bottom both in species recolonization and complexity. If there is not adequate detail on the presence of hard bottom habitat at this time then BOEM should undertake a detailed analysis of impacts to hard bottom habitats during the COP-specific review ensure avoidance is prioritized and evaluate the sufficiency of AMMM</p>	<p>As stated, during the project-specific COP-level NEPA analysis, the seafloor substrates will be described in more detail. While the scour protection may not be equal to the value of native hard-bottom habitat, the best available science indicates that species that require hard substrate for settlement are likely to settle on materials used for cable and scour protection. For example, in a newly published study on the settlement success of the European flat oyster, granite was the substrate with the highest settlement preference (ter Hofstede et al. 2024). Granite is often used in scour protection for offshore wind projects.</p>

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	measures to offset these impacts (e.g. MUL-4 MUL-23 COMFIS-2 COMFIS-4).	
BOEM-2024-0001-0317-0002	<p>Finfish Invertebrates and Essential Fish Habitat (Section 3.5.5): The EMF and cable heat analysis should primarily evaluate dipole bundled high voltage direct current (HVDC) export cables since these will be required for most export cables in the NY Bight due to the distance required to reach shore and state policy initiatives (e.g. mesh-ready). The cumulative impacts section should also acknowledge that interaction rates with finfish and benthic invertebrates increase as more cables with higher capacities are installed. In addition the Agencies continue to recommend a minimum target burial depth of 6 feet for all submarine cables where technically feasible. This burial depth is consistent with BOEM's Draft Fisheries Mitigation Guidance and typically provides sufficient protection to both the cable and maritime users in the area. This depth also reduces the risk of fishing gear interactions and mitigates the effects of EMF on sensitive species that inhabit and transit through a project area. The Agencies also recommend maintaining cables in a bundled state or if unbundling is necessary to bury in a single trench to further reduce EMF and habitat impacts. In addition the New York District U.S. Army Corps of Engineers (USACE) also has a guidance value of a minimum of 7 feet burial depth. [Footnote 9: USACE NY District Nationwide Permit 57 - Electric Utility Line and Telecommunications Activities Permit-specific Regional Conditions b(2)(iv) states "[i]n areas outside of Federal project channels fleeting or anchorage areas the top of the utility line shall be located a minimum of 7 feet below the existing bottom in sediment and 2 feet below the existing bottom in compacted rock."]</p> <p>All certificated NYS offshore wind projects have been required to meet a target burial depth of 6 feet in NYS waters as part of the project-specific NYS Public Service Law Article VII Certification Conditions. Reducing habitat impacts is expected to indirectly benefit ocean users like commercial fishermen by minimizing habitat changes and the risk of interactions with fishing gear.</p>	<p>Text regarding EMF and heat has been added to Section 3.5.5 of the Final PEIS regarding cable heat from HVDC cables. Section 2.1.2 provides the RPDE, which states that 3–19.6 feet (0.9–6 meters) is the anticipated potential range of burial depth; 6 feet (1.8 meters) is the typical target burial depth. Depths may vary based on site-specific factors (e.g., soil type, cable/pipeline crossings, crossing of navigation channels or other federal civil work projects, other federal or state requirements). Cable installation will comply with all permit and certification requirements.</p>
BOEM-2024-0001-0317-0003	Marine Mammals (Section 3.5.6): The Agencies recommend considering and expanding the discussion of noise effects on marine	National Research Council 1994 and 2000 were reviewed and added as references in Section 3.5.6.1.3.

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	<p>mammals. Case studies regarding the impact of low frequency sound on cetaceans and the hearing sensitivity of baleen whales have been in existence for many years. Below are example citations that could be referenced: - National Research Council. 1994. Low-Frequency Sound and Marine Mammals: Current Knowledge and Research Needs. Washington DC: The National Academies Press. <a href="https://doi.org/10.17226/4557">https://doi.org/10.17226/4557</a>. - National Research Council. 2000. Marine Mammals and Low-Frequency Sound: Progress Since 1994. Washington DC: The National Academies Press. <a href="https://doi.org/10.17226/9756">https://doi.org/10.17226/9756</a>. - Jebelli A. Yagoub MCE Dhillon BS and Lotfi N. 2018. Effect of Low-Frequency Noise on Humpback Whale Behaviors. Journal of Oceanography and Marine Research 6: 186.- Croll D. Clark C. Calambokidis J. Ellison W. and Tershy B. February 2001. Effect of anthropogenic low-frequency noise on the foraging ecology of Balaenoptera whales Animal Conservation Volume 4 Issue 1 pp. 13-27. <a href="https://doi.org/10.1017/S1367943001001020">https://doi.org/10.1017/S1367943001001020</a>. - National Research Council. 2003. Ocean Noise and Marine Mammals. Washington DC: The National Academies Press. <a href="https://doi.org/10.17226/10564">https://doi.org/10.17226/10564</a>. Underwater noise from impact and vibratory pile driving drilling and increased vessel noise related to offshore wind development would fall into the low-frequency category. Noise from unexploded ordnances (UXO) detonations would also be audible to low-frequency cetaceans. Baleen hearing range as currently understood has minimal overlap with the noise generated by seafloor mapping surveys. Low-frequency cetaceans may be at risk of masking by lower frequency construction-related vessel traffic but vessel traffic is generally not uncommon in the PEIS study area. With respect to pile driving most energy in pile-driving noise is at low frequencies.</p>	<p>National Research Council 2003 is already referenced in Section 3.5.6.1.3 of the PEIS when discussing potential impacts of noise on marine mammals, and was not carried forward into Section 3.5.6.3.3 because the discussion of vessel noise, vibratory piling, and drilling focused on more recent papers for conciseness in the main body of the PEIS.</p> <p>Jebelli et al. (2018) has not been included in the discussion of geophysical equipment noise effects or any other noise effects section because it lacks applicability to the noise sources in question and relies on highly theoretical assumptions for programmed Autonomous Underwater Vehicle “behavior,” not animal behavior, that are not relevant to NY Bight or associated impact assessments.</p> <p>Croll et al. (2001), though focused on low-frequency Navy sonar noise, was added to the discussion of vessel noise in Section 3.5.6.3.3 to illustrate how other factors may drive behavioral changes that are unrelated to low-frequency noise exposure. In response to the latter part of the comment, BOEM agrees all these sources contain sound energy in lower frequencies below 1,000 hertz and would therefore fall more within the low-frequency cetacean hearing range, and this was considered in the assessment of effects in this PEIS. However, another important consideration, which is illustrated by the recommended references provided, is the characteristics of the sound source type and available data show that marine mammal responses differ for impulsive vs. non-impulsive noise; intermittent/pulsed vs. continuous noise; and underwater explosions vs. non-explosive sound sources. Therefore, information provided in Sections 3.5.6.3 and 3.5.6.4 discusses research analyzing low-frequency noise sources from sources with similar characteristics to the source being discussed to comprehensively assess the risk of effects on marine mammals in the PEIS.</p>
BOEM-2024-0001-0317-0004	<p>Commercial Fishing (Section 3.6.1): For clarity the impacts to commercial and for-hire recreational fisheries should be stated separately. That is the FEIS should state specifically what the impacts to commercial fisheries would be and what the impacts to</p>	<p>For this programmatic analysis, the impacts range from negligible to major because project-specific details are not yet known and the analysis considers the impact range across all IPFs.</p>

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	<p>recreational for-hire fisheries would be for each of the alternatives. For example the Draft PEIS currently states that "impacts on commercial fisheries and for-hire recreational fishing are expected to range from negligible to major." [Footnote 11: See PEIS pg. 3.6.1-52] As is it is not clear whether the impacts to each of the commercial and for-hire recreational fisheries are expected to be "major" or whether this is an aggregate or overall level of impact. For comparison BOEM has analyzed the potential impacts to these fishing industries separately in project-specific EISs like the Empire Wind EIS. [Footnote 12: See Empire Wind FEIS pg. 3.9-65: "Therefore BOEM expects that the impacts resulting from the Proposed Action would be moderate to major for commercial fisheries and minor to moderate for for-hire recreational fishing depending on the fishery and fishing vessel."]</p>	
BOEM-2024-0001-0317-0005	<p>6. Mitigation and Monitoring (Appendix G):</p> <p>a. Mariner Communication Plan: As recommended in the State's PEIS scoping comments the Agencies continue to recommend developing a Mariner Communication Plan that addresses all phases of development (Surveys Construction Operations Decommissioning). Robust and targeted outreach continues to be needed across the diverse users in the assessment area including commercial vessel operators commercial fishermen for-hire/charter fishermen recreational fishermen recreational boaters divers etc. Wind development occurring outside of the East Coast's busiest port and shipping lanes necessitates careful coordination to protect the safety of all mariners. This plan would supplement the NY Bight lease stipulation to implement Fisheries Communication Plans.</p> <p>b. Fisheries Mitigation (COMFIS-4): The Agencies continue to recommend a minimum target cable burial depth of 6 feet in state and federal waters for all projects where technically feasible as noted in Item 4 (above).</p> <p>c. Commercial Fisheries Mitigation (COMFIS-6): The Agencies recommend that lessees utilize and contribute to the Regional Compensation Fund once it is established through the 11-State effort. The States are working together to advance a shared vision of a consistent regional approach for the Atlantic Coast's commercial and</p>	<p>Thank you for your comment. Existing notice to mariners covers all phases of development. Burial depth for each project will be specifically determined at the project-specific phase. COMFIS-7 (fisheries compensation fund) has been added to encourage lessees to consider contracting with a neutral third party to process claims, manage and disburse funds, and handle appeals.</p>

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	for-hire recreational fishing industries and supporting infrastructure through the conceptual development of a regional compensation fund to be managed by an independent Regional Fund Administrator. The States have reached consensus on the need for an expert independent party to lead the design and development of an effective claims process and governance structure for the Fund that reflects input from all affected sectors especially those most directly affected fishing enterprises and infrastructure support. With start-up funds secured a request for proposals is expected to be released by NYSERDA in early 2024.	
BOEM-2024-0001-0317-0006	On-going Coordination: The Agencies note that notwithstanding BOEM's obligation to analyze environmental impacts for proposed and future projects within the NY Bight including State waters and relevant upland transmission components the State has a parallel process pursuant to Article VII of New York State Public Service Law 120 et. seq. that analyzes the need for and environmental impacts of transmission components within the State's jurisdictional boundary. By participating in BOEM's NEPA review and as parties to relevant Article VII proceedings NYSDOS NYSDEC and NYSDPS are committed to facilitating continued coordination between the State and federal review processes. The Agencies appreciate the opportunity to provide this input and look forward to continued collaboration as BOEM undertakes an important next step in concluding this federal environmental review.	Thank you. Comment noted.
BOEM-2024-0001-0317-0007	b. The Agencies recommend careful review of the impact levels estimated under Alternatives B and C. The Agencies note that between the stated impacts summary (pp. 2-23 to 2-38) and the text there are no differences in stated impacts for many resource areas even though several AMMM measures are identified that could reduce impacts to those resources if adopted now. The Agencies support establishing AMMMs in the PEIS to address anticipated impacts and are available to assist BOEM in clarifying impact levels between alternatives.	BOEM has clarified that Alternative B serves to compare how impacts would change with the AMMM measures identified in Alternative C. Alternative C now distinguishes between AMMM measures that have been previously applied and those that have not been previously applied. RPs are not analyzed within the alternatives analysis. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information The edits to Alternative C were made to help better distinguish the potential benefits of previously applied and not previously applied AMMM measures.

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BOEM-2024-0001-0317-0008	BOEM "anticipates that the cumulative impacts on benthic resources in the geographic analysis area would likely be negligible to major with moderate beneficial impacts. The incremental impacts for six NY Bight projects with AMMM measures incorporated would be reduced at a functional level although impact determinations would not change. In the context of other reasonably foreseeable environmental trends (Appendix D) the incremental impacts contributed by Alternative C to the cumulative impacts on benthic resources would be noticeable." [Footnote 8: See Draft PEIS pg. 3.5.2-38] This does not identify or illustrate these trends nor relay any direct correlation to offshore wind environmental impacts.	Thank you for your comment. For details regarding impacts on benthic resources from offshore wind projects, see PEIS Section 3.5.2.5 to see how the proposed mitigation measures (AMMM measures) would alter the impacts, if implemented.
BOEM-2024-0001-0317-0009	Level of Impacts: a. The Agencies urge BOEM to refine its impact level definitions to more accurately evaluate the Proposed Action and Alternatives. The cumulative impacts are often too broadly identified to provide a clear picture of how a full build-out would affect the resource area. For example: - BOEM anticipates that "the cumulative impacts on coastal habitat and fauna in the geographic analysis area even with application of AMMM measures under Alternative C would likely be negligible to moderate under six NY Bight projects. In context of reasonably foreseeable environmental trends the incremental impacts contributed by six NY Bight projects to the cumulative impacts on coastal habitat and fauna are unlikely to be detectable." [Footnote 5: See Draft PEIS pg. 3.5.4-20] This presents a wide discrepancy in impact declaration and characterization and does not focus enough on the expected impacts of the Alternatives.	The PEIS uses a four-level classification scheme to characterize the potential beneficial and adverse impacts of the Proposed Action and alternatives. Impact levels described in BOEM's <i>Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf</i> (MMS 2007) were used as the initial basis for establishing adverse impacts specific to each resource. These resource-specific adverse impact level definitions were then further refined based on prior NEPA analyses, scientific literature, and best professional judgment. Impact level ranges are broad due to the large RPDE analyzed. During the project-specific, COP-level NEPA analyses, impact level definitions can be refined to address project-specific impacts.
BOEM-2024-0001-0317-0010	The Agencies recommend that BOEM reconsider the impact level determined for Electric and Magnetic Field (EMF) impacts on benthic resources. As recognized in the Draft PEIS there are significant knowledge gaps regarding this topic and the effects of EMF on most invertebrates are understudied. Of the species-specific in-situ studies conducted to date there is evidence that anthropogenic EMFs can result in an "ecologically significant behavioral response" in little skate and American lobster (Hutchinson et al. 2020) [Footnote 6: Hutchison Z.L. Gill A.B. Sigray P. et al. Anthropogenic electromagnetic	The impact determination is consistent with other EISs. More details and analyses will be included in the project-specific COP NEPA documents.

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	<p>fields (EMF) influence the behavior of bottom-dwelling marine species. Sci Rep 10 4219 (2020). <a href="https://doi.org/10.1038/s41598-020-60793-x">https://doi.org/10.1038/s41598-020-60793-x</a>. Furthermore, the Draft PEIS references Gill and Desender (2020) [Footnote 7: Gill Andrew B. &amp; Desender Marieke. 2020 State of the Science Report Chapter 5: Risk to Animals from Electromagnetic Fields Emitted by Electric Cables and Marine Renewable Energy Devices. United States. <a href="https://doi.org/10.2172/1633088">https://doi.org/10.2172/1633088</a>] to support the statement that "no differences have been observed between benthic communities in energized cables compared to controls." However, in this same paper Gill and Desender (2020) conclude that "the lack of specific information has led to the general conclusion that EMFs associated with subsea cables are not harmful and do not pose a risk to biota... However, the lack of evidence does not necessarily equate to a lack of impact." Lack of knowledge about EMF impacts does not mean there will be negligible impacts. Therefore, the Agencies recommend a more conservative impact level determination of "minor" at this time for EMF impacts on benthic resources and more in-situ study on this topic to improve clarity.</p>	
BOEM-2024-0001-0317-0011	<p>Transmission review efficiencies: The Agencies encourage BOEM to identify review efficiencies between the NY Bight PEIS and NYC PPTN project and where possible without delaying either take steps necessary to begin analyzing the environmental effects of the NYC PPTN in the PEIS. The PEIS already analyzes prospective transmission infrastructure associated with projects in the NY Bight leases and could also include regional transmission solutions contemplated by neighboring states. Because portions of the NYC PPTN project may occupy federal waters it is expected to have similar effects and a study area that overlaps with that of the PEIS. This could allow early analysis of environmental effects many of which are already described in the PEIS study area off of New York and in NYC waters as well as potential tiering for a future COP or General Activities Plan associated with the NYC PPTN.</p>	<p>BOEM notes in Section 2.1.2.1.1 of the Final PEIS that in New York and New Jersey, efforts are underway to develop transmission infrastructure that would allow multiple offshore wind projects to interconnect at an offshore (New York City PPTN) and nearshore (NJBPU PBI) POI. Appendix B, <i>Supplemental Information and Additional Figures and Tables</i>, provides additional detail regarding the transmission infrastructure development efforts in New York and New Jersey.</p>
BOEM-2024-0001-0317-0012	<p>The Agencies offer the following detailed comments on the Draft PEIS and request that BOEM evaluate and address the following: 1. Preferred Alternative: The Agencies generally support adopting</p>	<p>BOEM acknowledges New York State Agencies' support of Alternative C.</p>

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	AMMM measures (Alternative C) as a preferred alternative in the PEIS vs. deferring their adoption to the project-specific review (Alternative B).	
BOEM-2024-0001-0317-0013	BOEM's No Action (Alternative A) is not an acceptable path forward based on the analysis of impacts in the Draft PEIS.	BOEM acknowledges New York State Agencies' lack of support of Alternative A.
BOEM-2024-0001-0317-0014	Through Alternative C BOEM has crafted a discrete list of technically feasible AMMM measures tailored to the NY Bight region that provide clear expectations for forthcoming project designs. Clearly prioritizing the PEIS AMMM measures through immediate adoption provides predictability helps address disproportionate effects to frontline communities and buttresses Federal and State investments in climate adaptation and coastal resilience strategies. However the Agencies caution that the effectiveness of the measures finally adopted should be well-supported and maximize federal funding opportunities in part because the costs of offshore wind development are largely borne by the State's ratepayers.	BOEM acknowledges New York State Agencies' support of Alternative C. BOEM has considered all comments received on AMMM measures and made adjustments to the AMMM measures based on comments as presented in Final PEIS Appendix G. Refer to response to comment BOEM-2024-0001-0371-0004 for updates to alternatives in the Final PEIS. The Proposed Action for the Final PEIS is the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. No measures will be implemented immediately. These measures may be required as conditions of approval for activities proposed by lessees in COPs submitted for the six NY Bight lease areas. BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations.
BOEM-2024-0001-0317-0015	For example the Agencies believe that incorporating the use of shared transmission corridors in the NY Bight whenever such infrastructure is reasonably available to the proposed offshore platform (MUL-18) is justifiable as a cost-effective and protective approach to development. Shared corridors offer benefits in terms of both cost and reduced impacts to coastal resources ocean users harbor operations and host communities. New York has moved forward to develop offshore transmission infrastructure capable of collecting energy generated at multiple offshore platforms and delivering it to onshore interconnection points. The New York State Public Service Commission (the Commission) by Order issued June 22 2023 initiated	BOEM notes in Section 2.1.2.1.1 of the Final PEIS that in New York and New Jersey, efforts are underway to develop transmission infrastructure that would allow multiple offshore wind projects to interconnect at an offshore (New York City PPTN) and nearshore (NJBPU PBI) POI. Appendix B, <i>Supplemental Information and Additional Figures and Tables</i> , provides additional detail regarding the transmission infrastructure development efforts in New York and New Jersey.

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	<p>a competitive process for the submission of proposals to build at least 4700 MW and up to 8000 MW of transmission capacity to serve the State's 9000 MW target (New York City Public Policy Transmission Need; PPTN). [Footnote 3: Case 20-E-0197] This action effectively ensures coordinated transmission and generation project development within a single development envelope. The solicitation will result in selection of the most efficient proposal in late 2025. In support of the New York City PPTN NYSERDA included contract terms in the 2022 offshore wind solicitation (ORECRFP22-1) requiring awardees to make commercially reasonable decisions to change their point of interconnection to those developed through the New York City PPTN upon NYSERDA's request. Subsequently NYSERDA built on this requirement in the 2023 solicitation by capping offshore wind solicitation awards to no more than 1400 MW into New York Independent System Operator's Zone J. Further adjustments in the planned 2025 OREC solicitation will require awardees to connect to the coordinated infrastructure developed pursuant to the New York City PPTN process. Thus the State will effectively mandate compliance with the mitigation measure identified in the Draft PEIS as MUL-18. Should New York expand its target for offshore wind beyond 9000 MW the Agencies expect the Commission and NYSERDA to take a similar approach because of its cost efficiencies and lower overall environmental and community impacts. BOEM's recognition in the PEIS of the value of using shared infrastructure in the NY Bight will align State and federal policy into the future. [Footnote 4: The Agencies further suggest that other Northeast States may make similar policy decisions given the advantages of coordinated transmission planning.]</p>	
BOEM-2024-0001-0317-0016	<p>When considering which AMMM measures to adopt as part of the Final PEIS the Agencies urge BOEM to carefully evaluate each measure's feasibility and proven effectiveness. Where AMMM measures do not meet this benchmark BOEM should consider removing them from the Final PEIS and as appropriate revisit them in the project-specific COP review. The AMMM measures should address the range of anticipated environmental impacts and be written in a manner to allow for flexibility over time in consideration</p>	<p>Thank you for your comment. BOEM has updated the alternatives analysis and reviewed all AMMM measures. Not all AMMM measures are being recommended as COP approval T&amp;Cs in the Final PEIS; many are now identified as RPs. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information.</p>

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	of project feasibility (including economic feasibility) and inclusive of a range of approaches based on feasibility and best available science. Offshore wind energy development is a substantial opportunity to reduce greenhouse gas emissions stemming from the combustion of fossil fuels and the environmental degradation caused by climate change.	
BOEM-2024-0001-0317-0017	Finally the Agencies commend BOEM for providing meaningful community engagement and articulating targeted mitigation measures that address impacts to historically marginalized and disadvantaged communities. By establishing the NY/NJ Environmental Justice Forum at the start of the PEIS BOEM has provided nearly two years of shared learning opportunities across governments tribal nations and diverse community-based organizations in the region. This forum is a means to establish ongoing and long-term engagement with Environmental Justice communities and it provides community representatives with an avenue to offer feedback to BOEM as appropriate. These types of collaborations accelerate the Biden administration's Justice40 initiative and compliment State-led efforts like the NYS Climate Act investments in NYS Disadvantaged Communities and the Offshore Wind Environmental Justice Technical Working Group. Additionally the Draft PEIS includes AMMM measures targeting community engagement as well as an Environmental Justice Compensatory Mitigation Fund through which lessees would make financial contributions to offset disproportionate and adverse impacts to environmental justice communities directly tied to offshore wind activities. BOEM's commitment to supplementing its standard outreach to integrate co-design concepts and seeking regional solutions to adverse cumulative impacts in these ways provides a useful template for future offshore wind environmental reviews across the nation.	Thank you for your comment.
BOEM-2024-0001-0317-0018	We commend BOEM's inclusion of a Representative Project Design Envelope that reflects refinements from recent projects (e.g. uniform turbine layout high- voltage direct current transmission typical six-foot cable burial depth). The Draft PEIS also includes forward-looking AMMM measures such as utilizing a shared transmission corridor	Thank you for your comment.

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	among others. [Footnote 2: The multi-resource Shared Transmission Corridor AMMM or "MUL-18" states: "Lessees should coordinate transmission infrastructure among projects. Where practicable transmission infrastructure should use shared intra- and interregional connections have requirements for meshed infrastructure apply parallel routing with existing and proposed linear infrastructure (including export cables and other existing infrastructure such as power and telecommunication cables pipelines) and limit the combined footprint to minimize impacts and maximize potential capacity. Where possible incorporate cable siting principles and routing measures for export cables and associated substations developed from the Atlantic Offshore Wind Transmission Study and the BOEM/DOE transmission planning effort the NYSEDA's Offshore Wind Cable Corridor Constraints Assessment associated NYS Public Service Commission orders and the results of other state and ISO/RTO transmission planning processes to maximize the utility of Points of Interconnection (POIs). Lessees considering landfall in New Jersey should also comply with the results of the state agreement approach (SAA) and any other future procurements resulting from similar initiatives.]	
BOEM-2024-0001-0317-0019	The Agencies generally concur in the appropriateness of the proposed AMMM measures and encourage BOEM to adopt them subject to the considerations discussed below as baseline requirements for offshore wind development in the NY Bight. Taking this step to adopt well-supported AMMM measures will help achieve efficiencies lower costs and streamline aspects of project permitting and the related environmental reviews while protecting sensitive resources and ocean uses vitally important to the Blue Economy.	Thank you for your comment.

P.4.2.4 Massachusetts Office of Coastal Zone Management

**Table P.4-10. Responses to Comments from the Massachusetts Office of Coastal Zone Management (BOEM-2024-0001-0319)**

Comment No.	Comment	Response
BOEM-2024-0001-0319-0001	Implementation of this PEIS There is increasing recognition that the scale of offshore wind development on the U.S. East Coast necessitates a regional look at cumulative impacts. In light of this we appreciate that BOEM is employing an analysis in this PEIS that facilitates comparison between one and many (6) projects. We encourage BOEM to continue to consider regional and cumulative impacts during subsequent offshore wind development including in the Gulf of Maine. We also encourage BOEM to employ this regional and cumulative view of impacts as early in the siting and leasing process as possible.	The cumulative impact analysis in the PEIS considers reasonably foreseeable planned activities including federal and non-federal activities not yet undertaken, but sufficiently likely to occur, that a responsible official of ordinary prudence would take such activities into account in reaching a decision (43 CFR 46.30). The federal and non-federal activities, including offshore wind activities, that BOEM must take into account in the analysis of cumulative impacts include, but are not limited to, activities for which there are existing decisions, funding, or proposals identified by BOEM. Reasonably foreseeable planned actions do not include those actions that are highly speculative or indefinite. Cumulative impacts in the Gulf of Maine are analyzed for those resources that have geographic analysis areas that include the Gulf of Maine (e.g., birds, finfish, marine mammals, commercial fisheries).
BOEM-2024-0001-0319-0002	The "tiered" use of this PEIS described in the document will hopefully streamline the project-specific environmental reviews that follow this analysis. The overview of the affected environment and resources in the geographical analysis area the qualitative discussion of impact producing factors (IPF)s and the baseline avoidance minimization mitigation and monitoring (AMMM) measures in the PEIS will allow project specific NEPA reviews to focus on IPFs quantitatively and to address any concerns particular to one project. We expect project specific NEPA analyses will present data and include results of sampling and surveys in lease areas for most resources offshore.	BOEM agrees with the comment.
BOEM-2024-0001-0319-0003	The subsequent project specific NEPA reviews for the six New York Bight leases are expected to incorporate the AMMM measures in this PEIS by reference. The draft PEIS states that under certain circumstances BOEM may exclude some of these measures or add ones not mentioned here. For this PEIS to expedite the NEPA process for any individual project steps should be taken in those subsequent NEPA reviews to make clear to reviewing agencies and the public	For each resource area, Appendix C, <i>Tiering Guidance</i> , summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that will be included in the COP-specific NEPA analysis for each lease area. Each COP NEPA analysis will consider the best available data and information that reflect the state of the science at the time of publication. Project-specific agency consultation will be conducted

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	which measures are excluded from and which are additional to the baseline set by this PEIS. If it is clear to agencies what the baseline is and what is different from the baseline reviews can be as efficient focused and helpful for BOEM and project proponents as possible.	for each EIS to inform the development of applicable AMMM measures for each lease area. The COP-specific NEPA ROD for each lease area will describe the specific terms and conditions for which compliance is required (40 CFR 1505.3), including any applicable AMMM measures analyzed in the PEIS.
BOEM-2024-0001-0319-0004	Compensatory Mitigation In this PEIS compensatory mitigation plans are described for birds fisheries and Environmental Justice communities. Hopefully these measures can be implemented effectively and their use can be expanded to other marine and coastal resources and uses. Specifically regarding compensatory mitigation for Environmental Justice communities CZM encourages BOEM to consult Massachusetts' Environmental Justice Strategy [Embedded Hyperlink: <a href="https://www.mass.gov/doc/february-2024-environmental-justice-strategy-english/download">https://www.mass.gov/doc/february-2024-environmental-justice-strategy-english/download</a> ] for additional guidance and resources. We also look forward to seeing the forthcoming guidance from BOEM on compensatory mitigation approaches including third-party managed regional funds. Compensatory mitigation for wildlife and habitat including protected species commercial fisheries and other resources and uses will benefit from a coordinated regional approach.	BOEM appreciates the feedback on the potential compensatory mitigation measure for environmental justice. BOEM has determined that EJ-4 would be infeasible to implement and enforce within the agency's statutory authority as a condition of approval. Therefore, EJ-4 is no longer an AMMM measure being considered in the PEIS.
BOEM-2024-0001-0319-0005	The relocation of boulders on the seafloor and the installation of scour protection cable armoring and other structures on the seafloor can pose hazards for mobile gear fishermen interfere with other marine uses and may alter seafloor habitat. BOEM should establish clear and consistent guidelines for boulder relocation and bottom disturbance best practices based on advice from relevant federal and state agencies. BOEM should also establish protocols and/or guidance for reporting any relocated boulders and disturbed seabed features to marine users including fishermen research entities and others. While some boulder considerations such as appropriate destination locations may be best handled on a project-by-project basis a regional and comprehensive approach that simplifies and standardizes the reporting of moved boulders and other seafloor hazards across projects and developers is needed. BOEM should specify in this PEIS a	Appendix G includes AMMM measures for boulder identification relocation. The data in Tables 3.6.1-2 and 3.6.1-3 have been updated for New Hampshire and Connecticut. Unfortunately, the values from previous years do change over time, so the date of these newly provided values is provided as a footnote to the table.

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	baseline expectation for reporting boulder relocations to mariners for boulders greater than 0.5 m. As noted above CZM has participated as a cooperating agency in the review of a preliminary version of this draft PEIS. We appreciate the correction of the data transposition and citation errors in Tables 2 and 3 of section 3.6.1.1.2 that were identified during that review. However in the revised table Connecticut is reported to have "1569" in revenue in 2021 (presumably a typo) and New Hampshire's 2021 revenue of 486990 (in \$1000s) seems unlikely given that years 2012-2022 were less than a tenth of this amount and there was no commensurate jump in landings for that year. We reiterate our concern that these data should be checked carefully given their importance to estimating the impact of wind development and identifying sufficient mitigation measures to the fishing industry. Although citations have been corrected per our prior comment the URLs currently result in a 404 error which makes checking the data entries more difficult.	

### P.4.3 Cooperating Local Agencies

#### P.4.3.1 New Bedford Port Authority

**Table P.4-11. Responses to Comments from the New Bedford Port Authority (BOEM-2024-0001-0444)**

Comment No.	Comment	Response
BOEM-2024-0001-0444-0001	As a cooperating agency that participated in the review of the New York Bight Preliminary Draft Programmatic Environmental Impact Statement (PEIS) we appreciate the opportunity BOEM afforded us to comment on the preliminary document. We understand that BOEM attempted to address some of our comments in the final draft document but we are concerned that the document remains problematic by not sufficiently addressing the impact of these areas on commercial fishing. Any EIS document must have at its core an understanding that offshore wind development not only negatively affects the scallop resource it also affects the scallop fishing industry activities. As a mobile gear fishery scallop vessels are among the	The impact on the scallop fishery is addressed in the document. Section 3.6.1.3.2 acknowledges that mobile fishing gear could be limited temporarily or permanently within certain locations within the lease area, which could lead to losses in revenue for the scallop industry. COMFIS-3 attempts to mitigate the impacts by increasing data and knowledge about the scallop fishery, which may result in the future development of other mitigation measures that could benefit the scallop fishery or other commercial or for-hire recreational fisheries.

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	largest vessels in the east coast fishing fleet. Individually they have the least opportunity to be able to maneuver and fish within a wind farm. It is concerning that the items in the PEIS regarding fisheries mitigation take a "one size fits all" approach with ingrained assumptions regarding the ability of commercial fishermen to "adapt" and fish within the WEA.	
BOEM-2024-0001-0444-0002	Although we have never advocated for the "No Action" alternative we are troubled that the draft PEIS does not consider a wider range of alternatives to help avoid minimize and mitigate the effects of OSW on our fishing industry and habitat especially relative to the scallop industry.	The purpose of the PEIS is to identify AMMM measures that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. At this programmatic stage, BOEM is not considering individual alternatives or AMMM measures that are project specific. Project-specific alternatives will be considered by BOEM and cooperating agencies at the COP-specific NEPA stage.
BOEM-2024-0001-0444-0003	Although many commercial fishermen and fisheries will be affected the scallop industry will be the fishery most adversely affected by wind development in the New York Bight. While we certainly support items in the PEIS such as the development of a scallop monitoring plan [bold and italicized: (COMFIS-3 Scallop Monitoring Plan)] detailed fisheries mitigation [bold and italicized: (COMFIS-4)] and fisheries compensatory mitigation [bold and italicized: (COMFIS-6)] these items together while important maybe too little or too late to protect the industry after the fact. Monitoring may lead to compensation to the scallop fishermen individually but financial compensation is supposed to take place as the last mitigation phase not as a substitute to other mitigation measures. First and foremost fishermen want to continue to be able to fish safely and productively in the New York Bight where the scallop resources are centered. We remain concerned that financial compensation is seen by BOEM as a substitute or reasonable alternative to other mitigation such as avoidance and minimization.	<p>Thank you for your comment. The NY Bight lease areas were designed to avoid certain commercial fishing activities based on stakeholder input and task force meetings held from 2017 to 2021. The Final Lease Sale Decision Memorandum explains that areas were removed from the leases to avoid the mid-shelf scarp (<a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/ATLW-8-NY-Bight-Final-Lease-Sale-Decision-Memorandum.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/ATLW-8-NY-Bight-Final-Lease-Sale-Decision-Memorandum.pdf</a>). Per the memo, "Specifically, in response to the commercial fishing industry BOEM excluded area adjacent to the scallop access area, included a buffer between select leases and removed areas of high value and benthic diversity." Additional information is found in Section 5.1.4.1 of the memo.</p> <p>BOEM agrees that compensatory mitigation is the last step in the mitigation hierarchy. A tenet of EFH is avoidance first. BOEM will evaluate project-specific impacts based on the project-specific COP before issuing a ROD. BOEM provides this guidance to first look at avoidance and minimization. Guidance on the financial compensation can be found here: <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf</a>.</p>

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		Based on comments received on the Draft PEIS, COMFIS-3 has been broadened to include a Fisheries and Benthic Monitoring Plan, which includes scallops. Project-specific details will be addressed during the COP-level NEPA analysis and NMFS consultation for each project.
BOEM-2024-0001-0444-0004	There remains time to reassess the wind energy development in the Bight. BOEM can still shift offshore wind development away from Mid-Atlantic scallop beds in the Bight and develop reasonable alternatives regarding siting turbine layouts cable burial depths and effects on the scallop species in general.	The PEIS does not approve any projects. Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&M, and conceptual decommissioning of the project based on the project design for turbine layout and cable routes proposed by the developer. Refer to Section 3.6.1, <i>Commercial Fisheries and For-Hire Recreational Fishing</i> , for discussion and analysis of potential impacts on commercial fishing, including scallop beds. Project-specific NEPA analysis of effects on commercial fishing within a specific lease area will be conducted once a COP is submitted for BOEM review.
BOEM-2024-0001-0444-0005	3.6.3-1 Demographics Employment and Economics The geographic analysis area is flawed in that it fails to account for the economic impact of the project on areas where the primary commercial impact of the NY Bight will be felt. Namely the commercial fishing port(s) where the fish caught in the NY Bight are landed. Over 60% of the economic impact felt by fisheries affected by the NY Bight will be felt in ports and communities in Massachusetts particularly the Port of New Bedford.	Thank you for the comment. Commercial fisheries and for-hire fishing industries are evaluated in Section 3.6.1. The impact assessments include fisheries and ports as far north as Maine. COP-specific NEPA analyses will include all affected communities in assessments when project-specific information is available.
BOEM-2024-0001-0444-0006	3.6.7-21 Scientific Research and Surveys Despite this language "Overall ongoing and reasonably foreseeable planned offshore wind energy projects in the geographic analysis area would likely have major effects on NOAA's scientific research and protected species surveys potentially leading to impacts on fishery participants and communities; as well as potential major impacts on monitoring and assessment activities associated with recovery and conservation programs for protected species" there are no AMMM measures that would specifically address the impact to NOAA stock surveys. In fact all that is provided is that "BOEM is committed to working with NOAA	BOEM has committed to working with NOAA to implement the Federal Survey Mitigation Strategy program. The PEIS addresses the adverse impacts of WTG structures on surveys in Section 3.6.7.4.1, <i>Scientific Research and Surveys</i> . Please refer to OU-7 in Table 3.6.7-6 for survey mitigation measures.

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	toward a long-term regional solution to account for changes in survey methodologies as a result of offshore wind farms." This begs the question of how a project can be approved when an issue that impacts two major areas of the NEPA review remains in the "looking for a solution" area of mitigation. While it is good that there is an effort to develop new mitigation measures over the life of the project and an effort to assess cumulative impact there are over 30 leases signed and multiple projects underway with an approved EIS and COP. When it comes to the impacts on the ecosystem and commercial fishing absent a cumulative impact assessment very soon any damage done may be irreversible.	
BOEM-2024-0001-0444-0007	Appendix E: Analysis of Incomplete and Unavailable Information Other sections of the document including [bold and italicized: (E.1.7 Essential Fish Habitat)] and [bold and italicized: (E.1.11 Commercial Fisheries and For-Hire Recreational Fishing)] note the uncertain incomplete or unavailable information related to this wind energy area. BOEM NOAA and other federal agencies must take the opportunity now to fully study monitor and analyze current projects that are already erected and delivering power to the grid most notably (Vineyard Wind I and South Fork Wind) in the Massachusetts and Rhode Island WEA to guide the process of the New York Bight moving forward. Furthermore guidance should be consistent across projects all along the East Coast in terms of grid layout mitigation and data collection. In doing so BOEM in conjunction with their federal partners should have a central database and depository for data collection studies and monitoring activities that are planned ongoing or already have been completed.	Thank you for your comment. The creation of a database is not within the scope of this PEIS. However, the Environmental Studies Program Information System Quarterly Reports include summaries of the BOEM environmental studies that are completed each quarter. They can be found here: <a href="https://www.boem.gov/environment/environmental-studies/environmental-studies-information">https://www.boem.gov/environment/environmental-studies/environmental-studies-information</a> . These studies inform BOEM's policy decisions on the development of energy and mineral resources on the OCS. One such study measured EMFs from alternating and direct currents from a subsea cable in Long Island Sound on American eel movements and migrations (Hutchison et al. 2021).
BOEM-2024-0001-0444-0008	Appendix G: Mitigation and Monitoring As the most profitable fishing port in the nation and the hub for countless onshore businesses and families who rely on the industry we believe that it is vital that the actual impact of the development of offshore wind on the economy and people of Massachusetts be established using the best available data methods and information to truly measure the impact of this project on our fishing industry and those that support it. With that said we commend BOEM for laying out broad mitigation monitoring	Thank you for your comment.

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	and compensatory plans for the expected wind energy development in the New York Bight. These plans are more thorough and specific than past Draft Environmental Impact Statements and are a step in the right direction in fully addressing the potential effects on our commercial fishing industry. Yet steps can be taken (see below) to address the concerns we have relative to the scallop fishery and the economic benefits this fishery has on the Port of New Bedford and the region as a whole.	
BOEM-2024-0001-0444-0009	While we realize that specific locations of potential projects are not known currently we support what is laid out in [bold and italicized: MUL-25] Consistent Turbine Layout Markings and Lighting. [Bold and italicized: MUL-25] Consistent Turbine Layout Markings and Lighting "Lessees should employ consistent turbine grid layouts spacing markings and lighting among lease areas to minimize navigational hazards and facilitate other ocean uses such as fishing and recreational activities. Turbines should have one of the two lines of orientation per lease stipulation spaced at least 1 nautical mile (1.9 kilometers) apart to support navigation safety and Search and Rescue (SAR). This recommended spacing is based on the USCG's 2020 Massachusetts and Rhode Island Port Access Route Study). The spacing would also preserve structure-free areas to facilitate seabird passage and fishing operations. Also per lease stipulations adjacent lease areas that do not adopt the same layout must have an additional setback from shared borders. "We continue to stress that all projects must be consistent in as many areas as possible including the important issue of proper spacing.	Please refer to response to comment BOEM-2024-0001-0370-0001. Project-specific layouts will be analyzed during subsequent NEPA analysis based on information provided in the COP.
BOEM-2024-0001-0444-0010	G-37 It is not clear if BOEM is proposing one fund for the NY Bight or multiple funds. We recommend one fund as it makes it simpler and more straightforward for claimants and makes sure that all claims are handled in the same way. Fisheries mitigation funds that were previously set up contain a one-time payment limitation and no payments should a permit transfer. Such limitations ignore the impact on commercial fishing as a whole and limit mitigation to an individual fisherman. As the life of these projects is 25-30 years the need for mitigation clearly extends past the one-time payment. Any financial	While a payment may be a one-time event or multiple payments over a series of years, the BOEM-recommended duration of mitigation includes the construction period, a cascading percentage of revenue exposure funding for the first 5 years in the operational period, and the decommissioning period. Current drafts of T&Cs state that BSEE will evaluate the need for additional compensatory mitigation consistent with the Annual Certification under 30 CFR 285.633(a). BOEM does not anticipate long-term

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	mitigation plan must include a requirement that any funds not paid out directly to fishermen or shoreside services must be utilized for other mitigation opportunities such as seafood marketing research into fisheries methods gear research etc. Without this the compensation plans combined with the loss of the ability to fish in the areas have the effect of reducing the value of a permit and the attractiveness of commercial fishing as an occupation to any new generation of fishermen. Finally any financial mitigation plan must include the ability of BSEE to require additional funds to be deposited should it become apparent that such funds are necessary to mitigate the impact from the areas.	closures in any given lease area aside from those required for safety during active construction or maintenance activities. COMFIS-7, a new RP developed in response to comments received on the Draft PEIS, encourages lessees to consider participating in a Fisheries Compensation Fund. Furthermore, BOEM does not preclude the lessees of the NY Bight from using a regional fund administrator, provided the requirements set forth from BOEM are met. BOEM recognizes the advantages of a single fund, yet also recognizes that a lessee may prefer to better set the terms of a fund for their individual project. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations.
BOEM-2024-0001-0444-0011	G-42 At the outset of the comments on the potential NY Bight lease areas there were comments regarding transit corridors. Are such corridors still contemplated? COMFIS-3 is commendable but not sufficient to address the potential issues involved. As indicated in the data put forward in the PEIS scallops are by far the most lucrative catch in the area and the catch around the NY Bight represents a significant portion of the scallop fishery as a whole. The PEIS acknowledges that the scour protection will introduce habitat in prime sandy bottom scallop habitat that did not previously exist. It further acknowledges that such rocky habitats could host scallop predators. The problem is that there does not appear to be any plan as to how to respond to issues that may arise as a result of the scallop monitoring. The problems identified by the scallop fishery involve concerns about turbidity scour pads currents OSS cooling recruitment etc. Absent addressing the concerns in the design and construction of the WEA it is difficult to see how BOEM intends to respond to negative impacts on scallop populations that arise in the monitoring plan.	Thank you for your comment. Based on comments received on the Draft PEIS, COMFIS-3 has been broadened to include a Fisheries and Benthic Monitoring Plan, which still includes scallops. Adaptive management as a result of COMFIS-3 monitoring will be considered on a case-by-case basis. As indicated in COMFIS-3, if the monitoring results deviate substantially from the anticipated impacts, the lessee is encouraged to propose new mitigation measures or monitoring methods, or both, to BOEM and BSEE for review and concurrence. BOEM retains the authority to review a COP and require a revision if circumstances change.
BOEM-2024-0001-0444-0012-a	Furthermore we support [bold and italicized: (MUL-26)] and [bold and italicized: (OU-7)] Monitoring Plan and Federal Survey Mitigation Program and urge BOEM to be as thorough and consistent when it	Thank you for your comment. Monitoring plans are developed as a result of project-specific ESA and EFH consultations.

Comment No.	Comment	Response
	comes time for the development of individual project DEIS construction and operations plans. [Bold and italicized: MUL-26] is a great addition to the procedures required under an EIS and COP. The language should include a requirement that Lessees put forward a plan to address any issues in connection with the required monitoring. Although it may be implied there should be a requirement that the results of such monitoring efforts be public and provided to BSEE and a note that BSEE retains the right to amend any COP or EIS requirements in response to the monitoring. We are also encouraged that compensatory mitigation includes compensation to shoreside businesses for losses associated with project development. These compensation and monitoring programs although not specifically noted shall be required for the entire life of the project and have begun to be addressed in recent BOEM's DEIS's.	
BOEM-2024-0001-0444-0012-b	[Bold and italicized: BEN-2] should contain a requirement that to the extent possible scour pads will be removed from habitat that was sandy bottom before the installation of the WEA. The restoration of the seafloor must be to the condition prior to installation or the damage done to the preexisting ecosystem will be permanent. This would apply to COMFIS-2 as well.	BEN-2 has been renamed MUL-41 because it is a technical requirement that does not mitigate impacts on benthic resources. Instead, it is to monitor scour protection for the integrity of the infrastructure. Scour protection typically will not be removed prior to installation of the offshore wind project and scour protection typically will stay in place for the life of the project. Lessees can request that facilities remain in place in the decommissioning application submitted to BSEE (30 CFR 285.900-285.913), but BOEM approves or does not approve the request (30 CFR 585.434).
BOEM-2024-0001-0444-0012-c	[Bold and italicized: COMFIS-4] contains several "recommendations" Is there a reason these measures are not required? A static cable depth of 2 feet in scallop areas is insufficient. From our conversations with scallop fishermen they are unlikely to take their scallop dredge into an area where the cable depth is only 2 feet as they do not feel comfortable with so little separation between their dredge and the cable especially where the seafloor conditions are constantly changing. We have also heard that the insurance companies insuring the vessels are equally unsure of scallop fishing within the WEA. At a minimum BOEM should require that inter-array cabling is laid out to minimize crossings in the line of orientation for the towers. As the	Thank you for your comment. Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs.

Comment No.	Comment	Response
	WEA is laid out with a predominant trawl direction in mind it only makes sense to require that inter-array cabling minimizes the chances of conflict between a trawl and the cables. There also needs to be a discussion as to the need for either closed-loop OSS cooling or a reduction in the use or volume of cooling water during times identified by NMFS as critical to scallop larval development.	<p>COMFIS-4 is an RP and burial is recommended at 3 feet below stable seabed as the minimum. Actual depths will be determined at the project-specific phase.</p> <p>Export cable burial depth of 3 to 19.6 feet (0.9 to 6 meters) is the anticipated potential range of burial depth; 6 feet (1.8 meters) is typical target burial depth. Depths may vary based on site-specific factors (e.g., soil type, cable/pipeline crossings, crossing of navigation channels or other federal civil work projects, other federal or state requirements).</p> <p>COMFIS-4, Fisheries mitigation, came directly from the draft Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR Part 585 (<a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf</a>). BOEM's ultimate recommendations will follow the Final Fisheries Mitigation Guidance once completed.</p> <p>Project-specific details will be analyzed during the COP NEPA stage.</p>
BOEM-2024-0001-0444-0013	We urge BOEM to reassess mitigation measures alternatives avoidance and minimization methods economic and habitat impacts and other environmental and operations concerns especially relative to the valuable scallop fishery and its operations.	Additional avoidance, minimization, and mitigation will be considered and applied during project-specific EFH consultations. Additionally, economic impacts on scallop fisheries can be addressed through compensatory mitigation (COMFIS-6).

## P.5 Responses to Other Agency, Stakeholder, and Public Comments on the Draft PEIS

### P.5.1 Purpose and Need

**Table P.5-1. Responses to Comments on the Purpose and Need**

Comment No.	Comment	Response
BOEM-2024-0001-0089-0001	The NY EIS should be discarded as submitted. There are numerous instances where knowledge gaps exist that are dismissed as inconsequential to the project. Examples include gaps in knowledge of EMF emissions impacting benthic layers and the authors suggest that ongoing studies taking place at Block Island Wind Farm which has consistently operated at a fraction of its stated capacity or not at all should suffice as evidence that the project should forge ahead. This is IRRESPONSIBLE!	The EMF and cable heat IPF discussion under Section 3.5.2.3, <i>Impacts of Alternative A – No Action on Benthic Resources</i> , does include a discussion of the differences between HVAC and HVDC and the type and intensity of the EMF they produce. Text has been added to this section and Section 3.5.2.5 stating that cable shielding required by BOEM would block electric fields emitted by HVDC and HVAC cables and that a weak induced electric field would be present if HVAC cables are used. Both sections discuss the impacts of any remaining EMF on benthic invertebrates. In addition, refer to response to comment BOEM-2024-0001-0400-0003 regarding data gaps, uncertainties, and incomplete and unavailable information. BOEM addresses this concern for each resource as required under CEQ regulations (40 CFR 1502.21) in PEIS Appendix E: <i>Analysis of Incomplete and Unavailable Information</i> . For NEPA purposes, BOEM believes the NEPA regulatory requirements regarding incomplete and unavailable information have been satisfied in the PEIS.
BOEM-2024-0001-0175-0004	[Bold: BPA:] I encourage you to read [Underline: The Toxic Wings - Damage and casualty of wind turbine blades] First English edition (May 2023): Jan Erik Weinbach Asbjørn Solberg og Brd-Einar Rimereit. THE TURBINE GROUP May 2023. The author states: "The entire western world has enumerated and adopted gigantic development targets with this unproven technology and that without having a scientific basis for the overall scope of consequences for HSE (health safety and environment). It is almost unbelievable and we know of no other industry that have been allowed such "Wild West" conditions ever. The closest we come to historical comparisons is to the tobacco industry which for many decades was allowed to advertise that cigarettes were good for life and health even long after it was widely known that cigarettes have a very negative effect	Each lease area will undergo project-specific environmental analyses through the development and submittal of an SAP and a COP. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include detailed evaluation of impacts and will consider the best available data and information that reflect the state of the science at the time of publication. Calculation of rates is outside the scope of the PEIS and is the responsibility of grid operator and state.

Comment No.	Comment	Response
	<p>on life and health. Smoking cigarettes was an individual choice and the damage caused by these was largely self-inflicted. The toxic emissions from wind turbines are imposed on each and every one of us including the voiceless creatures of nature. The responsibility for this must and will be assigned to those who imposed this on us without a scientific basis about the consequences for life and health". There will be too many negative and irreversible impacts for the limited amount of energy we would get from offshore wind. The benefit will never out measure the costs.</p> <p>Lastly I would like to mention that to date the BPU cannot tell the ratepayers what will be our cost for this venture since offshore wind is built on subsidies which I believe is not economically responsible. I truly hope that you don't realize what will be lost until after it is gone.</p>	
BOEM-2024-0001-0310f	A smaller pilot trial project would be more prudent and give all of us a chance to assess its environmental safety and energy generating efficiency.	BOEM considered but dismissed from further consideration an alternative to build a pilot project (PEIS Chapter 2, Table 2-3). Data from sites that are constructed and operating (e.g., Block Island), as well as the pilot project in Virginia, were incorporated into this PEIS and will be incorporated into the development of project-specific COPs and EISs.
BOEM-2024-0001-0310i	But one of the things I think that is not included in a lot of the BOEM documents is the fact that this industry is not going to produce enough energy for the big cities. The wind turbines does not produce enough energy for the MTA in New York City, for the police, for the Homeland Security, for the hospitals. Wind blows 38 percent of the time. What are you supposed to do for the rest of the time? You have 24/7 backup with the industry that they are saying, you know, you know, reducing. They're actually increasing the oil industry and gas, because we need all this backup because this industry cannot do the job.	Thank you for your comment. BOEM expects that offshore wind development in the NY Bight lease areas would lead to reductions in fossil fuel usage in the U.S. However, the wind turbines would not be a sole source of electricity to the electrical grid; other sources of electric generation—including both renewables and fossil fuels—are connected to the electrical grid and would continue to supply electricity in the event that the wind turbines are shut down for any reason.
BOEM-2024-0001-0310l	The problem with offshore windmills is they're expensive. According to the Energy Information Administration, offshore wind is the most expensive energy resource in our repertoire based on the level cost of energy. The 2002 estimate for offshore wind absent of any government subsidies is \$136 per megawatt of electricity. How are we the people of New York and New Jersey going to afford our electric bills? Thank you.	Thank you for your comment. The price of the power generated by the projects will be determined by offtake agreements, also known as power purchase agreements, negotiated between the offshore wind companies and electric distribution companies, subject to each state's offshore wind procurement laws and regulations.

Comment No.	Comment	Response
BOEM-2024-0001-0310m	<p>There's one other thing. I actually wanted the audience to know, but I want to BOEM to know too. This isn't your fault. You're given the task of working with the prospect of offshore wind. And so ahead of that somebody decided to do offshore wind, and the cost of the project and its benefits have been shrouded in mystery and the mystery is starting to clear and the curtain is starting to get drawn back and people are starting to understand the cost figures per person, per home.</p> <p>When we're told and you allow a certain wind farm or a set of wind farms to be built, we're told how many homes that would serve with electricity.</p> <p>We're not told what it costs per home to provide that. 'Cause that cost is on our backs. It shows up in our taxes and in our electric rates eventually. We have to pay all that back to the wind builders. We have to give them their profit they're guaranteed.</p> <p>So I will leave it at this. You can talk to me in the back if you're interested, but what it's showing is that it costs so much money per home that this would serve that for a tiny fraction, that's the cost to build, maintain the whole lifespan and if we add to that also the losses that we know that the seashores will come to, which includes the fisheries, it includes property value losses, the loss to the shore businesses. When you add all that up divided by the number of homes that that's supposed to provide electricity for, it's such a huge number that you could easily come up with alternatives.</p>	<p>Thank you for your comment. The price of the power generated by the projects will be determined by offtake agreements, also known as power purchase agreements, negotiated between the offshore wind companies and electric distribution companies, subject to each state's offshore wind procurement laws and regulations.</p>
BOEM-2024-0001-0310p	<p>I have been involved with many of the anti-wind and pro whale groups in the area, I have not found one fact that can support that there's anything good about these offshore wind turbines going in. Not one. If anybody knows of one, please educate me because I have read environmental impact studies and one of the main things that I would like to request from BOEM is to complete your mission statement. Your mission is to environmentally and economically manage our ocean, and by putting in these wind turbines and rushing them through without, you know, without the studies on how it's affecting the marine life and the ocean and the economy, is just irresponsible. You're not meeting your mission statement. So, BOEM, I would like you to meet your mission statement and be</p>	<p>BOEM's Environmental Studies Program develops, funds, and manages rigorous scientific research specifically to establish information needed for assessing and managing environmental impacts of energy and mineral development on the human, marine, and coastal environments. For more information on this program, please visit <a href="https://www.boem.gov/environment/how-we-do-research">https://www.boem.gov/environment/how-we-do-research</a>.</p> <p>Further, BOEM's Office of Renewable Energy Programs depends on science to meet its responsibilities under environmental laws, regulations, and standards. As such, BOEM funds and manages scientific research to inform its decision-making processes for</p>

Comment No.	Comment	Response
	environmentally and economically prudent with our ocean. We've only got one. If we ruin it this is going to be the worst environmental disaster in our lifetime, you know, worse than the polar icecaps and the dinosaurs missing and all that stuff. We cannot get clean water back.	renewable energy projects on the OCS. For more information on Office of Renewable Energy Programs, please visit <a href="https://www.boem.gov/environment/environmental-studies/renewable-energy-research">https://www.boem.gov/environment/environmental-studies/renewable-energy-research</a> .
BOEM-2024-0001-0313-0006	1.3 Purpose and Need for the Proposed Action Page 1-5 states that "A broader approach to the NEPA analysis for the minimum of six COPs expected for the NY Bight lease areas is consistent with Executive Order 14008 "Tackling the Climate Crisis at Home and Abroad" issued on January 27 2021. In that order President Biden stated that the policy of his administration is "to organize and deploy the full capacity of its agencies to combat the climate crisis to implement a Government-wide approach that reduces climate pollution in every sector of the economy; increases resilience to the impacts of climate change; protects public health; conserves our lands waters and biodiversity; delivers environmental justice; and spurs well-paying union jobs and economic growth especially through innovation commercialization and deployment of clean energy technologies and infrastructure." To support the goals outlined in Executive Order 14008 the administration has also announced plans to increase renewable energy production with a goal of 30 gigawatts (GW) of offshore wind energy capacity by 2030. Potential development of the leaseholds would assist with meeting several state mandates for renewable energy. New Jersey's goal of 11 GW of offshore wind energy generation by 2040 is outlined in New Jersey Executive Order No. 307 issued on September 21 2022. New York's requirement of 9.0 GW of offshore wind energy generation by 2035 is outlined in the Climate Leadership and Community Protection Act signed into law on July 18 2019. Additionally an estimated 1618 GW of offshore wind energy may be necessary to ensure New York State achieves its Climate Act mandates (New York State Climate Action Council 2022). Based on a conservatively estimated power ratio of 3 megawatts per square kilometer BOEM estimates that full development of leases in this area has the potential to create up to 5.6 to 7 GW of offshore wind energy."	The PEIS only analyzes six lease areas on the Atlantic OCS; other projects not analyzed in the PEIS would contribute to New Jersey and New York state goals. These include Empire Wind, Atlantic Shores North, and Atlantic Shores South. These other projects are analyzed as part of the cumulative effects analysis. The 5–7 GW expected from the six NY Bight lease areas is based on a conservative power ratio of 3 megawatts per square kilometer (MW/km <sup>2</sup> ). The NY Bight leases each have operations terms of 33 years that commence on the date of COP approval. Lessees may request an extension of their lease in accordance with lease terms and BOEM regulations.  Cumulative impacts are addressed in the PEIS for each resource and for each alternative, including the No Action Alternative; the methodology is explained in PEIS Chapter 3, pages 3-1 through 3-3.

Comment No.	Comment	Response
	<p>Comment: It is unclear how dedicating 48800 acres of lease area and the associated structures and disturbance meets the objectives specifically protection of public health; conservation of our lands waters and biodiversity stated above; in fact this project appears to directly contravene those policies. For context the entire Town of Oyster Bay comprises approximately 108 400 acres. The best-case scenario presented in the PEIS at full optimization of the project at 7GW is still less than the overly ambitious state mandate of 9GW of offshore wind energy further the lifespan of a WTG is only approximately 30 years. There is no discussion about the net generation of how these mandates will be achieved and how that figure is calculated into the equation upon expiration of the WTG's useful lifespan not only would it appear that a lease extension would be needed for continuous operation but WTGs would have to be decommissioned and replaced. The larger plans of scale and cumulative impacts must be adequately addressed in the final PEIS. Though the goals for alternative energy requirements are reiterated throughout the documents as a guiding qualifier for expeditiously proceeding with the review of these projects the details are omitted and unavailable thereby making it impossible to meaningfully review and consider the comprehensive cumulative synergistic direct and indirect impacts.</p>	
BOEM-2024-0001-0331-0001	<p>We are not opposed to clean energy in general and seek only that where it is pursued it be done in a reasonable and consistent manner and not leave major collateral damage in its wake. According to the Federal Register BOEM states that the purpose of the Draft PEIS is to analyze the potential impacts of the New York Bight along with identifying possible changes to those impacts that could result from adopting certain avoidance minimization mitigation and monitoring measures (AMMM). After public input BOEM will decide on whether to adopt one or all of the AMMM measures outlined in the DPEIS and make them conditions of approval for activities proposed by the lessees in their construction and operation plans (COPS) or defer the decision to adopt such measures to each project-specific environmental review. According to the diagram about the process the PEIS analyzes the programmatic avoidance minimization mitigation and monitoring measures that could apply to the New</p>	<p>Thank you for your comment. BOEM shares the same goal to ensure projects are developed responsibly. The Final PEIS includes several identified AMMM measures (refer to Appendix G) to avoid, minimize, and mitigate impacts from potential development of the six NY Bight lease areas.</p>

Comment No.	Comment	Response
	York Bight leases and includes a focused regional cumulative analysis.	
BOEM-2024-0001-0331-0030	<p>The BOEM PEIS lacks any discussion concerning intermittent offshore wind's contribution to grid unreliability how this will be mitigated and at what cost. For the first time in August 21 2023 the North American Electric Reliability Corporation (NERC) identified energy policy as a risk priority for grid reliability because the heightened legislative focus and mandates regarding decarbonization decentralization and electrification. The organization holds that the emerging resource mix is more susceptible to long-term widespread and extreme events like sustained loss of wind power. (<a href="https://www.nerc.com/news/Pages/Collective-Focus-Imperative-for-Mitigating-Emerging-Risks-to-Grid-Reliability.aspx">https://www.nerc.com/news/Pages/Collective-Focus-Imperative-for-Mitigating-Emerging-Risks-to-Grid-Reliability.aspx</a>) If the purpose of the projects is to meet the governor's goal by executive order for the State to sell 100% clean energy by 2035 including 11 GW of offshore wind how do the wind developers and BOEM propose to back up the wind when it is not blowing? What is the cost of this backup? What are the plans and cost of battery backup storage systems? According to Science Daily "energy droughts" in wind and solar can last a week. ( DOE/Pacific Northwest National Laboratory December 11 2023) . BOEM and wind developers use a misleading measurement called a capacity factor in their discussions of offshore wind energy output but this number typically 50% - is misleading in that it is an average. This average does not account for the times when generated wind energy exceeds demand and when wind energy is less than demand. For example there could be days when the wind turbines are only producing 20% of their energy capacity but demand requires 80% capacity. There will be other days when wind energy supply will be at 70% of its capacity but demand will only be at 50%. A rigorous multiyear supply/demand accounting would inform us of the balancing costs back-up costs and grid costs related to the true issues of intermittency.</p>	<p>BOEM's responsibility under the Energy Policy Act of 2005 is to issue renewable energy leases, easements, and rights-of-way (ROWs) for activities on the OCS. The purpose of the PEIS is to present a programmatic analysis of the six NY Bight lease areas to characterize the types of impacts that could occur and mitigation measures that could minimize those effects. Grid reliability is outside of BOEM's regulatory authority and the scope of the PEIS. The grid operator is responsible for managing the reliability of the grid. While offshore wind in the NY Bight would provide a new source of energy to the states of New York and New Jersey, other sources of energy would still be generated.</p> <p>BOEM's calculations of capacity are an assessment of total lease capacity and are not used to estimate power operations. Costs for power are considered through state solicitations and are factored into utility rates. To date BOEM has not received COPs proposing battery energy storage systems. Other developers may choose to develop battery systems to capture offshore wind, and those projects would be required to be reviewed and permitted separately, although they would be outside BOEM's jurisdiction. However, the offshore wind projects do not require backup power or battery storage systems, and each project has independent utility.</p>
BOEM-2024-0001-0334-0002	Be advised that the issues below as well as those you will receive from others represent a grave concern regarding BOEM's performance in protecting the interests of the New Jersey public. BOEM appears to ignore most of the significant impacts raised in their own EIS documents as well as the concerns raised by the well-	<p>The PEIS was developed through coordination with federal agencies, Tribal Nations, and state and local partners, and the AMMM measures seek to avoid, minimize, or mitigate potential impacts. Project-specific NEPA analysis will provide additional site-specific data and incorporate advances in technology and</p>

Comment No.	Comment	Response
	researched public. The approvals of the projects to date seem to only ensure that the projects move forward with the appearance of having been fully vetted and the mainstream press bolsters that perception to the public. A critical viewpoint is now widespread and if successful will lead to new and increased pressures to prevent offshore wind projects from proceeding in New Jersey on the East Coast and around the coastal areas of the USA.	understanding of these areas. Additional coordination with regulatory agencies is required as part of the approval of the project-specific approaches.
BOEM-2024-0001-0345-0003	New York City and Long Island are on the front lines of climate change. The NYSEDA white paper on the Climate Leadership and Community Protection Act asserts that one major obstacle the state faces to meet our climate change goals is that there is a "tale of two grids." Upstate uses 88% zero-emission resources but only represents 1/3 <sup>rd</sup> of the energy load while downstate is 2/3 <sup>rd</sup> of the load and 69% fossil fuels. The only way to see a just transition from polluting fossil fuels to renewable energy downstate is by utilizing offshore wind. New York has several offshore wind projects moving through the regulatory process which if approved will power millions of homes with clean renewable energy and bring New York significantly closer to our goal of 9000 MW of offshore wind. These projects are also kickstarting an "offshore wind-ustry" in the state which are already slated to create nearly 7000 jobs in project development manufacturing installation and operations and maintenance while creating over \$12 billion in economic benefits to the state. They will also allow the state to close down antiquated polluting fossil fuel fired power plants which will improve air quality in our region and provide \$1 billion in health benefits to New Yorkers in vulnerable and frontline communities.	Comment noted.
BOEM-2024-0001-0354-0017	True science involves constantly emerging new evidence and findings along with the ever-changing challenges imposed as to prior conclusions. As such contrary to the. Non-scientific "group think" and massive amounts of money driven public relations press releases behind the current wind turbine projects such sentiment ignores scientific methods of ongoing experimenting at the very least through realistic peer reviewed scientific pilot projects. True science involves constantly emerging new evidence and findings. This process necessarily continually involves the ongoing application of extensive scientific research which is then applied to the previously	This PEIS highlights regional issues; the details in the project-specific COP NEPA documents will provide additional site-specific information and incorporate advances in technology and scientific understanding as the projects advance. In addition, refer to response to comment BOEM-2024-0001-0400-0003 regarding data gaps, uncertainties, and incomplete and unavailable information. BOEM addresses this concern for each resource as required under CEQ regulations (40 CFR 1502.21) in PEIS Appendix E: <i>Analysis of Incomplete and Unavailable Information</i> . For NEPA purposes, BOEM believes the

Comment No.	Comment	Response
	accepted theories. Such a true application of peer reviewed science especially applied to growingly_ obsolete wind turbine construction would support the revision if not rejection of prior dogma as to allegedly "settled science". As I have testified previously only from a partially facetious standpoint the rush to judgment approach as to this specific proposal to construct massive windfarms off New Jersey represents non-scientific "group think" with the devastating potential to trample upon scientific inquiry and research. Such immense pressure from those supporting such colossal development of this offshore industrial site off of the precious New Jersey Coast unfortunately has facilitated many knee-jerk feel-good reactions which totally ignore the required economic and scientific vetting process. During a prior era particularly relevant to the coast of New Jersey our town and I were subjected to enormous pressures exerted by those supporting ocean dumping. Generated by a foreign corporation's pipeline off our beautiful and incalculably valuable portion of the New Jersey shore. Similar subconscious and actual influences are once again being exerted in favor of a foreign corporation looking to create another potential ocean dumping site off New Jersey's shoreline. I would truly beseech BOEM officials to rise above the narrow bureaucratic rubber-stamping of the within proposal in favor of the true application of scientific method to the entire cumulative and indirect impacts of the current project as well to windfarms off of New Jersey's Coast in general. Just as one heartfelt objector testified in a virtual hearing as to the threats proposed by foreign corporations to our country's national symbol the bald eagle these threats are very real whether proposed by a non-American entity or a corporation based in our own country.	NEPA regulatory requirements regarding incomplete and unavailable information have been satisfied in the PEIS.
BOEM-2024-0001-0355-0004	Unreliable energy so a back-up energy supply would still be needed.	Comment noted. Grid reliability is the responsibility of the state grid operators. While offshore wind in the NY Bight would provide a new source of energy to the states of New York and New Jersey, other sources of energy would still be generated.
BOEM-2024-0001-0355-0017	In addition it seems BOEM is rushing this process with little or no information. I am opposed to approval of the OSW projects at this time until MORE DATA AND MORE STUDIES are conducted. There are way too many unknowns and "insufficient data" per BOEMs PEIS. From p. 5 of the PEIS they state "The Atlantic OCS is considered by	Refer to response to comment BOEM-2024-0001-0400-0003 regarding data gaps, uncertainties, and incomplete and unavailable information. BOEM addresses this concern for each resource as required under CEQ regulations (40 CFR 1502.21) in PEIS Appendix E, <i>Analysis of Incomplete and Unavailable</i>

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	<p>BOEM to be a "Frontier Region" where little information exists about the geologic conditions and how those conditions may impact development of offshore wind farms." On page 12 they state "site investigation and characterization for such projects is generally focused on a limited area." Does this make sense on a barrier island where the water table is high and you can compromise the water resource on one part and not another? How can you approve such a project without knowing so much of the necessary information to make a thoughtful decision that will affect SO MANY humans and marine creatures in multiple negative ways? At the very minimum there should be a pilot study done to collect more information on our specific region before going for this massive disruption to and destruction to marine life human life real estate and tourism.</p>	<p><i>Information.</i> For NEPA purposes, BOEM believes the NEPA regulatory requirements regarding incomplete and unavailable information have been satisfied in the PEIS.</p> <p>In addition, this PEIS will not result in the approval of any activities in the NY Bight lease areas. Each lease holder is required to conduct project-specific environmental analyses, which include development and submittal of a COP as required under 30 CFR 585.628. BOEM will conduct project-specific NEPA analysis of the COP for each lease area that will focus on providing site- and project-specific analyses that were not already addressed by the PEIS. Appendix C, <i>Tiering Guidance</i>, summarizes the affected environment, impact analysis, and AMMM measures for each resource area discussed in this PEIS and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area and cable route as the projects advance.</p> <p>Further, BOEM considered but dismissed from further consideration an alternative to build a pilot project (PEIS Chapter 2, Table 2-3). Data from sites that are constructed and operating (e.g., Block Island), as well as the pilot project in Virginia, were incorporated into this PEIS and will be incorporated into the development of project specific COPs and EISs.</p>
BOEM-2024-0001-0356-0003	<p>The second more recent information that has been acknowledged is inadequate is from the NJBPU published 2/14/24: "Atlantic hurricanes pose a significant potential threat to the State's burgeoning OSW sector. Despite this risk relatively little technical research has been devoted to quantifying and assessing Atlantic hurricane impact upon OSW projects. As a result regulators developers and insurers have limited tools at their disposal to mitigate this risk or ascertain whether the risk warrants design modifications. The prevailing uncertainty surrounding what is widely perceived as a substantial threat to OSW largely without scientific or engineering backing serves as a considerable obstacle to the development of OSW Development of advanced technical research quantifying and assessing hurricane risk is therefore necessary to aid developers regulators and insurers in mitigating hurricane risk and providing improved design standard baselines." These studies</p>	<p>As stated in PEIS Section 2.3, the engineering specifications of the WTGs and their ability to sufficiently withstand weather events, including hurricane-level events, are independently evaluated by a certified verification agent when reviewing the Facility Design Report and Fabrication and Installation Report according to international standards. One of these standards calls for the structure to be able to withstand a 50-year return interval event. An additional standard includes withstanding 3-second gusts of a 500-year return interval event, which would correspond to Category 5 hurricane windspeeds. It is in the best interest of the lessees to construct and operate a viable project and minimize risk as much as possible; they are responsible for ensuring the WTGs are designed and constructed to withstand such events and to ensure the integrity of the structures would not be compromised.</p>

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	should've been performed and the results published long before any of the EIS's for any lease were approved. This is absolutely absurd and are yet more glaring reasons that OSW is being pushed through the regulatory processes prematurely and unchecked.	
BOEM-2024-0001-0357-0002	<p>As requested by the BOEM the bulk of our comments here are on the New York Bight program EIS to make it a more useful document. However it is not the document that is of paramount concern here. Rather it is the BOEM decision making process itself relative to the requirements of the Administrative Procedures Act the Outer continental Shelf Lands Act and the National Environmental Policy Act and the dictates of common sense which we believe is fundamentally unreasonable and flawed in at least two major respects:</p> <p>First, the BOEM does not consider the full, real environmental impact to an area when it approves projects, and</p> <p>Second, it does not engage expert and other public input before it makes the most important decisions, i.e., on wind turbine location, number, megawatt size and gear drive. Both of these defects are discussed below.</p>	<p>The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i>, is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and analyze AMMM measures that could reduce those effects. The PEIS does not approve any projects. Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&amp;M, and conceptual decommissioning of the project, including cumulative effects. During the COP-specific NEPA process, BOEM will hold a public comment period at the start of the NEPA process (scoping) and, following that, will release the Draft NEPA document, whereby members of the public and agencies can provide input to help inform the NEPA process, alternatives, and mitigation measures to identify and minimize environmental effects. Additionally, throughout the NEPA process, BOEM will work closely with Cooperating Tribal Governments and federal and state agencies to assist with assessing impacts and identifying mitigation measures. BOEM will analyze each COP as proposed by the developer and does not make decisions on number of turbines, MW size, and gear size that applicants include in the COP. BOEM may analyze different alternatives and mitigations—such as the number of turbines, MW size, and gear size—as part of the NEPA review process, project-specific consultations, and decision process.</p>
BOEM-2024-0001-0362-0027	<p>High-road Equitable Environmentally Responsible Development</p> <p>Outer Continental Shelf Lands Act BGA believes that standards for high-road equitable and environmentally responsible development are consistent with federal statute. In Section 8 of OCSLA Congress declared that it is the authority of the Secretary of the Interior (delegated to BOEM) to "grant a lease easement or right-of-way" for activities that "produce or support production transportation or transmission of energy from sources other than oil and gas" in a</p>	<p>Comment noted. Section 1.4, <i>Regulatory Overview</i>, of the Final PEIS describes the regulatory authority for renewable energy leasing on the OCS.</p>

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	<p>manner that provides for:"(A) Safety;(B) Protection of the environment;(C) Prevention of waste;(D) Conservation of the natural resources of the Outer Continental Shelf;(E) Coordination with relevant Federal agencies;(F) Protection of national security interests of the United States;(G) Protection of correlative rights in the Outer Continental Shelf;(H) A fair return to the United States;(I) Prevention of interferences with reasonable uses of the exclusive economic zone the high seas and the territorial seas;(J) Consideration of a. The location of and any schedule relating to a lease easement or right-of- way for an area of the Outer Continental Shelf; and b. Any other use of the sea or seabed including use for a fishery a sea lane a potential site of a deep-water port or navigation;(K) Public notice and comment on any proposal submitted for a lease easement or right-of-way under this subsection; and(L) Oversight inspection research monitoring and enforcement related to a lease easement or right-of-way under this subsection."</p> <p>[Footnote v: U.S. Code 1337 - Leases easements and rights-of-way on the outer Continental Shelf.</p> <p><a href="https://www.law.cornell.edu/uscode/text/43/1337">https://www.law.cornell.edu/uscode/text/43/1337</a>] High road standards touch on many of these imperatives including safety; protection of the environment; conservation of natural resources; protection of national security; fair return to the United States; consideration of other uses; and oversight inspection and resource monitoring. Environmentally responsible development robust stakeholder engagement equitable distribution of benefits and attention to quality job creation domestically are all foundational to OCSLA requirements. In addition to the authority granted to BOEM to facilitate energy development on the Outer Continental Shelf (OCS) the president has authority to direct requirements on leases of the OCS and precedent exists for the president to do so. Current BOEM leases include terms mandated by presidential Executive Order 11246 which prohibits employment discrimination and establishes affirmative action requirements for nonexempt federal contractors and subcontractors. [Footnote vi: DOL Executive Order 11246 Equal Employment Opportunity Sept. 24 1965.</p> <p><a href="https://www.dol.gov/agencies/ofccp/executive-order-11246/as-amended">https://www.dol.gov/agencies/ofccp/executive-order-11246/as-amended</a>] Article II 1 of the U.S. Constitution provides that</p>	

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	"executive power shall be vested in" the president. Such power gives the president the right in the absence of an express congressional declaration to the contrary to control the terms upon which public lands or property may be sold leased or used by private individuals or entities. [Footnote vii: Case text United States v. Midwest Oil Co. Feb. 23 1915. Available online: <a href="https://casetext.com/case/united-states-v-midwest-oil-co">https://casetext.com/case/united-states-v-midwest-oil-co</a> ]	
BOEM-2024-0001-0362-0028	In Executive Order 14008 Tackling the Climate Crisis at Home and Abroad issued January 27 2021 President Biden stated that it is the policy of the United States: "to organize and deploy the full capacity of its agencies to combat the climate crisis to implement a Government-wide approach that reduces climate pollution in every sector of the economy; increases resilience to the impacts of climate change; protects public health; conserves our lands waters and biodiversity; delivers environmental justice; and spurs well-paying union jobs and economic growth especially through innovation commercialization and deployment of clean energy technologies and infrastructure." This executive order further emphasizes that "[t]his Nation needs millions of construction manufacturing engineering and skilled-trades workers to build a new American infrastructure and clean energy economy." [Footnote ix: White House Executive Order on Tackling the Climate Crisis at Home and Abroad Jan. 27 2021. <a href="https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/">https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/</a> ] President Biden further states "Agencies shall seek to increase the Federal Government's resilience against supply chain disruptions. Such disruptions put the Nation's manufacturing sector at risk as well as consumer access to critical goods and services." Additionally President Biden directed all agencies to "adhere to the requirements of the Made in America Laws in making clean energy energy efficiency and clean energy procurement decisions" consistent with Executive Order 14005 Ensuring the Future Is Made in All of America by All of America's Workers. [Footnote x: White House Executive Order on Ensuring the Future Is Made in All of America by All of America's Workers Jan. 25 2021. <a href="https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/25/executive-order-on-ensuring-the-future-is-">https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/25/executive-order-on-ensuring-the-future-is-</a>	Comment noted. Section 1.3, <i>Purpose of and Need for the Proposed Action</i> , describes the purpose of the Proposed Action, which supports Executive Order 14008 "Tackling the Climate Crisis at Home and Abroad."

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	<p>made-in- all-of-america-by-all-of-americas-workers/] President Biden has also emphasized the need to maximize utilization of domestic content as we advance climate and clean energy solutions in order to strengthen U.S. manufacturing. President Biden's executive order on America's supply chains issued February 24 2021 states "[t]he United States needs resilient diverse and secure supply chains to ensure our economic prosperity and national security." It continues to say "resilient American supply chains will revitalize and rebuild domestic manufacturing capacity maintain America's competitive edge in research and development and create well-paying jobs. They will also support small businesses promote prosperity advance the fight against climate change and encourage economic growth in communities of color and economically distressed areas."</p>	
BOEM-2024-0001-0362-0029	<p>Executive Orders on Domestic Manufacturing Environmental Justice and Union Labor President Biden has reinforced in various executive orders that it is the policy of the federal government to pursue solutions to the climate crisis with attention to union labor domestic manufacturing environmental justice and protection of natural resources. The announcement of the national offshore wind target to deploy 30 gigawatts (GW) of offshore wind by 2030 further underscored this approach. The White House fact sheet containing that announcement declared: "The President recognizes that a thriving offshore wind industry will drive new jobs and economic opportunity up and down the Atlantic Coast in the Gulf of Mexico and in Pacific waters. The industry will also spawn new supply chains that stretch into America's heartland as illustrated by the 10000 tons of domestic steel that workers in Alabama and West Virginia are supplying to a Texas shipyard where Dominion Energy is building the Nation's first Jones Act compliant turbine installation vessel. "Federal leadership in close coordination with states and in partnership with the private sector unions and other key stakeholders is needed to catalyze the deployment of offshore wind at scale. "the Administration is taking coordinated steps to support rapid offshore wind deployment and job creation:1. Advance ambitious wind energy projects to create good-paying union jobs2. Investing in American infrastructure to strengthen the domestic supply chain and deploy offshore wind energy3. Supporting critical research and data-</p>	<p>Comment noted. Section 1.3, <i>Purpose of and Need for the Proposed Action</i>, describes the purpose of the Proposed Action, which supports President Biden administration's goal of 30 GW of offshore wind capacity by 2030.</p>

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	sharing." [Footnote viii: White House FACT SHEET: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs March 29 2021. <a href="https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/">https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/</a> ]	
BOEM-2024-0001-0362-0031	Recent global events have made it abundantly clear that our national security is strongly tied to our energy security to which domestic manufacturing plays a critical role. The U.S. Department of Energy and the North American Electric Reliability Corporation jointly-commissioned a report assessing risks to the U.S. electricity generation and distribution infrastructure. The summary of the report observed that the "bulk power system is dependent on long supply chains often with non-domestic sources and links" and determined that the "increased reliance on foreign manufacturers with critical components and essential spare parts manufactured abroad (e.g. HV transformers)" means the "supply chain itself represents an important potential vulnerability." [Footnote xv: North American Electric Reliability Corporation High-Impact Low-Frequency Event Risk Impact to the North American Bulk Power System at page 30 (June 2010). <a href="https://www.energy.gov/ceser/downloads/high-impact-low-frequency-risk-north-american-bulk-power-system-june-2010">https://www.energy.gov/ceser/downloads/high-impact-low-frequency-risk-north-american-bulk-power-system-june-2010</a> .] The report recommends that "efforts should be considered to bring more of the supply chain and manufacturing base for these critical assets back to North America." [Footnote xvi: Ibid at 27]	Comment noted.
BOEM-2024-0001-0383-0007	OSCLA: BOEM quotes the Outer Continental Shelf Lands Act regarding the Secretary's legislative requirement to "ensure that any activity under [subsection 8(p)] is carried out in a manner that provides for (A) safety; (B) protection of the environment.. (I) prevention of interference with reasonable uses (as determined by the Secretary) of the exclusive economic zone the high seas and the territorial seas.." etc. [Footnote 21: PEIS at New York Bight Draft Programmatic Environmental Impact Statement Volume 1 Chapters 1-4 (boem.gov) p. 1-6 1-7.] The agency then quotes a 2021 agency memo that states that the law as written in fact does not require the Secretary to ensure achievement of these various "goals" but to balance them.[Footnote 22: Ibid p. 1-7.]We disagree. The term	The Solicitor's Opinion of December 14, 2020, M-37059, was withdrawn on April 9, 2021, by M-37067 for the reasons explained in the latter opinion. The Solicitor's M-opinions on matters within the jurisdiction of the Department of the Interior (DOI) are binding on BOEM (see 209 Department Manual 3.2(A)(11)). Therefore, BOEM is bound to follow the interpretation of the OCSLA put forth in M-Opinion 37607.

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	<p>"ensure" means "ensure". It does not mean balance. By not ensuring safety by not ensuring prevention of interference with reasonable uses- such as federally permitted commercial fishing on the OCS- BOEM is in violation of the law. The agency cannot rewrite the meaning of the word "ensure" with an internal agency memo. Furthermore the agency memo written in 2021 directly contradicts a corresponding agency memo written only five months prior in 2020. We have attached that memo along with this comment. The 2021 memo purports to overturn the previous 2020 memo this reinterpretation coinciding with a change in Administration but the law cannot mean two different things. Simply because an Administration changes does not mean that the law changes. Congress changed nothing. The definition of the word "ensure" did not change in the English language between 2020 and 2021. BOEM cannot add words to statute that do not exist in the statute; it must take the legislative language at face value. The PEIS states that the law imposes only a "a general duty" and "does not require the Secretary to ensure that the goals are achieved to a particular degree" but allows the Secretary to "balance" what it refers to as "goals". These listed requirements are not goals; they are legal standards. The law says the Secretary must "ensure" that these legislative standards are met. The word "ensure" defined by Merriam-Webster means "to make sure certain or safe: guarantee." [Footnote 23: See Ensure Definition &amp; Meaning - Merriam-Webster.] The Secretary must guarantee these standards. It is clear from the discussion on navigational impacts in the AMMM section below the commercial fishing impacts contained in our attached USCG comments as well as the lack of regulatory benchmarks regarding high resolution geophysical surveys discussed below- which requires stronger regulatory protections by both BOEM and NOAA when being conducted in the Gulf of Mexico by other offshore energy industries than in the Atlantic by offshore wind developers- that BOEM is not guaranteeing that these OSCLA standards are met.</p>	
BOEM-2024-0001-0403-0002	The content of the PEIS is also grossly insufficient to account for the various impacts on nearly half a million acres of ocean land leased throughout the six lease areas: Bluepoint Wind Attentive Energy Community Offshore Wind Atlantic Shores Offshore Wind Bight	For each resource area, Appendix C, <i>Tiering Guidance</i> , summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional

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	<p>Invenenergy Wind Offshore and Vineyard Mid-Atlantic. Tellingly the record \$4.3 billion secured through these leases indicates that the profitability of these leases far outweighs any real assessment of the impacts and consequences of industrializing one of our last untapped and pristine natural resources. The PEIS by BOEM's own estimation anticipates 1103 wind turbines 22 offshore substations 44 offshore export cables of 1772 miles in length and 1583 miles of inter array cables between the six projects throughout the Bight. The document sites estimated impacts from negligible to major in a variety of areas but without citing sufficient baseline data due to the absence of such data. To issue a PEIS on the six lease areas without the existence of baseline data and "because the size and design of the NY Bight wind farms are unknown at this stage" is shortsighted grossly inappropriate and negligent. Unfortunately, further issuance of project-specific Environmental Impact Statements have been hamstrung by the federal 2020 NEPA rule change which will limit future EISs to 150 to 300 pages for "proposals of unusual scope or complexity". This means that we will never fully understand the impacts and will be to borrow a term from NMFS "building the ship while sailing it."</p>	<p>analysis that will be included in the COP-specific NEPA analysis for each lease area.</p> <p>Each lease area will undergo project-specific environmental analyses through the development and submittal of a COP. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include detailed evaluation of impacts and will consider the best available data and information that reflect the state of the science at the time of publication. BOEM has prepared several EISs for offshore wind projects within the required page limits and has not found that the page limits prevent a thorough analysis.</p>
BOEM-2024-0001-0406-0008	<p>BOEM's Proposed Action Violates NEPA and the APA</p> <p>BOEM's proposed action "the adoption of AMMM measures such that the potential impacts described in Alternative B may be avoided reduced or mitigated" Draft PEIS 2.1.3 (p. 2-16) would run afoul of both NEPA and the Administrative Procedures Act (APA) creating considerable legal risk for BOEM and jeopardizing the utility of its programmatic NEPA analysis if BOEM does not amend the proposed action in its Final PEIS. As BOEM describes it in the Draft PEIS the proposed action calls for "adopting programmatic AMMM measures that BOEM would require as conditions of approval for activities proposed by lessees in COPs submitted for the NY Bight lease areas unless future COP-specific NEPA analysis shows that implementation of such measures is not warranted or effective." Draft PEIS 1.3 (p.1-4) (emphasis added). BOEM then states that "[t]he Record of Decision (ROD) for the PEIS will state which of the AMMM measures analyzed in the PEIS BOEM has committed to adopting and if not why they were not adopted." Id. This proposed action would establish for</p>	<p>The Proposed Action for the Final PEIS includes the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. These measures may be required as conditions of approval for activities proposed by lessees in the COPs submitted for the six NY Bight lease areas. BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations.</p> <p>BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not establishing a presumption at COP review that a lessee would need to rebut—but is identifying those AMMM</p>

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	the six NYB lessees a presumption at COP review that BOEM will impose the full suite of AMMM measures from the Final PEIS on their projects unless the lessees can make a specific showing in their COPs that specific measures are not "warranted or effective." This approach unlawfully shifts the burden from BOEM to the lessee an approach which is legally problematic in at least two key respects.	measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.
BOEM-2024-0001-0406-0009	BOEM's Proposed Action Inappropriately Imposes Substantive Obligations Through a Procedural Statute NEPA is a procedural statute requiring an agency to analyze the environmental impacts of a proposed federal action. 42 U.S.C. 4331. While the NEPA regulations obligate an agency to provide a "detailed discussion of possible mitigation measures" when preparing an EIS it does not impose "a substantive requirement that a complete mitigation plan be actually formulated and adopted." <i>Robertson v. Methow Valley Citizens Council</i> 490 U.S. 332 35152 (1989). Thus while BOEM has appropriately discussed in detail the AMMM measures that could be applied during COP-specific NEPA analysis any adoption of those measures must be done through substantive statutes that grant BOEM and other permitting agencies the authority to require such measures. In this case BOEM's substantive authority to impose mitigation measures derives from the Outer Continental Shelf Lands Act (OCSLA) and its implementing regulations. In particular 30 CFR 585.620-628 establishes the COP review process and states that BOEM "will prepare an appropriate NEPA analysis" <i>id.</i> At 628(b) and then "upon completion of technical and environmental reviews will specify terms and conditions to be incorporated into the COP." <i>Id.</i> At 628(f)(1). Because BOEM's authority to impose mitigation measures is explicitly contingent on its review of a submitted COP it would be premature to invoke that authority in a PEIS. Moreover as noted above many of the proposed AMMM measures lie outside of BOEM's statutory and regulatory authority and would need to be "adopted" by other federal state and/or local agencies (if indeed they could be required or enforced at all). By proposing to "adopt" AMMM measures in a programmatic NEPA document divorced from an OCSLA decision point BOEM effectively and illegally converts NEPA to a substantive statute.[Footnote 1: It is no defense that BOEM would retain the discretion to not impose particular AMMM measures if	The Proposed Action for the Final PEIS includes the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. These measures may be required as conditions of approval for activities proposed by lessees in the COPs submitted for the six NY Bight lease areas. BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations. BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not establishing any substantive obligations at this programmatic stage—but is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.

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	<p>lessees can demonstrate in their COPs that an "adopted" measure is not "warranted or effective." The proposed action still would constitute a substantive imposition of AMMM measures before COP submittal with the burden now shifted to lessees to prove in their COPs that such measures should not be required.]</p>	
<p>BOEM-2024-0001-0406-0010</p>	<p>BOEM's Proposed Action Appears to Constitute a De Facto Rulemaking in Violation of the APA</p> <p>By imposing a new standard of review on all projects within the NY Bight BOEM has also effectively engaged in de facto rulemaking in violation of the APA. Subject to very limited exceptions the APA requires that any adoption of or amendment to a federal regulation go through the notice and comment rulemaking process. 5 U.S.C. 553. Substantive agency rules which change or impose rights and obligations of regulated parties may not be imposed through informal pronouncements; to do so represents a violation of the APA's rulemaking procedure. See e.g. Cmty. Nutrition Inst. V. Young 818 F.2d 943 946-47 (D.C. Cir. 1987); see also Phillips Petroleum Co. v. Johnson 22 F.3d 616 621 (5<sup>th</sup> Cir. 1994) ("A party may not be adversely affected by a [substantive] rule in violation of [APA notice and comment] requirements."). BOEM's proposed action while not styled as an amendment to its regulations imposes a new standard that upends the COP review process established in BOEM's existing regulations and seeks to apply a new set of requirements (i.e. the full suite of AMMM measures) to all offshore wind projects in the NY Bight. As noted in the section above BOEM's regulations require that it "specify terms and conditions" of COP approval "upon completion of technical and environmental reviews" of a submitted COP. 30 CFR 585.628(f)(1). If the ROD is issued as BOEM proposes all six NYB lessees would face a presumptive array of requirements prior to submitting a COP and prior to BOEM conducting any of its environmental or technical reviews of those COPs. The lessees would then be required to demonstrate in their COPs that individual measures are not "warranted or effective" a standard found nowhere in OCSLA or BOEM's regulations. This would create a new standard of review that effectively shifts BOEM's burden to demonstrate that specific AMMM measures are needed based on its review of the project to the lessees. That is exactly the type of</p>	<p>The Proposed Action for the Final PEIS includes the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. These measures may be required as conditions of approval for activities proposed by lessees in the COPs submitted for the six NY Bight lease areas. BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations.</p> <p>BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures. It is not establishing or imposing any substantive obligations at this programmatic stage. Nor does the proposed action purport to change the standard in BOEM's regulations governing review of COPs. For those reasons, the proposed action is not a de facto rulemaking. Instead, it is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.</p>

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	change in the rights and obligations of regulated parties that can only be done through notice and comment rulemaking.[Footnote 2: The fact that this particular Draft PEIS "only" applies to six lessees is of little consequence. BOEM is in the process of conducting a similar programmatic review for its five California leases see <a href="https://www.boem.gov/renewable-energy/state-activities/california-offshore-wind-programmatic-environmental-impact">https://www.boem.gov/renewable-energy/state-activities/california-offshore-wind-programmatic-environmental-impact</a> and has given every indication that it will continue to use the PEIS mechanism to create efficiencies in its future COP reviews. It is reasonable to expect that the choices BOEM makes in this PEIS process will inform subsequent programmatic reviews in other wind energy areas.	
BOEM-2024-0001-0406-0029	Finally BOEM should also consider declining to issue a ROD with the Final PEIS. Even in its draft form the PEIS does not make any "decisions" that trigger environmental effects and that remains the case if revised as suggested herein. No decision of that sort is made until BOEM makes a decision on an individual COP that has been the subject of a full-blown EIS. Any decision flowing from this PEIS is therefore premature. Moreover there is no formal requirement in NEPA the CEQ regulations or Department of the Interior (DOI) regulations that a programmatic NEPA analysis must include a ROD if no decision is being made. Eliminating the ROD would make clear to the public that this PEIS is primarily intended to facilitate early identification and analysis of important issues and impacts common to all NYB leases and not to narrow BOEM's or lessees' options at the COP stage or impose substantive requirements as with the presumptive application of the full suite of AMMM measures analyzed in the Draft PEIS.	Comment noted. A ROD could identify those AMMM measures BOEM may apply as conditions of approval for the COPs submitted for the NY Bight leases. This documentation does not constitute final agency action but may be integrated into the ROD for each individual project. Identification of the measures BOEM may apply does not narrow options at the COP stage because BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations.
BOEM-2024-0001-0423-0001	A rational and timely permitting process is vital to meeting the goals of Executive Order 14008 ("Tackling the Climate Crisis at Home and Abroad" issued on January 27 2021) New Jersey's goal of 11 GW of offshore wind energy generation by 2040 (as outlined in New Jersey Executive Order No. 307 issued on September 21 2022) and New York's requirement of 9.0 GW of offshore wind energy generation by 2035 (as outlined in the Climate Leadership and Community Protection Act signed into law on July 18 2019).	Comment noted.

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	<p>The permitting process for offshore wind is already extremely robust and Ocean Winds had expressed concern when the New York Bight PEIS process was announced as we feared that the PEIS had the potential to complicate and delay an already challenging process. Setting aside those concerns our Bluepoint Wind team has been working cooperatively with BOEM since it published its Notice of Intention (NOI) to prepare a PEIS on July 15 2022. The eighteen months between NOI and Draft PEIS is concerning and is impacting development of Construction and Operation Plans (COPs) for NY Bight lessees. It is disappointing that initial promises from BOEM that this PEIS will speed and not hinder project permitting and development do not seem to be materializing. That said Ocean Winds hopes that the Final PEIS will be issued on schedule and future PEIS efforts will proceed in a more expeditious manner. Further we note that this PEIS will set a precedent for the PEIS process in California and beyond. As such we urge BOEM to be thoughtful in its approach so that its actions in this process do not hinder development of an industry already facing a series of challenges on both coasts.</p>	
BOEM-2024-0001-0423-0030	<p>Purpose and Need for the Proposed Action  Ocean Winds supports the [bold and italicized: intent] of the PEIS namely to reduce redundancies across COP-specific NEPA analyses and help BOEM make timely decisions on COPs for the six lease areas covered by the Draft PEIS. Rather than leading to a more efficient process for individual COP approvals the scale and scope of the proposed AMMMs represent a significant expansion beyond past precedent and ensures a longer process for reviewing individual COPs when developers inevitably consider alternatives to the AMMMs in their individual COP submittals. This in turn will lengthen and complicate what is already a challenging federal permitting process. The Draft PEIS continues a troubling trend of the federal government continuing to raise the bar for offshore wind when compared to other maritime industries many of which are known to cause meaningful negative impact to the sensitive resources that the AMMMs proposed in the Draft PEIS are intended to protect. Ocean Winds also notes that the six months-long delay in the release of the Draft PEIS has negatively impacted project timelines which hinder</p>	<p>The AMMM measures considered in the PEIS include measures that have been included in previous COP approvals, as well as those proposed through the scoping process. In response to numerous comments on the Draft PEIS AMMM measures, BOEM has reviewed all AMMM measures and has made several changes to the measures as presented in Final PEIS Appendix G. In summary, BOEM has split the AMMM measures into AMMM measures that BOEM has required as conditions of approval from previous activities proposed by lessees in COPs submitted and AMMM measures that have not been applied as terms and conditions of approval for previous activities proposed by lessees in COPs. In addition, BOEM has identified RPs that could be considered at the project-specific COP NEPA review. Refer to response to comment BOEM-2024-0001-0371-0004 regarding revisions to Alternative C.</p> <p>Further, this PEIS is <i>not imposing</i> any AMMM measures; it is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures</p>

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	the purpose and need of BOEM making timely decisions on COPs for the NY Bight leases and we urge BOEM not to allow further delays to the Final PEIS. As discussed above the delay associated with this PEIS along with the overreach in the substance of the document sets a concerning precedent for future PEIS processes.	are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient. Regarding PEIS timelines and delays, BOEM is working as efficiently as possible to ensure an adequate NEPA document is developed that meets all the statutory and regulatory requirements.
BOEM-2024-0001-0426-0002	History is full of bad government decisions that seemed like a good idea at the time. Take the Homestead Act for example where settlers were given free acreage in Kansas Oklahoma East Texas and elsewhere to farm. The governments' objectives were economic development continuation of a young country's "Manifest Destiny" westward and an increase in agricultural production. Most settlers farmed land or grazed cattle but soon unanticipated consequences began to appear. Farmers plowed over prairie grasses and planted dryland wheat. As the demand for wheat grew cattle grazing decreased and more acres were plowed and planted. When the world market for wheat became oversupplied prices dropped and farmers reacted to their loss of revenue by planting more wheat to make up on volume what they were losing on price. This dry land farming led to the systematic destruction of prairie grass. With the land gradually being stripped bare environmental damage began to occur. Finally with the drought of 1930 over farmed land blew away. The heartland of the U.S. became a vast dust bowl. An article by Jonathan Coppess from the University of Illinois Urbana-Champaign on the Dust Bowl offers haunting parallels for New Jersey clean energy policy:" As one of the worst environmental disasters in our history the Dust Bowl was a confluence of policy human activities climatic shifts and the outer bounds of nature's tolerance. It should counsel humility about the ability of humans to perpetually push natural resources for their benefit The dust bowl was triggered by an extreme drought -part of a natural cycle over which we had little knowledge and less control - but it had been built by policies and misguided actions in an unfamiliar environment" Into the Unknown An often-quoted remark from Donald Rumsfeld former Secretary of Defense during a discussion linking Iraq with weapons of mass destruction states:" Reports that say that something hasn't	BOEM analyzes offshore wind projects using the best available science and information and seeks input from the public, agencies, and Tribal Nations to inform its decisions. For the PEIS, BOEM has identified information that was incomplete or unavailable for the evaluation of reasonably foreseeable impacts in Appendix E, <i>Analysis of Incomplete and Unavailable Information</i> .

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	<p>happened are always interesting to me because as we know there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns—the ones we don't know we don't know. And if one looks throughout the history of our country and other free countries it is the latter category that tends to be the difficult one." Known Unknowns and Unknown. Unknowns</p> <p>So are there any "known unknowns" and more troubling "unknown unknowns" lurking beneath the surface of efforts to accelerate offshore wind development?</p>	
BOEM-2024-0001-0426-0008	<p>Here at home PSE&amp;G and Eversource have backed off from prior investment commitments to offshore wind. Do we understand why? There are other questions as well that have barely been explored at least publicly. Regarding national security an open field of hundreds of turbines in the middle of the Atlantic is an inviting soft target for terrorists or adversarial nations. How will we defend these resources?</p>	<p>The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i>, is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and analyze AMMM measures that could reduce those effects. Questions related to financial investments and national security are outside the scope of the PEIS. As stated in PEIS Section 2.3, non-routine activities and events, such as a terrorist attacks, are impossible to predict with certainty and are not analyzed in detail. In addition, PEIS Appendix E, <i>Analysis of Incomplete and Unavailable Information</i>, Section E.1.17, states that there is uncertainty regarding national security, but that the information that is available is appropriate for this programmatic level of analysis. Subsequent project-specific environmental analysis will be required for each individual COP.</p>
BOEM-2024-0001-0439-0003	<p>To address these concerns, the OSW industry urges BOEM to ensure that the final PEIS does not impose new analytical burdens or substantive requirements on lessees but instead serves as an analytical tool that improves the efficiency of the environmental review of COP-specific proposals within the NY Bight through tiering. To ensure this outcome: The Purpose and Need of the Proposed Action should be an analysis of AMMMs that BOEM <i>may</i> consider as conditions of approval.</p>	<p>BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not establishing any substantive obligations at this programmatic stage—but is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.</p>

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BOEM-2024-0001-0439-0007	BOEM should not adopt AMMMs through NEPA. NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions.[Footnote 5: 42 U.S.C. 4331.] Importantly NEPA is merely a procedural statute- it authorizes the use of substantive authorities for improved environmental outcomes but imposes no substantive requirements.[Footnote 6: NEPA only requires a "reasonably complete discussion of possible mitigation measures" to allow for a fair evaluation of avoidable and unavoidable environmental consequences.[Footnote 7: See id. At 352.] The Supreme Court has warned that there is no requirement under NEPA "that a complete mitigation plan be actually formulated and adopted." [Footnote 8: Id.] Indeed the Court has held that it would be "inconsistent" with NEPA's procedural focus "to demand the presence of a fully developed plan that will mitigate environmental harm." [Footnote 9: Id. At 353; see also Citizens Against Burlington Inc. v. Busey 938 F.2d 190 205-06 (D.C. Cir.) (agency not required to finish mitigation studies or execute mitigation plans before project begins) cert. denied 502 U.S. 994 (1991); Communities Inc. v. Busey 956 F.2d 619 625-26 (6 <sup>th</sup> Cir.) (EIS lacking complete remediation plan adequate where sufficient investigation was conducted to identify mitigation alternatives and make reasonable estimate of cost) cert. denied 506 U.S. 953 (1992).] In short NEPA requires agencies to take a "hard look" at the environmental impacts of actions being proposed under substantive statutes over which they have authority such as OCSLA. NEPA itself does not provide authority to impose requirements or limit actions.[Footnote 10: Ibid. at 351.( "other statutes may impose substantive environmental obligations on federal agencies but NEPA merely prohibits uninformed rather than unwise agency action.")]	BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures. It is not establishing or imposing any substantive obligations at this programmatic stage. Instead, it is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.
BOEM-2024-0001-0439-0009	The Purpose and Need of the Proposed Action inappropriately shifts burden to developers. The Proposed Action proposes to "[adopt] measures <i>unless</i> future COP-specific NEPA analysis shows that implementation of measures is not warranted or effective"[Footnote 12: Draft PEIS ES-3.] Separate from the issue of adopting substantive measures discussed above the proposal to wait for site specific analysis to show that a measure is not warranted inappropriately shifts the burden to developers to prove that specific AMMMs	In an effort to create a more efficient process, the PEIS analyzes AMMM measures that have been applied previously through the COP-specific NEPA process. BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not shifting the burden to developers—but is identifying those AMMM measures that BOEM may impose at

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	<p>should not be imposed at the COP approval stage. This will significantly increase the costs to developers to study analyze and disprove the appropriateness of certain measures. This is a burden found in neither NEPA nor BOEM regulations nor other reviewing statutes. The final PEIS should not require site-specific analysis to disprove the need for prematurely adopted AMMMs. Rather the PEIS should help inform the site-specific NEPA review but ultimately the analysis in the site-specific NEPA document should determine which AMMMs are reasonable and necessary for the project under review.</p>	<p>the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.</p> <p>In addition, see response to comment BOEM-2024-0001-0423-0030 regarding BOEM's review and revisions of AMMM measures in the PEIS and identification of RPs.</p>
<p>BOEM-2024-0001-0439-0010</p>	<p>The Purpose and Need of the Proposed Action</p> <p>The Adoption of AMMMs is contrary to BOEM's authority under OCSLA and NEPA. BOEM states that the Proposed Action for the Draft PEIS is "the adoption of programmatic AMMM measures that BOEM would require as conditions of approval for activities proposed by lessees in COPs submitted for the NY Bight lease areas unless future COP-specific NEPA analysis shows that implementation of measures is not warranted or effective." [Footnote 13: Draft PEIS ES-3.] Stating that BOEM "would require" the AMMMs as conditions of approval is contrary to BOEM's authority under OCSLA's implementing regulations. First under BOEM's implementing regulations the agency cannot use a PEIS to "pre-approve" COP terms and conditions. Doing so prematurely imposes a substantive burden on lessees and inappropriately preempts the COP approval process. BOEM regulations outlining the COP approval process state that BOEM conducts an environmental review once the lessee has submitted a COP and that "upon completion of our technical and environmental reviews and other reviews required by Federal Law BOEM may approve disapprove or approve with modifications your COP. If we approve your COP we will specify terms and conditions to be incorporated into your COP." [Footnote 14: 30 C.F.R. 585.628(f).] Importantly BOEM approves a COP including mitigation measures upon completion of the environmental review. In short as required by regulation a lessee submits a COP which includes proposed measures to reduce impacts from the proposed activities within the COP to BOEM. BOEM subsequently reviews the COP for completeness and sufficiency and conducts an environmental review on the COP. It is at this stage that BOEM determines which AMMMs</p>	<p>The Proposed Action for the Final PEIS includes the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. These measures may be required as conditions of approval for activities proposed by lessees in the COPs submitted for the six NY Bight lease areas. BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations.</p> <p>BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not prematurely adopting AMMM measures through the PEIS—but is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.</p>

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	<p>should be included in the environmental review for analysis and which AMMMs should be selected for adoption as terms and conditions of plan approval. In contradiction to these regulations BOEM is proposing to rely on this PEIS to prematurely adopt AMMMs prior to COP review and approval. While BOEM can certainly rely on a PEIS to analyze the impacts of appropriate AMMMs (as discussed in more detail below) it should not use the PEIS as authority to impose a substantive burden on a lessee prior to the COP review and approval.[Footnote 15: As noted in the section below it is no defense that a lessee may theoretically rebut the adoption of an AMMM at the COP stage by demonstrating that it is not "warranted or effective." This new burden is not found in BOEM's regulations.]</p>	
BOEM-2024-0001-0439-0011	<p>Premature adoption of AMMMs may also inadvertently overlook consultation processes such as under the Endangered Species Act (ESA) which begins with review of a fully developed site- specific action in sufficient detail to assess the effects of the action on listed species and critical habitat.[Footnote 16: 50 C.F.R. 402.14(c)(1)(i) (requiring detailed description of proposed action to initiate ESA consultation).] If the activity is allowed by an incidental take statement any reasonable and prudent measures imposed as a result of the ESA process "cannot alter the basic design location scope duration or timing of the action and may involve only minor changes." [Footnote 17: Id. 402.14(i)(2).] Similarly the Marine Mammal Protection Act ("MMPA") authorization process begins with a developer's application to conduct site-specific activities and any conditions imposed must be "practicable" and may not unduly interfere with the activity's implementation.[Footnote 18: 16 U.S.C. 1371(a)(5)(A)(i)(II)(aa) ("practicable" requirement for conditions in incidental take regulations provision); id. 1371(a)(5)(D)(ii)(I) ("practicable" requirement for conditions in incidental harassment authorizations); see Nat. Res. Def. Council Inc. v. Pritzker 828 F.3d 1125 1134-35 (9<sup>th</sup> Cir. 2016) (interpreting "least practicable adverse impact" requirement under 16 U.S.C. 1371(a)(5)(A)(i)(II)(aa)); id. At 1135 n.9. (eliminating 99% of oceans from sonar activity would be more protective of marine mammals "[b]ut it would not be practicable because it would so restrict military options for readiness</p>	<p>BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not prematurely adopting AMMM measures through the PEIS—but is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient. Identification of AMMM measures through the PEIS process would supplement and inform but not supplant the identification of measures at the project-level ESA consultation. Based on comments provided on the Draft PEIS, BOEM revised AMMM measures as presented in Appendix G. Some of these measures would mitigate impacts on ESA-listed species. During project-level ESA consultation, agencies may identify additional measures to minimize effects on federally listed species.</p>

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	<p>training that it would render such training ineffective").] Other environmental review statutes including the Clean Air Act and the Clean Water Act contain similar requirements to review site- specific plans and limit agencies' conditioning authority over proposed activities.[Footnote 19: 40 C.F.R. 1502.24 (To the fullest extent possible agencies shall prepare draft environmental impact statements concurrent and integrated with environmental impact analyses and related surveys and studies required by all other Federal environmental review laws and Executive orders applicable to the proposed action including the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) the National Historic Preservation Act of 1966 (54 U.S.C. 300101 et seq.) and the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.).] As such any AMMMs that would potentially be required under the ESA MMPA or other environmental statutes should not be adopted prior to the completion of the consultation process. In the final PEIS, BOEM should clarify that the Proposed Action is an analysis of AMMMs that BOEM may consider as conditions of approval. As such future site-specific analysis would determine whether an AMMM considered in the draft PEIS is warranted rather than determining whether such measure is [italicized: not warranted.] Under this scenario BOEM would still rely on the PEIS to provide an environmental analysis of impacts and to tier site-specific reviews but it would not prematurely require the adoption of specific AMMMs. The final PEIS would include an analysis of all reasonable AMMMs that BOEM may require as terms and conditions of COP approval. BOEM would not be required to re-analyze each AMMM included in the final PEIS when reviewing and approving a COP. As such the final PEIS would allow for consistency standardization and a more efficient environmental review process at the site-specific level.</p>	
BOEM-2024-0001-0452-0001	<p>Purpose of a PEIS We applaud BOEM for initiating this Programmatic Environmental Impact Statement (PEIS) specific to mitigation measures for regional OSW projects. This action appears partially responsive to longstanding fishing industry requests to better assess the cumulative impacts of the numerous OSW projects in the permitting pipeline and to conduct dedicated analyses regarding fisheries-</p>	<p>Section 1.2, Table 1-1, <i>History of BOEM planning and leasing activities in the NY Bight</i>, summarizes the history of BOEM's planning process and lease sale for the NY Bight, including the 2018 Call for Information and Nominations, the 2021 identification of the WEAs, and the Draft and Final Environmental Assessment (EA) for commercial and research leases. The table also summarizes the public notification and public comment</p>

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	<p>specific mitigation measures that should be included as Terms and Conditions of any OSW project approval. [Footnote 10: As described in later sections of these comments a PEIS can only meet BOEM's obligations to avoid minimize and mitigate impacts to the environment if conducted in advance of lease issuance and if it includes all activities related to the proposed action in this case the multiple phases of OSW development. Instead the timing of this PEIS after leases have been issued results in the most meaningful opportunities to avoid impacts identified through environmental review to have already been lost.] The federal OSW leasing program needs substantially more attention devoted toward developing and incorporating fisheries and ecosystem data not less and this PEIS should not result in reduced scrutiny in the downstream approval of any OSW project. Rather we reiterate previous well known requests to BOEM to develop measurable criteria for excluding areas from development when risks to the physical and human environment exceed acceptable thresholds and apply those on regional and project-specific bases in all regions. Disappointingly the draft PEIS only evaluates the six OSW leases in the NY Bight excluding the existing leases on the east coast and anticipated addition of Central Atlantic WEAs all which contribute to cumulative effects to many of the same species oceanographic systems and fisheries. The draft PEIS also does not explain how BOEM's ongoing development of fisheries mitigation guidelines will interface with the findings of the final PEIS.</p>	<p>periods that were conducted as part of the process. The analysis and development of the WEA in the NY Bight are summarized in the <i>New York Bight Area Identification Memorandum Pursuant to 30 CFR 585.211(b)</i>, which is found on BOEM's website: <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/Memorandum%20for%20Area%20ID%20in%20the%20NY%20Bight.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/Memorandum%20for%20Area%20ID%20in%20the%20NY%20Bight.pdf</a>.</p> <p>Each individual COP submitted by a developer to BOEM will be separately analyzed as required under BOEM's regulations, and that analysis will disclose the full impacts of the construction and installation, O&amp;M, and conceptual decommissioning of the project. For each resource area, Appendix C, <i>Tiering Guidance</i>, summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area.</p> <p>BOEM assesses the cumulative effects of the NY Bight projects in combination with ongoing and planned reasonably foreseeable activities, which are defined in Section 3.3.1. In addition, BOEM would have the opportunity to consider new information in each individual COP-specific NEPA document about what other activities are reasonably foreseeable at the time. Table 3.6.1-21 provides an RP, COMFIS-5, which recommends that lessees follow the Fisheries Survey Guidelines issued by BOEM with regards to pre-, during- and post-construction fisheries monitoring survey plan design.</p>
BOEM-2024-0001-0469-0002	<p>Purpose of and Need for the Proposed Action</p> <p>The Draft PEIS states that the purpose of the proposed action is to: "identify issues analyze degree of potential impacts and adopt as appropriate AMMM measures This PEIS will reduce redundancies across COP-specific NEPA analyses including very similar affected environments impacts and mitigation measures and will allow for future project-specific NEPA documents to be focused on the project-specific impacts not considered in the PEIS or those impacts that warrant further consideration. The Proposed Action is needed to help BOEM make timely decisions on COPs submitted for the six</p>	<p>The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i>, is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and analyze AMMM measures that could reduce those effects. The PEIS does not approve any projects. Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&amp;M, and conceptual decommissioning of the project. For each resource area, Appendix C, <i>Tiering Guidance</i>, summarizes the affected</p>

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	<p>NY Bight lease areas." [Footnote 5: BUREAU OF OCEAN ENERGY MGMT. NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT at 1-4 1-5 (Jan. 2024).] The agency's main goal in taking this approach clearly appears to be expediting review and approvals of future OSW projects. This is concerning as there are many knowledge gaps regarding the marine life in this region and the potential effect of creating a vast array of OSW installations. [Footnote 6: E.g. BUREAU OF OCEAN ENERGY MGMT. NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT appx. E (Jan. 2024); BUREAU OCEAN ENERGY MGMT. &amp; NAT'L OCEANIC &amp; ATMOSPHERIC ADMIN. BOEM &amp; NOAA FISHERIES NORTH ATLANTIC RIGHT WHALE AND OFFSHORE WIND STRATEGY at 9 (Jan. 2024) (citing Dorrell RM Lloyd CJ Lincoln BJ Rippeth TP Taylor JR Caulfield CP Sharples J Polton JA Scannell BD Greaves DM et al. 2022. Anthropogenic mixing in seasonally stratified shelf seas by offshore wind farm infrastructure. <i>Frontiers in Marine Science</i>. 9:830927. Doi:10.3389/fmars.2022.830927 and Raghukumar K Nelson T Jacox M Chartrand C Fiechter J Chang G Cheung L Roberts J. 2023. Projected cross-shore changes in upwelling induced by offshore wind farm development along the California coast. <i>Communications Earth &amp; Environment</i>. 4(4):116. Doi:10.1038/s43247-023-00780-y).] Sound science takes time; as does planning to determine and assess the impacts and take actions to avoid minimize and/or mitigate accordingly. Doing less puts marine life at grave risk.</p>	<p>environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area.</p> <p>During the COP-specific NEPA process, BOEM will hold a public comment period at the start of the NEPA process (scoping) and following the release of the Draft NEPA document, whereby members of the public and agencies can provide input to help inform the NEPA process, alternatives, and mitigation measures to identify and minimize environmental effects. Additionally, throughout the NEPA process BOEM works closely with Cooperating Tribal Governments and federal and state agencies to assist with assessing impacts and identifying mitigation measures.</p>
BOEM-2024-0001-0469-0003	<p>The Draft PEIS assumes the maximum use scenario that projects will use the most impactful range of the project design envelope. However for some factors BOEM predicts that impacts will be "negligible to major "the entire possible range of impacts because the actual impacts will depend on the individual parameters of the project. [Footnote 7: NEW YORK BIGHT DRAFT ENVIRONMENTAL IMPACT STATEMENT supra note 5 at ES-10-13] In addition the Tiering Guidance appendix states that the impact analysis in the PEIS for categories such as marine mammals cannot be used for individual Construction and Operations Plan ("COP") environmental reviews under the National Environmental Policy Act ("NEPA"). [Footnote 8: Id. At appx. C.] Taken together this all calls into question the utility of</p>	<p>The PEIS does not approve any projects. Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&amp;M, and conceptual decommissioning of the project. Project-specific analyses that tier from or incorporate by reference this PEIS will evaluate whether a project would have greater, equal, fewer, or different impacts than those that were analyzed in the PEIS by considering the level of action analyzed and the particularities of the site. Refer to Appendix C, <i>Tiering Guidance</i>, for specific recommendations by resource topic regarding how the PEIS may be incorporated by reference in the future COP-specific NEPA</p>

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	attempting to analyze such project-dependent impacts on a programmatic scale.	documents; this appendix also identifies additional analysis that would likely be required as part of the COP-specific NEPA analysis once detailed and site-specific project information is available.
BOEM-2024-0001-0469-0004	In absence of a PEIS avoidance minimization and mitigation ("AMMM") measures would be analyzed in the NEPA reviews of individual projects on a case-by-case basis. BOEM proposes choosing Alternative C adopting mitigation measures on a programmatic level i.e. for all six projects. [Footnote 9: Id. At ES-3]. According to BOEM representatives this would allow the agency to simply "check a box" applying the mitigation measure once they determined the measure applied to the individual project instead of performing an individual analysis on the mitigation measure. However for many affected resources the projected impacts remain constant between Alternative B (deferring adoption of mitigation measures until the individual NEPA review) and Alternative C especially for cumulative impacts. BOEM representatives stated that they would refine the mitigation measures as OSW develops and expressed that they were especially interested in comments on the mitigation measures themselves which COA provides later in Section VI. While COA does not wish to discourage the development and adaptation of AMMM measures it is unacceptable that currently available AMMM measures do not appear to be effective based on these projections.	Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&M, and conceptual decommissioning of the project. Project-specific analyses that tier from or incorporate by reference this PEIS will evaluate whether a project would have greater, equal, fewer, or different impacts than those that were analyzed in the PEIS by considering the level of action analyzed and the particularities of the site. Based on public and agency comments on the Draft PEIS, BOEM has revised several AMMM measures, which are described in Appendix G, <i>Mitigation and Monitoring</i> .
BOEM-2024-0001-0469-0005	Additionally the Draft PEIS references New York and New Jersey's statutory mandate and executive orders (respectively) requiring a certain amount of wind energy generation by a target year as well as the federal government's Executive Order 14008 and the associated goal to generate thirty (30) gigawatts of OSW capacity by 2030. The federal goal was developed by the Departments of Interior, Energy, Commerce, and Transportation but there is no detailed documentation or analysis on how these goals were developed and what environmental technological or economic standards they meet nor any public transparency or review. All these goals are intended to boost renewable energy development but the goals do not go through the same environmental review processes as the individual projects created to meet them.	Section 1.3, <i>Purpose of and Need for the Proposed Action</i> , describes the purpose of the Proposed Action, which supports Executive Order 14008 "Tackling the Climate Crisis at Home and Abroad" and President Biden administration's goal of 30 GW of offshore wind capacity by 2030. Goals set by the federal government or the states are not federal actions that require NEPA review.

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BOEM-2024-0001-0469-0006	In summary the purpose and need statement prioritizes speed over due process and filling scientific knowledge gaps. The programmatic approach is of limited help when so many impacts must be considered at the individual COP review stage and the AMMM measures do not appear to change the overall environmental impacts in many cases. Further the push for OSW development is based on aspirational goals.	Project-specific analyses that tier from or incorporate by reference this PEIS will evaluate whether a project would have greater, equal, fewer, or different impacts than those that were analyzed in the PEIS by considering the level of action analyzed and the particularities of the site. Refer to Appendix C, <i>Tiering Guidance</i> , for specific recommendations by resource topic regarding how the PEIS may be incorporated by reference in the future COP-specific NEPA documents; this appendix also identifies additional analysis that would likely be required as part of the COP-specific NEPA analysis once detailed and site-specific project information is available.
BOEM-2024-0001-0470-0004	The amounts of installed capacity and number of Wind Turbine Generators (WTGs) in the planned projects as described in the PEIS are inconsistent and seriously misleading:--On page ES-4 the PEIS states "Based on a conservatively estimated power ratio of 3 megawatts per square kilometer BOEM estimates that full development of leases in this area has the potential to create up to 5.6 to 7 GW of offshore wind energy."--On the same page the PEIS states an estimated 16-18 GW of offshore wind energy may be necessary to ensure New York State achieves its Climate Act mandates (New York State Climate Action Council 2022).--On page ES-7 of the PEIS BOEM states that "For the analysis of six NY Bight projects BOEM anticipates development of 1103 WTGs 22 offshore substations (OSSs) 44 offshore export cables totaling 1772 miles (2852 kilometers) and 1582 miles (2546 kilometers) of inter-array cables across the six NY Bight lease areas."---This assertion that the six NY Bight projects would build "up to 1103 WTGS" is repeated on PEIS page 2-16.--On page 3.4.1-8 the PEIS says the NY Bight Projects evaluated in the PEIS would construct an estimated 9922 MW of renewable power from the installation of 713 WTGs citing Table D2-1 in Appendix D.---Table D2-1 indicates only 8822 MW will be installed by the current projects and require 615 WTGs---Table D2-1 further indicates that a further 1103 WTGs are planned but fails to disclose the resulting installed MWs. (Using a ratio analysis of the data provided in Table D2-1 if 615 WTGs will produce 8822 MW of installed capacity then 1103 WTGs would constitute another 15822 MW installed).--The Table in Appendix D appears to conflict with text	The estimated power ratio of 3 MW per square kilometer and an estimate of 5.6 to 7 GW for total generating capacity of the NY Bight leases presented in Section 1.3 of the PEIS are derived from the BOEM December 2021 Final Sale Notice for the NY Bight leases. BOEM has added a footnote to this statement in Section 1.3 clarifying the source of this information. The power-generating capacity from the Final Sale Notice is provided for informational purposes and is not used in the analysis of the alternatives. The analysis of the alternatives is based on the parameters of the RPDE described in Section 2.1.2 of Chapter 2. BOEM recognizes that as technology advances and as projects are designed to maximize power output, the actual generation capacity of the NY Bight lease areas could be greater. Refined estimates of the anticipated generation capacity of each project proposed in the NY Bight lease areas will be described in each COP and project-level NEPA analysis. The purpose and need states the PEIS supports state climate goals, but it is not intended to meet state obligations. BOEM's leasing process for offshore wind is independent of state goals and solicitations. BOEM is required to assess COPs as submitted by developers; its role is not to design projects to meet state goals. The estimate of 9,922 MW of renewable power in Section 3.4.1.1 (now 9,561 MW due to updates to ongoing and planned offshore wind projects in PEIS Appendix D) is describing ongoing and planned offshore wind in the geographic analysis area for air

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	elsewhere in the PEIS and indicates the total planned buildout of OSW in the NY Bight leases is 26644 MW.	quality, excluding the NY Bight project. In Table D2-1, the combined number of turbines for all six NY Bight projects (1,103 WTGs) is presented, consistent with the estimates presented in the six-project RPDE in Chapter 2. To avoid speculation, the total generating capacity of the NY Bight leases is not described. The generating capacity of a turbine or a project does not directly relate to impacts; it is rather the physical dimensions of the WTGs and other parameters that relate to environmental impacts.
BOEM-2024-0001-0470-0005	[Bold: II. COMMENTS][Underline: 1. Segmentation:] [Bold: The PEIS violates 38 CFR Section 200.4 by improperly segmenting the Proposed Action from the full complement of OSW projects and installed Wind Turbine Generators (WTGs) needed to meet the dual legal requirements of service load obligations and applicable state mandates for renewable energy.] The purpose of the Proposed Actions is to build and operate OSW facilities that produce "renewable" electricity from sources approved under NY law and NJ Executive Order to meet what is now and re- mains in the future a long-established "service obligation" [Footnote 1: Federal law defines the "service obligation" as a requirement applicable to or the exercise of authority granted to an electric utility under Federal State or local law or under long-term contracts to provide electric service to end-users or to a distribution utility (16 USC Section 824q).] to provide electricity to end-use consumers. Switching the existing generation from fossil fuels and nuclear power to renewables such as offshore wind requires full assessment of the impacts of building out the full complement of OSW facilities that will be needed so a) the public is fully informed of the magnitude of the federal action and b) complete and cumulative impacts can be assessed. This "segmenting" of OSW projects is a blatant violation of NEPA and its regulations given the stated purpose of the PEIS is to assess the "potential biological socioeconomic physical and cultural impacts that could result from development activities for six commercial wind energy leases in an area offshore New Jersey and New York known as the New York Bight (NY Bight)" (PEIS page ES-3).	The regulations identified in the comment (38 CFR 200.4) do not apply to BOEM or the DOI. The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i> , is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and analyze AMMM measures that could reduce those effects. The PEIS does not approve any projects. Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&M, and conceptual decommissioning of the project. For each resource area, Appendix C, <i>Tiering Guidance</i> , summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area. BOEM assesses the cumulative effects of each project in combination with ongoing and planned reasonably foreseeable activities, which are defined in Section 3.3.1. The cumulative effects analysis in the PEIS considers ongoing and planned offshore wind activities. This analysis will be reviewed and augmented at the COP specific stage to ensure that each project is considered in the context of reasonably foreseeable activities. In the PEIS, BOEM considers the effects of the addition of the six NY Bight projects to other ongoing and planned projects in accordance with NEPA.
BOEM-2024-0001-0470-0010	[Italics: c) The forecast growth in electricity demand by industry regulators cannot be met by the segmented OSW Projects described in the PEIS]The planned 8822/9922 MW construction under the	The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i> , is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and

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	<p>Proposed Action is well below the 20 MW total needed for the initial compliance with NYS CLCPA and the NJ EO and woefully below what NYISO growth forecasts indicate will be needed for full NYS compliance alone. The PEIS borders on fraudulent in its failure to fully disclose and assess the full effects of building out and operating the total number of WTGs needed to "meet" renewable goals and mandates given the realities of demand growth and service obligation; the full buildout will generate compounding and cumulative damage to irreplaceable maritime assets from construction and operation of both WTGs and attendant transmission facilities that are effectively ignored. Nor does the PEIS disclose and analyze the amount of non-intermittent electric generation (nuclear hydro fossil etc) along with storage/battery facilities that will be needed to ensure reliable electric supplies during the 60% downtime experienced by OSW generation or storage facilities.</p>	<p>analyze AMMM measures that could reduce those effects. The PEIS does not approve any projects.</p> <p>The purpose and need further states that the PEIS supports federal goals of 30 GW and state goals, but it is not intended to meet state obligations. BOEM's leasing process for offshore wind is entirely independent of state goals and solicitations. BOEM is required to assess COPs as submitted by developers; its role is not to design projects to meet state goals. The PEIS does disclose the cumulative effects of buildout of other ongoing and planned offshore wind projects on the OCS within the geographic area of analysis for each resource. Regarding other sources of energy, the PEIS is analyzing wind development in six offshore wind lease areas, and the analysis of other sources of energy or battery storage is outside the scope of this PEIS.</p>
BOEM-2024-0001-0470-0011	<p>-[Italics: New York]Page 3.4.1-6 of the PEIS notes that the New York State Energy Research and Development Agency (NY- SERDA) led the development of the New York State Offshore Wind Master Plan is leading the coordination of offshore wind opportunities in New York State and is supporting the development of 9000 MW of offshore wind energy by 2035.[Table 4: NYSERDA Projected Generation and Fuel Type]NYSERDA Generation Model: Upstate 2030; Demand Load (Gigawatt Hours/ GWh): 51223; Percentage Renewable: 70%; Percentage Offshore Wind: 0%NYSERDA Generation Model: Downstate 2030; Demand Load (Gigawatt Hours/ GWh): 100455; Percentage Renewable: 70%; Percentage Offshore Wind: 24%NYSERDA Generation Model: Upstate 2040; Demand Load (Gigawatt Hours/ GWh): 74905; Percentage Renewable: 75%; Percentage Offshore Wind: 0%NYSERDA Generation Model: Downstate 2040; Demand Load (Gigawatt Hours/ GWh): 132601; Percentage Renewable: 90%; Percentage Offshore Wind: 33%[Table End][Bold: Source: NYSERDA.NY.Gov]On its [Underline: "Story of Our Grid"] page NYSERDA divides the NYCA into Up- and Downstate regions to illustrate how various fuel types will be used to deliver the NYISO-measured load demand. NYSERDA calculations of future demand levels (using numbers similar but not equal to those of the</p>	<p>The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i>, is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and analyze AMMM measures that could reduce those effects. The PEIS does not approve any projects.</p> <p>The purpose and need further states that the PEIS supports federal goals of 30 GW and state goals, but it is not intended to meet state obligations. BOEM's leasing process for offshore wind is entirely independent of state goals and solicitations. BOEM is required to assess COPs as submitted by developers; its role is not to design projects to meet state goals. Additionally, BOEM can only act as authorized under OCSLA, and it has no control over how much energy/electricity is needed or what other types of energy sources are used.</p> <p>Each individual COP submitted by a developer to BOEM will be analyzed separately as required under NEPA and will disclose the full impacts of the construction and installation, O&amp;M, and conceptual decommissioning of the project. For each resource area, Appendix C, <i>Tiering Guidance</i>, summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that BOEM anticipates</p>

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	<p>NYISO) and planned renewable contributions for the NYS Grid are summarized in Table 4. [Footnote 3: The total demand included in the NYSERDA calculations for 2030 are lower and the 2040 estimates are higher than the forecasts in the NYISO Gold Book provided in Table 2. NYSERDA does not provide estimates to 2053] [Footnote 4: New York City demand is currently about 55000 GWh a little over half of the forecast 2030 Downstate demand for ~100000 GWh.] NYSERDA's Upstate/Downstate demand ratios run about one-third/two-thirds of the total load demand in the NYCA. Applying those ratios to the 2053 NYISO forecast downstate demand will approximate 155113 GWh. The "Story of Our Grid" webpage states that "Downstate load is completely met with zero emissions generation in 2040" a claim that is based on 33% of load being met with offshore wind. Applying this 33% requirement to the 2053 demand forecast means that more than [Bold: 50000 GWh] of OSW generation is necessary meet the CPCLA mandates in 2053. [Footnote 5: Calculations of GWh from OSW WTGs herein use a capacity factor of 40% a three-year average of global capacity factors for 2020 to 2022 reported in 2024 by Statista.] Sourcing the 2040 downstate demand with 33% OSW production (as planned by NYSERDA) would require WTG capacity to make [Bold: 43758 GWh.] As noted above were the projects to actually total 9922 MW from 713 WTGs (vice 8822 MW from 613 WTGs) electric generation could approach [Bold: 35000 GWh of electricity.] Assuming NY gets 50% of the output from the set (segment) of projects analyzed in the PEIS [Bold: the 2053 demand shortfall would be more than 30000 GWh.] Looked at another way meeting the 2053 downstate demand of over 155000 GWh with 33% OSW [Bold: (50000 GWh)] requires about [Bold: 15000 MW of installed OSW capacity.] This means NYS alone requires nearly half of all the off-shore wind in the Administration's Program to actually meet its CPCLA obligations. The PEIS completely fails to disclose the reasonably foreseeable future actions needed to secure the actual MW/WTG buildout needed to produce the 50000 GWh to meet the NYS mandate alone.[Table Start: Eastern Seaboard Homes]Eastern Seaboard States: ME; "HOMES" (in millions): 0.57Eastern Seaboard States: MA; "HOMES" (in millions): 2.71Eastern Seaboard States: RI; "HOMES" (in millions): 0.42Eastern</p>	<p>may be included in the COP-specific NEPA analysis for each lease area.</p> <p>BOEM assesses the cumulative effects of each project in combination with ongoing and planned reasonably foreseeable activities, which are defined in Section 3.3.1. The cumulative effects analysis in the PEIS considers ongoing and planned offshore wind activities. This analysis will be reviewed and augmented at the COP-specific stage to ensure that each project is considered in the context of reasonably foreseeable activities. In the PEIS, BOEM considers the effects of the addition of the six NY Bight projects to other ongoing and planned projects in accordance with NEPA.</p>

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	<p>Seaboard States: CT; "HOMES" (in millions): 1.39Eastern Seaboard States: NY; "HOMES" (in millions): 7.53Eastern Seaboard States: NJ; "HOMES" (in millions): 3.39Eastern Seaboard States: PA; "HOMES" (in millions): 5.14Eastern Seaboard States: DE; "HOMES" (in millions): 0.45Eastern Seaboard States: MD; "HOMES" (in millions): 2.29Eastern Seaboard States: VA; "HOMES" (in millions): 3.24Eastern Seaboard States: NC; "HOMES" (in millions): 4.01Eastern Seaboard States: SC; "HOMES" (in millions): 1.97Eastern Seaboard States: GA; "HOMES" (in millions): 3.88Eastern Seaboard States: FL; "HOMES" (in millions): 8.15Eastern Seaboard States: Total; "HOMES" (in millions): 45.14[Table End][Bold: Source: US Census Bureau] For purposes of grid stability and reliability as well as delivering forecast demand requirements it is important to note that the Downstate/NYC demand for 50000 GWh includes vast municipal enterprise systems such as subways wastewater treatment plants hospitals emergency services (police fire emergency medical) street and traffic lights all requiring 24/7 electricity supply in copious amounts for all residents but especially underserved and environ- mental justice populations. Describing actual turbine electricity production in euphemistic misleading comparisons about powering "X Million Homes" is highly deceptive. As Table 5 shows the Eastern Seaboard has over 45 million "homes." Breaking down the deceptive tagline about the vaunted Atlantic OSW program powering "10 Million Homes" if the planned 30 GW installed can serve 10 million homes 45 million homes will require 135 GW installed. The US Department of Energy typically cites 412 offshore WTGs as the requirement per gigawatt meaning that powering [Bold: all] the East coast homes (and [Bold: just] the homes) with the needed 135 gigawatts of wind at 412 turbines per gigawatt puts over 55000 turbines in the irreplaceable maritime system of the Atlantic a far cry for the 600-700 turbine segment analyzed in the PEIS.</p>	
BOEM-2024-0001-0470-0012	<p>[Italics: New Jersey]Data on load growth in New Jersey is not as clear due to its inclusion in the multi-state Pennsylvania/Jersey/Maryland ISO (PJM). The [Underline: 2024 PJM Load Forecast Report] states that the total annual energy use throughout the PJM footprint is expected to increase nearly 40% by 2039 from the current 813328 to 1021955 GWh. Of that about 30000 GWh of additional demand is</p>	Please see response to comment BOEM-2024-0001-0470-0011.

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	<p>identified as coming from the four NJ utility zones summarized in Table 6. [Footnote 6: The total NJ load growth was calculated by subtracting the 2024 load forecast amount from the 2039 load forecast amount for the four NJ service zones listed in Table E-1 ANNUAL NET ENERGY (GWh) AND GROWTH RATES FOR EACH PJM MID- ATLANTIC ZONE AND GEOGRAPHIC REGION 2024 – 2034 summarized on pages 71-72 of the 2024 PJM Load Forecast Report linked above.][Table 6: NJ Forecast Load Increases]NJ Utility Zone: Atlantic Electric (AE); Load increase 2024-2039 (GWh): 2556NJ Utility Zone: Jersey Central Power &amp; Light (JCPL); Load increase 2024-2039 (GWh): 11380NJ Utility Zone: Public Service Electric &amp; Gas (PS); Load increase 2024-2039 (GWh): 15155NJ Utility Zone: Rockland Electric (East) (RECO); Load increase 2024-2039 (GWh): 341NJ Utility Zone: Total; Load increase 2024-2039 (GWh): 29432[Table End][Source: 2024 PJM Load Forecast Report]According to the [underline: U.S. Department of Energy's Energy Information Agency (EIA)] New Jersey plants of all types produced 65061 GWh of electricity in 2022 of which 33394 GWh came from natural gas production. [Footnote 7: US EIA New Jersey Electricity Profile 2022. New Jersey currently has 26 natural gas-fired power plants.] The entire mandated 11000 MW of OSW installed capacity (only a fraction of which will come from the Proposed Action being evaluated) could only produce about 39000 GWh. This means that full buildout of the NJ EO goal (one-third of the total Atlantic OSW planned by the Biden Administration) might produce enough electricity to replace natural gas plants or increase production to meet load growth from data centers and electric vehicles [Bold: but not both.] It is hard to conceive how the purpose of the action to make the New Jersey grid emission-free is satisfied if only the disclosed segment of OSW wind construction is used. These arithmetic impossibilities become even more glaring and problematic when considering the 2023 acceleration of clean energy goals in [Underline: NJ Executive Order 315]. Previously the 2019 EMP required 100 percent clean energy by 2050; the new EO 315 deadline is 2035. Notably the NJ State Senate recently woke suddenly from a green-dream when a bill authorizing a public referendum on amending the state's Constitution to ban construction of new power plants that burn natural gas or other</p>	

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	fossil fuels was amended to allow the construction of such plants if they are to be primarily used as emergency backup power sources. The carve-out manages the damaging grid reliability risks exposed when Superstorm Sandy knocked out power in 2012 causing nearly a billion gallons of untreated sewage to flow into area waterways because sewage plants lacked accessible backup generation. The New Jersey arithmetic again demonstrates that the realities of the service obligation and actual OSW electricity production confirm these projects are but a fractional segmented portion of the actions needed to meet the overall energy production goals not just renewable standards.	
BOEM-2024-0001-0470-0013	[Italics: c) The final EIS analysis must analyze the fully aggregated (not segmented) complement of operational generation assets and storage capacity needed to reliably satisfy the identified electricity demand (including growth) while combatting the climate crisis through deployment of clean energy technologies and infrastructure.]The PEIS must redefine the Proposed Action as including construction and operation of the full complement of WTGs and storage facilities needed to meet both the known load requirements and renewable portfolio standards simultaneously. Without properly defined and unsegmented actions any evaluation or adoption of so-called programmatic avoidance minimization mitigation and monitoring (AMMM) measures remains inaccurate insufficient misleading and violative of the spirit and letter of the National Environmental Policy Act and its attendant regulations.	Please see response to comment BOEM-2024-0001-0470-0011.
BOEM-2024-0001-0470-0020 and BOEM-2024-0001-0470-0021	[Bold: III. SUMMARY]-In spite of high populations and significant population density East Coast states almost universally achieve the lowest per capita carbon emissions in the country based on their historic underwriting of clean energy and transport systems. --Inland states with whom eastern states are competing for new manufacturing facilities and other economic development opportunities still make significant portions of their electricity from coal and natural gas. This keeps electricity prices low and attracts businesses that use electricity as operational fuel at the same time greenhouse gas emission levels remain high. --Forcing eastern states to shut down clean capacity and/or prematurely retire non-coal electricity production facilities in favor	Please see response to comment BOEM-2024-0001-0470-0011. BOEM has authority under OCSLA to authorize renewable energy activities on the OCS and evaluates projects as proposed by developers under its regulations. Electricity rates are not within the scope of the PEIS and are part of agreements with the state and developer.

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	of massive expenditures for OSW facilities that are merely presumed to be “environmentally preferable” (all evidence to the contrary) further increases already high east coast electricity prices and exacerbates [Underline: competitive advantage already accruing to fossil-electric generating states.]	
BOEM-2024-0001-0470-0022 and BOEM-2024-0001-0470-0023	<p>For an industry as damaging dangerous and risky as OSW whether by design or function BOEM's system of programmatic EISs coupled with tiered analysis for subsequent issuance of various construction permits and approvals woefully fails to meet the most basic principles and requirements of the National Environmental Policy Act and this PEIS is no different.</p> <p>--Analyses separated into geographically disperse lease-areas inevitably suffer from improper segmentation fail to assess cumulative impacts and ignore the macro-socioeconomic impacts that will affect businesses and populations across large areas because these projects involve electricity as fundamental to survival in today's times as air and water.</p>	Please see response to comment BOEM-2024-0001-0470-0011. The PEIS is a regional analysis and not an analysis on specific individual lease areas.
BOEM-2024-0001-0470-0024	<p>BOEM cannot willfully ignore the realities and plain arithmetic of electricity demand growth when assessing the viability and effects of eliminating electric generation plants that can meet critical survival needs sanitation transportation communication safety education food security inter alia in favor of expensive unreliable and damaging WTGs that cannot do the job without multiple layers of storage backup along with additive transmission facilities. These sine qua non co-components bring compounding as well as cumulative negative effects to the areas where they must be built and operated.</p> <p>--By 2053 downstate New York electricity demand growth is forecast to be over 155000 GWh (two-thirds of 253020 GWh); producing 33% of that load with OSW (50000 GWh) requires the output of about 15000 MW of installed OSW capacity far more than the current acknowledged projects could deliver to the NY Grid.</p> <p>--By 2039 New Jersey is forecast to add 29432 GWh to its demand load and also plans to replace 33394 GWh of current electricity produced by natural gas plants both with OSW. Satisfying this actual requirement for 62826 GWh of clean/renewable electricity for NJ's portion of the PJM grid with OSW would necessitate more than the planned 11 GW installed capacity.</p>	Please see response to comment BOEM-2024-0001-0470-0011. Offshore wind would likely be in addition to other energy sources. Wind energy would displace fossil fuel energy to the extent that it is offered to the grid at a lower price than the bids from fossil-fueled energy sources.

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	<p>--Electricity demand in these two states alone have an estimated requirement for about 26 GW of installed OSW to meet service obligations almost 87% of the entire 30 GW Atlantic Offshore Wind Program planned by the Biden Administration.</p> <p>--To the extent the current Proposed Actions build less than 26000 GW installed OSW capacity in the NY Bight to meet concurrent demand growth and portfolio standards additional undisclosed energy storage facilities will also be required to reliably assure service obligation generation levels. The size location and full suite of impacts from the construction and operation of such storage facilities along with all necessary transmission and distribution infrastructure must be included in any and all environmental impact analysis to prevent improper segmentation and assure full cumulative impact analysis.</p>	
BOEM-2024-0001-0470-0025	<p>No amount of mitigation can be accurately assessed or planned in the absence of accurate and fully disclosed impacts and effects from building and operating the full complement of OSW WTGs and attendant storage/transmission facilities needed to meet the knowable and known amounts of electricity required to sustain the populations and assets of the affected states.</p> <p>The environmentally preferable option for greening the nation's electricity portfolio does not involve the green eastern seaboard states. Real decarbonization will come from discontinuing the 675000 GWh of electricity still produced with coal plants in the US few if any of which are in Atlantic Seaboard states.</p> <p>--No agency of federal state or local government should use public funds to subsidize or under- write premature retirement and/or displacement of existing non-coal electricity production assets until existing coal plants are first replaced by the ratepayers who benefit from them (especially those in states with the highest GHG outputs per capita).</p>	Please see response to comment BOEM-2024-0001-0470-0011.
BOEM-2024-0001-0474-0004	<p>Among other reasons the action is Arbitrary because the BOEM administrative process favors the private interests of offshore wind developers to the detriment of the citizen stakeholders and the general public. Among other reasons the action is Arbitrary because the energy goals established in Executive Orders and Presidential Proclamations are not within the authority of the Executive Branch</p>	<p>Please see response to comment BOEM-2024-0001-0470-0011.</p> <p>BOEM's responsibility under the Energy Policy Act of 2005 is to issue renewable energy leases, easements, and ROWs for activities on the OCS (see PEIS Section 1.4, <i>Regulatory Overview</i>).</p>

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	and do not have the force of law as the authority belongs in the legislative branch of government. Among other reasons the action is Arbitrary because the energy goals established by Executive Orders and presidential proclamations usurp personal freedoms. Among other reasons the action is Arbitrary because fees paid by the leaseholders and other funds collected from leaseholders and offshore wind developers are illegally and improperly deposited to the United States Treasury without dedication to the specific purpose and recognition of the cost of harm and remediation to the ocean. Among other reasons the action is Arbitrary because the leasehold interests restrict and interfere with the right to travel of all citizens and all members of the public.	
BOEM-2024-0001-0528c	Beginning with offshore wind, transforming the ocean into a giant power plant. This despite the fact that the industry is in economic and technological turmoil, as evidenced by the abandonment of many projects by Ørsted and others, as well as technological challenges and failures, such as the inadequate grid to even accept the energy generated.	BOEM's responsibility under the Energy Policy Act of 2005 is to issue renewable energy leases, easements, and ROWs for activities on the OCS. The purpose of the PEIS is to identify issues and analyze potential impacts for the six NY Bight lease areas. Grid reliability is outside of BOEM's regulatory authority and the scope of the PEIS. The grid operator is responsible for managing the reliability of the grid. While offshore wind in the NY Bight would provide a new source of energy to the states of New York and New Jersey, other sources of energy would still be generated.
BOEM-2024-0001-0528c	And yet this PEIS seeks to streamline and expedite the issuance of these industrial scale offshore wind projects on these 6 lease areas which impact over nearly a half 1 million acres. To be clear, Clean Ocean action is not opposed to the idea of offshore wind, Clean Ocean Action opposes this reckless scope, scale and speed currently underway due to its lack of robust, independent science, transparency, good governance, and due diligence. Our ocean deserves better. A fair pilot project and independent cost benefit analysis, and also public transparency.	Thank you for your comment. The purpose of the Proposed Action is to describe issues, analyze degree of potential impacts, and identify, as appropriate, AMMM measures. BOEM is preparing this Final PEIS because of the close proximity of the six NY Bight lease area, their similar level of development due to the leases being awarded from the same auction, the close timing of the anticipated COP submissions, and the high, near-term demand from the states of New York and New Jersey for electricity generated by offshore wind. This PEIS will reduce redundancies across COP-specific NEPA analyses, including very similar affected environments, impacts, and mitigation measures, and it will allow for future project-specific NEPA documents to be focused on the project-specific impacts not considered in the PEIS or those impacts that warrant further consideration.

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		<p>BOEM will still conduct project-specific NEPA analysis of the COP for each lease area, and it will focus on providing site- and project-specific analyses that were not already addressed by the PEIS. Project-specific alternatives will be considered by BOEM and cooperating agencies at the COP NEPA stage.</p> <p>Further, BOEM considered but dismissed from further consideration an alternative to build a pilot project (PEIS Chapter 2, Table 2-3). Data from sites that are constructed and operating (e.g., Block Island), as well as the pilot project in Virginia, were incorporated into this PEIS and will be incorporated into the development of project-specific COPs and EISs.</p>
BOEM-2024-0001-0528f	Despite a growing demand for energy, the scale, scope, and speed of these offshore wind projects has continued to be a concern, but with this PES, it seems, the intent is to move even faster.	<p>Thank you for your comment.</p> <p>The purpose of the Proposed Action is to describe issues, analyze degree of potential impacts, and identify, as appropriate, AMMM measures. BOEM is preparing this Final PEIS because of the close proximity of the six NY Bight lease areas, their similar level of development due to the leases being awarded from the same auction, the close timing of the anticipated COP submissions, and the high, near-term demand from the states of New York and New Jersey for electricity generated by offshore wind. This PEIS will reduce redundancies across COP-specific NEPA analyses, including very similar affected environments, impacts, and mitigation measures, and it will allow for future project-specific NEPA documents to be focused on the project-specific impacts not considered in the PEIS or those impacts that warrant further consideration. The expectation is that the analysis at the COP NEPA stage can be more streamlined and efficient.</p> <p>BOEM will still conduct project-specific NEPA analysis of the COP for each lease area, and it will focus on providing site- and project-specific analyses that were not already addressed by the PEIS. Project-specific alternatives will be considered by BOEM and cooperating agencies at the COP NEPA stage.</p>
BOEM-2024-0001-0528w	The environmental impacts of the individual projects will vary greatly, depending on which design elements they choose. Yet the PEIS would allow them to use, depending on the resource, the same characterization of the affected environment and or qualitative impacts estimated in the PEIS for the environmental reviews of the	Please see response to comment BOEM-2024-0001-0528f for information on the purpose of this PEIS and subsequent COP NEPA reviews.

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	individual projects. This will expedite the environmental review process and threaten the quality of the analysis.	
BOEM-2024-0001-0529k	Instead, the government has set its sights primarily on fast tracking, massive ocean industrialization, transforming the ocean into a giant offshore power plant. Despite the fact that the industry is in economic and technological turmoil.	Please see response to comment BOEM-2024-0001-0528f for information on the purpose of this PEIS and subsequent COP NEPA reviews.
BOEM-2024-0001-0529o	The scale, scope and speed of these offshore wind projects has always been a concern, but with this PEIS it seems the intent is to move even faster.	Please see response to comment BOEM-2024-0001-0528f for information on the purpose of this PEIS and subsequent COP NEPA reviews.
BOEM-2024-0001-0529t	The stated purpose and need for this PEIS is to consider the combined impacts of these projects in order to streamline offshore wind development in response to President Biden’s executive order calling for a certain amount of offshore wind energy to be developed by 2040, it’s 11 gigawatts. This presupposes that offshore wind projects must be developed in this area which runs counter to the purpose of the National Environmental, Environmental Policy Act, which is to analyze the effects of projects before deciding to build them. The purpose in this section also incorrectly claims that BOEM can predict the environmental impacts of projects with wide ranges of design elements in a helpful way. Because choosing different foundations, different numbers of turbines or different types of substations, just to name a few examples, will have very different environmental impacts depending on which part of the range a developer chooses. That is likely why the range of impacts for the different factors can be as high as negligible to major. Yet the PEIS would allow BOEM to use, depending on the factor, the same characterization of the affected environment and the same qualitative impacts estimated in the PEIS and the environmental reviews of the individual projects. This is what we mean when we say that speeding up the environmental review process comes at the expense of the quality of the analysis.	Please see response to comment BOEM-2024-0001-0528f for information on the purpose of this PEIS and subsequent COP NEPA reviews.
nguBOEM-2024-0001-0439-0008	In the introduction BOEM states that it is developing this Draft PEIS "to (1) identify analyze and [italicized: adopt] programmatic AMMM measures that could be applied to the six NY Bight lease areas." [Footnote 11: Draft PEIS at ES-1.] It appears that BOEM is proposing to use NEPA to impose substantive requirements on	BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures. It is not establishing or imposing any substantive obligations at this programmatic stage. Instead, it is identifying those AMMM

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	lessees without identifying the authority for each of the AMMMs. As stated BOEM cannot use NEPA as the statutory mechanism to adopt these AMMM measures it can only rely on NEPA to analyze the impacts of adopting or not adopting said measures under other statutes. As discussed in detail below adopting AMMMs at the PEIS stage prior to COP review is contrary to BOEM's implementing regulations under OCSLA. The final PEIS and Record of Decision (ROD) should clarify that BOEM is [italicized: considering] rather than [italicized: adopting] the proposed AMMMs. In this way the PEIS does not inappropriately impose substantive requirements on projects but instead provides an analysis of these AMMMs which can help inform and provide a more efficient path to project specific environmental reviews and approval. As discussed below however this efficiency is only possible if the preferred alternative selected in the ROD considers only those AMMMs that are reasonable and economically and technically feasible.	measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.

## P.5.2 Proposed Action and Alternatives

**Table P.5-2. Responses to Comments on the Proposed Action and Alternatives**

Comment No.	Comment	Response
BOEM-2024-0001-0403-0002	The content of the PEIS is also grossly insufficient to account for the various impacts on nearly half a million acres of ocean land leased throughout the six lease areas: Bluepoint Wind Attentive Energy Community Offshore Wind Atlantic Shores Offshore Wind Bight Invenergy Wind Offshore and Vineyard Mid-Atlantic. Tellingly the record \$4.3 billion secured through these leases indicates that the profitability of these leases far outweighs any real assessment of the impacts and consequences of industrializing one of our last untapped and pristine natural resources. The PEIS by BOEM's own estimation anticipates 1103 wind turbines 22 offshore substations 44 offshore export cables of 1772 miles in length and 1583 miles of inter array cables between the six projects throughout the Bight. The document sites estimated impacts from negligible to major in a variety of areas but without citing sufficient baseline data due to the absence of such	For each resource area, Appendix C, <i>Tiering Guidance</i> , summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that will be included in the COP-specific NEPA analysis for each lease area. Each lease area will undergo project-specific environmental analyses through the development and submittal of a COP. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include detailed evaluation of impacts and will consider the best available data and information that reflect the state of the science at the time of publication. BOEM has prepared several EISs for offshore wind projects within the required page limits and has not found that the page limits prevent a thorough analysis.

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	data. To issue a PEIS on the six lease areas without the existence of baseline data and "because the size and design of the NY Bight wind farms are unknown at this stage" is shortsighted grossly inappropriate and negligent. Unfortunately, further issuance of project-specific Environmental Impact Statements have been hamstrung by the federal 2020 NEPA rule change which will limit future EISs to 150 to 300 pages for "proposals of unusual scope or complexity". This means that we will never fully understand the impacts and will be to borrow a term from NMFS "building the ship while sailing it."	
BOEM-2024-0001-0089-0001	The NY EIS should be discarded as submitted. There are numerous instances where knowledge gaps exist that are dismissed as inconsequential to the project. Examples include gaps in knowledge of EMF emissions impacting benthic layers and the authors suggest that ongoing studies taking place at Block Island Wind Farm which has consistently operated at a fraction of its stated capacity or not at all should suffice as evidence that the project should forge ahead. This is IRRESPONSIBLE!	The EMF and cable heat IPF discussion under Section 3.5.2.3, <i>Impacts of Alternative A – No Action on Benthic Resources</i> , does include a discussion of the differences between HVAC and HVDC and the type and intensity of the EMF they produce. Text has been added to this section and Section 3.5.2.5 stating that cable shielding required by BOEM would block electric fields emitted by HVDC and HVAC cables and that a weak induced electric field would be present if HVAC cables are used. Both sections discuss the impacts of any remaining EMF on benthic invertebrates. In addition, refer to response to comment BOEM-2024-0001-0400-0003 regarding data gaps, uncertainties, and incomplete and unavailable information. BOEM addresses this concern for each resource as required under CEQ regulations (40 CFR 1502.21) in PEIS Appendix E: <i>Analysis of Incomplete and Unavailable Information</i> . For NEPA purposes, BOEM believes the NEPA regulatory requirements regarding incomplete and unavailable information have been satisfied in the PEIS.
BOEM-2024-0001-0175-0004	[Bold: BPA:] I encourage you to read [Underline: The Toxic Wings - Damage and casualty of wind turbine blades] First English edition (May 2023): Jan Erik Weinbach Asbjørn Solberg og Brd-Einar Rimereit. THE TURBINE GROUP May 2023. The author states: "The entire western world has enumerated and adopted gigantic development targets with this unproven technology and that without having a scientific basis for the overall scope of consequences for HSE (health safety and environment). It is almost unbelievable and we know of no other industry that have been allowed such "Wild West" conditions ever. The closest we come to historical comparisons is to	Each lease area will undergo project-specific environmental analyses through the development and submittal of an SAP and a COP. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include detailed evaluation of impacts and will consider the best available data and information that reflect the state of the science at the time of publication. Calculation of rates is outside the scope of the PEIS and is the responsibility of grid operator and state.

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	<p>the tobacco industry which for many decades was allowed to advertise that cigarettes were good for life and health even long after it was widely known that cigarettes have a very negative effect on life and health. Smoking cigarettes was an individual choice and the damage caused by these was largely self-inflicted. The toxic emissions from wind turbines are imposed on each and every one of us including the voiceless creatures of nature. The responsibility for this must and will be assigned to those who imposed this on us without a scientific basis about the consequences for life and health". There will be too many negative and irreversible impacts for the limited amount of energy we would get from offshore wind. The benefit will never out measure the costs.</p> <p>Lastly I would like to mention that to date the BPU cannot tell the ratepayers what will be our cost for this venture since offshore wind is built on subsidies which I believe is not economically responsible. I truly hope that you don't realize what will be lost until after it is gone.</p>	
BOEM-2024-0001-0313-0006	<p>1.3 Purpose and Need for the Proposed Action Page 1-5 states that "A broader approach to the NEPA analysis for the minimum of six COPs expected for the NY Bight lease areas is consistent with Executive Order 14008 "Tackling the Climate Crisis at Home and Abroad" issued on January 27 2021. In that order President Biden stated that the policy of his administration is "to organize and deploy the full capacity of its agencies to combat the climate crisis to implement a Government-wide approach that reduces climate pollution in every sector of the economy; increases resilience to the impacts of climate change; protects public health; conserves our lands waters and biodiversity; delivers environmental justice; and spurs well-paying union jobs and economic growth especially through innovation commercialization and deployment of clean energy technologies and infrastructure." To support the goals outlined in Executive Order 14008 the administration has also announced plans to increase renewable energy production with a goal of 30 gigawatts (GW) of offshore wind energy capacity by 2030. Potential development of the leaseholds would assist with meeting several state mandates for renewable energy. New Jersey's goal of 11 GW of offshore wind energy generation by 2040 is outlined in</p>	<p>The PEIS only analyzes six lease areas on the Atlantic OCS; other projects not analyzed in the PEIS would contribute to New Jersey and New York state goals. These include Empire Wind, Atlantic Shores North, and Atlantic Shores South. These other projects are analyzed as part of the cumulative effects analysis. The 5–7 GW expected from the six NY Bight lease areas is based on a conservative power ratio of 3 megawatts per square kilometer (MW/km<sup>2</sup>). The NY Bight leases each have operations terms of 33 years that commence on the date of COP approval. Lessees may request an extension of their lease in accordance with lease terms and BOEM regulations.</p> <p>Cumulative impacts are addressed in the PEIS for each resource and for each alternative, including the No Action Alternative; the methodology is explained in PEIS Chapter 3, pages 3-1 through 3-3.</p>

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	<p>New Jersey Executive Order No. 307 issued on September 21 2022. New York's requirement of 9.0 GW of offshore wind energy generation by 2035 is outlined in the Climate Leadership and Community Protection Act signed into law on July 18 2019. Additionally an estimated 1618 GW of offshore wind energy may be necessary to ensure New York State achieves its Climate Act mandates (New York State Climate Action Council 2022). Based on a conservatively estimated power ratio of 3 megawatts per square kilometer BOEM estimates that full development of leases in this area has the potential to create up to 5.6 to 7 GW of offshore wind energy."</p> <p>Comment: It is unclear how dedicating 48800 acres of lease area and the associated structures and disturbance meets the objectives specifically protection of public health; conservation of our lands waters and biodiversity stated above; in fact this project appears to directly contravene those policies. For context the entire Town of Oyster Bay comprises approximately 108 400 acres. The best-case scenario presented in the PEIS at full optimization of the project at 7GW is still less than the overly ambitious state mandate of 9GW of offshore wind energy further the lifespan of a WTG is only approximately 30 years. There is no discussion about the net generation of how these mandates will be achieved and how that figure is calculated into the equation upon expiration of the WTG's useful lifespan not only would it appear that a lease extension would be needed for continuous operation but WTGs would have to be decommissioned and replaced. The larger plans of scale and cumulative impacts must be adequately addressed in the final PEIS. Though the goals for alternative energy requirements are reiterated throughout the documents as a guiding qualifier for expeditiously proceeding with the review of these projects the details are omitted and unavailable thereby making it impossible to meaningfully review and consider the comprehensive cumulative synergistic direct and indirect impacts.</p>	
BOEM-2024-0001-0331-0001	We are not opposed to clean energy in general and seek only that where it is pursued it be done in a reasonable and consistent manner and not leave major collateral damage in its wake. According to the Federal Register BOEM states that the purpose of the Draft PEIS is to	Thank you for your comment. BOEM shares the same goal to ensure projects are developed responsibly. The Final PEIS includes several identified AMMM measures (refer to Appendix

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	<p>analyze the potential impacts of the New York Bight along with identifying possible changes to those impacts that could result from adopting certain avoidance minimization mitigation and monitoring measures (AMMM). After public input BOEM will decide on whether to adopt one or all of the AMMM measures outlined in the DPEIS and make them conditions of approval for activities proposed by the lessees in their construction and operation plans (COPS) or defer the decision to adopt such measures to each project-specific environmental review. According to the diagram about the process the PEIS analyzes the programmatic avoidance minimization mitigation and monitoring measures that could apply to the New York Bight leases and includes a focused regional cumulative analysis.</p>	<p>G) to avoid, minimize, and mitigate impacts from potential development of the six NY Bight lease areas.</p>
<p>BOEM-2024-0001-0331-0030</p>	<p>The BOEM PEIS lacks any discussion concerning intermittent offshore wind's contribution to grid unreliability how this will be mitigated and at what cost. For the first time in August 21 2023 the North American Electric Reliability Corporation (NERC) identified energy policy as a risk priority for grid reliability because the heightened legislative focus and mandates regarding decarbonization decentralization and electrification. The organization holds that the emerging resource mix is more susceptible to long-term widespread and extreme events like sustained loss of wind power. (<a href="https://www.nerc.com/news/Pages/Collective-Focus-Imperative-for-Mitigating-Emerging-Risks-to-Grid-Reliability.aspx">https://www.nerc.com/news/Pages/Collective-Focus-Imperative-for-Mitigating-Emerging-Risks-to-Grid-Reliability.aspx</a>) If the purpose of the projects is to meet the governor's goal by executive order for the State to sell 100% clean energy by 2035 including 11 GW of offshore wind how do the wind developers and BOEM propose to back up the wind when it is not blowing? What is the cost of this backup? What are the plans and cost of battery backup storage systems? According to Science Daily "energy droughts" in wind and solar can last a week. ( DOE/Pacific Northwest National Laboratory December 11 2023) . BOEM and wind developers use a misleading measurement called a capacity factor in their discussions of offshore wind energy output but this number typically 50% - is misleading in that it is an average. This average does not account for the times when generated wind energy exceeds demand and when wind energy is less than demand. For example there could be days when</p>	<p>BOEM's responsibility under the Energy Policy Act of 2005 is to issue renewable energy leases, easements, and rights-of-way (ROWs) for activities on the OCS. The purpose of the PEIS is to present a programmatic analysis of the six NY Bight lease areas to characterize the types of impacts that could occur and mitigation measures that could minimize those effects. Grid reliability is outside of BOEM's regulatory authority and the scope of the PEIS. The grid operator is responsible for managing the reliability of the grid. While offshore wind in the NY Bight would provide a new source of energy to the states of New York and New Jersey, other sources of energy would still be generated.</p> <p>BOEM's calculations of capacity are an assessment of total lease capacity and are not used to estimate power operations. Costs for power are considered through state solicitations and are factored into utility rates. To date BOEM has not received COPs proposing battery energy storage systems. Other developers may choose to develop battery systems to capture offshore wind, and those projects would be required to be reviewed and permitted separately, although they would be outside BOEM's jurisdiction. However, the offshore wind projects do not require backup power or battery storage systems, and each project has independent utility.</p>

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	the wind turbines are only producing 20% of their energy capacity but demand requires 80% capacity. There will be other days when wind energy supply will be at 70% of its capacity but demand will only be at 50%. A rigorous multiyear supply/demand accounting would inform us of the balancing costs back-up costs and grid costs related to the true issues of intermittency.	
BOEM-2024-0001-0334-0002	Be advised that the issues below as well as those you will receive from others represent a grave concern regarding BOEM's performance in protecting the interests of the New Jersey public. BOEM appears to ignore most of the significant impacts raised in their own EIS documents as well as the concerns raised by the well-researched public. The approvals of the projects to date seem to only ensure that the projects move forward with the appearance of having been fully vetted and the mainstream press bolsters that perception to the public. A critical viewpoint is now widespread and if successful will lead to new and increased pressures to prevent offshore wind projects from proceeding in New Jersey on the East Coast and around the coastal areas of the USA.	The PEIS was developed through coordination with federal agencies, Tribal Nations, and state and local partners, and the AMMM measures seek to avoid, minimize, or mitigate potential impacts. Project-specific NEPA analysis will provide additional site-specific data and incorporate advances in technology and understanding of these areas. Additional coordination with regulatory agencies is required as part of the approval of the project-specific approaches.
BOEM-2024-0001-0345-0003	New York City and Long Island are on the front lines of climate change. The NYSEDA white paper on the Climate Leadership and Community Protection Act asserts that one major obstacle the state faces to meet our climate change goals is that there is a "tale of two grids." Upstate uses 88% zero-emission resources but only represents 1/3 <sup>rd</sup> of the energy load while downstate is 2/3 <sup>rd</sup> of the load and 69% fossil fuels. The only way to see a just transition from polluting fossil fuels to renewable energy downstate is by utilizing offshore wind. New York has several offshore wind projects moving through the regulatory process which if approved will power millions of homes with clean renewable energy and bring New York significantly closer to our goal of 9000 MW of offshore wind. These projects are also kickstarting an "offshore wind-ustry" in the state which are already slated to create nearly 7000 jobs in project development manufacturing installation and operations and maintenance while creating over \$12 billion in economic benefits to the state. They will also allow the state to close down antiquated polluting fossil fuel fired power plants which will improve air quality	Comment noted.

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	in our region and provide \$1 billion in health benefits to New Yorkers in vulnerable and frontline communities.	
BOEM-2024-0001-0354-0017	<p>True science involves constantly emerging new evidence and findings along with the ever-changing challenges imposed as to prior conclusions. As such contrary to the. Non-scientific "group think" and massive amounts of money driven public relations press releases behind the current wind turbine projects such sentiment ignores scientific methods of ongoing experimenting at the very least through realistic peer reviewed scientific pilot projects. True science involves constantly emerging new evidence and findings. This process necessarily continually involves the ongoing application of extensive scientific research which is then applied to the previously accepted theories. Such a true application of peer reviewed science especially applied to growingly_ obsolete wind turbine construction would support the revision if not rejection of prior dogma as to allegedly "settled science". As I have testified previously only from a partially facetious standpoint the rush to judgment approach as to this specific proposal to construct massive windfarms off New Jersey represents non-scientific "group think" with the devastating potential to trample upon scientific inquiry and research. Such immense pressure from those supporting such colossal development of this offshore industrial site off of the precious New Jersey Coast unfortunately has facilitated many knee-jerk feel-good reactions which totally ignore the required economic and scientific vetting process. During a prior era particularly relevant to the coast of New Jersey our town and I were subjected to enormous pressures exerted by those supporting ocean dumping. Generated by a foreign corporation's pipeline off our beautiful and incalculably valuable portion of the New Jersey shore. Similar subconscious and actual influences are once again being exerted in favor of a foreign corporation looking to create another potential ocean dumping site off New Jersey's shoreline. I would truly beseech BOEM officials to rise above the narrow bureaucratic rubber-stamping of the within proposal in favor of the true application of scientific method to the entire cumulative and indirect impacts of the current project as well to windfarms off of New Jersey's Coast in general. Just as one heartfelt objector testified in a virtual hearing as to the threats</p>	<p>This PEIS highlights regional issues; the details in the project-specific COP NEPA documents will provide additional site-specific information and incorporate advances in technology and scientific understanding as the projects advance.</p> <p>In addition, refer to response to comment BOEM-2024-0001-0400-0003 regarding data gaps, uncertainties, and incomplete and unavailable information. BOEM addresses this concern for each resource as required under CEQ regulations (40 CFR 1502.21) in PEIS Appendix E: <i>Analysis of Incomplete and Unavailable Information</i>. For NEPA purposes, BOEM believes the NEPA regulatory requirements regarding incomplete and unavailable information have been satisfied in the PEIS.</p>

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	proposed by foreign corporations to our country's national symbol the bald eagle these threats are very real whether proposed by a non-American entity or a corporation based in our own country.	
BOEM-2024-0001-0355-0004	Unreliable energy so a back-up energy supply would still be needed.	Comment noted. Grid reliability is the responsibility of the state grid operators. While offshore wind in the NY Bight would provide a new source of energy to the states of New York and New Jersey, other sources of energy would still be generated.
BOEM-2024-0001-0355-0017	In addition it seems BOEM is rushing this process with little or no information. I am opposed to approval of the OSW projects at this time until MORE DATA AND MORE STUDIES are conducted. There are way too many unknowns and "insufficient data" per BOEMs PEIS. From p. 5 of the PEIS they state "The Atlantic OCS is considered by BOEM to be a "Frontier Region" where little information exists about the geologic conditions and how those conditions may impact development of offshore wind farms." On page 12 they state "site investigation and characterization for such projects is generally focused on a limited area." Does this make sense on a barrier island where the water table is high and you can compromise the water resource on one part and not another? How can you approve such a project without knowing so much of the necessary information to make a thoughtful decision that will affect SO MANY humans and marine creatures in multiple negative ways? At the very minimum there should be a pilot study done to collect more information on our specific region before going for this massive disruption to and destruction to marine life human life real estate and tourism.	Refer to response to comment BOEM-2024-0001-0400-0003 regarding data gaps, uncertainties, and incomplete and unavailable information. BOEM addresses this concern for each resource as required under CEQ regulations (40 CFR 1502.21) in PEIS Appendix E, <i>Analysis of Incomplete and Unavailable Information</i> . For NEPA purposes, BOEM believes the NEPA regulatory requirements regarding incomplete and unavailable information have been satisfied in the PEIS.  In addition, this PEIS will not result in the approval of any activities in the NY Bight lease areas. Each lease holder is required to conduct project-specific environmental analyses, which include development and submittal of a COP as required under 30 CFR 585.628. BOEM will conduct project-specific NEPA analysis of the COP for each lease area that will focus on providing site- and project-specific analyses that were not already addressed by the PEIS. Appendix C, <i>Tiering Guidance</i> , summarizes the affected environment, impact analysis, and AMMM measures for each resource area discussed in this PEIS and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area and cable route as the projects advance.  Further, BOEM considered but dismissed from further consideration an alternative to build a pilot project (PEIS Chapter 2, Table 2-3). Data from sites that are constructed and operating (e.g., Block Island), as well as the pilot project in Virginia, were incorporated into this PEIS and will be incorporated into the development of project specific COPs and EISs.

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BOEM-2024-0001-0356-0003	The second more recent information that has been acknowledged is inadequate is from the NJBPU published 2/14/24: "Atlantic hurricanes pose a significant potential threat to the State's burgeoning OSW sector. Despite this risk relatively little technical research has been devoted to quantifying and assessing Atlantic hurricane impact upon OSW projects. As a result regulators developers and insurers have limited tools at their disposal to mitigate this risk or ascertain whether the risk warrants design modifications. The prevailing uncertainty surrounding what is widely perceived as a substantial threat to OSW largely without scientific or engineering backing serves as a considerable obstacle to the development of OSW Development of advanced technical research quantifying and assessing hurricane risk is therefore necessary to aid developers regulators and insurers in mitigating hurricane risk and providing improved design standard baselines." These studies should've been performed and the results published long before any of the EIS's for any lease were approved. This is absolutely absurd and are yet more glaring reasons that OSW is being pushed through the regulatory processes prematurely and unchecked.	As stated in PEIS Section 2.3, the engineering specifications of the WTGs and their ability to sufficiently withstand weather events, including hurricane-level events, are independently evaluated by a certified verification agent when reviewing the Facility Design Report and Fabrication and Installation Report according to international standards. One of these standards calls for the structure to be able to withstand a 50-year return interval event. An additional standard includes withstanding 3-second gusts of a 500-year return interval event, which would correspond to Category 5 hurricane windspeeds. It is in the best interest of the lessees to construct and operate a viable project and minimize risk as much as possible; they are responsible for ensuring the WTGs are designed and constructed to withstand such events and to ensure the integrity of the structures would not be compromised.
BOEM-2024-0001-0357-0002	As requested by the BOEM the bulk of our comments here are on the New York Bight program EIS to make it a more useful document. However it is not the document that is of paramount concern here. Rather it is the BOEM decision making process itself relative to the requirements of the Administrative Procedures Act the Outer continental Shelf Lands Act and the National Environmental Policy Act and the dictates of common sense which we believe is fundamentally unreasonable and flawed in at least two major respects: First, the BOEM does not consider the full, real environmental impact to an area when it approves projects, and Second, it does not engage expert and other public input before it makes the most important decisions, i.e., on wind turbine location, number, megawatt size and gear drive. Both of these defects are discussed below.	The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i> , is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and analyze AMMM measures that could reduce those effects. The PEIS does not approve any projects. Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&M, and conceptual decommissioning of the project, including cumulative effects. During the COP-specific NEPA process, BOEM will hold a public comment period at the start of the NEPA process (scoping) and, following that, will release the Draft NEPA document, whereby members of the public and agencies can provide input to help inform the NEPA process, alternatives, and mitigation measures to identify and minimize environmental effects. Additionally, throughout the NEPA process, BOEM will work closely with Cooperating Tribal Governments and federal and state agencies to assist with assessing impacts and identifying mitigation

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		measures. BOEM will analyze each COP as proposed by the developer and does not make decisions on number of turbines, MW size, and gear size that applicants include in the COP. BOEM may analyze different alternatives and mitigations—such as the number of turbines, MW size, and gear size—as part of the NEPA review process, project-specific consultations, and decision process.
BOEM-2024-0001-0362-0027	<p>High-road Equitable Environmentally Responsible Development Outer Continental Shelf Lands Act BGA believes that standards for high-road equitable and environmentally responsible development are consistent with federal statute. In Section 8 of OCSLA Congress declared that it is the authority of the Secretary of the Interior (delegated to BOEM) to "grant a lease easement or right-of-way" for activities that "produce or support production transportation or transmission of energy from sources other than oil and gas" in a manner that provides for: "(A) Safety; (B) Protection of the environment; (C) Prevention of waste; (D) Conservation of the natural resources of the Outer Continental Shelf; (E) Coordination with relevant Federal agencies; (F) Protection of national security interests of the United States; (G) Protection of correlative rights in the Outer Continental Shelf; (H) A fair return to the United States; (I) Prevention of interferences with reasonable uses of the exclusive economic zone the high seas and the territorial seas; (J) Consideration of a. The location of and any schedule relating to a lease easement or right-of- way for an area of the Outer Continental Shelf; and b. Any other use of the sea or seabed including use for a fishery a sea lane a potential site of a deep-water port or navigation; (K) Public notice and comment on any proposal submitted for a lease easement or right-of-way under this subsection; and (L) Oversight inspection research monitoring and enforcement related to a lease easement or right-of-way under this subsection."</p> <p>[Footnote v: U.S. Code 1337 - Leases easements and rights-of-way on the outer Continental Shelf.  <a href="https://www.law.cornell.edu/uscode/text/43/1337">https://www.law.cornell.edu/uscode/text/43/1337</a>] High road standards touch on many of these imperatives including safety; protection of the environment; conservation of natural resources; protection of national security; fair return to the United States;</p>	Comment noted. Section 1.4, <i>Regulatory Overview</i> , of the Final PEIS describes the regulatory authority for renewable energy leasing on the OCS.

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	<p>consideration of other uses; and oversight inspection and resource monitoring. Environmentally responsible development robust stakeholder engagement equitable distribution of benefits and attention to quality job creation domestically are all foundational to OCSLA requirements. In addition to the authority granted to BOEM to facilitate energy development on the Outer Continental Shelf (OCS) the president has authority to direct requirements on leases of the OCS and precedent exists for the president to do so. Current BOEM leases include terms mandated by presidential Executive Order 11246 which prohibits employment discrimination and establishes affirmative action requirements for nonexempt federal contractors and subcontractors. [Footnote vi: DOL Executive Order 11246 Equal Employment Opportunity Sept. 24 1965. <a href="https://www.dol.gov/agencies/ofccp/executive-order-11246/as-amended">https://www.dol.gov/agencies/ofccp/executive-order-11246/as-amended</a>] Article II 1 of the U.S. Constitution provides that "executive power shall be vested in" the president. Such power gives the president the right in the absence of an express congressional declaration to the contrary to control the terms upon which public lands or property may be sold leased or used by private individuals or entities. [Footnote vii: Case text United States v. Midwest Oil Co. Feb. 23 1915. Available online: <a href="https://casetext.com/case/united-states-v-midwest-oil-co">https://casetext.com/case/united-states-v-midwest-oil-co</a>]</p>	
BOEM-2024-0001-0362-0028	<p>In Executive Order 14008 Tackling the Climate Crisis at Home and Abroad issued January 27 2021 President Biden stated that it is the policy of the United States: "to organize and deploy the full capacity of its agencies to combat the climate crisis to implement a Government-wide approach that reduces climate pollution in every sector of the economy; increases resilience to the impacts of climate change; protects public health; conserves our lands waters and biodiversity; delivers environmental justice; and spurs well-paying union jobs and economic growth especially through innovation commercialization and deployment of clean energy technologies and infrastructure." This executive order further emphasizes that "[t]his Nation needs millions of construction manufacturing engineering and skilled-trades workers to build a new American infrastructure and clean energy economy." [Footnote ix: White House Executive Order on Tackling the Climate Crisis at Home and Abroad Jan. 27</p>	<p>Comment noted. Section 1.3, <i>Purpose of and Need for the Proposed Action</i>, describes the purpose of the Proposed Action, which supports Executive Order 14008 "Tackling the Climate Crisis at Home and Abroad."</p>

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	<p>2021. <a href="https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/">https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/</a>] President Biden further states "Agencies shall seek to increase the Federal Government's resilience against supply chain disruptions. Such disruptions put the Nation's manufacturing sector at risk as well as consumer access to critical goods and services." Additionally President Biden directed all agencies to "adhere to the requirements of the Made in America Laws in making clean energy energy efficiency and clean energy procurement decisions" consistent with Executive Order 14005 Ensuring the Future Is Made in All of America by All of America's Workers. [Footnote x: White House Executive Order on Ensuring the Future Is Made in All of America by All of America's Workers Jan. 25 2021. <a href="https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/25/executive-order-on-ensuring-the-future-is-made-in-all-of-america-by-all-of-americas-workers/">https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/25/executive-order-on-ensuring-the-future-is-made-in-all-of-america-by-all-of-americas-workers/</a>] President Biden has also emphasized the need to maximize utilization of domestic content as we advance climate and clean energy solutions in order to strengthen U.S. manufacturing. President Biden's executive order on America's supply chains issued February 24 2021 states "[t]he United States needs resilient diverse and secure supply chains to ensure our economic prosperity and national security." It continues to say "resilient American supply chains will revitalize and rebuild domestic manufacturing capacity maintain America's competitive edge in research and development and create well-paying jobs. They will also support small businesses promote prosperity advance the fight against climate change and encourage economic growth in communities of color and economically distressed areas."</p>	
BOEM-2024-0001-0362-0029	<p>Executive Orders on Domestic Manufacturing Environmental Justice and Union Labor President Biden has reinforced in various executive orders that it is the policy of the federal government to pursue solutions to the climate crisis with attention to union labor domestic manufacturing environmental justice and protection of natural resources. The announcement of the national offshore wind target to deploy 30 gigawatts (GW) of offshore wind by 2030 further underscored this approach. The White House fact sheet containing that announcement declared: "The President recognizes that a</p>	<p>Comment noted. Section 1.3, <i>Purpose of and Need for the Proposed Action</i>, describes the purpose of the Proposed Action, which supports President Biden administration's goal of 30 GW of offshore wind capacity by 2030.</p>

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	<p>thriving offshore wind industry will drive new jobs and economic opportunity up and down the Atlantic Coast in the Gulf of Mexico and in Pacific waters. The industry will also spawn new supply chains that stretch into America's heartland as illustrated by the 10000 tons of domestic steel that workers in Alabama and West Virginia are supplying to a Texas shipyard where Dominion Energy is building the Nation's first Jones Act compliant turbine installation vessel. "Federal leadership in close coordination with states and in partnership with the private sector unions and other key stakeholders is needed to catalyze the deployment of offshore wind at scale. "the Administration is taking coordinated steps to support rapid offshore wind deployment and job creation:1. Advance ambitious wind energy projects to create good-paying union jobs2. Investing in American infrastructure to strengthen the domestic supply chain and deploy offshore wind energy3. Supporting critical research and data-sharing." [Footnote viii: White House FACT SHEET: Biden Administration Jumpstarts Offshore Wind Energy Projects to Create Jobs March 29 2021. <a href="https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/">https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/</a>]</p>	
BOEM-2024-0001-0362-0031	<p>Recent global events have made it abundantly clear that our national security is strongly tied to our energy security to which domestic manufacturing plays a critical role. The U.S. Department of Energy and the North American Electric Reliability Corporation jointly-commissioned a report assessing risks to the U.S. electricity generation and distribution infrastructure. The summary of the report observed that the "bulk power system is dependent on long supply chains often with non-domestic sources and links" and determined that the "increased reliance on foreign manufacturers with critical components and essential spare parts manufactured abroad (e.g. HV transformers)" means the "supply chain itself represents an important potential vulnerability." [Footnote xv: North American Electric Reliability Corporation High-Impact Low-Frequency Event Risk Impact to the North American Bulk Power System at page 30 (June 2010). <a href="https://www.energy.gov/ceser/downloads/high-impact-low-frequency-risk-north-american-bulk-power-system-june-">https://www.energy.gov/ceser/downloads/high-impact-low-frequency-risk-north-american-bulk-power-system-june-</a></p>	Comment noted.

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	2010.] The report recommends that "efforts should be considered to bring more of the supply chain and manufacturing base for these critical assets back to North America." [Footnote xvi: Ibid at 27]	
BOEM-2024-0001-0383-0007	<p>OSCLA: BOEM quotes the Outer Continental Shelf Lands Act regarding the Secretary's legislative requirement to "ensure that any activity under [subsection 8(p)] is carried out in a manner that provides for (A) safety; (B) protection of the environment.. (I) prevention of interference with reasonable uses (as determined by the Secretary) of the exclusive economic zone the high seas and the territorial seas.." etc. [Footnote 21: PEIS at New York Bight Draft Programmatic Environmental Impact Statement Volume 1 Chapters 1-4 (boem.gov) p. 1-6 1-7.] The agency then quotes a 2021 agency memo that states that the law as written in fact does not require the Secretary to ensure achievement of these various "goals" but to balance them.[Footnote 22: Ibid p. 1-7.]We disagree. The term "ensure" means "ensure". It does not mean balance. By not ensuring safety by not ensuring prevention of interference with reasonable uses- such as federally permitted commercial fishing on the OCS- BOEM is in violation of the law. The agency cannot rewrite the meaning of the word "ensure" with an internal agency memo. Furthermore the agency memo written in 2021 directly contradicts a corresponding agency memo written only five months prior in 2020. We have attached that memo along with this comment. The 2021 memo purports to overturn the previous 2020 memo this reinterpretation coinciding with a change in Administration but the law cannot mean two different things. Simply because an Administration changes does not mean that the law changes. Congress changed nothing. The definition of the word "ensure" did not change in the English language between 2020 and 2021.BOEM cannot add words to statute that do not exist in the statute; it must take the legislative language at face value. The PEIS states that the law imposes only a "a general duty" and "does not require the Secretary to ensure that the goals are achieved to a particular degree" but allows the Secretary to "balance" what it refers to as "goals". These listed requirements are not goals; they are legal standards. The law says the Secretary must "ensure" that these legislative standards are met. The word "ensure" defined by</p>	<p>The Solicitor's Opinion of December 14, 2020, M-37059, was withdrawn on April 9, 2021, by M-37067 for the reasons explained in the latter opinion. The Solicitor's M-opinions on matters within the jurisdiction of the Department of the Interior (DOI) are binding on BOEM (see 209 Department Manual 3.2(A)(11)). Therefore, BOEM is bound to follow the interpretation of the OCSLA put forth in M-Opinion 37607.</p>

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	Merriam-Webster means "to make sure certain or safe: guarantee." [Footnote 23: See Ensure Definition & Meaning - Merriam-Webster.] The Secretary must guarantee these standards. It is clear from the discussion on navigational impacts in the AMMM section below the commercial fishing impacts contained in our attached USCG comments as well as the lack of regulatory benchmarks regarding high resolution geophysical surveys discussed below- which requires stronger regulatory protections by both BOEM and NOAA when being conducted in the Gulf of Mexico by other offshore energy industries than in the Atlantic by offshore wind developers- that BOEM is not guaranteeing that these OSLA standards are met.	
BOEM-2024-0001-0406-0008	BOEM's Proposed Action Violates NEPA and the APA BOEM's proposed action "the adoption of AMMM measures such that the potential impacts described in Alternative B may be avoided reduced or mitigated" Draft PEIS 2.1.3 (p. 2-16) would run afoul of both NEPA and the Administrative Procedures Act (APA) creating considerable legal risk for BOEM and jeopardizing the utility of its programmatic NEPA analysis if BOEM does not amend the proposed action in its Final PEIS. As BOEM describes it in the Draft PEIS the proposed action calls for "adopting programmatic AMMM measures that BOEM would require as conditions of approval for activities proposed by lessees in COPs submitted for the NY Bight lease areas unless future COP-specific NEPA analysis shows that implementation of such measures is not warranted or effective." Draft PEIS 1.3 (p.1-4) (emphasis added). BOEM then states that "[t]he Record of Decision (ROD) for the PEIS will state which of the AMMM measures analyzed in the PEIS BOEM has committed to adopting and if not why they were not adopted." Id. This proposed action would establish for the six NYB lessees a presumption at COP review that BOEM will impose the full suite of AMMM measures from the Final PEIS on their projects unless the lessees can make a specific showing in their COPs that specific measures are not "warranted or effective." This approach unlawfully shifts the burden from BOEM to the lessee an approach which is legally problematic in at least two key respects.	The Proposed Action for the Final PEIS includes the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. These measures may be required as conditions of approval for activities proposed by lessees in the COPs submitted for the six NY Bight lease areas. BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations. BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not establishing a presumption at COP review that a lessee would need to rebut—but is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.
BOEM-2024-0001-0406-0009	BOEM's Proposed Action Inappropriately Imposes Substantive Obligations Through a Procedural Statute NEPA is a procedural statute requiring an agency to analyze the environmental impacts of	The Proposed Action for the Final PEIS includes the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts on resources in the six

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	<p>a proposed federal action. 42 U.S.C. 4331. While the NEPA regulations obligate an agency to provide a "detailed discussion of possible mitigation measures" when preparing an EIS it does not impose "a substantive requirement that a complete mitigation plan be actually formulated and adopted." <i>Robertson v. Methow Valley Citizens Council</i> 490 U.S. 332 35152 (1989). Thus while BOEM has appropriately discussed in detail the AMMM measures that could be applied during COP-specific NEPA analysis any adoption of those measures must be done through substantive statutes that grant BOEM and other permitting agencies the authority to require such measures. In this case BOEM's substantive authority to impose mitigation measures derives from the Outer Continental Shelf Lands Act (OCSLA) and its implementing regulations. In particular 30 CFR 585.620-628 establishes the COP review process and states that BOEM "will prepare an appropriate NEPA analysis" <i>id.</i> At 628(b) and then "upon completion of technical and environmental reviews will specify terms and conditions to be incorporated into the COP." <i>Id.</i> At 628(f)(1). Because BOEM's authority to impose mitigation measures is explicitly contingent on its review of a submitted COP it would be premature to invoke that authority in a PEIS. Moreover as noted above many of the proposed AMMM measures lie outside of BOEM's statutory and regulatory authority and would need to be "adopted" by other federal state and/or local agencies (if indeed they could be required or enforced at all). By proposing to "adopt" AMMM measures in a programmatic NEPA document divorced from an OCSLA decision point BOEM effectively and illegally converts NEPA to a substantive statute.[Footnote 1: It is no defense that BOEM would retain the discretion to not impose particular AMMM measures if lessees can demonstrate in their COPs that an "adopted" measure is not "warranted or effective." The proposed action still would constitute a substantive imposition of AMMM measures before COP submittal with the burden now shifted to lessees to prove in their COPs that such measures should not be required.]</p>	<p>NY Bight lease areas. These measures may be required as conditions of approval for activities proposed by lessees in the COPs submitted for the six NY Bight lease areas. BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations. BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not establishing any substantive obligations at this programmatic stage—but is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.</p>
BOEM-2024-0001-0406-0010	<p>BOEM's Proposed Action Appears to Constitute a De Facto Rulemaking in Violation of the APA By imposing a new standard of review on all projects within the NY Bight BOEM has also effectively engaged in de facto rulemaking in</p>	<p>The Proposed Action for the Final PEIS includes the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. These measures may be required as</p>

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	<p>violation of the APA. Subject to very limited exceptions the APA requires that any adoption of or amendment to a federal regulation go through the notice and comment rulemaking process. 5 U.S.C. 553. Substantive agency rules which change or impose rights and obligations of regulated parties may not be imposed through informal pronouncements; to do so represents a violation of the APA's rulemaking procedure. See e.g. Cmty. Nutrition Inst. V. Young 818 F.2d 943 946-47 (D.C. Cir. 1987); see also Phillips Petroleum Co. v. Johnson 22 F.3d 616 621 (5<sup>th</sup> Cir. 1994) ("A party may not be adversely affected by a [substantive] rule in violation of [APA notice and comment] requirements."). BOEM's proposed action while not styled as an amendment to its regulations imposes a new standard that upends the COP review process established in BOEM's existing regulations and seeks to apply a new set of requirements (i.e. the full suite of AMMM measures) to all offshore wind projects in the NY Bight. As noted in the section above BOEM's regulations require that it "specify terms and conditions" of COP approval "upon completion of technical and environmental reviews" of a submitted COP. 30 CFR 585.628(f)(1). If the ROD is issued as BOEM proposes all six NYB lessees would face a presumptive array of requirements prior to submitting a COP and prior to BOEM conducting any of its environmental or technical reviews of those COPs. The lessees would then be required to demonstrate in their COPs that individual measures are not "warranted or effective" a standard found nowhere in OCSLA or BOEM's regulations. This would create a new standard of review that effectively shifts BOEM's burden to demonstrate that specific AMMM measures are needed based on its review of the project to the lessees. That is exactly the type of change in the rights and obligations of regulated parties that can only be done through notice and comment rulemaking.[Footnote 2: The fact that this particular Draft PEIS "only" applies to six lessees is of little consequence. BOEM is in the process of conducting a similar programmatic review for its five California leases see <a href="https://www.boem.gov/renewable-energy/state-activities/california-offshore-wind-programmatic-environmental-impact">https://www.boem.gov/renewable-energy/state-activities/california-offshore-wind-programmatic-environmental-impact</a> and has given every indication that it will continue to use the PEIS mechanism to create efficiencies in its future COP reviews. It is</p>	<p>conditions of approval for activities proposed by lessees in the COPs submitted for the six NY Bight lease areas.. BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations. BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures. It is not establishing or imposing any substantive obligations at this programmatic stage. Nor does the proposed action purport to change the standard in BOEM's regulations governing review of COPs. For those reasons, the proposed action is not a de facto rulemaking. Instead, it is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.</p>

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	reasonable to expect that the choices BOEM makes in this PEIS process will inform subsequent programmatic reviews in other wind energy areas.	
BOEM-2024-0001-0406-0029	Finally BOEM should also consider declining to issue a ROD with the Final PEIS. Even in its draft form the PEIS does not make any "decisions" that trigger environmental effects and that remains the case if revised as suggested herein. No decision of that sort is made until BOEM makes a decision on an individual COP that has been the subject of a full-blown EIS. Any decision flowing from this PEIS is therefore premature. Moreover there is no formal requirement in NEPA the CEQ regulations or Department of the Interior (DOI) regulations that a programmatic NEPA analysis must include a ROD if no decision is being made. Eliminating the ROD would make clear to the public that this PEIS is primarily intended to facilitate early identification and analysis of important issues and impacts common to all NYB leases and not to narrow BOEM's or lessees' options at the COP stage or impose substantive requirements as with the presumptive application of the full suite of AMMM measures analyzed in the Draft PEIS.	Comment noted. A ROD could identify those AMMM measures BOEM may apply as conditions of approval for the COPs submitted for the NY Bight leases. This documentation does not constitute final agency action but may be integrated into the ROD for each individual project. Identification of the measures BOEM may apply does not narrow options at the COP stage because BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations.
BOEM-2024-0001-0423-0001	A rational and timely permitting process is vital to meeting the goals of Executive Order 14008 ("Tackling the Climate Crisis at Home and Abroad" issued on January 27 2021) New Jersey's goal of 11 GW of offshore wind energy generation by 2040 (as outlined in New Jersey Executive Order No. 307 issued on September 21 2022) and New York's requirement of 9.0 GW of offshore wind energy generation by 2035 (as outlined in the Climate Leadership and Community Protection Act signed into law on July 18 2019). The permitting process for offshore wind is already extremely robust and Ocean Winds had expressed concern when the New York Bight PEIS process was announced as we feared that the PEIS had the potential to complicate and delay an already challenging process. Setting aside those concerns our Bluepoint Wind team has been working cooperatively with BOEM since it published its Notice of Intention (NOI) to prepare a PEIS on July 15 2022. The eighteen months between NOI and Draft PEIS is concerning and is impacting development of Construction and Operation Plans (COPs) for NY Bight lessees. It is disappointing that initial promises from BOEM that	Comment noted.

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	this PEIS will speed and not hinder project permitting and development do not seem to be materializing. That said Ocean Winds hopes that the Final PEIS will be issued on schedule and future PEIS efforts will proceed in a more expeditious manner. Further we note that this PEIS will set a precedent for the PEIS process in California and beyond. As such we urge BOEM to be thoughtful in its approach so that its actions in this process do not hinder development of an industry already facing a series of challenges on both coasts.	
BOEM-2024-0001-0423-0030	Purpose and Need for the Proposed Action Ocean Winds supports the [bold and italicized: intent] of the PEIS namely to reduce redundancies across COP-specific NEPA analyses and help BOEM make timely decisions on COPs for the six lease areas covered by the Draft PEIS. Rather than leading to a more efficient process for individual COP approvals the scale and scope of the proposed AMMMs represent a significant expansion beyond past precedent and ensures a longer process for reviewing individual COPs when developers inevitably consider alternatives to the AMMMs in their individual COP submittals. This in turn will lengthen and complicate what is already a challenging federal permitting process. The Draft PEIS continues a troubling trend of the federal government continuing to raise the bar for offshore wind when compared to other maritime industries many of which are known to cause meaningful negative impact to the sensitive resources that the AMMMs proposed in the Draft PEIS are intended to protect. Ocean Winds also notes that the six months-long delay in the release of the Draft PEIS has negatively impacted project timelines which hinder the purpose and need of BOEM making timely decisions on COPs for the NY Bight leases and we urge BOEM not to allow further delays to the Final PEIS. As discussed above the delay associated with this PEIS along with the overreach in the substance of the document sets a concerning precedent for future PEIS processes.	The AMMM measures considered in the PEIS include measures that have been included in previous COP approvals, as well as those proposed through the scoping process. In response to numerous comments on the Draft PEIS AMMM measures, BOEM has reviewed all AMMM measures and has made several changes to the measures as presented in Final PEIS Appendix G. In summary, BOEM has split the AMMM measures into AMMM measures that BOEM has required as conditions of approval from previous activities proposed by lessees in COPs submitted and AMMM measures that have not been applied as terms and conditions of approval for previous activities proposed by lessees in COPs. In addition, BOEM has identified RPs that could be considered at the project-specific COP NEPA review. Refer to response to comment BOEM-2024-0001-0371-0004 regarding revisions to Alternative C. Further, this PEIS is <i>not imposing</i> any AMMM measures; it is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient. Regarding PEIS timelines and delays, BOEM is working as efficiently as possible to ensure an adequate NEPA document is developed that meets all the statutory and regulatory requirements.
BOEM-2024-0001-0426-0002	History is full of bad government decisions that seemed like a good idea at the time. Take the Homestead Act for example where settlers were given free acreage in Kansas Oklahoma East Texas and	BOEM analyzes offshore wind projects using the best available science and information and seeks input from the public, agencies, and Tribal Nations to inform its decisions. For the PEIS,

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	<p>elsewhere to farm. The governments' objectives were economic development continuation of a young country's "Manifest Destiny" westward and an increase in agricultural production. Most settlers farmed land or grazed cattle but soon unanticipated consequences began to appear. Farmers plowed over prairie grasses and planted dryland wheat. As the demand for wheat grew cattle grazing decreased and more acres were plowed and planted. When the world market for wheat became oversupplied prices dropped and farmers reacted to their loss of revenue by planting more wheat to make up on volume what they were losing on price. This dry land farming led to the systematic destruction of prairie grass. With the land gradually being stripped bare environmental damage began to occur. Finally with the drought of 1930 over farmed land blew away. The heartland of the U.S. became a vast dust bowl. An article by Jonathan Coppess from the University of Illinois Urbana-Champaign on the Dust Bowl offers haunting parallels for New Jersey clean energy policy:" As one of the worst environmental disasters in our history the Dust Bowl was a confluence of policy human activities climatic shifts and the outer bounds of nature's tolerance. It should counsel humility about the ability of humans to perpetually push natural resources for their benefit The dust bowl was triggered by an extreme drought -part of a natural cycle over which we had little knowledge and less control - but it had been built by policies and misguided actions in an unfamiliar environment" Into the Unknown An often-quoted remark from Donald Rumsfeld former Secretary of Defense during a discussion linking Iraq with weapons of mass destruction states:" Reports that say that something hasn't happened are always interesting to me because as we know there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns- the ones we don't know we don't know. And if one looks throughout the history of our country and other free countries it is the latter category that tends to be the difficult one." Known Unknowns and Unknown. Unknowns</p>	<p>BOEM has identified information that was incomplete or unavailable for the evaluation of reasonably foreseeable impacts in Appendix E, <i>Analysis of Incomplete and Unavailable Information</i>.</p>

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	So are there any "known unknowns" and more troubling "unknown unknowns" lurking beneath the surface of efforts to accelerate offshore wind development?	
BOEM-2024-0001-0426-0008	Here at home PSE&G and Eversource have backed off from prior investment commitments to offshore wind. Do we understand why? There are other questions as well that have barely been explored at least publicly. Regarding national security an open field of hundreds of turbines in the middle of the Atlantic is an inviting soft target for terrorists or adversarial nations. How will we defend these resources?	The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i> , is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and analyze AMMM measures that could reduce those effects. Questions related to financial investments and national security are outside the scope of the PEIS. As stated in PEIS Section 2.3, non-routine activities and events, such as a terrorist attacks, are impossible to predict with certainty and are not analyzed in detail. In addition, PEIS Appendix E, <i>Analysis of Incomplete and Unavailable Information</i> , Section E.1.17, states that there is uncertainty regarding national security, but that the information that is available is appropriate for this programmatic level of analysis. Subsequent project-specific environmental analysis will be required for each individual COP.
BOEM-2024-0001-0439-0003	To address these concerns, the OSW industry urges BOEM to ensure that the final PEIS does not impose new analytical burdens or substantive requirements on lessees but instead serves as an analytical tool that improves the efficiency of the environmental review of COP-specific proposals within the NY Bight through tiering. To ensure this outcome: The Purpose and Need of the Proposed Action should be an analysis of AMMMs that BOEM <i>may</i> consider as conditions of approval.	BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not establishing any substantive obligations at this programmatic stage—but is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.
BOEM-2024-0001-0439-0007	BOEM should not adopt AMMMs through NEPA. NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions.[Footnote 5: 42 U.S.C. 4331.] Importantly NEPA is merely a procedural statute- it authorizes the use of substantive authorities for improved environmental outcomes but imposes no substantive requirements.[Footnote 6: NEPA only requires a "reasonably complete discussion of possible mitigation measures" to allow for a fair evaluation of avoidable and unavoidable environmental consequences.[Footnote 7: See id. At 352.] The Supreme Court has	BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures. It is not establishing or imposing any substantive obligations at this programmatic stage. Instead, it is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.

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	<p>warned that there is no requirement under NEPA "that a complete mitigation plan be actually formulated and adopted." [Footnote 8: Id.] Indeed the Court has held that it would be "inconsistent" with NEPA's procedural focus "to demand the presence of a fully developed plan that will mitigate environmental harm." [Footnote 9: Id. At 353; see also <i>Citizens Against Burlington Inc. v. Busey</i> 938 F.2d 190 205-06 (D.C. Cir.) (agency not required to finish mitigation studies or execute mitigation plans before project begins) cert. denied 502 U.S. 994 (1991); <i>Communities Inc. v. Busey</i> 956 F.2d 619 625-26 (6<sup>th</sup> Cir.) (EIS lacking complete remediation plan adequate where sufficient investigation was conducted to identify mitigation alternatives and make reasonable estimate of cost) cert. denied 506 U.S. 953 (1992).] In short NEPA requires agencies to take a "hard look" at the environmental impacts of actions being proposed under substantive statutes over which they have authority such as OCSLA. NEPA itself does not provide authority to impose requirements or limit actions. [Footnote 10: Ibid. at 351. ("other statutes may impose substantive environmental obligations on federal agencies but NEPA merely prohibits uninformed rather than unwise agency action.")]</p>	
nguBOEM-2024-0001-0439-0008	<p>In the introduction BOEM states that it is developing this Draft PEIS "to (1) identify analyze and [italicized: adopt] programmatic AMMM measures that could be applied to the six NY Bight lease areas." [Footnote 11: Draft PEIS at ES-1.] It appears that BOEM is proposing to use NEPA to impose substantive requirements on lessees without identifying the authority for each of the AMMMs. As stated BOEM cannot use NEPA as the statutory mechanism to adopt these AMMM measures it can only rely on NEPA to analyze the impacts of adopting or not adopting said measures under other statutes. As discussed in detail below adopting AMMMs at the PEIS stage prior to COP review is contrary to BOEM's implementing regulations under OCSLA. The final PEIS and Record of Decision (ROD) should clarify that BOEM is [italicized: considering] rather than [italicized: adopting] the proposed AMMMs. In this way the PEIS does not inappropriately impose substantive requirements on projects but instead provides an analysis of these AMMMs which can help inform and provide a more efficient path to project specific environmental reviews and approval. As discussed below however</p>	<p>BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures. It is not establishing or imposing any substantive obligations at this programmatic stage. Instead, it is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.</p>

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	this efficiency is only possible if the preferred alternative selected in the ROD considers only those AMMMs that are reasonable and economically and technically feasible.	
BOEM-2024-0001-0439-0009	The Purpose and Need of the Proposed Action inappropriately shifts burden to developers. The Proposed Action proposes to "[adopt] measures <i>unless</i> future COP-specific NEPA analysis shows that implementation of measures is not warranted or effective"[Footnote 12: Draft PEIS ES-3.] Separate from the issue of adopting substantive measures discussed above the proposal to wait for site specific analysis to show that a measure is not warranted inappropriately shifts the burden to developers to prove that specific AMMMs should not be imposed at the COP approval stage. This will significantly increase the costs to developers to study analyze and disprove the appropriateness of certain measures. This is a burden found in neither NEPA nor BOEM regulations nor other reviewing statutes. The final PEIS should not require site-specific analysis to disprove the need for prematurely adopted AMMMs. Rather the PEIS should help inform the site-specific NEPA review but ultimately the analysis in the site-specific NEPA document should determine which AMMMs are reasonable and necessary for the project under review.	In an effort to create a more efficient process, the PEIS analyzes AMMM measures that have been applied previously through the COP-specific NEPA process. BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not shifting the burden to developers—but is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient. In addition, see response to comment BOEM-2024-0001-0423-0030 regarding BOEM's review and revisions of AMMM measures in the PEIS and identification of RPs.
BOEM-2024-0001-0439-0010	The Purpose and Need of the Proposed Action The Adoption of AMMMs is contrary to BOEM's authority under OCSLA and NEPA. BOEM states that the Proposed Action for the Draft PEIS is "the adoption of programmatic AMMM measures that BOEM would require as conditions of approval for activities proposed by lessees in COPs submitted for the NY Bight lease areas unless future COP-specific NEPA analysis shows that implementation of measures is not warranted or effective."[Footnote 13: Draft PEIS ES-3.] Stating that BOEM "would require" the AMMMs as conditions of approval is contrary to BOEM's authority under OCSLA's implementing regulations. First under BOEM's implementing regulations the agency cannot use a PEIS to "pre-approve" COP terms and conditions. Doing so prematurely imposes a substantive burden on lessees and inappropriately preempts the COP approval process. BOEM regulations outlining the COP approval process state that BOEM conducts an environmental review once the lessee has submitted a COP and that "upon completion of our technical and	The Proposed Action for the Final PEIS includes the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. These measures may be required as conditions of approval for activities proposed by lessees in the COPs submitted for the six NY Bight lease areas. BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations. BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not prematurely adopting AMMM measures through the PEIS—but is identifying those AMMM measures that BOEM

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	<p>environmental reviews and other reviews required by Federal Law BOEM may approve disapprove or approve with modifications your COP. If we approve your COP we will specify terms and conditions to be incorporated into your COP."[Footnote 14: 30 C.F.R. 585.628(f).] Importantly BOEM approves a COP including mitigation measures upon completion of the environmental review. In short as required by regulation a lessee submits a COP which includes proposed measures to reduce impacts from the proposed activities within the COP to BOEM. BOEM subsequently reviews the COP for completeness and sufficiency and conducts an environmental review on the COP. It is at this stage that BOEM determines which AMMMs should be included in the environmental review for analysis and which AMMMs should be selected for adoption as terms and conditions of plan approval. In contradiction to these regulations BOEM is proposing to rely on this PEIS to prematurely adopt AMMMs prior to COP review and approval. While BOEM can certainly rely on a PEIS to analyze the impacts of appropriate AMMMs (as discussed in more detail below) it should not use the PEIS as authority to impose a substantive burden on a lessee prior to the COP review and approval.[Footnote 15: As noted in the section below it is no defense that a lessee may theoretically rebut the adoption of an AMMM at the COP stage by demonstrating that it is not "warranted or effective." This new burden is not found in BOEM's regulations.]</p>	<p>may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.</p>
BOEM-2024-0001-0439-0011	<p>Premature adoption of AMMMs may also inadvertently overlook consultation processes such as under the Endangered Species Act (ESA) which begins with review of a fully developed site- specific action in sufficient detail to assess the effects of the action on listed species and critical habitat.[Footnote 16: 50 C.F.R. 402.14(c)(1)(i) (requiring detailed description of proposed action to initiate ESA consultation).] If the activity is allowed by an incidental take statement any reasonable and prudent measures imposed as a result of the ESA process "cannot alter the basic design location scope duration or timing of the action and may involve only minor changes."[Footnote 17: Id. 402.14(i)(2).] Similarly the Marine Mammal Protection Act ("MMPA") authorization process begins with a developer's application to conduct site-specific activities and any</p>	<p>BOEM has modified the PEIS language describing the Proposed Action and refined the language throughout the PEIS to make clear that this PEIS is <i>not imposing</i> any AMMM measures—and therefore is not prematurely adopting AMMM measures through the PEIS—but is identifying those AMMM measures that BOEM may impose at the COP-specific NEPA stage. Because those AMMM measures are identified and analyzed now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient. Identification of AMMM measures through the PEIS process would supplement and inform but not supplant the identification of measures at the project-level ESA consultation. Based on comments provided on the Draft PEIS, BOEM revised AMMM measures as presented in</p>

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	<p>conditions imposed must be "practicable" and may not unduly interfere with the activity's implementation.[Footnote 18: 16 U.S.C. 1371(a)(5)(A)(i)(II)(aa) ("practicable" requirement for conditions in incidental take regulations provision); id. 1371(a)(5)(D)(ii)(I) ("practicable" requirement for conditions in incidental harassment authorizations); see Nat. Res. Def. Council Inc. v. Pritzker 828 F.3d 1125 1134-35 (9<sup>th</sup> Cir. 2016) (interpreting "least practicable adverse impact" requirement under 16 U.S.C. 1371(a)(5)(A)(i)(II)(aa)); id. At 1135 n.9. (eliminating 99% of oceans from sonar activity would be more protective of marine mammals "[b]ut it would not be practicable because it would so restrict military options for readiness training that it would render such training ineffective").] Other environmental review statutes including the Clean Air Act and the Clean Water Act contain similar requirements to review site- specific plans and limit agencies' conditioning authority over proposed activities.[Footnote 19: 40 C.F.R. 1502.24 (To the fullest extent possible agencies shall prepare draft environmental impact statements concurrent and integrated with environmental impact analyses and related surveys and studies required by all other Federal environmental review laws and Executive orders applicable to the proposed action including the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) the National Historic Preservation Act of 1966 (54 U.S.C. 300101 et seq.) and the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.).] As such any AMMMs that would potentially be required under the ESA MMPA or other environmental statutes should not be adopted prior to the completion of the consultation process. In the final PEIS, BOEM should clarify that the Proposed Action is an analysis of AMMMs that BOEM may consider as conditions of approval. As such future site-specific analysis would determine whether an AMMM considered in the draft PEIS is warranted rather than determining whether such measure is [italicized: not warranted.] Under this scenario BOEM would still rely on the PEIS to provide an environmental analysis of impacts and to tier site-specific reviews but it would not prematurely require the adoption of specific AMMMs. The final PEIS would include an analysis of all reasonable AMMMs that BOEM may require as terms and conditions of COP approval. BOEM would not be required to re-</p>	<p>Appendix G. Some of these measures would mitigate impacts on ESA-listed species. During project-level ESA consultation, agencies may identify additional measures to minimize effects on federally listed species.</p>

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	analyze each AMMM included in the final PEIS when reviewing and approving a COP. As such the final PEIS would allow for consistency standardization and a more efficient environmental review process at the site-specific level.	
BOEM-2024-0001-0452-0001	<p>Purpose of a PEIS</p> <p>We applaud BOEM for initiating this Programmatic Environmental Impact Statement (PEIS) specific to mitigation measures for regional OSW projects. This action appears partially responsive to longstanding fishing industry requests to better assess the cumulative impacts of the numerous OSW projects in the permitting pipeline and to conduct dedicated analyses regarding fisheries-specific mitigation measures that should be included as Terms and Conditions of any OSW project approval. [Footnote 10: As described in later sections of these comments a PEIS can only meet BOEM's obligations to avoid minimize and mitigate impacts to the environment if conducted in advance of lease issuance and if it includes all activities related to the proposed action in this case the multiple phases of OSW development. Instead the timing of this PEIS after leases have been issued results in the most meaningful opportunities to avoid impacts identified through environmental review to have already been lost.] The federal OSW leasing program needs substantially more attention devoted toward developing and incorporating fisheries and ecosystem data not less and this PEIS should not result in reduced scrutiny in the downstream approval of any OSW project. Rather we reiterate previous well known requests to BOEM to develop measurable criteria for excluding areas from development when risks to the physical and human environment exceed acceptable thresholds and apply those on regional and project-specific bases in all regions. Disappointingly the draft PEIS only evaluates the six OSW leases in the NY Bight excluding the existing leases on the east coast and anticipated addition of Central Atlantic WEAs all which contribute to cumulative effects to many of the same species oceanographic systems and fisheries. The draft PEIS also does not explain how BOEM's ongoing development of fisheries mitigation guidelines will interface with the findings of the final PEIS.</p>	<p>Section 1.2, Table 1-1, <i>History of BOEM planning and leasing activities in the NY Bight</i>, summarizes the history of BOEM's planning process and lease sale for the NY Bight, including the 2018 Call for Information and Nominations, the 2021 identification of the WEAs, and the Draft and Final Environmental Assessment (EA) for commercial and research leases. The table also summarizes the public notification and public comment periods that were conducted as part of the process. The analysis and development of the WEA in the NY Bight are summarized in the <i>New York Bight Area Identification Memorandum Pursuant to 30 CFR 585.211(b)</i>, which is found on BOEM's website: <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/Memorandum%20for%20Area%20ID%20in%20the%20NY%20Bight.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/Memorandum%20for%20Area%20ID%20in%20the%20NY%20Bight.pdf</a>.</p> <p>Each individual COP submitted by a developer to BOEM will be separately analyzed as required under BOEM's regulations, and that analysis will disclose the full impacts of the construction and installation, O&amp;M, and conceptual decommissioning of the project. For each resource area, Appendix C, <i>Tiering Guidance</i>, summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area.</p> <p>BOEM assesses the cumulative effects of the NY Bight projects in combination with ongoing and planned reasonably foreseeable activities, which are defined in Section 3.3.1. In addition, BOEM would have the opportunity to consider new information in each individual COP-specific NEPA document about what other activities are reasonably foreseeable at the time. Table 3.6.1-21 provides an RP, COMFIS-5, which recommends that lessees follow the Fisheries Survey Guidelines issued by BOEM with regards to</p>

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		pre-, during- and post-construction fisheries monitoring survey plan design.
BOEM-2024-0001-0469-0002	<p>Purpose of and Need for the Proposed Action</p> <p>The Draft PEIS states that the purpose of the proposed action is to: "identify issues analyze degree of potential impacts and adopt as appropriate AMMM measures This PEIS will reduce redundancies across COP-specific NEPA analyses including very similar affected environments impacts and mitigation measures and will allow for future project-specific NEPA documents to be focused on the project-specific impacts not considered in the PEIS or those impacts that warrant further consideration. The Proposed Action is needed to help BOEM make timely decisions on COPs submitted for the six NY Bight lease areas." [Footnote 5: BUREAU OF OCEAN ENERGY MGMT. NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT at 1-4 1-5 (Jan. 2024).] The agency's main goal in taking this approach clearly appears to be expediting review and approvals of future OSW projects. This is concerning as there are many knowledge gaps regarding the marine life in this region and the potential effect of creating a vast array of OSW installations. [Footnote 6: E.g. BUREAU OF OCEAN ENERGY MGMT. NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT appx. E (Jan. 2024); BUREAU OCEAN ENERGY MGMT. &amp; NAT'L OCEANIC &amp; ATMOSPHERIC ADMIN. BOEM &amp; NOAA FISHERIES NORTH ATLANTIC RIGHT WHALE AND OFFSHORE WIND STRATEGY at 9 (Jan. 2024) (citing Dorrell RM Lloyd CJ Lincoln BJ Rippeth TP Taylor JR Caulfield CP Sharples J Polton JA Scannell BD Greaves DM et al. 2022. Anthropogenic mixing in seasonally stratified shelf seas by offshore wind farm infrastructure. <i>Frontiers in Marine Science</i>. 9:830927. Doi:10.3389/fmars.2022.830927 and Raghukumar K Nelson T Jacox M Chartrand C Fiechter J Chang G Cheung L Roberts J. 2023. Projected cross-shore changes in upwelling induced by offshore wind farm development along the California coast. <i>Communications Earth &amp; Environment</i>. 4(4):116. Doi:10.1038/s43247-023-00780-y).] Sound science takes time; as does planning to determine and assess the impacts and take actions to avoid minimize and/or mitigate accordingly. Doing less puts marine life at grave risk.</p>	<p>The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i>, is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and analyze AMMM measures that could reduce those effects. The PEIS does not approve any projects. Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&amp;M, and conceptual decommissioning of the project. For each resource area, Appendix C, <i>Tiering Guidance</i>, summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area.</p> <p>During the COP-specific NEPA process, BOEM will hold a public comment period at the start of the NEPA process (scoping) and following the release of the Draft NEPA document, whereby members of the public and agencies can provide input to help inform the NEPA process, alternatives, and mitigation measures to identify and minimize environmental effects. Additionally, throughout the NEPA process BOEM works closely with Cooperating Tribal Governments and federal and state agencies to assist with assessing impacts and identifying mitigation measures.</p>

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BOEM-2024-0001-0469-0003	The Draft PEIS assumes the maximum use scenario that projects will use the most impactful range of the project design envelope. However for some factors BOEM predicts that impacts will be "negligible to major "the entire possible range of impacts because the actual impacts will depend on the individual parameters of the project. [Footnote 7: NEW YORK BIGHT DRAFT ENVIRONMENTAL IMPACT STATEMENT supra note 5 at ES-10-13] In addition the Tiering Guidance appendix states that the impact analysis in the PEIS for categories such as marine mammals cannot be used for individual Construction and Operations Plan ("COP") environmental reviews under the National Environmental Policy Act ("NEPA"). [Footnote 8: Id. At appx. C.] Taken together this all calls into question the utility of attempting to analyze such project-dependent impacts on a programmatic scale.	The PEIS does not approve any projects. Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&M, and conceptual decommissioning of the project. Project-specific analyses that tier from or incorporate by reference this PEIS will evaluate whether a project would have greater, equal, fewer, or different impacts than those that were analyzed in the PEIS by considering the level of action analyzed and the particularities of the site. Refer to Appendix C, <i>Tiering Guidance</i> , for specific recommendations by resource topic regarding how the PEIS may be incorporated by reference in the future COP-specific NEPA documents; this appendix also identifies additional analysis that would likely be required as part of the COP-specific NEPA analysis once detailed and site-specific project information is available.
BOEM-2024-0001-0469-0004	In absence of a PEIS avoidance minimization and mitigation ("AMMM") measures would be analyzed in the NEPA reviews of individual projects on a case-by-case basis. BOEM proposes choosing Alternative C adopting mitigation measures on a programmatic level i.e. for all six projects. [Footnote 9: Id. At ES-3]. According to BOEM representatives this would allow the agency to simply "check a box" applying the mitigation measure once they determined the measure applied to the individual project instead of performing an individual analysis on the mitigation measure. However for many affected resources the projected impacts remain constant between Alternative B (deferring adoption of mitigation measures until the individual NEPA review) and Alternative C especially for cumulative impacts. BOEM representatives stated that they would refine the mitigation measures as OSW develops and expressed that they were especially interested in comments on the mitigation measures themselves which COA provides later in Section VI. While COA does not wish to discourage the development and adaptation of AMMM measures it is unacceptable that currently available AMMM measures do not appear to be effective based on these projections.	Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&M, and conceptual decommissioning of the project. Project-specific analyses that tier from or incorporate by reference this PEIS will evaluate whether a project would have greater, equal, fewer, or different impacts than those that were analyzed in the PEIS by considering the level of action analyzed and the particularities of the site. Based on public and agency comments on the Draft PEIS, BOEM has revised several AMMM measures, which are described in Appendix G, <i>Mitigation and Monitoring</i> .
BOEM-2024-0001-0469-0005	Additionally the Draft PEIS references New York and New Jersey's statutory mandate and executive orders (respectively) requiring a certain amount of wind energy generation by a target year as well as	Section 1.3, <i>Purpose of and Need for the Proposed Action</i> , describes the purpose of the Proposed Action, which supports Executive Order 14008 "Tackling the Climate Crisis at Home and

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	the federal government's Executive Order 14008 and the associated goal to generate thirty (30) gigawatts of OSW capacity by 2030. The federal goal was developed by the Departments of Interior, Energy, Commerce, and Transportation but there is no detailed documentation or analysis on how these goals were developed and what environmental technological or economic standards they meet nor any public transparency or review. All these goals are intended to boost renewable energy development but the goals do not go through the same environmental review processes as the individual projects created to meet them.	Abroad" and President Biden administration's goal of 30 GW of offshore wind capacity by 2030. Goals set by the federal government or the states are not federal actions that require NEPA review.
BOEM-2024-0001-0469-0006	In summary the purpose and need statement prioritizes speed over due process and filling scientific knowledge gaps. The programmatic approach is of limited help when so many impacts must be considered at the individual COP review stage and the AMMM measures do not appear to change the overall environmental impacts in many cases. Further the push for OSW development is based on aspirational goals.	Project-specific analyses that tier from or incorporate by reference this PEIS will evaluate whether a project would have greater, equal, fewer, or different impacts than those that were analyzed in the PEIS by considering the level of action analyzed and the particularities of the site. Refer to Appendix C, <i>Tiering Guidance</i> , for specific recommendations by resource topic regarding how the PEIS may be incorporated by reference in the future COP-specific NEPA documents; this appendix also identifies additional analysis that would likely be required as part of the COP-specific NEPA analysis once detailed and site-specific project information is available.
BOEM-2024-0001-0470-0004	The amounts of installed capacity and number of Wind Turbine Generators (WTGs) in the planned projects as described in the PEIS are inconsistent and seriously misleading:--On page ES-4 the PEIS states "Based on a conservatively estimated power ratio of 3 megawatts per square kilometer BOEM estimates that full development of leases in this area has the potential to create up to 5.6 to 7 GW of offshore wind energy."--On the same page the PEIS states an estimated 16-18 GW of offshore wind energy may be necessary to ensure New York State achieves its Climate Act mandates (New York State Climate Action Council 2022).--On page ES-7 of the PEIS BOEM states that "For the analysis of six NY Bight projects BOEM anticipates development of 1103 WTGs 22 offshore substations (OSSs) 44 offshore export cables totaling 1772 miles (2852 kilometers) and 1582 miles (2546 kilometers) of inter-array cables across the six NY Bight lease areas."---This assertion that the six NY Bight projects would build "up to 1103 WTGS" is repeated on	The estimated power ratio of 3 MW per square kilometer and an estimate of 5.6 to 7 GW for total generating capacity of the NY Bight leases presented in Section 1.3 of the PEIS are derived from the BOEM December 2021 Final Sale Notice for the NY Bight leases. BOEM has added a footnote to this statement in Section 1.3 clarifying the source of this information. The power-generating capacity from the Final Sale Notice is provided for informational purposes and is not used in the analysis of the alternatives. The analysis of the alternatives is based on the parameters of the RPDE described in Section 2.1.2 of Chapter 2. BOEM recognizes that as technology advances and as projects are designed to maximize power output, the actual generation capacity of the NY Bight lease areas could be greater. Refined estimates of the anticipated generation capacity of each project proposed in the NY Bight lease areas will be described in each COP and project-level NEPA analysis.

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	<p>PEIS page 2-16.--On page 3.4.1-8 the PEIS says the NY Bight Projects evaluated in the PEIS would construct an estimated 9922 MW of renewable power from the installation of 713 WTGs citing Table D2-1 in Appendix D.---Table D2-1 indicates only 8822 MW will be installed by the current projects and require 615 WTGs---Table D2-1 further indicates that a further 1103 WTGs are planned but fails to disclose the resulting installed MWs. (Using a ratio analysis of the data provided in Table D2-1 if 615 WTGs will produce 8822 MW of installed capacity then 1103 WTGs would constitute another 15822 MW installed).--The Table in Appendix D appears to conflict with text elsewhere in the PEIS and indicates the total planned buildout of OSW in the NY Bight leases is 26644 MW.</p>	<p>The purpose and need states the PEIS supports state climate goals, but it is not intended to meet state obligations. BOEM's leasing process for offshore wind is independent of state goals and solicitations. BOEM is required to assess COPs as submitted by developers; its role is not to design projects to meet state goals.</p> <p>The estimate of 9,922 MW of renewable power in Section 3.4.1.1 (now 9,561 MW due to updates to ongoing and planned offshore wind projects in PEIS Appendix D) is describing ongoing and planned offshore wind in the geographic analysis area for air quality, excluding the NY Bight project. In Table D2-1, the combined number of turbines for all six NY Bight projects (1,103 WTGs) is presented, consistent with the estimates presented in the six-project RPDE in Chapter 2. To avoid speculation, the total generating capacity of the NY Bight leases is not described. The generating capacity of a turbine or a project does not directly relate to impacts; it is rather the physical dimensions of the WTGs and other parameters that relate to environmental impacts.</p>
<p>BOEM-2024-0001-0470-0005</p>	<p>[Bold: II. COMMENTS][Underline: 1. Segmentation:] [Bold: The PEIS violates 38 CFR Section 200.4 by improperly segmenting the Proposed Action from the full complement of OSW projects and installed Wind Turbine Generators (WTGs) needed to meet the dual legal requirements of service load obligations and applicable state mandates for renewable energy.] The purpose of the Proposed Actions is to build and operate OSW facilities that produce "renewable" electricity from sources approved under NY law and NJ Executive Order to meet what is now and re- mains in the future a long-established "service obligation" [Footnote 1: Federal law defines the "service obligation" as a requirement applicable to or the exercise of authority granted to an electric utility under Federal State or local law or under long-term contracts to provide electric service to end-users or to a distribution utility (16 USC Section 824q).] to provide electricity to end-use consumers. Switching the existing generation from fossil fuels and nuclear power to renewables such as offshore wind requires full assessment of the impacts of building out the full complement of OSW facilities that will be needed so a) the public is fully informed of the magnitude of the federal action</p>	<p>The regulations identified in the comment (38 CFR 200.4) do not apply to BOEM or the DOI. The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i>, is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and analyze AMMM measures that could reduce those effects. The PEIS does not approve any projects. Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&amp;M, and conceptual decommissioning of the project. For each resource area, Appendix C, <i>Tiering Guidance</i>, summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area.</p> <p>BOEM assesses the cumulative effects of each project in combination with ongoing and planned reasonably foreseeable activities, which are defined in Section 3.3.1. The cumulative effects analysis in the PEIS considers ongoing and planned</p>

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	and b) complete and cumulative impacts can be assessed. This "segmenting" of OSW projects is a blatant violation of NEPA and its regulations given the stated purpose of the PEIS is to assess the "potential biological socioeconomic physical and cultural impacts that could result from development activities for six commercial wind energy leases in an area offshore New Jersey and New York known as the New York Bight (NY Bight)" (PEIS page ES-3).	offshore wind activities. This analysis will be reviewed and augmented at the COP specific stage to ensure that each project is considered in the context of reasonably foreseeable activities. In the PEIS, BOEM considers the effects of the addition of the six NY Bight projects to other ongoing and planned projects in accordance with NEPA.
BOEM-2024-0001-0470-0010	[Italics: c) The forecast growth in electricity demand by industry regulators cannot be met by the segmented OSW Projects described in the PEIS]The planned 8822/9922 MW construction under the Proposed Action is well below the 20 MW total needed for the initial compliance with NYS CLCPA and the NJ EO and woefully below what NYISO growth forecasts indicate will be needed for full NYS compliance alone. The PEIS borders on fraudulent in its failure to fully disclose and assess the full effects of building out and operating the total number of WTGs needed to "meet" renewable goals and mandates given the realities of demand growth and service obligation; the full buildout will generate compounding and cumulative damage to irreplaceable maritime assets from construction and operation of both WTGs and attendant transmission facilities that are effectively ignored. Nor does the PEIS disclose and analyze the amount of non-intermittent electric generation (nuclear hydro fossil etc) along with storage/battery facilities that will be needed to ensure reliable electric supplies during the 60% downtime experienced by OSW generation or storage facilities.	The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i> , is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and analyze AMMM measures that could reduce those effects. The PEIS does not approve any projects. The purpose and need further states that the PEIS supports federal goals of 30 GW and state goals, but it is not intended to meet state obligations. BOEM's leasing process for offshore wind is entirely independent of state goals and solicitations. BOEM is required to assess COPs as submitted by developers; its role is not to design projects to meet state goals. The PEIS does disclose the cumulative effects of buildout of other ongoing and planned offshore wind projects on the OCS within the geographic area of analysis for each resource. Regarding other sources of energy, the PEIS is analyzing wind development in six offshore wind lease areas, and the analysis of other sources of energy or battery storage is outside the scope of this PEIS.
BOEM-2024-0001-0470-0011	-[Italics: New York]Page 3.4.1-6 of the PEIS notes that the New York State Energy Research and Development Agency (NY- SERDA) led the development of the New York State Offshore Wind Master Plan is leading the coordination of offshore wind opportunities in New York State and is supporting the development of 9000 MW of offshore wind energy by 2035.[Table 4: NYSERDA Projected Generation and Fuel Type]NYSERDA Generation Model: Upstate 2030; Demand Load (Gigawatt Hours/ GWh): 51223; Percentage Renewable: 70%; Percentage Offshore Wind: 0%NYSERDA Generation Model: Downstate 2030; Demand Load (Gigawatt Hours/ GWh): 100455; Percentage Renewable: 70%; Percentage Offshore Wind:	The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i> , is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and analyze AMMM measures that could reduce those effects. The PEIS does not approve any projects. The purpose and need further states that the PEIS supports federal goals of 30 GW and state goals, but it is not intended to meet state obligations. BOEM's leasing process for offshore wind is entirely independent of state goals and solicitations. BOEM is required to assess COPs as submitted by developers; its role is not to design projects to meet state goals. Additionally, BOEM

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	<p>24%NYSERDA Generation Model: Upstate 2040; Demand Load (Gigawatt Hours/ GWh): 74905; Percentage Renewable: 75%; Percentage Offshore Wind: 0%NYSERDA Generation Model: Downstate 2040; Demand Load (Gigawatt Hours/ GWh): 132601; Percentage Renewable: 90%; Percentage Offshore Wind: 33%[Table End][Bold: Source: NYSERDA.NY.Gov]On its [Underline: “Story of Our Grid”] page NYSERDA divides the NYCA into Up- and Downstate regions to illustrate how various fuel types will be used to deliver the NYISO-measured load demand. NYSERDA calculations of future demand levels (using numbers similar but not equal to those of the NYISO) and planned renewable contributions for the NYS Grid are summarized in Table 4. [Footnote 3: The total demand included in the NYSERDA calculations for 2030 are lower and the 2040 estimates are higher than the forecasts in the NYISO Gold Book provided in Table 2. NYSERDA does not provide estimates to 2053] [Footnote 4: New York City demand is currently about 55000 GWh a little over half of the forecast 2030 Downstate demand for ~100000 GWh.] NYSERDA's Upstate/Downstate demand ratios run about one-third/two-thirds of the total load demand in the NYCA. Applying those ratios to the 2053 NYISO forecast downstate demand will approximate 155113 GWh. The "Story of Our Grid" webpage states that "Downstate load is completely met with zero emissions generation in 2040" a claim that is based on 33% of load being met with offshore wind. Applying this 33% requirement to the 2053 demand forecast means that more than [Bold: 50000 GWh] of OSW generation is necessary meet the CPCLA mandates in 2053. [Footnote 5: Calculations of GWh from OSW WTGs herein use a capacity factor of 40% a three-year average of global capacity factors for 2020 to 2022 reported in 2024 by Statista.] Sourcing the 2040 downstate demand with 33% OSW production (as planned by NYSERDA) would require WTG capacity to make [Bold: 43758 GWh.] As noted above were the projects to actually total 9922 MW from 713 WTGs (vice 8822 MW from 613 WTGs) electric generation could approach [Bold: 35000 GWh of electricity.] Assuming NY gets 50% of the output from the set (segment) of projects analyzed in the PEIS [Bold: the 2053 demand shortfall would be more than 30000 GWh.] Looked at another way meeting the 2053 downstate demand of over</p>	<p>can only act as authorized under OCSLA, and it has no control over how much energy/electricity is needed or what other types of energy sources are used.</p> <p>Each individual COP submitted by a developer to BOEM will be analyzed separately as required under NEPA and will disclose the full impacts of the construction and installation, O&amp;M, and conceptual decommissioning of the project. For each resource area, Appendix C, <i>Tiering Guidance</i>, summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area.</p> <p>BOEM assesses the cumulative effects of each project in combination with ongoing and planned reasonably foreseeable activities, which are defined in Section 3.3.1. The cumulative effects analysis in the PEIS considers ongoing and planned offshore wind activities. This analysis will be reviewed and augmented at the COP-specific stage to ensure that each project is considered in the context of reasonably foreseeable activities. In the PEIS, BOEM considers the effects of the addition of the six NY Bight projects to other ongoing and planned projects in accordance with NEPA.</p>

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	<p>155000 GWh with 33% OSW [Bold: (50000 GWh)] requires about [Bold: 15000 MW of installed OSW capacity.] This means NYS alone requires nearly half of all the off-shore wind in the Administration's Program to actually meet its CPCLA obligations. The PEIS completely fails to disclose the reasonably foreseeable future actions needed to secure the actual MW/WTG buildout needed to produce the 50000 GWh to meet the NYS mandate alone.[Table Start: Eastern Seaboard Homes]Eastern Seaboard States: ME; "HOMES" (in millions): 0.57Eastern Seaboard States: MA; "HOMES" (in millions): 2.71Eastern Seaboard States: RI; "HOMES" (in millions): 0.42Eastern Seaboard States: CT; "HOMES" (in millions): 1.39Eastern Seaboard States: NY; "HOMES" (in millions): 7.53Eastern Seaboard States: NJ; "HOMES" (in millions): 3.39Eastern Seaboard States: PA; "HOMES" (in millions): 5.14Eastern Seaboard States: DE; "HOMES" (in millions): 0.45Eastern Seaboard States: MD; "HOMES" (in millions): 2.29Eastern Seaboard States: VA; "HOMES" (in millions): 3.24Eastern Seaboard States: NC; "HOMES" (in millions): 4.01Eastern Seaboard States: SC; "HOMES" (in millions): 1.97Eastern Seaboard States: GA; "HOMES" (in millions): 3.88Eastern Seaboard States: FL; "HOMES" (in millions): 8.15Eastern Seaboard States: Total; "HOMES" (in millions): 45.14[Table End][Bold: Source: US Census Bureau] For purposes of grid stability and reliability as well as delivering forecast demand requirements it is important to note that the Downstate/NYC demand for 50000 GWh includes vast municipal enterprise systems such as subways wastewater treatment plants hospitals emergency services (police fire emergency medical) street and traffic lights all requiring 24/7 electricity supply in copious amounts for all residents but especially underserved and environ- mental justice populations. Describing actual turbine electricity production in euphemistic misleading comparisons about powering "X Million Homes" is highly deceptive. As Table 5 shows the Eastern Seaboard has over 45 million "homes." Breaking down the deceptive tagline about the vaunted Atlantic OSW program powering "10 Million Homes" if the planned 30 GW installed can serve 10 million homes 45 million homes will require 135 GW installed. The US Department of Energy typically cites 412 offshore WTGs as the requirement per gigawatt meaning that powering [Bold: all] the East coast homes (and [Bold:</p>	

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	just] the homes) with the needed 135 gigawatts of wind at 412 turbines per gigawatt puts over 55000 turbines in the irreplaceable maritime system of the Atlantic a far cry for the 600-700 turbine segment analyzed in the PEIS.	
BOEM-2024-0001-0470-0012	<p>[Italics: New Jersey]Data on load growth in New Jersey is not as clear due to its inclusion in the multi-state Pennsylvania/Jersey/Maryland ISO (PJM). The [Underline: 2024 PJM Load Forecast Report] states that the total annual energy use throughout the PJM footprint is expected to increase nearly 40% by 2039 from the current 813328 to 1021955 GWh. Of that about 30000 GWh of additional demand is identified as coming from the four NJ utility zones summarized in Table 6. [Footnote 6: The total NJ load growth was calculated by subtracting the 2024 load forecast amount from the 2039 load forecast amount for the four NJ service zones listed in Table E-1 ANNUAL NET ENERGY (GWh) AND GROWTH RATES FOR EACH PJM MID- ATLANTIC ZONE AND GEOGRAPHIC REGION 2024 – 2034 summarized on pages 71-72 of the 2024 PJM Load Forecast Report linked above.][Table 6: NJ Forecast Load Increases]NJ Utility Zone: Atlantic Electric (AE); Load increase 2024-2039 (GWh): 2556NJ Utility Zone: Jersey Central Power &amp; Light (JCPL); Load increase 2024-2039 (GWh): 11380NJ Utility Zone: Public Service Electric &amp; Gas (PS); Load increase 2024-2039 (GWh): 15155NJ Utility Zone: Rockland Electric (East) (RECO); Load increase 2024-2039 (GWh): 341NJ Utility Zone: Total; Load increase 2024-2039 (GWh): 29432[Table End][Source: 2024 PJM Load Forecast Report]According to the [underline: U.S. Department of Energy's Energy Information Agency (EIA)] New Jersey plants of all types produced 65061 GWh of electricity in 2022 of which 33394 GWh came from natural gas production. [Footnote 7: US EIA New Jersey Electricity Profile 2022. New Jersey currently has 26 natural gas-fired power plants.] The entire mandated 11000 MW of OSW installed capacity (only a fraction of which will come from the Proposed Action being evaluated) could only produce about 39000 GWh. This means that full buildout of the NJ EO goal (one-third of the total Atlantic OSW planned by the Biden Administration) might produce enough electricity to replace natural gas plants or increase production to meet load growth from data centers and electric vehicles [Bold: but not both.] It is hard to conceive how the</p>	Please see response to comment BOEM-2024-0001-0470-0011.

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	purpose of the action to make the New Jersey grid emission-free is satisfied if only the disclosed segment of OSW wind construction is used. These arithmetic impossibilities become even more glaring and problematic when considering the 2023 acceleration of clean energy goals in [Underline: NJ Executive Order 315]. Previously the 2019 EMP required 100 percent clean energy by 2050; the new EO 315 deadline is 2035. Notably the NJ State Senate recently woke suddenly from a green-dream when a bill authorizing a public referendum on amending the state’s Constitution to ban construction of new power plants that burn natural gas or other fossil fuels was amended to allow the construction of such plants if they are to be primarily used as emergency backup power sources. The carve-out manages the damaging grid reliability risks exposed when Superstorm Sandy knocked out power in 2012 causing nearly a billion gallons of untreated sewage to flow into area waterways because sewage plants lacked accessible backup generation. The New Jersey arithmetic again demonstrates that the realities of the service obligation and actual OSW electricity production confirm these projects are but a fractional segmented portion of the actions needed to meet the overall energy production goals not just renewable standards.	
BOEM-2024-0001-0470-0013	[Italics: c) The final EIS analysis must analyze the fully aggregated (not segmented) complement of operational generation assets and storage capacity needed to reliably satisfy the identified electricity demand (including growth) while combatting the climate crisis through deployment of clean energy technologies and infrastructure.]The PEIS must redefine the Proposed Action as including construction and operation of the full complement of WTGs and storage facilities needed to meet both the known load requirements and renewable portfolio standards simultaneously. Without properly defined and unsegmented actions any evaluation or adoption of so-called programmatic avoidance minimization mitigation and monitoring (AMMM) measures remains inaccurate insufficient misleading and violative of the spirit and letter of the National Environmental Policy Act and its attendant regulations.	Please see response to comment BOEM-2024-0001-0470-0011.
BOEM-2024-0001-0470-	[Bold: III. SUMMARY]-In spite of high populations and significant population density East Coast states almost universally achieve the	Please see response to comment BOEM-2024-0001-0470-0011.

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0020 and BOEM-2024- 0001-0470- 0021	<p>lowest per capita carbon emissions in the country based on their historic underwriting of clean energy and transport systems.</p> <p>--Inland states with whom eastern states are competing for new manufacturing facilities and other economic development opportunities still make significant portions of their electricity from coal and natural gas. This keeps electricity prices low and attracts businesses that use electricity as operational fuel at the same time greenhouse gas emission levels remain high.</p> <p>--Forcing eastern states to shut down clean capacity and/or prematurely retire non-coal electricity production facilities in favor of massive expenditures for OSW facilities that are merely presumed to be “environmentally preferable” (all evidence to the contrary) further increases already high east coast electricity prices and exacerbates [Underline: competitive advantage already accruing to fossil-electric generating states.]</p>	<p>BOEM has authority under OCSLA to authorize renewable energy activities on the OCS and evaluates projects as proposed by developers under its regulations.</p> <p>Electricity rates are not within the scope of the PEIS and are part of agreements with the state and developer.</p>
BOEM-2024- 0001-0470- 0022 and BOEM-2024- 0001-0470- 0023	<p>For an industry as damaging dangerous and risky as OSW whether by design or function BOEM's system of programmatic EISs coupled with tiered analysis for subsequent issuance of various construction permits and approvals woefully fails to meet the most basic principles and requirements of the National Environmental Policy Act and this PEIS is no different.</p> <p>--Analyses separated into geographically disperse lease-areas inevitably suffer from improper segmentation fail to assess cumulative impacts and ignore the macro-socioeconomic impacts that will affect businesses and populations across large areas because these projects involve electricity as fundamental to survival in today's times as air and water.</p>	<p>Please see response to comment BOEM-2024-0001-0470-0011. The PEIS is a regional analysis and not an analysis on specific individual lease areas.</p>
BOEM-2024- 0001-0470- 0024	<p>BOEM cannot willfully ignore the realities and plain arithmetic of electricity demand growth when assessing the viability and effects of eliminating electric generation plants that can meet critical survival needs sanitation transportation communication safety education food security inter alia in favor of expensive unreliable and damaging WTGs that cannot do the job without multiple layers of storage backup along with additive transmission facilities. These sine qua non co-components bring compounding as well as cumulative negative effects to the areas where they must be built and operated.</p>	<p>Please see response to comment BOEM-2024-0001-0470-0011. Offshore wind would likely be in addition to other energy sources. Wind energy would displace fossil fuel energy to the extent that it is offered to the grid at a lower price than the bids from fossil-fueled energy sources.</p>

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	<p>--By 2053 downstate New York electricity demand growth is forecast to be over 155000 GWh (two-thirds of 253020 GWh); producing 33% of that load with OSW (50000 GWh) requires the output of about 15000 MW of installed OSW capacity far more than the current acknowledged projects could deliver to the NY Grid.</p> <p>--By 2039 New Jersey is forecast to add 29432 GWh to its demand load and also plans to replace 33394 GWh of current electricity produced by natural gas plants both with OSW. Satisfying this actual requirement for 62826 GWh of clean/renewable electricity for NJ's portion of the PJM grid with OSW would necessitate more than the planned 11 GW installed capacity.</p> <p>--Electricity demand in these two states alone have an estimated requirement for about 26 GW of installed OSW to meet service obligations almost 87% of the entire 30 GW Atlantic Offshore Wind Program planned by the Biden Administration.</p> <p>--To the extent the current Proposed Actions build less than 26000 GW installed OSW capacity in the NY Bight to meet concurrent demand growth and portfolio standards additional undisclosed energy storage facilities will also be required to reliably assure service obligation generation levels. The size location and full suite of impacts from the construction and operation of such storage facilities along with all necessary transmission and distribution infrastructure must be included in any and all environmental impact analysis to prevent improper segmentation and assure full cumulative impact analysis.</p>	
BOEM-2024-0001-0470-0025	<p>No amount of mitigation can be accurately assessed or planned in the absence of accurate and fully disclosed impacts and effects from building and operating the full complement of OSW WTGs and attendant storage/transmission facilities needed to meet the knowable and known amounts of electricity required to sustain the populations and assets of the affected states.</p> <p>The environmentally preferable option for greening the nation's electricity portfolio does not involve the green eastern seaboard states. Real decarbonization will come from discontinuing the 675000 GWh of electricity still produced with coal plants in the US few if any of which are in Atlantic Seaboard states.</p>	Please see response to comment BOEM-2024-0001-0470-0011.

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	--No agency of federal state or local government should use public funds to subsidize or under- write premature retirement and/or displacement of existing non-coal electricity production assets until existing coal plants are first replaced by the ratepayers who benefit from them (especially those in states with the highest GHG outputs per capita).	
BOEM-2024-0001-0474-0004	Among other reasons the action is Arbitrary because the BOEM administrative process favors the private interests of offshore wind developers to the detriment of the citizen stakeholders and the general public. Among other reasons the action is Arbitrary because the energy goals established in Executive Orders and Presidential Proclamations are not within the authority of the Executive Branch and do not have the force of law as the authority belongs in the legislative branch of government. Among other reasons the action is Arbitrary because the energy goals established by Executive Orders and presidential proclamations usurp personal freedoms. Among other reasons the action is Arbitrary because fees paid by the leaseholders and other funds collected from leaseholders and offshore wind developers are illegally and improperly deposited to the United States Treasury without dedication to the specific purpose and recognition of the cost of harm and remediation to the ocean. Among other reasons the action is Arbitrary because the leasehold interests restrict and interfere with the right to travel of all citizens and all members of the public.	Please see response to comment BOEM-2024-0001-0470-0011. BOEM's responsibility under the Energy Policy Act of 2005 is to issue renewable energy leases, easements, and ROWs for activities on the OCS (see PEIS Section 1.4, <i>Regulatory Overview</i> ).
BOEM-2024-0001-0528c	Beginning with offshore wind, transforming the ocean into a giant power plant. This despite the fact that the industry is in economic and technological turmoil, as evidenced by the abandonment of many projects by Ørsted and others, as well as technological challenges and failures, such as the inadequate grid to even accept the energy generated.	BOEM's responsibility under the Energy Policy Act of 2005 is to issue renewable energy leases, easements, and ROWs for activities on the OCS. The purpose of the PEIS is to identify issues and analyze potential impacts for the six NY Bight lease areas. Grid reliability is outside of BOEM's regulatory authority and the scope of the PEIS. The grid operator is responsible for managing the reliability of the grid. While offshore wind in the NY Bight would provide a new source of energy to the states of New York and New Jersey, other sources of energy would still be generated.
BOEM-2024-0001-0528c	And yet this PEIS seeks to streamline and expedite the issuance of these industrial scale offshore wind projects on these 6 lease areas which impact over nearly a half 1 million acres. To be clear, Clean Ocean action is not opposed to the idea of offshore wind, Clean	Thank you for your comment. The purpose of the Proposed Action is to describe issues, analyze degree of potential impacts, and identify, as appropriate, AMMM measures. BOEM is preparing this Final PEIS because of the close

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	<p>Ocean Action opposes this reckless scope, scale and speed currently underway due to its lack of robust, independent science, transparency, good governance, and due diligence. Our ocean deserves better. A fair pilot project and independent cost benefit analysis, and also public transparency.</p>	<p>proximity of the six NY Bight lease area, their similar level of development due to the leases being awarded from the same auction, the close timing of the anticipated COP submissions, and the high, near-term demand from the states of New York and New Jersey for electricity generated by offshore wind. This PEIS will reduce redundancies across COP-specific NEPA analyses, including very similar affected environments, impacts, and mitigation measures, and it will allow for future project-specific NEPA documents to be focused on the project-specific impacts not considered in the PEIS or those impacts that warrant further consideration.</p> <p>BOEM will still conduct project-specific NEPA analysis of the COP for each lease area, and it will focus on providing site- and project-specific analyses that were not already addressed by the PEIS. Project-specific alternatives will be considered by BOEM and cooperating agencies at the COP NEPA stage.</p> <p>Further, BOEM considered but dismissed from further consideration an alternative to build a pilot project (PEIS Chapter 2, Table 2-3). Data from sites that are constructed and operating (e.g., Block Island), as well as the pilot project in Virginia, were incorporated into this PEIS and will be incorporated into the development of project-specific COPs and EISs.</p>
BOEM-2024-0001-0528f	<p>Despite a growing demand for energy, the scale, scope, and speed of these offshore wind projects has continued to be a concern, but with this PES, it seems, the intent is to move even faster.</p>	<p>Thank you for your comment.</p> <p>The purpose of the Proposed Action is to describe issues, analyze degree of potential impacts, and identify, as appropriate, AMMM measures. BOEM is preparing this Final PEIS because of the close proximity of the six NY Bight lease areas, their similar level of development due to the leases being awarded from the same auction, the close timing of the anticipated COP submissions, and the high, near-term demand from the states of New York and New Jersey for electricity generated by offshore wind. This PEIS will reduce redundancies across COP-specific NEPA analyses, including very similar affected environments, impacts, and mitigation measures, and it will allow for future project-specific NEPA documents to be focused on the project-specific impacts not considered in the PEIS or those impacts that warrant further</p>

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		consideration. The expectation is that the analysis at the COP NEPA stage can be more streamlined and efficient. BOEM will still conduct project-specific NEPA analysis of the COP for each lease area, and it will focus on providing site- and project-specific analyses that were not already addressed by the PEIS. Project-specific alternatives will be considered by BOEM and cooperating agencies at the COP NEPA stage.
BOEM-2024-0001-0528w	The environmental impacts of the individual projects will vary greatly, depending on which design elements they choose. Yet the PEIS would allow them to use, depending on the resource, the same characterization of the affected environment and or qualitative impacts estimated in the PEIS for the environmental reviews of the individual projects. This will expedite the environmental review process and threaten the quality of the analysis.	Please see response to comment BOEM-2024-0001-0528f for information on the purpose of this PEIS and subsequent COP NEPA reviews.
BOEM-2024-0001-0529k	Instead, the government has set its sights primarily on fast tracking, massive ocean industrialization, transforming the ocean into a giant offshore power plant. Despite the fact that the industry is in economic and technological turmoil.	Please see response to comment BOEM-2024-0001-0528f for information on the purpose of this PEIS and subsequent COP NEPA reviews.
BOEM-2024-0001-0529o	The scale, scope and speed of these offshore wind projects has always been a concern, but with this PEIS it seems the intent is to move even faster.	Please see response to comment BOEM-2024-0001-0528f for information on the purpose of this PEIS and subsequent COP NEPA reviews.
BOEM-2024-0001-0529t	The stated purpose and need for this PEIS is to consider the combined impacts of these projects in order to streamline offshore wind development in response to President Biden’s executive order calling for a certain amount of offshore wind energy to be developed by 2040, it’s 11 gigawatts. This presupposes that offshore wind projects must be developed in this area which runs counter to the purpose of the National Environmental, Environmental Policy Act, which is to analyze the effects of projects before deciding to build them. The purpose in this section also incorrectly claims that BOEM can predict the environmental impacts of projects with wide ranges of design elements in a helpful way. Because choosing different foundations, different numbers of turbines or different types of substations, just to name a few examples, will have very different environmental impacts depending on which part of the	Please see response to comment BOEM-2024-0001-0528f for information on the purpose of this PEIS and subsequent COP NEPA reviews.

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	range a developer chooses. That is likely why the range of impacts for the different factors can be as high as negligible to major. Yet the PEIS would allow BOEM to use, depending on the factor, the same characterization of the affected environment and the same qualitative impacts estimated in the PEIS and the environmental reviews of the individual projects. This is what we mean when we say that speeding up the environmental review process comes at the expense of the quality of the analysis.	
BOEM-2024-0001-0310f	A smaller pilot trial project would be more prudent and give all of us a chance to assess its environmental safety and energy generating efficiency.	BOEM considered but dismissed from further consideration an alternative to build a pilot project (PEIS Chapter 2, Table 2-3). Data from sites that are constructed and operating (e.g., Block Island), as well as the pilot project in Virginia, were incorporated into this PEIS and will be incorporated into the development of project-specific COPs and EISs.
BOEM-2024-0001-0310i	But one of the things I think that is not included in a lot of the BOEM documents is the fact that this industry is not going to produce enough energy for the big cities. The wind turbines does not produce enough energy for the MTA in New York City, for the police, for the Homeland Security, for the hospitals. Wind blows 38 percent of the time. What are you supposed to do for the rest of the time? You have 24/7 backup with the industry that they are saying, you know, you know, reducing. They're actually increasing the oil industry and gas, because we need all this backup because this industry cannot do the job.	Thank you for your comment. BOEM expects that offshore wind development in the NY Bight lease areas would lead to reductions in fossil fuel usage in the U.S. However, the wind turbines would not be a sole source of electricity to the electrical grid; other sources of electric generation—including both renewables and fossil fuels—are connected to the electrical grid and would continue to supply electricity in the event that the wind turbines are shut down for any reason.
BOEM-2024-0001-0310l	The problem with offshore windmills is they're expensive. According to the Energy Information Administration, offshore wind is the most expensive energy resource in our repertoire based on the level cost of energy. The 2002 estimate for offshore wind absent of any government subsidies is \$136 per megawatt of electricity. How are we the people of New York and New Jersey going to afford our electric bills? Thank you.	Thank you for your comment. The price of the power generated by the projects will be determined by offtake agreements, also known as power purchase agreements, negotiated between the offshore wind companies and electric distribution companies, subject to each state's offshore wind procurement laws and regulations.
BOEM-2024-0001-0310m	There's one other thing. I actually wanted the audience to know, but I want to BOEM to know too. This isn't your fault. You're given the task of working with the prospect of offshore wind. And so ahead of	Thank you for your comment. The price of the power generated by the projects will be determined by offtake agreements, also known as power purchase agreements, negotiated between the offshore wind companies and electric distribution companies,

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	<p>that somebody decided to do offshore wind, and the cost of the project and its benefits have been shrouded in mystery and the mystery is starting to clear and the curtain is starting to get drawn back and people are starting to understand the cost figures per person, per home.</p> <p>When we're told and you allow a certain wind farm or a set of wind farms to be built, we're told how many homes that would serve with electricity.</p> <p>We're not told what it costs per home to provide that. 'Cause that cost is on our backs. It shows up in our taxes and in our electric rates eventually. We have to pay all that back to the wind builders. We have to give them their profit they're guaranteed.</p> <p>So I will leave it at this. You can talk to me in the back if you're interested, but what it's showing is that it costs so much money per home that this would serve that for a tiny fraction, that's the cost to build, maintain the whole lifespan and if we add to that also the losses that we know that the seashores will come to, which includes the fisheries, it includes property value losses, the loss to the shore businesses. When you add all that up divided by the number of homes that that's supposed to provide electricity for, it's such a huge number that you could easily come up with alternatives.</p>	<p>subject to each state's offshore wind procurement laws and regulations.</p>
BOEM-2024-0001-0310p	<p>I have been involved with many of the anti-wind and pro whale groups in the area, I have not found one fact that can support that there's anything good about these offshore wind turbines going in. Not one. If anybody knows of one, please educate me because I have read environmental impact studies and one of the main things that I would like to request from BOEM is to complete your mission statement. Your mission is to environmentally and economically manage our ocean, and by putting in these wind turbines and rushing them through without, you know, without the studies on how it's affecting the marine life and the ocean and the economy, is just irresponsible. You're not meeting your mission statement. So, BOEM, I would like you to meet your mission statement and be environmentally and economically prudent with our ocean. We've only got one. If we ruin it this is going to be the worst environmental</p>	<p>BOEM's Environmental Studies Program develops, funds, and manages rigorous scientific research specifically to establish information needed for assessing and managing environmental impacts of energy and mineral development on the human, marine, and coastal environments. For more information on this program, please visit <a href="https://www.boem.gov/environment/how-we-do-research">https://www.boem.gov/environment/how-we-do-research</a>.</p> <p>Further, BOEM's Office of Renewable Energy Programs depends on science to meet its responsibilities under environmental laws, regulations, and standards. As such, BOEM funds and manages scientific research to inform its decision-making processes for renewable energy projects on the OCS. For more information on Office of Renewable Energy Programs, please visit</p>

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	disaster in our lifetime, you know, worse than the polar icecaps and the dinosaurs missing and all that stuff. We cannot get clean water back.	<a href="https://www.boem.gov/environment/environmental-studies/renewable-energy-research">https://www.boem.gov/environment/environmental-studies/renewable-energy-research</a> .

### P.5.3 Air Quality and Greenhouse Gases

**Table P.5-3. Responses to Comments on Air Quality and Greenhouse Gases**

Comment No.	Comment	Response
BOEM-2024-0001-0436-0004	Also potential development of the leaseholds would assist with meeting several state mandates for renewable energy. New Jersey's goal of 11 GW of offshore wind energy generation by 2040 is outlined in New Jersey Executive Order No. 307 issued on September 21 2022. New York's requirement of 9.0 GW of offshore wind energy generation by 2035 is outlined in the Climate Leadership and Community Protection Act signed into law on July 18 2019. Additionally an estimated 1618 GW of offshore wind energy may be necessary to ensure New York State achieves its Climate Act mandates (New York State Climate Action Council 2022). Based on a conservatively estimated power ratio of 3 megawatts per square kilometer BOEM estimates that full development of leases in this area has the potential to create up to 5.6 to 7 GW of offshore wind energy.	BOEM agrees that development of offshore wind energy projects would help meet state mandates for renewable energy.
BOEM-2024-0001-0093-0001	I would like to be on record as in favor of the Offshore wind projects in the New York bight. As Chair of the Franklin Township Environmental Commission we are working too minimize fossil fuel use. I believe that Off Shore wind will help in fight against Global warming.	BOEM agrees that development of offshore wind energy projects (to the extent they displace fossil fuels) would help reduce GHG emissions that contribute to climate change.
BOEM-2024-0001-0171-0001	[Underline: Climate & Environment]-As we know all too well the climate crisis poses an imminent threat to coastal communities and states across the entire Northeast. We've continued to experience inland flooding sea level rise severe rain historic snowfalls devastating hurricanes and other extreme weather events and as the climate crisis worsens so will the weather.-To achieve the necessary carbon emission reductions to protect our communities from the	BOEM agrees that development of offshore wind energy projects (to the extent they displace fossil fuels) would help reduce GHG emissions that contribute to climate change.

Comment No.	Comment	Response
	climate crisis we need a major transition in our energy sector now. The only way to protect and sustain our communities and our environment is the safe and responsible transition to 100 percent clean energy and the development of clean energy sources like offshore wind.-Wind energy is clean energy. Unlike energy from sources like coal or methane gas wind energy does not require burning fossil fuels and does not release harmful climate-destabilizing pollution.-By cutting our fossil fuel reliance offshore wind will help alleviate the impacts of climate change statewide. Our communities have already faced the impacts of inland flooding severe rain and weather events. This can go on no more.	
BOEM-2024-0001-0273-0001	Off-shore wind energy is a vital source for low emission energy and the health of our planet. Please make haste to build healthy off-shore wind turbines now.	BOEM agrees that development of offshore wind energy projects (to the extent they displace fossil fuels) would help reduce air pollutant emissions and reduce GHG emissions that contribute to climate change.
IsBOEM-2024-0001-0284-0001	Offshore wind is advertised as "green" or "clean" energy. In my opinion OSW provides no positive impact on the environment and is neither green or clean. According to Boem "Overall it is anticipated that there would be no collective impact on global warming as a result of OSW projects including the Proposed Action alone....". It is my understanding that OSW turbines may actually increase ocean temperatures. I have seen photos of wind turbines with oil lubricant and Sulfur Hexafluoride (SF6) oozing out of them. This leakage can potentially pollute our oceans.	Final PEIS Section 3.4.1.4 discusses the potential impact of the project alternatives on GHG emissions that contribute to climate change. Final PEIS Section 3.4.1.4.3 and Appendix B Section B.1.4 discuss potential impacts of WTGs on ocean temperatures. Final PEIS Sections 3.4.1.3.2 and 3.4.1.4.1 discuss the potential for chemical spills. SF <sub>6</sub> is a colorless gas. A leak of SF <sub>6</sub> would be addressed by repair of the associated switchgear. Applicants would be required, through its OCS air permit, to have leak detection and repair procedures in place prior to operation of WTGs.
BOEM-2024-0001-0284-0003	Offshore wind turbines are more susceptible to extreme weather. Do we know what impact a Category 3 or 4 or a northeaster will have on the stability of these wind turbines? Perhaps that should be studied before committing to hundreds of wind turbines off our shores. I am asking for more research to be done before committing our coastal communities to this inefficient unclean and environmentally unfriendly energy option.	Final PEIS Section 2.3 discusses design features of WTGs to accommodate extreme weather including hurricanes.
BOEM-2024-0001-0313-0028	3.4.1-10 Affected Environment and Environmental Consequences. Offshore wind energy development could help reduce emissions from onshore energy sources potentially improving regional air	The assumptions and calculations underlying the projections commented on are provided in the studies referenced by the commenter.

Comment No.	Comment	Response
	<p>quality and reducing GHGs. Millstein et al. (2018) estimated that between 2007 and 2015 wind power in the US avoided as much as 127698000 metric tons (MT) of CO<sub>2</sub> per year 147000 MT of SO<sub>2</sub> per year 93000 MT of NO<sub>x</sub> per year and 9000 MT of PM<sub>2.5</sub> per year. A study by the U.S. Department of Energy (USDOE) estimated emissions for a future scenario with wind energy supplying 10 percent of total U.S. electricity demand by 2020 20 percent by 2030 and 35 percent by 2050. The study estimated cumulative emissions reductions from 2013 to 2050 of 2.6 million MT of SO<sub>2</sub> 4.7 million MT of NO<sub>x</sub> and 0.5 million MT of PM<sub>2.5</sub> (USDOE 2015). Similarly the study scenario was estimated to reduce GHG emissions in the electric sector by 130 million MT of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) in 2020 380 million MT CO<sub>2</sub>e in 2030 and 510 million MT CO<sub>2</sub>e in 2050 (USDOE 2015). An analysis by Barthelmie and Pryor (2021) calculated that depending on global trends in GHG emissions and the amount of wind energy expansion development of wind energy could reduce predicted increases in global surface temperature by 0.51.4 degrees Fahrenheit (F) (0.30.8 degrees Celsius [C]) by 2100."</p> <p>Comment Projections to arrive at these statistics and the assumptions and calculations should be substantiated as it is unclear whether factors including construction emissions GHGs associated with manufacturing of the WTGs and all structures is included the emissions from decommissioning and disposal nor does it include the fact that the lifespan of these turbines is approximately 30 years; by 2050 wind turbines in place and presumably used in these calculations will have to be retired so the net impacts may be misleading.</p> <p>It is also a common concern how local impacts and benefits will be felt by the residents these regional and global trends should be contextualized for this project. Is there any impact to ozone which is a concern on long island in the summer months?</p> <p>These projections also appear to have a set of assumptions and offsets for displacing the use of fossil fuels not the net increase assuming these alternative energy methods are an additional energy source and not a substitute.</p> <p>3.4.1-10 Affected Environment and Environmental Consequences.</p> <p>The section on accidental releases states "Ongoing and planned</p>	<p>Estimates of construction emissions are presented in Final PEIS Section 3.4.1.4.1. Decommissioning emissions were not quantified. As stated in Final PEIS Section 3.4.1.4.1, emissions from manufacturing are not included in the analysis. However, life cycle considerations are discussed in Section 3.4.1.4.1. As indicated in Section 3.4.1.4.1, although wind energy has higher upstream emissions than many other generation methods, its life-cycle GHG emissions are orders of magnitude lower than from other generation methods.</p> <p>Wind energy development (to the extent that it displaces fossil fuel energy) is expected to reduce emissions of NO<sub>x</sub> and VOC from power plants, which could lead to reduced formation of ozone (O<sub>3</sub>) that could affect Long Island.</p> <p>Wind energy would displace fossil fuel energy to the extent that it is offered to the grid at a lower price than the bids from fossil-fueled energy sources. BOEM expects that wind energy would be substituted for and not add to energy from fossil-fueled energy sources.</p> <p>Final PEIS Sections 3.4.1.3.2 and 3.4.1.4.1 discuss the potential for air quality impacts from accidental chemical spills.</p>

Comment No.	Comment	Response
	offshore wind activities could release air toxics or HAPs because of accidental chemical spills within the air quality geographic analysis area.	
BOEM-2024-0001-0313-0031	Section 3.4.1.5.4 Conclusions" Impacts of Alternative C. As with Alternative B development of the NY Bight projects with application of AMMM measures under Alternative C would result in a net decrease in overall emissions over the region compared to the emissions from traditional fossil-fuel power plants. Impact ratings under Alternative C are the same as expected with Alternative B; however the amount of emissions could be less with Alternative C because of the emission reductions achieved by implementation of AMMM measures."	As discussed in Section 3.4.1.5.4, impacts under Alternative C are expected to be less than under Alternative B.
BOEM-2024-0001-0313-0032	General Comments about the section on Air Quality There are concerns regarding the utilization of sulfur hexafluoride as it appears that the technology is either not available and there is no mandate that alternatives be utilized. All mitigation measures identified above are presented with the qualifier "if/as feasible" with no discussion about how this would be implemented. There should be additional discussion regarding compliance and consistency with NYSDEC documents recently released " As part of DEC's ongoing implementation of the Climate Leadership and Community Protection Act (Climate Act) on Dec. 28 2023 DEC filed draft regulations to reduce emissions of two potent greenhouse gases hydrofluorocarbons (HFCs) and sulfur hexafluoride (SF6). HFCs are extremely potent greenhouse gases (GHGs) often used in refrigeration and cooling that have hundreds to thousands of times higher global warming potential than natural refrigerants. As recommended by the Climate Action Council in the Scoping Plan DEC filed proposed amendments to 6 NYCRR Part 494 to further reduce greenhouse gas emissions from refrigerants foams and aerosol propellants. SF6 is the most potent greenhouse gas and in New York State is used in electric power transmission and distribution equipment. As also recommended by the Scoping Plan DEC also filed a new draft regulation 6 NYCRR Part 495 which includes among other requirements a program to phase down the use of SF6 in gas-insulated equipment (GIE) used by the electricity sector." (source: NYSDEC Climate Action Highlights February 2024)	<p>The proposed regulation 6 New York Codes, Rules and Regulations (NYCRR) Part 495, Sulfur Hexafluoride Standards and Reporting, would phase out the use of SF<sub>6</sub> in gas-insulated equipment beginning in 2026. BOEM is recommending RP AQ-1, which would encourage lessees to use a substitute insulator gas rather than SF<sub>6</sub> in the switchgear and transmission systems, if feasible. Final PEIS Section 3.4.1.5.1 discusses mitigation measures.</p> <p>The Final PEIS does not quantify emissions from construction vehicle traffic. However, vehicle traffic would contribute only a small proportion of total project emissions.</p> <p>As stated in Final PEIS Section 3.4.1.4.1, emissions from manufacturing are not included in the analysis. However, lifecycle considerations are discussed in Section 3.4.1.4.1. As indicated in Section 3.4.1.4.1, although wind energy has higher upstream emissions than many other generation methods, its lifecycle GHG emissions are orders of magnitude lower than from other generation methods.</p> <p>The Final PEIS does not quantify emissions from stationary sources, vehicles, production of energy used on the project site or by vehicles, and waste disposal. However, these sources are expected to contribute only a small proportion of total project emissions.</p>

Comment No.	Comment	Response
	<p>It does not appear that the cumulative air quality impacts from construction vehicle traffic of personnel to job sites is included in the impact analysis nor is the air quality impacts of manufacturing and mining of raw materials to produce the wind turbines the associated infrastructure and other materials integral to the proposed action. It stands to reason that this is part of the overall emissions calculation that would not be emitted if not for the creation of this proposed action and as such should be part of the calculation and net impact analysis.</p> <p>It should be noted even the NYSDEC Policy document recommends analysis of direct and indirect emissions when evaluating the impacts of greenhouses gasses "When GHG emissions are considered in an EIS total annual emissions should be presented as short tons of carbon dioxide or for other types of GHGs as both short tons and as equivalent to short tons of CO2 using the most up-to-date global warming potential factors as determined by the Intergovernmental Panel on Climate Change (IPCC) and published in the most recent Assessment Report on Climate Change.</p> <p>In cases when GHGs are analyzed in an EIS both direct and indirect GHG emissions should be assessed. Each of these categories includes both stationary and mobile sources. Direct GHG emissions will include both stack and fugitive emissions from combustion processes or industrial processes conducted on-site and from fleet vehicles owned (or leased) and operated by the project proponent and associated with the project. Indirect GHG emissions will include emissions generated by energy plants (off-site) supplying energy used on the site of the proposed project during its operation and from vehicle trips to or from the project site during its operation where vehicles are not owned or operated by the project proponent (i.e. freight deliveries employee commuting customer visits).</p> <p>Another source of indirect emissions is the generation transportation treatment and disposal of wastes generated at the site. Waste generation is typically reported in an EIS and should also be evaluated for its contributions to GHG emissions and included in the quantification of total annual emissions." (source: NYSDEC Policy "Assessing Energy Use and Greenhouse Gas Emissions in</p>	

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	Environmental Impact Statements" Issuing Authority Office of Air Energy and Climate)	
BOEM-2024-0001-0313-0033	<p>Affected Environment and Environmental Consequences 3.4.1-4 The PEIS states "The CAA prohibits federal agencies from approving any activity that does not conform to a State Implementation Plan. This prohibition applies only with respect to nonattainment or maintenance areas. Conformity to a State Implementation Plan means conformity to a State Implementation Plan's purpose of reducing the severity and number of violations of the NAAQS to achieve attainment of such standards. The activities for which BOEM has authority are outside of any nonattainment or maintenance area and therefore not subject to the requirement to show conformity. However agencies issuing future approvals related to offshore wind projects in the NY Bight are responsible for evaluating the applicability of the CAA General Conformity requirements to their actions."</p> <p>Comment - There is also a concern with the way the impact analysis is compartmentalized for one representative NY Bight Project in terms of air quality the impacts to air quality could be concentrated based on the timing of certain construction activities and could have a synergistic adverse impact to considerations like ozone formation for which there are significant considerations. This also does not account nor analysis for the cumulative impacts of the surrounding planned projects which in terms of air quality could certainly have a localized impact especially during construction and decommissioning of the various projects.</p> <p>It is also concerning that the above paragraph appears to obviate responsibility for air quality concerns based on distance to the shoreline despite the project components and connections that are connected to this larger plan of scale and potentially shared infrastructure with surrounding projects.</p>	<p>Final PEIS Sections 3.4.1.4.3 and 3.4.1.5.3 discuss cumulative impacts. In the absence of COP-specific project proposals, available data are insufficient to determine specific locations of cumulative impacts.</p> <p>BOEM's determination that its actions are not subject to the requirement to show conformity is not related to distance from shore but follows from the language of the General Conformity Rule.</p>
BOEM-2024-0001-0331-0017	BOEM excluded the amount of fossil fuels and chemicals that will be used by the New York Bight projects but we assume based on the number of turbines it will be 55% more than the following numbers for the other NY/NJ projects: coolants 2 million gallons; oils 4 million gallons; diesel fuel 1 million gallons. Including all NY/NJ projects there will be 36000 acres of seabed disturbance for export cables	Final PEIS Section 3.4.1.3.2 discusses potential quantities of fuels and chemicals. In the absence of COP-specific project proposals, any quantitative estimates for fuels, chemicals, and other project characteristics are uncertain.

Comment No.	Comment	Response
	and 33000 acres of disturbance for interarray cables. There will be 827 acres of scour protection and 737 acres of cable hard protection excluding NY Bight since no numbers are provided but we assume the Bight will add 2424 more acres of scour and hard protection in the ocean. There will be over 11 tons of carbon dioxide added to the NJ/NY atmosphere during the construction of the projects.	
BOEM-2024-0001-0331-0036	<p>The PEIS Fails to Address GHG Emissions and SF6 and Mitigation is Inconsistent with the Project's Goals The section AQ Table G-1 of mitigation measures for reducing GHG is nothing more than window dressing. The mitigation measure AQ-1 acknowledges that the offshore wind developers will continue to use SF6 and must evaluate the "feasibility of using non SF6". Lessees are "encouraged" to replace diesel fuel with alternatives and "encouraged" to replace combustion engines with zero -emissions technologies. These mitigation measures have no teeth in actually requiring developers to take any real measures to reduce their carbon footprint. According to the EPA SF6 is the most potent greenhouse gas known to date. It has an atmospheric lifetime of 3200 years and a "relatively small amount of SF6 can have a significant impact on global climate change." Previous EIS documents have significantly minimized the amount of SF6 that will be used in the offshore wind projects. In previous documents BOEM recognizes SF6 as "the most potent greenhouse gas known." Offshore wind developers and BOEM have incomplete of not only the number of offshore substations (OSS) but it has failed to mention the use of SF6 in each of the turbines. The PEIS does not disclose the potential full amount of SF6 that may be used in the projects. The PEIS fails to mention the use of SF6 in each wind turbine generator. Considering that BOEM has admitted in previous EIS documents that there is a yearly loss of SF6 from switchgear disclosing the full amounts that may be used in these projects is crucial. The PEIS does not disclose expected leakage of SF6 in its table listing project emissions. There is no mention of a potential accidental release of SF6 such as happened at the Seagreen offshore wind area in the North Sea in June of 2022 forcing the crew to evacuate their rig. The EPA states that leaks of SF6 can occur during "installation maintenance and servicing and decommissioning" of equipment that contains the gas. The PEIS does</p>	<p>Final PEIS Section 3.4.1.4.1 discusses SF<sub>6</sub> and provides the estimated quantity of SF<sub>6</sub> for one representative project. BOEM encourages lessees to analyze and consider implementing AQ-1 as a RP, as outlined in Table G-2. Measure AQ-1 addresses SF<sub>6</sub> management. Compliance efforts will also be addressed through the USEPA's OCS air permitting process. The lessee will be required to follow all applicable federal, state, and local laws regarding the use and management of SF<sub>6</sub>. The environmental decision document for each COP-specific NEPA review will describe the specific terms and conditions of the AMMM measures for which compliance is required.</p>

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	not fulfill its purpose outlining the environmental impact concerning SF6 use since that does not begin and end with the Atlantic Shores projects. As BOEM has previously stated (1) "the impact of GHG emissions does not depend upon the source location." Since numerous wind energy projects in the NJ/NY area will be using SF6 in OSSs and wind turbines the singular approach in evaluating the environmental impact of just NY Bight makes the PEIS flawed and too limited to fulfill its purpose.	
BOEM-2024-0001-0334-0013	Is climate change really happening for the reasons we think? If not need to rush into offshore wind is moot. Are CO2 reductions by the US meaningful against grosser CO2 emissions elsewhere? Is offshore wind even effective in a green sense?- If green/renewable energy has merit and we want it is offshore wind even the best choice?	Issues around selection of offshore wind energy for development are public policy questions that are beyond the scope of an EIS and outside of BOEM's authority; therefore, they should be addressed at the federal and state level.
BOEM-2024-0001-0334-0015	Great questions. To the last question I submit it is NOT the best "renewable" choice. It is now becoming clear that the investment required to serve a given number of homes with offshore wind is tremendously overpriced. It can be demonstrated that for small fraction of the offshore wind investment those homes would be better served by their own solar energy system panels and a storage battery. Easily 1/3 the cost or less. These would be supplied by a program to install them by a fully funded state program. If the public comes to understand this they will reject having offshore wind put on their backs and will insist that NJ comes up with a plan that puts the same investment into installing a solar system on every suitable home instead. Period. Case closed. BOEM will be out of the wind business. And maybe out of the ocean leasing business too. Representatives Jeff Van Drew and Chris Smith have been apprised of this. SEE ORIGINAL COMMENT FOR IMAGE: If a Far More Cost Effective Alternative to Off-Shore Wind (OSW) exists NOW that;	Issues around selection of offshore wind energy for development, and its costs, are public policy questions that are beyond the scope of an EIS and outside of BOEM's authority; therefore, they should be addressed at the federal and state level.
BOEM-2024-0001-0345-0001	CCE strongly supports advancing well-sited environmentally responsible renewable energy projects and phasing out the use of antiquated fossil fuels on Long Island and throughout New York State. Thank you for the opportunity to comment on this important renewable energy guidance document. CCE is supportive of this process to streamline the permitting for the six NY Bight projects to ensure that they move forward in both an environmentally responsible and timely manner.	BOEM agrees that development of offshore wind energy projects (to the extent they displace fossil fuels) would bring about climate and environmental benefits.

Comment No.	Comment	Response
BOEM-2024-0001-0345-0002	New York State is a leader in the fight against climate change and a national champion for offshore wind having passed the strongest climate change law in the nation in 2019. The state is working towards achieving mandates of 70% renewable energy by 2030 carbon free electricity by 2040 and a net zero carbon economy by 2050. We cannot achieve these goals particularly in downstate New York without also achieving or exceeding our target of 9000 MW of offshore wind. The Biden administration has announced plans to tackle climate change and put forth a goal of reaching a net-zero carbon economy by 2050. We must work aggressively to support responsibly-sited renewable energy projects like Excelsior Wind Attentive Energy and Community Offshore Wind to meet these critical state and federal goals.	BOEM agrees that development of offshore wind energy projects would help meet state mandates for renewable energy.
BOEM-2024-0001-0345-0004	Climate Change and Wildlife CCE thanks BOEM for its thorough assessment of impacts to fish birds and marine species which should be mitigated to the greatest extent possible. As we know the most immediate impact to these species is climate change. The real danger facing our beaches fisheries and coastal communities is not a wind farm it is rising sea levels ocean acidification warming waters and extreme weather events. These events continue to be a significant threat to downstate New York and to adversely impact our estuaries and our coastal communities. The environmental benefits of advancing offshore wind farms to reduce climate impacts needs to be weighed against any potential impacts associated with construction of offshore wind farms. [Bold Italics: CCE believes that offshore wind is one significant part of the antidote in fighting climate change.] Long Island and New York City are already experiencing negative ecological and economic impacts of climate change. We need to be at the forefront of the transition to renewable energy and offshore wind development in the US.	BOEM agrees that development of offshore wind energy projects would (to the extent they displace fossil fuels) help reduce GHG emissions that contribute to climate change. Potential impacts of construction activities on each resource area are discussed in the respective sections of the Final PEIS.
BOEM-2024-0001-0345-0005	The National Ocean and Atmospheric Administration (NOAA) predicts under a worst- case scenario a 6 ft sea level rise will cause most of the barrier islands and Long Island homes south of Merrick Road (route 27A) to be flooded or under water with more than 150 municipalities impacted. Homes and infrastructure are already being raised including roads in Freeport Lindenhurst Smithtown and Southampton as well as the Shelter Island ferry while residents in the	As discussed in the Final PEIS, development of offshore wind energy projects (to the extent they displace fossil fuels) would help reduce GHG emissions that contribute to climate change including the impacts noted by the commenter.

Comment No.	Comment	Response
	<p>most vulnerable communities are facing managed retreat and home buyouts. These communities are in an exceptionally vulnerable position to extreme weather events.</p> <p>Superstorm Sandy destroyed or damaged 95000 buildings on Long Island and caused \$19 billion in damages to New York City. We are experiencing the increasing occurrence of "hundred-year storms" and increased precipitation during rain and snow events and the problem will only get worse. NOAA predicts that in a worst-case sea level rise scenario the average high tide in NYC will be 2 feet higher than the storm surge during Superstorm Sandy. High costs of repairing damage from extreme weather events like Superstorm Sandy and Hurricane Irene coupled with the need to raise homes and pay increased flood insurance premiums are impacting struggling homeowners in coastal communities. In addition to major storms south shore communities are already experiencing "sunny day flooding" due to higher tides. This means on sunny day there is still street flooding and property damage.</p> <p>Extreme weather events are not our only challenge. Warmer winters coupled with longer hotter summers are creating more hospitable conditions for invasive species deer ticks and mosquitos that carry diseases and reduced agricultural yields. Increased summer temperatures and more severe heat waves also degrade air quality increase health care costs and put lives at risk.</p> <p>In the U.S. air pollution from burning fossil fuels leads to annual losses of \$600 billion and the loss of 230000 lives. In NYC approximately 130 residents die each year just from heat waves with the number expected to rise over the coming century. Both Suffolk County and NYC regularly receive an "F" for air quality by the American Lung Association and experience disproportionately high rates of asthma heart disease and other chronic health issues in disadvantaged communities. Transitioning to offshore wind will significantly curb air pollution and provide quantifiable health benefits for New Yorkers. Air pollution reductions from the first 2400 MW of offshore wind in New York would be valued at roughly \$1 billion and would avoid an estimated 100 premature deaths each year.</p>	

Comment No.	Comment	Response
	<p>Ocean acidity has increased 30% since the industrial revolution and there are documented negative impacts to sea scallops squid clams oysters and other species in the northeast.</p> <p>The catastrophic lobster die-off in the Long Island Sound is mainly attributed to warmer waters. The native lobster species and its historic maritime industry declined 90%. The industry used to account for tens of millions of dollars annually. The loss of this fishery is not only an economic loss but also means this historic maritime culture is slipping away.</p>	
BOEM-2024-0001-0345-0006	<p>It is critical that BOEM measure all potential impacts of offshore wind projects in comparison to the adverse impacts of fossil fuels and include climate change impacts that would result from a "No Action" alternative.[<b>Bold Underline:</b> The choice is not between wind and nothing; it is between wind and fossil fuels.] For instance if we generate 3000 MW of power with offshore wind BOEM needs to compare any environmental impacts associated with this generation of power to environmental impacts of 3000 MW generated by fossil fuels. What are the emissions associated with each over the expected life of the wind farm?</p> <p>Findings under the "No Action" alternative are substantial and serve to illustrate that while all energy projects have some negative impacts the impacts of doing nothing and continuing our reliance on fossil fuels are significant and unacceptable. Potential adverse impacts under the "No Action" alternative for several categories including the fishing industry finfish invertebrates and essential fish habitat marine mammals and sea turtles coastal habitats and wetlands due to climate change. Including but limited to the impacts of warming ocean waters shifts in food sources impacts associated with increased acidification in both ocean waters and estuarine systems. As well as the continued impacts of oil and gas leaks and spills into the marine environment when conducting fossil fuel exploration activities and general operation of extraction of fossil fuels. Potential adverse impacts on air quality due to increased greenhouse gas emissions and air pollutants on water quality and on environmental justice communities.</p>	<p>Final PEIS Section 3.4.1.4 presents estimated emissions from NY Bight wind projects and the emissions from fossil-fuel power generation that would be avoided (to the extent that the wind projects displace fossil fuels).</p> <p>For each resource area, the respective sections of the Final PEIS analyze the potential adverse impacts with the No Action Alternative.</p>

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BOEM-2024-0001-0345-0007	Ultimately the offshore wind cooling systems would cause substantially less impact than the "No Action" alternative and would also offset the fossil fuel pollution entering our communities and local waterways leading to improved water quality and air quality in local Long Island communities. [Bold Italics: CCE asks that BOEM include an analysis of the benefits of decreased fossil fuel pollution as offshore wind allows us to retire these plants.]	Final PEIS Section 3.4.1.4 discusses the emissions from fossil-fuel power generation that would be avoided (to the extent that wind projects displace fossil fuels) with NY Bight offshore wind development.
BOEM-2024-0001-0345-0008	CCE also thanks BOEM for evaluating not only the potential adverse environmental impacts but also the potential benefits including air quality improvements in disadvantaged communities due to decreased fossil fuel pollution	Thank you for your comment.
BOEM-2024-0001-0345-0013	Opponents of offshore wind testified during the virtual public hearings that offshore wind projects will have no overall impact on climate change. Transitioning from old antiquated fossil fuels plant to wind power will absolutely have positive impacts locally. It would be helpful for BOEM to provide specific data comparing the greenhouse gas emissions from local fossil fuel plants on our air and water quality vs the emissions we will see over the lifespan of these offshore wind projects. Offshore wind farms are NOT meant to be additive to the power grid but rather the specific goal is to replace and shutter existing fossil fuel power stations.	Final PEIS Section 3.4.1.4 discusses the emissions with NY Bight offshore wind development as well as the avoided emissions from fossil-fuel power generation (to the extent that wind projects displace fossil fuels).
BOEM-2024-0001-0355-0002	Wind Turbines...Not green. Not the answer to reducing carbon footprint - they actually utilize a lot of fossil fuels and create a lot of greenhouse gases in the manufacturing transportation installation and maintenance.	As stated in Final PEIS Section 3.4.1.4.1, emissions from mining and manufacturing are not included in the analysis. However, lifecycle considerations are discussed in Section 3.4.1.4.1. As indicated in Section 3.4.1.4.1, although wind energy has higher upstream emissions than many other generation methods, its lifecycle GHG emissions are orders of magnitude lower than from other generation methods.
BOEM-2024-0001-0362-0032	Strengthening the nation's supply chains can result in environmental benefits as well. Energy intensive manufacturers in the United States are relatively clean compared to competitors. As one example "[s]teel exporters to the U.S. emit 50-100+% more CO2 emissions per ton than U.S. producers on average." [Footnote xvii: CUR Consulting Leveraging a Carbon Advantage: Impacts of a Border Carbon Adjustment and Carbon Fee on the US Steel Industry 2021. <a href="https://clcouncil.org/reports/leveraging-a-carbon-advantage.pdf?v1">https://clcouncil.org/reports/leveraging-a-carbon-advantage.pdf?v1</a> ]	BOEM agrees that strengthening domestic supply chains and increasing domestic content can lead to environmental benefits.

Comment No.	Comment	Response
	<p>Use of domestic content can also reduce shipping distance and thus emissions resulting from long-distance maritime transportation. The International Maritime Organization estimates that maritime shipping generated 1 billion tons of greenhouse gases per year from 2007-2012. Another study estimates that maritime shipping emissions are forecasted to rise between 35% and 210% by 2050. [Footnote xviii: The Journal of Labor and Society Right-to-work Laws and Fatalities in Construction June 2011. <a href="https://deepblue.lib.umich.edu/bitstream/handle/2027.42/98283/j.1743-4580.2011.00334.x.pdf?sequence=1">https://deepblue.lib.umich.edu/bitstream/handle/2027.42/98283/j.1743-4580.2011.00334.x.pdf?sequence=1</a>]</p>	
BOEM-2024-0001-0383-0022	<p>Wind Wake Effect: BOEM's PEIS section regarding wind wake effect seems to deliberately exclude newer information that demonstrate even New York Bight specific impacts. For example Appendix B of the PEIS briefly discusses "wake effect" and quotes a Christiansen paper from 2005. Yet it does not incorporate a paper from the same author Christiansen from 2022 which discusses wind wake effect in more detail and even concludes that "surface temperature primarily increases in the vicinity of offshore wind farms" due to the wind farm wake effect and that the resulting "large-scale surface heating of up to 0.1 degrees C imitates the effects of climate change." [Footnote 56: See Christiansen et al "Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes" Frontiers in Marine Science 2022 at <a href="https://www.frontiersin.org/articles/10.3389/fmars.2022.818501/full">https://www.frontiersin.org/articles/10.3389/fmars.2022.818501/full</a> p. 12.] It also excludes a 2022 report by ArcVera Renewables entitled "Estimating Long-Range External Wake Losses in Energy Yield and Operational Performance Assessments Using the WRF Wind Farm Parameterization" which specifically analyzed the potential for large project to project wake impacts for the New York Bight lease areas resulting in simulations depicting wind speed deficits of 7% up to 100 km away from the wind facility with a 28.9% loss of wind at the wind farm itself. [Footnote 57: Stoelinga et. al. "Estimating Long-Range External Wake Losses in Energy Yield and Operational Performance Assessments Using the WRF Wind Farm Parameterization" ArcVera Renewables 2022.] We request that these be included.</p>	<p>Discussion of the two references requested by the commenter has been added to Appendix B.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0383-0023	<p>Additionally the newest 2024 study by Pryor and Barthelmie "Power Production Inter- and Intra-Array Wake Losses from the U.S. East Coast Offshore Wind Energy Lease Areas" found the New York Bight leases to be some of the most impacted leases in all US waters by the wind wake effect: "The climatological mean wake loss for NYBIG is 31.0%...The cumulative wake extent increases with the total number of wind turbines installed and this is systematically the highest for the NYBIG layout the 'second generation' lease areas in NYBIG are significantly impacted by their wind farm wakes in multiple flow regimes (Figures 4 and 5). Further for the NYBIG layout when the Fitch WFP is used there is no area south of Long Island that is not covered by the combined shadow of the existing LA."</p> <p>[Footnote 58: Pryor and Barthelmie "Power Production Inter- and Intra-Array Wake Losses from the U.S. East Coast Offshore Wind Energy Lease Areas" Energies 2024 available at Power Production Inter- and Intra-Array Wake Losses from the U.S. East Coast Offshore Wind Energy Lease Areas (Journal Article)   OSTI.GOV p. 14 16-17.]</p> <p>The study concludes that "The offshore wind energy deployments being developed along the U.S. east coast far exceed those that characterize existing offshore wind deployments and so are expected to experience greater wake losses." [Footnote 59: Ibid p. 25.] This information contains tremendous implications for both environmental impacts and affects to the Mid Atlantic Cold Pool as well as the cost/benefit analysis expected to result from construction of the New York Bight leases. It is clear that the production and the claimed power output will not reach the nameplate capacity of the project and that the purported project "benefits" will be significantly curtailed by wind wake effects for these leases in particular. BOEM should also include in its analysis how the wind wakes from the NY Bight projects will be expected to curtail production of previously approved projects.</p>	<p>Because wind wake effects influence the amount of energy produced by a wind farm, BOEM expects that applicants will take wind wake effects into account in planning wind farm developments. BOEM will consider including changes in energy production due to wind wake effects in future estimates of avoided emissions to the extent data are available.</p>
BOEM-2024-0001-0394-0001	<p>Claimed tonnage of carbon dioxide emissions spared annually is not supported by the disclosures in the DEIS which omits carbon emissions that will necessarily occur as the result of the project resulting from mining and materials production for refined steel and concrete materials. We've calculated for steel production and have yet to calculate for concrete. The infrastructure is massive; It is not</p>	<p>As stated in Final PEIS Section 3.4.1.4.1, emissions from mining and manufacturing are not included in the analysis. However, lifecycle considerations are discussed in Section 3.4.1.4.1. As indicated in Section 3.4.1.4.1, although wind energy has higher upstream emissions than many other generation methods, its</p>

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	<p>appropriate to omit this when calculating emissions as other types of power plants do not require anywhere near the amount of materials to build.</p> <p>The cumulative effect of Mayflower Wind project combined with other wind power plants is an enormous increase the metal and concrete surface area in the marine environment (a.k.a marine industrialization or marine urbanization) is expected to cause a population explosion of sessile (attached) filter-feeding heterotrophs which will reduce autotrophic plankton (photosynthetic plankton) density over the Outer Continental Shelf and via this mechanism its capacity to serve as a carbon buffer (which is important for pulling carbon dioxide out of the atmosphere) may be impaired.</p>	<p>lifecycle GHG emissions are orders of magnitude lower than from other generation methods.</p> <p>As living organisms, phytoplankton themselves respire and therefore produce CO<sub>2</sub>. The consumption of phytoplankton by filter-feeding organisms (such as those that may colonize WTG foundations and scour protection) plays an important role in the carbon cycle; the loss of phytoplankton to consumers results in the creation of fecal pellets and pseudofeces that fall to the bottom and can eventually become buried, serving as a major CO<sub>2</sub> sink. BOEM is not aware of any scientific studies documenting a decrease in phytoplankton abundance in the presence of other large offshore structures such as oil and gas rigs in locations such as the Gulf of Mexico, which currently has over 4,000 rigs, nor is BOEM aware of any studies documenting increased CO<sub>2</sub> in the presence of these offshore structures.</p>
BOEM-2024-0001-0421-0001	<p>It is essential that we continue to develop sustainable sources of energy that do not add pollutants to the air we breathe or contribute to global warming. I support the Biden administration's efforts to build offshore wind power by 2030 and urge the Bureau of Ocean Energy Management to conduct a timely and thorough environmental review for the six offshore wind projects proposed for the New York Bight.</p>	<p>BOEM agrees that development of offshore wind energy projects (to the extent that they displace fossil fuels) would bring about climate and environmental benefits.</p> <p>The Final PEIS thoroughly evaluates the potential environmental impacts of six projects to the extent possible at the programmatic level. BOEM expects that further, more specific analysis will be performed as additional information becomes available when applicants file COPs for projects.</p>
BOEM-2024-0001-0423-0011	<p>Other AMMM Measures of Concern Air Quality The air quality AMMMs are disproportionate to BOEM's own impact analysis are an overreach of jurisdiction and are duplicative of EPA air permitting. In its Table 2-4 (summary and comparison of impacts among alternatives) BOEM states that the "no action" alternative "would result in overall moderate impacts" for the cumulative impact scenario. Alternative B would also result in moderate impacts however in Alternative B BOEM notes that:[italicized: "six NY Bight projects and other offshore wind projects would have moderate beneficial impacts on air quality in the region surrounding six NY Bight projects to the extent that energy produced by offshore wind projects would displace energy produced by fossil-fuel power plants."][Footnote 2: Draft PEIS Table 2-4 page 2-24.]</p>	<p>AMMM measures fall within BOEM's authority under 30 CFR 585.102(b) to approve COPs with conditions. AMMM measures address BOEM's concerns, which may not be precisely the same as EPA's, or they may address impacts that are outside of EPA's OCS permitting jurisdiction.</p> <p>Comment on Table 2-4 acknowledged.</p> <p>Regarding Alternative C, the fact that beneficial impacts would occur during O&amp;M does not reduce the need and desirability of reducing impacts during both construction and O&amp;M. AMMM measures fall within BOEM's authority to approve COPs with conditions. AMMM measures address BOEM's concerns, which may not be precisely the same as EPA's, or they may address impacts that are outside of EPA's OCS permitting jurisdiction.</p>

Comment No.	Comment	Response
	<p>Alternative C does not alter the moderate negative impacts that would occur even under no action yet BOEM seemingly ignores the beneficial impacts of offshore wind and would impose specified AMMM Measures that have never been required in other COP approvals. AQ-1 through AQ-5 require the Lessee to evaluate the feasibility of each listed measure and each AMMM concludes with the statement that [italicized: "Any instances where the Lessee believes there is technical (and/or economic) infeasibility must be supported by a technical feasibility analysis as appropriate for review and concurrence by BOEM and BSEE [the Bureau of Safety and Environmental Enforcement]."]</p> <p>The Clean Air Act and not the PEIS is the appropriate mechanism for regulating the emissions associated with the NY Bight projects. These AMMMs duplicate the EPA process and requirements. Moreover as noted in the Draft PEIS these projects will have beneficial impact on air quality. Creating additional regulatory requirements and costs given the existence of EPA process would undermine and slow achievement of that net benefit and create cost that would ultimately flow back to electricity customers.</p>	
BOEM-2024-0001-0423-0019	<p>[bold: AQ-6 and AQ-7] relate to onshore measures that are regulated by the states and local governments (and again are outside of BOEM's jurisdiction) and therefore should not be included in the PEIS.</p> <p>Lastly and as a general matter on air quality Ocean Winds notes that there is already a shortage of Jones Act compliant marine construction and support vessels in the U.S. The offshore wind industry competes with oil and gas developers and other maritime users for this same small fleet of vessels (e.g. platform supply vessels service operations vessels crew transfer vessels offshore tugs barges anchor handling vessels jack-up vessels etc.). As it is in the hands of vessel owners and port operators whether to adopt the proposed measures put forward in the air quality AMMMs they may find it less expensive and more profitable to support work outside the offshore wind industry where these restrictions are not in place. This would further limit the availability of usable vessels and ports to our industry putting further pressure on project viability.</p>	<p>AQ-6 and AQ-7 are included in the Final PEIS as RPs. BOEM encourages the lessees to consider the feasibility of these mitigation measures in their individual projects. AMMM measures fall within BOEM's authority under 30 CFR 585.102(b) to approve COPs with conditions.</p> <p>A lessee has the option to demonstrate that an AMMM measure is infeasible. BOEM expects that excessive costs and unavailability of vessels could be factors in a demonstration that an AMMM measure is infeasible on a case-by-case basis.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0426-0001	H.L. Mencken once said "there is always an easy solution to every problem - neat plausible and wrong." He could be speaking to New Jersey's current quest to achieve the very worthwhile objective of 100% clean energy by 2035. A major focus in this plan is significant investment and development of an offshore wind industry off the New Jersey coast. Clean energy is certainly something we should strive for but in many ways our current blind crusade devil be damned towards the implementation of offshore wind does present troubling questions which may not have been sufficiently addressed yet.	BOEM agrees that development of offshore wind energy projects would help meet state mandates for renewable energy.
BOEM-2024-0001-0426-0010	From an ecological standpoint too many differing opinions still exist on the effect on birds fish mammals and the overall ocean environment. The effect of hurricanes with high winds and huge waves on thousand-foot structures permanently anchored to the ocean floor present other questions. Offshore Wind Requires a Second Look at True Motives H.L. Mencken also once said: "The urge to save humanity is almost always a false front for the urge to rule." Our clean energy future and our environment are far too important to be driven by special interests naive idealism or for-profit developers. Fred Fastiggi-Principal Shoreline Energy Advisors	Final PEIS Section 2.3 discusses design features of WTGs to accommodate extreme weather, including hurricanes.
BOEM-2024-0001-0433-0001	New Jersey is on the frontlines of the climate crisis with ever increasing sea level rise heavy rain events and both coastal and inland flooding. To achieve the necessary carbon emission reductions to protect our communities from the climate crisis we need a major transition in our energy sector now. Offshore wind is one of our greatest clean energy solutions that will benefit the local economy and communities here in our state without the further burning of fossil fuels.	BOEM agrees that development of offshore wind energy projects (to the extent that they displace fossil fuels) would help reduce GHG emissions that contribute to climate change.
BOEM-2024-0001-0433-0003	Offshore wind will also benefit the overall air quality of our region which suffers greatly from a dense population and overwhelming industry pollution. We need to invest in offshore wind to bring relief to people who suffer from asthma heart disease and other medical conditions. The projects in these lease areas will directly allow our communities in NJ to breathe easier and we urge BOEM to move quickly to protect the health of our future generations.	BOEM agrees that development of offshore wind energy projects (to the extent that they displace fossil fuels) would reduce air pollutant emissions from power plants.

Comment No.	Comment	Response
BOEM-2024-0001-0436-0004	Environmental Benefits of Offshore Wind Development The PEIS should clarify the climate (i.e. greenhouse gas emission reduction) air quality and other environmental benefits of offshore wind development and view alternatives and AMMMs in that context. The PEIS is generally focused on negative environmental impacts without a balanced discussion of how offshore wind development is essential for transitioning our national energy supply and reducing environmental impacts. [Footnote 4: See e.g. Affected Environment and Environmental Consequences 3.4.1-10 ("Increasing energy production from offshore wind projects could reduce regional GHG emissions by displacing energy from fossil fuels. The amount of emissions reduction from displaced generation is uncertain because the future grid mix is not known. This reduction would likely more than offset the relatively small GHG emissions from offshore wind projects. This reduction in regional GHG emissions would be noticeable in the regional context and contribute incrementally to addressing climate change and would represent a moderate beneficial impact in the regional context but a negligible beneficial impact in the global context.").]	Final PEIS Section 3.4.1.4.1 provides estimates of GHG reductions, avoided health effects, and the social cost of GHGs. Issues around reducing the carbon intensity of the national energy supply are public policy questions that are beyond the scope of an EIS and outside of BOEM's authority. These issues should be addressed at the federal and state level.
BOEM-2024-0001-0436-0005	The PEIS vastly underestimates energy production from lease areas and conducted an impact assessment based off only 8.6 GW of reasonably foreseeable wind power on the OCS. Table 3.4.1-4.	Table 3.4.1-4 presents an example scenario, as discussed in Final PEIS Section 3.4.1.3.2, and does not represent the potential generation capacity or avoided health impact of developing all lease areas in the NY Bight. Table 3.4.1-7 provides the estimated avoided health impacts of one representative project comprising 280 WTGs.
BOEM-2024-0001-0436-0006	The environmental benefits from offshore wind therefore have been discounted and negative impacts (e.g. construction air emissions) have been overstated. In the impact assessment the Final PEIS must address the environmental benefits of offshore wind development particularly as context for analysis of Clean Air Act criteria air pollutants and greenhouse gas emissions from construction and operations.	Final PEIS Section 3.4.1.4.1 provides estimates of environmental benefits, including criteria pollutant and GHG emissions reductions, avoided health effects (to the extent that wind projects displace fossil fuels), and the social cost of GHGs.
BOEM-2024-0001-0439-0025	Furthermore climate change benefits need to be further explained throughout the PEIS. For example in the air section the PEIS states that "offshore wind projects" would "represent a moderate beneficial impact in the regional context but a negligible beneficial impact in the global context." [Footnote 50: Draft PEIS at 112790]	A determination of "moderate" or "negligible" is a qualitative evaluation. The "30x30 goals" may refer to the U.S. Department of Energy (DOE) Offshore Wind Energy Strategy, a summary of DOE's efforts to meet President Biden's goal to deploy 30 GW of offshore wind energy by 2030 and set the nation on a pathway to

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	These statements can be confusing and misleading as noted by several speakers at the public hearings. Whenever global climate change impact is discussed it should be explained in the context of the outsized contribution offshore wind will have on meeting US 30x30 goals and the importance of US reductions as it is a major producer worldwide of greenhouse gas emissions.	110 GW or more by 2050. Discussion of the DOE strategy has been added to Final PEIS Section 3.4.1.
BOEM-2024-0001-0467-0001	UPROSE and NYC-EJA strongly urge amending and adopting Alternative C (Proposed Action) to account for the cumulative impacts of air pollution. Specifically we urge Alternative C to prioritize the elimination rather than simply the reduction of air pollutants arising from direct and indirect offshore wind activities in the New York Bight. This must be realized in a requirement by BOEM that lessees electrify vehicles and vessels directly involved in offshore wind activities in the New York Bight and prioritize low co-pollutant fuels over traditional marine or fossil fuels where electrification is technically infeasible. BOEM must also require lessees to avoid using "false solutions" like natural gas propane and hydrogen as a facade to address climate and environmental justice impacts. Advocates and researchers recognize these technologies as fuels that 1) continue to emit air pollutants when combusted disproportionately in climate and environmental justice communities in similar or greater amounts as other fossil fuels and 2) do not significantly reduce greenhouse gas emissions <insert source here>.	BOEM's designation of the AQ AMMM measures as RPs encourages lessees to consider practices such as electrification and the use of low-carbon fuels. Lessees are also encouraged to provide justifications if these RPS are determined to be infeasible. Final PEIS Table 3.4.1-10 lists the AMMM measures for air quality/GHGs.
BOEM-2024-0001-0468-0001	Potential development of the lease holdings would assist with meeting several state mandates for renewable energy including New Jersey's goal of 11 GW of offshore wind energy generation by 2040 is outlined in New Jersey Executive Order No. 307 issued on September 21 2022; New York's requirement of 9 GW of offshore wind energy generation by 2035 is outlined in the Climate Leadership and Community Protection Act signed into law on July 18 2019. Additionally an estimated 16-18 GW of offshore wind energy may be necessary to ensure New York State achieves its Climate Act mandates (New York State Climate Action Council 2022). Based on a conservatively estimated power ratio of 3 megawatts per square kilometer BOEM estimates that full development of leases in this area has the potential to create up to 5.6 to 7 GW of offshore wind energy.	BOEM agrees that development of offshore wind energy projects would help meet state mandates for renewable energy.

Comment No.	Comment	Response
BOEM-2024-0001-0506-0001	I support the orderly and equitable development of offshore wind energy capture installations in the New York Bight. They can add significantly to renewable energy capture in this area as vitally needed in order to reduce the use of CO2-producing fossil fuel for electricity generation.	BOEM agrees that development of offshore wind energy projects (to the extent that they displace fossil fuels) would help reduce GHG emissions that contribute to climate change.
BOEM-2024-0001-0522-0003	Health I support offshore wind development because a transition to clean energy won't just fight climate change it will also help improve the air New Jerseyans breathe. While our state's air has improved in recent decades it still ranks among the worst in the nation. We need to invest in offshore wind to bring relief to people who suffer from asthma heart disease and other medical conditions. The transition to cleanly produced offshore wind will bring particular benefits to those most at risk of heart and lung conditions: children and seniors. I'm calling on BOEM to act quickly to secure our clean energy future to protect the health of an entire generation of children. I urge you to proceed with the offshore wind leases in the New York Bight. It is critical to center community engagement and prioritize the advancement of this project that will help reduce pollution mitigate against the worst impacts of climate change and bring family-sustaining jobs to the area.	BOEM agrees that development of offshore wind energy projects (to the extent that they displace fossil fuels) would reduce air pollutant emissions from power plants.
BOEM-2024-0001-0522-0005	Please commit to this project and reject efforts to slow it down or block it so that New Jersey communities and the environment can be protected from harmful pollution and the worst effects of fossil-fuel-driven climate change.	BOEM is committed to facilitating offshore wind energy development in an economically and environmentally responsible way. For any COP-based project, the lessee is responsible for meeting applicable permitting and regulatory requirements.
BOEM-2024-0001-0523-0001	My interest in supporting renewable energy projects generally and the Beacon Wind project in particular is simply because like many parents in my community I worry about the local and global environmental conditions they will inherit. The scientific consensus is absolutely clear that to avert the most devastating impacts of climate change for future generations---for our children and grandchildren---we must act urgently to reduce carbon pollution and supporting renewable energy projects like Beacon Wind is absolutely crucial to that.	This comment refers to Beacon Wind and, as such, is not a comment on the NY Bight Final PEIS. BOEM agrees that development of offshore wind energy projects (to the extent they displace fossil fuels) would help reduce GHG emissions that contribute to climate change.
BOEM-2024-0001-0523-0002	First the Beacon Wind project will provide energy to New York City's power grid and thereby let New York City begin transitioning away from the fracked gas power that New Yorkers are so strongly	This comment refers to Beacon Wind and, as such, is not a comment on the NY Bight PEIS. BOEM agrees that development of offshore wind energy projects (to the extent that they displace

Comment No.	Comment	Response
	opposed to as witnessed by the overwhelming opposition to NRG's proposed Williams pipeline recently. Fracked gas in addition to being a greenhouse gas pollutes our communities' air and contributes to poor health outcomes including asthma which many Brooklyn children disproportionately suffer from. Fracked gas pipelines pollute all the communities they pass through but especially those with vaporizers which is why New Yorkers worked so hard recently to defeat National Grid's plan for new vaporizers in North Brooklyn. Again projects like Beacon will enable us to begin transitioning away from these sources. Second without offshore wind New York will not be able to meet its mandate for clean energy as specified by New York's Climate Leadership and Community Protection Act (CLCPA).	fossil fuels) would support state renewable energy mandates, reduce air pollutant emissions, and reduce GHG emissions that contribute to climate change.
BOEM-2024-0001-0523-0004	I encourage BOEM in writing the draft and final EIS to consider the important environmental risks and damages of NOT taking advantage of this opportunity. In doing so BOEM would miss an important opportunity to help our communities reduce their greenhouse gas emissions improve local air quality and protect biodiversity globally through reducing greenhouse gasses. To summarize for those of us who are parents and want to protect our children's future the only reasonable course of action today is to support efforts to transition to clean energy sources rapidly. The Beacon Wind project is an excellent opportunity to do that and to build cleaner healthier communities here in New York for our children. That's why so many Brooklyn families support this project and I hope BOEM will too.	This comment refers to Beacon Wind and, as such, is not a comment on the NY Bight PEIS. BOEM agrees that development of offshore wind energy projects (to the extent they displace fossil fuels) would reduce air pollutant emissions and reduce GHG emissions that contribute to climate change.
BOEM-2024-0001-0528c	In addition, there's no evidence that this industrialization will stop climate change. In fact, by BOEM's own admission, quote, There will be no collective impact on global warming as a result of offshore wind projects.	No single project can reduce GHG emissions enough to have a measurable impact by itself on climate change. The GHG emission reductions from one NY Bight project would contribute individually, in combination with all other GHG reductions, toward slowing the rate of climate change.
BOEM-2024-0001-0528z	For all those stating that we need to do this, as other commenters mentioned, according to BOEM's Vineyard Wind, FEIS. Page 76, quote overall, it is anticipated that there would be no collective impact on global warming as a result of offshore wind projects end quote. It seems like cumulative sum cumulative impacts, equal cumulative assumptions.	Please refer to response to comment BOEM-2024-0001-0528c for more information on impacts from offshore wind projects on GHG emissions.

Comment No.	Comment	Response
BOEM-2024-0001-0529n	BOEM has already admitted in their documents that these turbines will have no effect on climate change. According to Page 76, BOEM's Vineyard Wind 1 FEIS Volume 2	Please refer to response to comment BOEM-2024-0001-0528c for more information on impacts from offshore wind projects on GHG emissions.
BOEM-2024-0001-0528bb	The South Bronx has remained the poorest urban Congressional district in the U.S. It's also afflicted with some of the worst air pollution rates in the state and country. We experience it by being near the vehicle intensive pollution of the Deegan, the Bruckner, and the Cross Bronx highways, the pollution of industrial and warehouse facilities, and the power, authority, and natural gas plants in Morris, in Port Morris, among others. The Bronx is Community District One, in which I live, has the highest childhood asthma hospitalization rates in the city.	Thank you for your comment. Please see Section 3.4.1.1., <i>Description of the Affected Environment and Future Baseline Conditions</i> , for more information on designated nonattainment or maintenance areas for carbon monoxide (CO), particulate matter with diameter of 2.5 microns and smaller (PM <sub>2.5</sub> ), or O <sub>3</sub> in the geographic analysis area. BOEM will conduct project-specific NEPA analysis of the COP for each lease area that will focus on providing additional site- and project-specific analyses that were not already addressed by the PEIS.
BOEM-2024-0001-0528gg	We're about to destroy an entire, the entire ecosystem with the mass construction when BOEM's own documents state and I quote overall it is anticipated that there will be no collective impact on global warming as a result of offshore wind projects. Now that is quoted.	Please refer to response to comment BOEM-2024-0001-0528c for more information on impacts from offshore wind projects on GHG emissions.
BOEM-2024-0001-0310g	In the applicant's own admission, offshore wind will have little to no effect on climate change or reducing the carbon footprint.	Please refer to response to comment BOEM-2024-0001-0528c for more information on impacts from offshore wind projects on GHG emissions.
BOEM-2024-0001-0310h	In BOEM's own documents it states, "Overall, it is anticipated that there will be no collective impact on global warming as a result of offshore wind projects."	Please refer to response to comment BOEM-2024-0001-0528c for more information on impacts from offshore wind projects on GHG emissions.
BOEM-2024-0001-0310i	U.S. Government Bureau of Ocean Energy Management, BOEM, admits that U.S. offshore wind projects would by themselves probably have an admitted impact on global emissions and climate change and the benefit would be negligible.	Please refer to response to comment BOEM-2024-0001-0528c for more information on impacts from offshore wind projects on GHG emissions.
BOEM-2024-0001-0310n	BOEM's own documents claim that offshore wind will have little to no effect on global warming and carbon emissions. BOEM also claims that offshore wind will have a dampening effect on the wind, reducing the winds ability to cool sea surface temperatures.	Please refer to response to comment BOEM-2024-0001-0528c for more information on impacts from offshore wind projects on GHG emissions. Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of Structures</i> , which discusses hydrodynamics, including atmospheric wakes.

Comment No.	Comment	Response
BOEM-2024-0001-0310o	According to another BOEM document, "Overall, it is anticipated that there would be no collective impact on global warming as a result of offshore wind projects," stated in Vineyard Winds' final Environmental Impact Statement.	Please refer to response to comment BOEM-2024-0001-0528c for more information on impacts from offshore wind projects on GHG emissions.
BOEM-2024-0001-0310q	As far as I know, the greenhouse emissions expended to build and install these turbines is completely left out of the EIS calculation requirements. 2000 ton 6-inch thick steel wall monopoles from Germany and tower assemblies from Spain and lifted and pounded into place by foreign flagged gigantic ships, generator nacelles filled with rare earth components and blade assemblies weighing tens of hundreds of tons more, all the geotechnical surveys and support operations completely left out. I consider that intentional deception. Maybe things aren't as green as they'd like us to believe. All proposed sources of energy should be required to have cradle-to-grave calculations so we can make honest decisions.	Please refer to response to comment BOEM-2024-0001-0528hh for more information on emissions from manufacturing.
BOEM-2024-0001-0529hh	I mean to sum up, BOEM itself states, there will be no collective impact on global warming as a result of offshore wind projects. These projects are not the answer.	Please refer to response to comment BOEM-2024-0001-0528c for more information on impacts from offshore wind projects on GHG emissions.
BOEM-2024-0001-0529hh	And I think you know anybody that picks up the documents and reads and will find right away that fossil fuels are used in all phases of turbine manufacturing, construction, the operation of the wind for our projects, the maintenance, and will be so, well also in the decommissioning, and that's through net increases and carbon emissions from increase shipping, trucking, helicopter traffic, all used to construct and maintain these, not to mention all the steel and other fossil fuels or other products that need, rely on fossil fuels to be constructed, so. The documents also reveal the amounts of, significant amounts of petrochemicals and lubricants necessary for operation of the turbines ongoing, I suggest people look into that.	As stated in Final PEIS Section 3.4.1.4.1, emissions from manufacturing and other "upstream" sources are not included in the analysis. However, life cycle considerations are discussed in Section 3.4.1.4.1. As indicated in Section 3.4.1.4.1, although wind energy has higher upstream emissions than many other generation methods, its lifecycle GHG emissions are orders of magnitude lower than from other generation methods.

## P.5.4 Water Quality

**Table P.5-4. Responses to Comments on Water Quality**

Comment No.	Comment	Response
BOEM-2024-0001-0175-0002	No one has explained in detail a few of my concerns such as:[Bold: Substations"] "An open loop cooling system is used to dissipate heat from the conversion of AC to DC . Cool water is taken in and comes out up to 8100000 per day at 86-90f with chlorine residuals as they use that to keep pipes clear." If you are truly concerned with climate change and warming oceans why would you even consider putting that many millions of gallons of sea water at that temperature which will be chemically treated back into the ocean? How will this not negatively and/or irreversibly impact the ocean and its inhabitants? Multiply that amount of sea water by how many substations will be in place multiplied by 365 days in a year times 25 years. I suggest someone should read [Underline: Marine ecological impact analysis of residual chlorine ...] by S Youping 2023 where he states "The free residual chlorine in seawater is more toxic to aquatic organisms".	Additional analysis has been added to Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Discharges/Intakes</i> , to further describe the minimal impacts of the open loop cooling system.
BOEM-2024-0001-0180-0003	The wind farm development of the New York Bight will cause the certain pollution of our ocean through blade erosion petrochemical leakage and electromagnetic radiation presented by underground cables. Documented neurological problems will occur to the human population living in close proximity. There will be negative effects to our wind currents and deep water currents. I understand your stance of a need to mitigate the effects of climate change but destroying our ocean is not the answer. At least give the public scientists and our elected officials time to properly review this document and related research.	Thank you for your comment. Please see the Presence of Structures IPF and Accidental Releases IPF discussions within Sections 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative</i> ; 3.4.2.4.1, <i>Impacts of One project</i> ; 3.4.2.4.2, <i>Impacts of Six Projects</i> ; and 3.4.2.5, <i>Impacts of Alternative C (Proposed Action) – Identification of AMMM Measures at the Programmatic Stage</i> .
BOEM-2024-0001-0259-0001	It is imperative that the development of wind energy farms receive adequate research evaluation and modeling of potential inter-annual effects on the local ecosystem from the first development-related activities to post-operations years after installations. As noted in a recent BOEM supported study producing a Consensus Report by National Academies of Sciences Engineering and Medicine in 2023: Potential Hydrodynamic Impacts of Offshore Wind Energy on Nantucket Shoals Regional Ecology: An Evaluation from Wind to Whales. Washington DC: The National Academies Press.	Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of structures</i> for the discussion of hydrodynamic effects.

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	<p><a href="https://doi.org/10.17226/27154">https://doi.org/10.17226/27154</a> "the impacts on ecosystems from development and operation of offshore wind may be difficult to distinguish from natural and other anthropogenic variability (including climate change)". Further "A single offshore wind turbine can alter local hydrodynamics... arrays of turbines in a wind farm or at multiple adjacent offshore wind farms...become more complex with implications for both local and regional circulation. Understanding these hydrodynamic effects is essential to develop predictions of the potential impacts of wind farms on the region's ecosystem from phytoplankton to marine mammals". (p.2)</p>	
BOEM-2024-0001-0313-0018	<p>Offshore Activities and Facilities Page 2-7 states "One NY Bight project would install between 50 and 280 WTGs within a NY Bight lease area in a grid layout at a minimum spacing of 0.6 by 0.6 nautical mile (1.1 by 1.1 kilometers). The WTGs considered would have a rotor diameter up to 1214 feet (370 meters) and a blade tip height that extends up to 1312 feet (400 meters) above mean sea level (AMSL) (Figure 2-2). A single NY Bight project would install 15 OSSs that would serve as common collection points for power from the WTGs as well as the origin for the offshore export cables that deliver power to shore (Figure 2- 1). NY Bight lessees may use HVAC or HVDC technology to transmit power from the wind farms to shore.2 Different equipment would be required on each OSS depending on whether HVAC or HVDC technology is used. An HVAC system is typically used to transport energy onshore when the wind farm is within about 30 miles (50 kilometers) of the shore (Middleton and Barnhart 2022). Due to the distance of the NY Bight lease areas to shore (which at their closest points are between 22 and 45 miles [35 and 72 kilometers] offshore) if HVAC OSSs are chosen an HVAC booster station or a reactive compensation station may be required along the export cable route to offset against power losses between the offshore wind farm and the grid. HVAC booster stations are generally similar in size and foundation type to an OSS. HVDC systems operate by converting the alternating current (AC) high voltage electricity produced by the WTGs to direct current (DC) for transport to shore and then once onshore convert the electricity back to AC for distribution to the grid. HVDC systems do not experience the same losses in power experienced on AC transmission</p>	<p>Thank you for your comment. CWA Section 316(b) requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts. This should be included in the project-specific, COP-level NEPA analysis. Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Discharges/Intakes</i>, which discusses the minimal impacts of the open loop cooling system. The project-specific, COP-level NEPA analysis will also provide greater details.</p>

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	<p>lines at long distances and do not require booster stations along the export cable route. Because of the large amount of heat generated during the conversion of AC to DC at the HVDC converter OSS located in the wind farm these systems must be cooled when operating. The most common type of cooling system is an open loop system that intakes cool filtered sea water and discharges warmer water back into the ocean. Chemicals such as bleach (sodium hypochlorite) may be used in order to prevent growth in the system and keep pipes clean (Middleton and Barnhart 2022)." Comment Additional information on the amount of heat transferred into the surrounding waterbody and potential impacts from the "large amount of heat" generated as identified above should be analyzed. Potential impacts of thermal pollution and the direct and indirect impacts to the ecosystem dynamic and sensitive organisms in the pathway of this heat transfer must be evaluated. It is also concerning that there are no quantifiable metrics regarding the cumulative impacts of all offshore substations in the NY Bight Area as well as those planned for Empire Wind (and other planned offshore wind developments) which again are substantially contiguous to OSC-A 0544. There should also be a discussion of the chemicals mentioned above and how that will impact the ecosystem including water quality habitat wildlife etc. which are not sufficiently evaluated in the PEIS.</p>	
BOEM-2024-0001-0313-0021	<p>There is no discussion of the chemical composition of the significant amount of grout that will be used and the impacts to the quality of the water body is leaching and natural degradation occurs. However based on simple publicly available manufacturing specifications from suppliers to other offshore wind turbine grout suppliers it appears that the grout needed would consist of seawater resistant grout material composition and may further include polycarboxylate-based synthetic plasticizers polyglycol-based defoaming agent; calcium sulphur aluminate-based hardener among other chemical additives that may have an impact to benthic organisms and degrade water quality. If any of the byproducts or leached materials could adversely impact the ecosystem dynamic this issue should at least be discussed and/or conditions placed as mitigation measures on the grout utilized. For example in the case of preparing a grout material composition by containing a high strength admixture the following</p>	<p>Potential contaminants other than accidental releases are discussed in Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative</i>, under the Presence of structures IPF and Discharges/Intakes IPF. However, the project-specific, COP-level NEPA analysis will provide greater detail for each of the NY Bight lease areas.</p>

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	<p>mechanism is typically generated - the high strength admixture reacts with calcium aluminate among components of cement thereby generating ettringite; the ettringite reacts with a calcium hydroxide generated by a hydration reaction between water and cement thereby forming a calcium silicate hydrate. Further scientific studies have indicated that "The results show that chloride ions induced corrosion of steel bars in offshore RC structures is highly influenced by the concentration of sulfate ions. The sulfate ions induced concrete expansion and cracking from ettringite formation could potentially accelerate chloride ions induced corrosion of steel bars in concrete ultimately the premature failure of the offshore RC structures. (source: Degradation of concrete in marine environment under coupled chloride and sulfate attack: A numerical and experimental study December 2022). Page 2-15 goes on to state "Annual maintenance campaigns are expected to be needed for general upkeep (e.g. bolt tensioning crack and coating inspection safety equipment inspection cleaning high-voltage component service and blade inspection) and replacement of consumable components (e.g. lubrication oil changes). BOEM anticipates OSSs would also undergo annual maintenance to both medium-voltage and high voltage systems auxiliary systems and safety systems as well as topside structural inspections. Portions of the topsides may require the reapplication of corrosion-resistant coating. Routine maintenance and refueling would also be performed on generators located on the OSSs." Comment Building on the comments and concerns above regarding water quality impacts there is no discussion in the PEIS regarding mitigation measures specifically pertaining to water quality impacts of the chemicals proposed and peripherally referenced in these sections. Analysis of hazardous material composition and their potential impacts and mitigation measures if needed are not provided and should be an integral component of the FEIS. Are emerging contaminants such as PFAs or 14 -dioxane used in coatings what is the chemical composition of the specialty cleaning products used and will there be measures to protect the waterbody and dependent organisms from the addition of these chemicals? Anti- fouling paint has an environmental legacy of adverse impacts to the marine ecosystem are these corrosion</p>	

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	resistant coatings safe and the scientific studies substantiating same should be provided as appendices in the PEIS and conditions of these leases. There should also be additional discussion of protection measures for the lubricants and oil in terms of water quality and mitigation measures.	
BOEM-2024-0001-0313-0022	<p>Later in the PEIS there is a paragraph on incidental releases and future planning documents that would be prepared but these standard measures and plans should be provided now for review and comment also these should be part of the proactive planning process not a reactionary measure in case of an incidental release. (page 2-22 "Chemical spills or releases: For offshore activities these include inadvertent releases from refueling vessels spills from routine maintenance activities and any more significant spills as a result of a catastrophic event. All vessels would be certified to conform to vessel O&amp;M protocols designed to minimize risk of fuel spills and leaks. Developers would prepare an Oil Spill Response Plan (OSRP) and would be expected to comply with USCG and BSEE regulations relating to prevention and control of oil spills. Onshore releases could potentially occur from construction equipment or HDD activities. All wastes generated onshore would comply with applicable state and federal regulations including the Resource Conservation and Recovery Act and the Department of Transportation Hazardous Materials regulations.") There are recent news articles expressing concerns about the WTG blades naturally eroding during operation and spreading a significant amount of microplastics as a byproduct. The PEIS should discuss the epoxy compounds shed by WTGs and if they contain toxins that could adversely impact the environment. Microplastic shedding from turbine blades commonly referred to as Leading Edge Erosion has the potential should be evaluated. The particles eroded from blades include epoxy which can be comprised of 40% Bisphenol-A (BPA) a purportedly banned endocrine disruptor and neurotoxin. (See international Journal of Medical Sciences "Int J Med Sci. 2015; 12(12): 926936 Published online 2015 Oct 30; Neurological Effects of Bisphenol A and its Analogues); the abstract of which states "The endocrine disrupting chemical bisphenol A (BPA) is widely used in the production of polycarbonate plastics and epoxy resins. The use</p>	<p>Potential contaminants other than accidental releases are discussed in Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative</i>, under the Presence of Structures IPF and Discharges/Intakes IPF. However, the project-specific, COP-level NEPA analysis will provide greater detail for each of the NY Bight lease areas.</p>

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	<p>of BPA-containing products in daily life makes exposure ubiquitous and the potential human health risks of this chemical are a major public health concern. Although numerous in vitro and in vivo studies have been published on the effects of BPA on biological systems there is controversy as to whether ordinary levels of exposure can have adverse effects in humans. However the increasing incidence of developmental disorders is of concern and accumulating evidence indicates that BPA has detrimental effects on neurological development. Other bisphenol analogues used as substitutes for BPA are also suspected of having a broad range of biological actions. The objective of this review is to summarize our current understanding of the neurobiological effects of BPA and its analogues and to discuss preventive strategies from a public health perspective. Academic research has shown the potential for 137 pounds of epoxy microparticles to be shed per turbine per year. The resulting annual BPA release can potentially contaminate water and impact water quality and aquatic and terrestrial life. Minimizing the shedding depends on specialized blade coatings that contain toxic ingredients from the PFAS family of "forever" chemicals which are biologically cumulative and nondegradable. These coatings likewise need replacement after a few years. PFAS is also a common ingredient in lubricants and hydraulic fluids which can leak from wind turbines. The risk of forever impacting the water surrounding nearshore communities and sensitive habitat by wind turbines should be evaluated in the PEIS.</p>	
BOEM-2024-0001-0313-0023	<p>Conversely there are fact sheets and reports from proponents of offshore wind and that attempt to debunk concerns by indicating that any leading edge erosion is minor however this fails to knowledge that potential adverse impacts are measures in parts per trillion so even the smallest amount of erosion especially when considering cumulatively could most certainly have an adverse environmental impact which should be discussed in the PEIS. It is also worthy of note that NYSDEC recently published information on emerging contaminant on aquatic ecosystems which should be included in the evaluation of the PEIS there are significant concerns of bioaccumulation in the food chain of contaminants in the tissues of organisms which again should be discussed in the PEIS. It is</p>	<p>Thank you for your comment. Through the AMMM measures WQ-1 and WQ-2, accidental releases are anticipated to be reduced or minimized.</p> <p>Potential contaminants other than accidental releases are discussed in Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative</i>, under the Presence of Structures IPF and Discharges/Intakes IPF. Derivation of bioaccumulation factors and bioaccumulative chemicals of concern are out of scope for this PEIS. The discussions in the PEIS are based on the best available science to date.</p>

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	<p>important that the stated objectives of human and environmental health and safety are evaluated in the PEIS. (see: <a href="https://dec.ny.gov/news/press-releases/2023/3/dec-releases-final-ambient-water-quality-guidance-values-for-pfoa-pfos-and-14-dioxane">https://dec.ny.gov/news/press-releases/2023/3/dec-releases-final-ambient-water-quality-guidance-values-for-pfoa-pfos-and-14-dioxane</a>) and the NYSDEC Division of Water Technical and Operational Guidance Series (1.1.4) PROCEDURES FOR DERIVATION OF BIOACCUMULATION FACTORS document. The stated purpose of which is "PURPOSE Bioaccumulation Factors (BAFs) are needed to derive Health (Fish Consumption) and Wildlife type water quality standards and guidance values. BAFs are also used to identify Bioaccumulative Chemicals of Concern (BCCs) in Department programs. The purpose of this document is to provide detailed procedures for the derivation of such BAFs." "The purpose of this document is to describe procedures for deriving bioaccumulation factors (BAFs) to be used in the calculation of Health (Fish Consumption) and Wildlife type standards and guidance values. A subset of the human health BAFs is also used to identify the chemicals that are considered bioaccumulative chemicals of concern (BCCs). B. Bioaccumulation reflects uptake of a substance by aquatic organisms exposed to the substance through all routes (i.e. ambient water and food) as would occur in nature. Bioconcentration reflects uptake of a substance by aquatic organisms exposed to the substance only through the ambient water. Both BAFs and bioconcentration factors (BCFs) are proportionality constants that describe the relationship between the concentration of a substance in aquatic organisms and its concentration in the ambient water. The water quality regulations require BAFs rather than BCFs because they better account for the total exposure of aquatic organisms to chemicals." It is important that the seemingly flippant dismissal of de minimis impacts of microplastics and impacts from epoxy and PFAS/14-dioxane could actually be orders of magnitude more impactful based on the levels of contaminants that are considered by environmental and health agencies to be a serious environmental and human health hazard.</p>	
BOEM-2024-0001-0313-0027	3.1-2 Affected Environment and Environmental Consequences Comment on Table 3.1-1 - Regarding the description for the impact producing factor (IPF) identified as discharges/intakes is incomplete	Thank you for your comment. Corrosion is considered in the Presence of Structures IPF.

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	and should include cleaning chemicals anti-fouling paints any discharge associated with recoating and maintenance. Is the corroded material considered a discharge in this context?	
BOEM-2024-0001-0313-0029	Section 3.4.2 Water Quality includes a discussion of the nature of releases anticipated. Based on Appendix D Table D2-3 up to about 1989065 gallons (7.5 million liters) of coolants 3895547 gallons (14.7 million liters) of oils and lubricants and 1077618 (4.1 million liters) of diesel fuel would be contained in the 737 wind turbine and substation structures for the wind energy projects within the air quality geographic analysis area. If accidental releases occur they would be most likely during construction but could occur during operations and conceptual decommissioning of offshore wind facilities. These may lead to short- term periods (hours to days) of HAPs emissions through surface evaporation. HAPs emissions would consist of VOCs which are important for O3 formation." Comment The staggering number of contaminants that could be accidentally released into the environment requires further analysis and discussion and/or inclusion of the proactive planning documents in the final PEIS to ensure that all reasonable measures are in place and immediate actions are in place prior to any incidental release for the reasons described previously in this comment letter.	Thank you for your comment. Through AMMM measures WQ-1 and WQ-2, accidental releases are anticipated to be reduced or minimized. Please see Section 3.4.2.5.1, <i>Impacts of One Project</i> , for a discussion of accidental releases and the potential impacts of the AMMM measures mentioned above.
BOEM-2024-0001-0313-0034	3.4.2 Water Quality The PEIS states "The water quality geographic analysis area as shown on Figure 3.4.2-1 includes a 10- mile (16.1-kilometer) radius around the NY Bight lease areas along with inshore waterways around representative ports that may be used for the NY Bight projects. The offshore geographic analysis area accounts for some transport of water masses due to ocean currents. The inshore geographic analysis area was chosen to capture the extent of the natural network of waterbodies that could be affected by port utilization for construction and operation activities of the NY Bight projects." Screenshot of Figure 3.4.2-1: SEE ORIGINAL COMMENT FOR FIGURE 3.4.2-1: Water quality geographic analysis area Comment The geographic boundary of the water quality impact analysis is woefully inadequate and must be extended to the shoreline to encompass all of the planned components of this project. This is particularly concerning for all of the reasons previously mentioned but some of the most sensitive ecosystems	Since the exact locations and activities for each project are not known at this programmatic stage, the project-specific, COP-level NEPA analysis will include inshore areas for each NY Bight lease area if conditions or activities are different than the analyses of representative areas and projects included in the PEIS.

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	that are dependent on water quality and health of the ecosystem are at the intertidal areas. Further it is unacceptable that water quality analysis does not include the areas proposed for "ocean dumping" and project components that absolutely have the potential to impact water quality. SEE ORIGINAL COMMENT FOR FIGURE 3.6.62- TSS. Separation zones precautionary areas and USCG proposed fairways anchorages and precautionary areas in the geographic analysis area.	
BOEM-2024-0001-0313-0035	<p>Affected Environment and Environmental Consequences 3.4.2-3 The PEIS states "The offshore U.S. waters of the Atlantic Ocean including potential offshore export cable corridors and lease areas have little variation in salinity and temperature though a vertical variation (i.e. stratification) occurs on a seasonal basis (conductivity-temperature-depth data from the World Ocean Database 2021). Stratification typically is strongest in the summer when surface waters are warmer and somewhat less saline than bottom waters; well-mixed and more uniform vertical salinity and temperature profiles are evident in the fall. In late spring and early summer a strong thermocline develops at an approximately 20-meter depth across the entire shelf of the Mid-Atlantic Bight isolating a continuous mid- shelf cold pool of water that extends from Nantucket to Cape Hatteras (Miles et al. 2021). The cold pool holds nutrients over the shelf during the spring and summer which in turn promotes phytoplankton productivity and affects fish distributions and behavior (Lentz 2017; Miles et al. 2021; Nye et al. 2009). The Cold Pool is highly dynamic over its annual lifespan and among years (Chen and Curchitser 2020) experiencing significant changes in stratification with peak stratification occurring in summer and with weaker stratification occurring during its formation and breakdown in spring and fall (Miles et al 2021). Additionally the isolated volume of cold bottom water shifts location predominately moving southwestward along the shelf as it slowly warms through the season (Miles et al. 2021)." The PEIS also states "As one of the key drivers behind water quality change over time climate change (including warming sea temperatures rising sea levels ocean acidification etc.) can affect water quality causing changes and variability within the ecosystem. Northeast regional ocean temperatures have warmed faster than the global ocean over the last two decades according to the National Oceanic and Atmospheric</p>	<p>Thank you for your comment. Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of structures</i>, which discusses hydrodynamics, including atmospheric wakes and the Mid-Atlantic Bight Cold Pool.</p>

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	<p>Administration (NOAA 2021). Additionally there is some evidence indicating that the cold pool is both warming and shrinking due to the effects of climate change which will likely affect species distributions and total ecosystem productivity in the Mid-Atlantic Bight (Friedland et al. 2022)." (page 3.4.2-8) Comment There are unanswered questions based on lack of meaningful analysis in the PEIS if the OSSs will impact the ecosystem dynamic especially as it pertains to the converter stations. There are also questions regarding anticipated impact of vertical mixing from WTG installation (pile driving as well as activities associated with installation of appurtenant structures and infrastructure). Further will the construction activity impact the aforementioned thermocline and what will be the impact on the surrounding ecosystem? The short-term and long terms effects of the impacts of the proposed action should be evaluated in the PEIS as it pertains to the thermocline and Cold Pool and potential direct indirect and cumulative impacts of these changes when considering not just the NY Bight but planned offshore wind activities.</p>	
BOEM-2024-0001-0313-0036	<p>Affected Environment and Environmental Consequences 3.4.2-3 Page 3.4.2-3 of the PEIS states "As of 2022 the offshore U.S. waters of the Atlantic Ocean are considered attainable (i.e. meeting water quality standards/goals) per the 303(d) requirements. With increasing distance from shore oceanic circulation patterns play an increasingly larger role in dispersing and diluting anthropogenic contaminants and determining water quality. Waters are assessed as impaired when an applicable water quality standard is not being attained. The top causes of pollution associated with impairment in assessed bays and estuaries are mercury most common in fish tissue; polychlorinated biphenyls (PCBs) persisting in sediments and fish tissue; and pathogens which indicate possible fecal contamination (USEPA 2017). PCBs in sediments among other legacy chemicals (i.e. mercury dichlorodiphenyltrichloroethane and dioxin) potentially exceed water quality standards and can be resuspended in the water column during major storm events or from activities such as dredging." Comment This section raises concerns that are not evaluated in the PEIS regarding potential impacts to ocean circulation patterns as a result of the WTGs and associated</p>	<p>Thank you for your comment. Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of structures</i>, which discusses hydrodynamics, including atmospheric wakes and the Mid-Atlantic Bight Cold Pool. Please see Sections 3.4.2.4.1, <i>Impacts of One Project</i>, and 3.4.2.4.2, <i>Impacts of Six Projects</i>, for discussion on accidental releases, anchoring, cable emplacement and maintenance, and discharges/intakes. AMMM measures, including MUL-1, WQ-1 and WQ-2, and RP MUL-28, address accidental releases of both solid waste and chemicals. AMMM measures MUL-2 and NAV-3 address anchoring plans to avoid sensitive habitats. AMMM measures BEN-1, MUL-41, and OU-4 discuss infrastructure and cable emplacement during siting, construction, operation, and decommissioning phases of the project.</p>

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	<p>structures/infrastructure substantial disturbance and physical barriers in the water. Further this is a case in point example of why the geographic area of water quality analysis must extend to all potentially impacted areas. As the methodology for construction a resuspension of potentially contaminated sediments and suffocating benthic organisms and increasing turbidity are all serious concerns. Accidental releases anchoring cable emplacement and maintenance discharges/intakes points of interconnection all have the potential to substantially contribute to degradation of water quality which should be studied and proactive planning measures and mitigation measures should be discussed in the final PEIS as appropriate. Page 3.4.2-9 indicates that "Additionally global climate change is an ongoing and developing phenomenon in the absence of offshore wind development that causes ocean acidification warming sea temperatures rising sea levels and changes in ocean circulation patterns that can affect water quality." It is important to substantiate in the final PEIS that the proposed action does not cause an unforeseen impact to ocean circulation and water quality impacts than is worse than the no action alternative; which is why this must be evaluated in the final PEIS.</p>	
BOEM-2024-0001-0313-0037	<p>Affected Environment and Environmental Consequences 3.4.2-11 The PEIS states "Using the assumptions in Appendix D Table D2-3 approximately 128184 gallons (485229 liters) of coolants and 842583 gallons (3189524 liters) of fuels oils and lubricants would be involved during construction of the WTGs and OSSs for the Empire Wind 1 and 2 (OCS-0512) projects (the only planned offshore wind projects within the water quality geographic analysis area). Other chemicals including grease paints and sulfur hexafluoride would also be used at the offshore wind projects and black and grey water may be stored in vessels and at onshore facilities. BOEM's study "Environmental Risks Fate and Effects of Chemicals Associated with Wind Turbines on the Atlantic Outer Continental Shelf" presented extensive analysis and modeling to determine the probability and potential environmental consequences of a chemical spill at offshore wind facilities (Bejarano et al. 2013). The modeling effort revealed the most likely type of spill is a non-routine event and could occur from the WTGs at a volume of 90 to 440 gallons (341 to 1666 liters) at a</p>	<p>Thank you for your comment. Through AMMM measures WQ-1 and WQ-2, accidental releases are anticipated to be reduced or minimized.</p> <p>Potential contaminants other than accidental releases are discussed in Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative</i>, under the Presence of Structures and Discharges/Intakes IPFs.</p> <p>Sulfur hexafluoride is a gas, poorly soluble in water, and used in WTG switchgears in small quantities (approximately 3 kg). If there is a leak, it is more likely to affect air quality than water quality. Section 2.3 discusses design features of WTGs to accommodate extreme weather, including hurricanes.</p>

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	<p>rate of one time in 1 to 5 years or a diesel fuel spill of up to 2000 gallons (7571 liters) at a rate of one time in 91 years. The likelihood of a spill occurring from multiple WTGs and OSSs at the same time is very low and therefore the potential impacts from a spill larger than 2000 gallons (7571 liters) are largely discountable. BOEM anticipates that the likelihood of a non-routine catastrophic or maximum-case scenario release of all oils and chemicals to be very low (Bejarano et al. 2013). Small-volume spills could occur during OSS transformer maintenance or transfer of fluids (oils and chemicals) while low-probability small- or large-volume spills could occur due to vessel collisions allisions such as a vessel striking against a WTGs/OSS or incidents such as toppling during a storm or earthquake. The use of heavy equipment onshore could result in potential spills during use or refueling activities. Onshore construction and installation activities and associated equipment would involve fuel and lubricating and hydraulic oils." Comment DER reviewed the 5330-page document and while this is in referenced above "Environmental Risks Fate and Effects of Chemicals Associated with Wind Turbines on the Atlantic Outer Continental Shelf" again this does not include evaluation of water quality impacts of emerging contaminants and issues of concern regarding potential contaminants beyond spills and accidental releases. A more comprehensive review of all potential contamination impacts to the water body and organisms must be addressed in the final PEIS. Additionally the risks associated with sulfur hexafluoride seem to be inconsistently evaluated in the PEIS whether it will be utilized or not and thus the evaluation seems disjointed and incomplete. This section further solidifies that validity of the concerns of structural failure during an extreme storm event despite the design for a Category 5 storm there should be a contingency plan in place and evaluation of impacts if WTGs parts thereof and OSSs are destroyed during a storm and the containments and mitigation measures in place.</p>	
BOEM-2024-0001-0313-0038	<p>Affected Environment and Environmental Consequences 3.4.2-12The PEIS states "Cable emplacement and maintenance: The installation of array cables and offshore export cables would include site preparation activities (e.g. boulder removal) cable installation via jetting (primary method) plowing trenching and dredging which can</p>	<p>A statement has been added to the Final PEIS Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative</i>, to make clear to the reader that a project-specific, COP-level NEPA analysis will provide greater details of the specific NY Bight lease areas in regard to sediment transport models.</p>

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	<p>cause temporary increases in turbidity and sediment resuspension. A sediment transport analysis model was conducted for the only planned offshore wind projects within the geographic analysis area the Empire Wind 1 and 2 projects (OCS-0512) (Tetra Tech 2022). The model showed the displacement of sediments would be low and that sediments would remain suspended for a short period of time (4 hours) and typically dissipate to background levels very close to the trench. The model simulated jet plowing the primary installation method to be used for the Empire Wind projects (OCS-0512). The sediment transport model predicted that the sediment plume would typically travel between 328 feet (100 meters) and 1640 feet (500 meters) during flood and ebb conditions but could travel more than 3280 feet (1000 meters) in some areas with stronger currents. Maximum plume concentrations at 3280 feet (1000 meters) would be below 30 milligrams per liter at all stations with the exception of the two stations with strong currents. Coarse particles (medium sand and larger) would not be suspended in the water column from jet plow activities. Fine sand would settle to the bed in less than 1 minute and within 3 feet (1 meter) to 16 feet (5 meters) of the trench centerline depending on current velocities. Silts and clays would remain suspended for approximately 4 hours and would be transported farther from the trench." Comment Although these models are for Empire Wind it does make sense that similar conditions would be expected for 1 NY bight project but again this does not analyze the cumulative impacts to water quality and benthic organisms marine mammals and the entire ecosystem dynamic for the number of activities ongoing at one time. There could be synergistic and cumulative adverse impacts not only in the short term but also in terms of long-term impacts for smothering of shellfish and larvae as well as dislodging potentially contaminated sediments that would otherwise not be disturbed as a result of the proposed action. These issues should be evaluated and analyzed in the final PEIS.</p>	<p>Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Discharges/Intakes</i> for the discussion of resuspension of contaminants.</p>
BOEM-2024-0001-0313-0039	<p>Affected Environment and Environmental Consequences 3.4.2-13The PEIS states "Offshore wind facilities could have impacts on atmospheric and oceanographic processes (including the cold pool) through the presence of structures and the extraction of energy from</p>	<p>Thank you for your comment. Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of structures</i>, which discusses hydrodynamics, including atmospheric wakes and the Mid-Atlantic Bight Cold Pool.</p>

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	<p>the wind. There has been extensive research into characterizing and modeling atmospheric wakes created by wind turbines in order to design the layout of wind facilities and hydrodynamic wake/turbulence related to predicting seabed scour. However relatively few studies have analyzed the hydrodynamic wakes coupled with the interaction of atmospheric wakes with the sea surface. Further even fewer studies have analyzed wakes and their impact on regional scale oceanographic processes (i.e. cold pool) and potential secondary changes to primary production and ecosystems. Studies on this topic have focused on ocean modeling rather than field measurement campaigns." Comment It seems apparent from the information above that there is a lack of scientific studies to understand the impact and long-term effects of a project of this size and scope.</p> <p>In additional to the escrow account required by the developer for decommissioning it appears that there should be funds set aside by the developer for mitigating the potential adverse impacts that may be needed so any long -term remediation and restoration of the habitat is not passed on to the taxpayers in the future.</p>	<p>Lessees can request that facilities remain in place in the decommissioning application submitted to BSEE (30 CFR 285.900-285.913), but BOEM approves or does not approve the request (30 CFR 585.434). Unless otherwise determined during the decommissioning application review, lessees are required to remove all facilities, installations, and other devices permanently or temporarily attached to the seabed on the OCS to a depth of 15 feet below the mudline within 2 years following the termination of a lease or grant. The Energy Policy Act also established specific financial security requirements for OCS projects and requires the lessee to provide a surety bond or other form of financial assurance. Ultimately, the sum of all the lessee's financial assurances will cover the estimated decommissioning costs of an offshore wind farm and, upon termination of the lease, this sum is returned to the lessee or grantee to be used for decommissioning. More information on decommissioning can be found in the following study:  <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Decommissioning_WhitePaper.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Decommissioning_WhitePaper.pdf</a>.</p>
BOEM-2024-0001-0313-0040	<p>Affected Environment and Environmental Consequences 3.4.2-15 The PEIS States "The exposure of offshore wind structures which are mainly made of steel to the marine environment can result in corrosion without protective measures. Corrosion is a general problem for offshore infrastructures and corrosion protection systems are necessary to maintain their structural integrity. Protective measures for corrosion (e.g. coatings cathodic protection systems) are often in direct contact with seawater and have different potentials for emissions of metals or organic compounds into the marine environment e.g. galvanic anodes emitting metals such as aluminum zinc and indium and organic coatings releasing organic compounds due to weathering or leaching. The current understanding of chemical emissions for offshore wind structures is that emissions appear to be low suggesting a low environmental impact especially compared to other offshore activities; however these emissions may become more relevant for the marine environment with increased numbers of offshore wind projects and a better understanding of the potential long-term effects of</p>	<p>Additional text has been added to Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of structures</i>. Additional sources—including findings from a study of sacrificial anodes (Reese et al. 2020) and further discussion of HDVC cooling systems (Middleton and Barnhart 2022)—have been included. In addition, AMMM measure WQ-1 details the mitigation measurement designed to address sacrificial anodes, and AMMM measure WQ-2 details a 17-step plan to address accidental spills.</p>

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	<p>corrosion protection systems (Kirchgeorg et al. 2018). Based on the current understanding of offshore wind structure corrosion effects on water quality BOEM anticipates the potential impact to be minor. The presence of structures would not be expected to appreciably contribute to the cumulative impacts on water quality." Comment To build on previous comments and concerns expressed in this letter the potential impacts to water quality are seemingly summarily dismissed without substantiation. In the above paragraph not only are concerns raised about the impacts to water quality from corrosion but also the typing of chemicals that are used in coatings which may themselves be comprised of materials that could leach into the waterbody and affect the water quality and supported marine life. It does not appear that there is meaningful and comprehensive evaluation of all potential contamination that could contribute to impairing the water body to arrive at the conclusion below especially when considering not just this project but all planned and future offshore wind projects. Suggestions of no impact are not an acceptable substitute to definitive research on this topic which again should also analyze not just this project and the other planned projects but also any synergistic effects of how these chemicals interact in the waterbody bioaccumulating factors and mitigation measures to minimize any impacts to the ecosystem.</p>	
BOEM-2024-0001-0313-0046	<p>Affected Environment and Environmental Consequences 3.5.2-15The PEIS states "Discharges/intakes: Increase in discharge and intake would be expected due to an increase in vessel activity within the NY Bight area waters and ports. Permitted offshore discharges would include uncontaminated bilge water ballast grey water and treated liquid wastes. It is generally expected that maritime activity including offshore development recreation and shipping would increase in the foreseeable future. Water intake can occur through planned activities such as cooling systems for power plants or other energy sources which is the case for the Sunrise Wind Farm (Woods Hole Group 2021; Middleton and Barnhart 2022). Intake of smaller volumes can also occur with some cable trenching methods. This water intake increases the likelihood of entrainment and impingement of planktonic organisms (Barnthouse 2013; Heimbuch 2007). Intake and physical contact with a barrier (screen) due to high</p>	<p>CWA Section 316(b) requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts. Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Discharges/Intakes</i>, which discusses the minimal impacts of the open loop cooling system. The project-specific COP-level NEPA analysis will also provide greater details.</p>

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	intake velocity can negatively impact larval benthic invertebrates and larval fish (Barntouse 2013; Heimbuch 2007). Benthic larvae and other planktonic organisms would experience unavoidable mortality within a small range of the activity. " Comment DER disagrees with the characterization of this activity and impact as small in general given the scope scale and magnitude of the proposed action and cumulative impacts there is relatively little if anything about this project that should be considered small. Further any unavoidable mortality should be quantified with a commensurate impact to water quality as previously discussed as well as environmental impacts to the trophic levels and subsequent environmental impact to the ecosystem as a result of the proposed action.	
BOEM-2024-0001-0313-0056	Again DER would also like to reiterate the necessity for extending the water quality geographic boundary to include this area and sphere of potential impact influence in the PEIS analysis. Are other planned developments utilizing these same disposal sites what is the cumulative impact and amount of sediment planned for disposal?	Since the exact locations and activities for each project are not known at this programmatic stage, the project-specific, COP-level NEPA analysis will include proposed disposal sites for each NY Bight lease area if the project is proposing sediment disposal.
BOEM-2024-0001-0331-0009	"Few studies have been done to understand hydrodynamics around wind energy turbines and those that exist focus on European offshore wind farms in the North Sea where conditions are different from Nantucket Shoals. Large turbines of the size planned for the Nantucket Shoals region have not been built yet in U.S. waters. Researchers have tried to model the hydrodynamic impacts of turbines but their results don't always agree with each other. There's a need for more work to compare different types of models with each other and with actual observations in the ocean to make sure that they represent key processes like tides stratification turbulence and drag correctly. The most accurate outputs will likely come from using a range of models. Oceanographers might start with models that predict what happens as water moves past a single turbine. These results then would inform models that predict the effects of an entire wind farm. Then results from wind farm- scale models would be incorporated into models that predict regional ocean circulation.	Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of structures</i> for the discussion on hydrodynamics. The project-specific COP-level NEPA analysis will provide further details specific to the NY Bight lease areas.
BOEM-2024-0001-0331-0038	The PEIS ignores the Deoxygenation Potential of Offshore Wind Areas. Offshore wind projects have the potential to increase sediment carbon in deeper areas of the ocean due to reduced	Thank you for your comment. Caution should be taken in extrapolating study outcomes from European wind farms to expected results in the NY Bight, as the environmental conditions

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	<p>current velocities and negatively impact decreased dissolved oxygen within areas that currently have low oxygen concentration. In European wind farm areas there is evidence that ongoing offshore wind farm developments can have a substantial impact on the structuring of coastal marine ecosystems on basin scales. Recently Floeter et al. ( Floeter J. et al. Pelagic effects of offshore wind farm foundations in the stratified North Sea. Prog. Oceanogr. 156 154173 (2017). provided empirical evidence for the existence of these upwelling/down-welling dipoles showing distinct structural changes in mixed layer depth and potential energy anomaly inside the wind wake area of OWFs in the summer stratified area of the southern North Sea. (Floeter J. et al. Pelagic effects of offshore wind farm foundations in the stratified North Sea. Prog. Oceanogr. 156 154173 2017) including ?</p> <p>An increase in sediment carbon due to the reduced velocities in the water columns and?</p> <p>An Increase in dissolved oxygen in the pelagic and benthic region. A first assessment of the large-scale integrated impact of atmospheric wakes from already existing OWFs on the hydrography of the southern North Sea revealed the emergence of large-scale oceanic structures with respect to currents sea surface elevation and stratification. Daewal et al. (2022) ( Offshore wind farms are projected to impact primary production and bottom water deoxygenation in the North Sea. Ute Daewel et al. 2022. 3:292. <a href="https://doi.org/10.1038/s43247-022-006250">https://doi.org/10.1038/s43247-022-006250</a> <a href="https://www.nature.com/commsenv">www.nature.com/commsenv</a> studied the impacts of primary production and bottom water deoxygenation in the North Sea. The researchers examined modifications in mixing and stratification in relation to impacts with nutrient availability in the euphotic zone. Their concerns examined the ecosystem impacts for some obvious reasons: (i) Changes in nutrient concentration would start a cause-effect chain that translates into changes in primary production and effectively alters the food chain; (ii) In a dynamic system like the southern North Sea which is characterized by strong tidal and residual currents changes in the biotic and abiotic environment are exposed to advective processes; (iii) The expected changes depend strongly on the prevailing hydrodynamic conditions which makes it</p>	<p>are not equal. European wind farm facilities differ as they are in shallower waters with weak seasonal stratification, in sheltered areas along the coasts, and are arranged with tight spacing of turbines (Lentz 2017; Hogan et al. 2023).</p> <p>Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of structures</i>, which discusses hydrodynamics, including atmospheric wakes and the Mid-Atlantic Bight Cold Pool.</p>

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	difficult to disentangle natural from inflicted changes. Other than a high-density suite of physical and biological observations numerical modeling studies are the only means to build BACI studies as scenarios with and without the disturbance can be simulated.	
BOEM-2024-0001-0331-0040	<p>The PEIS Incorrectly Dismisses Impact to Cold Pool The PEIS dismisses as an alternative to minimize an important factor impacting marine habitats and migratory patterns on the midAtlantic shelf called the “Cold Pool”. This seasonal thermocline is one of the largest of its kind in the global ocean and extends from Nantucket to Cape Hatteras. Wind turbines have been shown to impact the mixing of ocean water both at the surface through their change in wind energy and at other levels through their physical structure. The PEIS on table 2-3 makes passing mention of the mid Atlantic cold pool but subsequently in the no action or the action alternatives does not present or any assessment of the impacts on it. This is a glaring omission the PEIS. The PEIS needs to provide a full assessment of the impact to the cold pool not just from this project but from all reasonably foreseeable actions including its own wind project approvals between the Hudson Shelf valley and Cape May NJ. Beyond that the impact on the Cold Pool both off the New Jersey coast and more broadly off the mid-Atlantic shelf from this project and in conjunction with the other foreseeable offshore wind projects must be carefully assessed. As mentioned in the July 22 2020 report of the Science Center for Marine Fisheries Management (a project funded by the National Science Foundation) in its critique of the BOEM Supplementary Environmental Impact Statement for the Vineyard Wind Project: “Too much attention cannot be given to the Cold Pool” and “The weakening of the Cold Pool supports the potential of generating the most catastrophic ecological event on the continental shelf the world has ever seen”. On page 3.4.2-13 of the PEIS BOEM states that offshore wind facilities could have impacts on the cold pool and admits that relatively few studies have analyzed the hydrodynamic wakes coupled with the interaction of atmospheric wakes with the sea surface. Further even fewer studies have analyzed wakes and their impact on regional scale and oceanographic process (cold pool). On page 3.5.2-29 BOEM states that few studies have evaluated the secondary impacts of atmospheric wakes the interaction with the</p>	<p>Thank you for your comment. Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of structures</i>, which discusses hydrodynamics, including atmospheric wakes and the Mid-Atlantic Bight Cold Pool. Additional text was added in the hydrodynamics discussion.</p>

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	sea surface and the regional changes of oceanographic patterns (cold pool) and primary productivity. On page 3.5.6-49 BOEM states that changes in the cold pool dynamics resulting from future activities should they occur could conceivably result in changes in habitat suitability and fish community structure but the extent and significance of these potential effects are unknown. The potential impact of cumulative impact of the Atlantic Coast offshore wind projects including the New York Bight on the Cold Pool should be clearly understood before this or any new projects are permitted.	
BOEM-2024-0001-0331-0041	The PEIS Does Not Adequately Address the Potential Impact of Offshore Wind Projects on Freshwater Aquifer Shoreline Sinking and Potential Catastrophic Offshore Landslides. A Rutgers study on the impact of climate change (New Jersey's Rising Seas and Changing Coastal Storms: Report of the 2019 Science and Technical Advisory Panel Kopp et al 2019) identifies two major components to rising sea levels at the NJ shore global warming and the sinking shoreline. Contributors to the sinking shoreline include "glacial isostatic adjustment" (GIA) which is tied to the fresh water aquifers that underlie the continental shelf and sediment compaction which is due to increasing weight on the developed land. Another study shows the connection between the onshore aquifers and the huge deep freshwater aquifer that extends out to the edge of the continental shelf (Aquifer Systems Far Offshore on the US Atlantic Margin Gustafson et al Scientific Reports 9 article 8709 2019).	Thank you for your comment. The project-specific, COP-level NEPA analysis will provide further details.
BOEM-2024-0001-0331-0042	And a study (Overpressure and Fluid Flow in the New Jersey Continental Slope: Implications for Slope Failure and Cold Seeps authored by Dugan and Flemings and published by in Science July 14 2000) documents the instability in the NJ seabed above the deep aquifer. That study was reported in Science News July 25 2000 under the title Trapped Water Could be a Cause for Underwater Landslides Tidal Waves. The PEIS on page 3.4.2-7 states that "groundwater reservoirs underlie areas where onshore project activities could occur. Some of these reservoirs provide water supplies to communities including USEPA-designated sole source aquifers which are aquifers that supply at least 50-percent of the drinking water for an area with no other sources available if the aquifer is contaminated. Sole-source aquifers that overlap areas where	Thank you for your comment. The project-specific, COP-level NEPA analysis will provide further details specific to the NY Bight lease areas. Through AMMM measures WQ-1 and WQ-2, accidental releases are anticipated to be reduced or minimized. Please see Section 3.4.2.5.1, <i>Impacts of One Project</i> , for a discussion of accidental releases and the potential impacts of the AMMM measures mentioned above. Empire Wind (OCS-0512) is the only ongoing offshore wind project in the offshore geographic analysis area.

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	onshore project activities may occur include the New Jersey Coastal Plains aquifer system Kings/Queens Counties (Brooklyn- Queens) aquifer system and the Nassau/Suffolk Counties Long Island aquifer system. On page 3.4.2-18 BOEM states that impacts from accidental releases on water quality would result in negligible and temporary impact on surface and groundwater quality including sole source aquifers." Therefore the PEIS does not adequately address this very significant issue. BOEM in other EIS documents has stated that "Very few studies have examined the effects of substrate vibration from pile driving yet many have acknowledged that is a field of urgently needed research". Nor has there been a programmatic analysis done of the multiple projects planned off the northeast Atlantic coast to evaluate the combined potential impact on the unstable ocean floor from these massive industrial developments.	
BOEM-2024-0001-0331-0043	Atlantic Coast projects contemplate 1800+ massive 900-1300 ft tall turbines as close as 9 miles to the NJ shore which will likely have monopole bases that are each 15 meters in diameter and each weigh 2500 tons (5 million pounds). They will be pile driven up to 242 feet into the seabed with repeated hammer strokes each up to 4400 kilojoules. And these giant turbines will generate significant continuous low frequency operating vibrations that will be transmitted into the ocean floor for their entire multi - decade operating life. The public needs assurance that these massive projects will not impact our fresh water aquifers that they will not exacerbate the current sinking of the NJ shore line related to the changing pressure dynamics of the underground aquifers and that they will not trigger underwater landslides in the unstable continental shelf. Therefore this subject requires much more analysis in the PEIS and future EIS documents.	Please see the Land Disturbance discussion in Section 3.4.2.4.1, <i>Impacts of One Project</i> . The project-specific, COP-level NEPA analysis will provide further details specific to the NY Bight lease areas. Proper erosion and sedimentation controls would be maintained to prevent soil destabilization and water quality impacts during construction, protecting groundwater resources, including sole source aquifers, and minimizing land disturbance near shorelines through the use of HDD at landfall sites.
BOEM-2024-0001-0332-0012	Discharges/Intakes With regards to discharges/intakes (3.5.2-24) routine vessel discharges even within USCG regulations brings a hot topic of invasive species to the forefront. OSSs with open loop cooling systems must be prohibited due to thermal plume warming waters and loss of fish larvae. This could hurt recruitment and jeopardize the sustainability of some fisheries. The NYB the waters and substrate necessary for spawning feeding and growth to maturity. In New Jersey PSEG continues to pay compensatory	Section 3.5.5, <i>Finfish, Invertebrates, and EFH</i> , and Section 3.5.2, <i>Benthic Resources</i> , provide analysis of entrainment and impingement. Section 316(b) of the CWA requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impact from impingement and entrainment of aquatic organisms. If a project

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	<p>mitigation for the fish eggs/larvae entrained/impinged through the open loop cooling system at the Salem nuke plant. That money goes towards a host of programs that seek to offset the impact of that mortality. Given the fact that we know many important species fluke and BFT being just two spawn in those waters or where their larvae are present in waters where AC/DC substations would be needed BOEM must calculate mortality and execute an agreement to outline a plan to mitigate the impact. A mitigation fund must be set up prior to construction with payments into the fund based on the economic cost associated with their entrainment/impingement.</p> <p>Cold Pool Disruption. The NYB's unique cold bottom waters support our diverse fisheries and must be protected. The use of "few studies" and "fewer studies" in Section 3.4.2-13 screams stop and get the scientific work done before proceeding. "The new presence of structures and their impact on regional scale oceanographic processes and potential secondary changes to primary production and ecosystems is extremely important. Structures may reduce wind-forced mixing of surface waters whereas water flowing around the foundations may increase vertical mixing." "There has been extensive research into characterizing and modeling atmospheric wakes created by wind turbines in order to design the layout of wind facilities." Obviously their investment depends on it. Why isn't this same attention and resources dedicated to hydrodynamics?</p>	<p>is proposing open loop systems, the project-specific COP-level NEPA analysis can be expanded and mitigation proposed. Section 3.5.5, <i>Finfish, Invertebrates, and EFH</i>, and Section 3.5.2, <i>Benthic Resources</i>, provide analysis of hydrodynamic effects and the Mid-Atlantic Bight Cold Pool.</p>
BOEM-2024-0001-0334-0003	<p>Though your reviewers are adept at identifying numerous issues with the construction of offshore wind projects there are no tough stances to ensure that these issues are indeed mitigated. The result appears to be the overlooking of potential dangers. In your past two New Jersey EIS efforts the documents contain numerous MAJOR category impacts. Ocean Wind 1 FEIS contains 770 instances of the word "MAJOR" and Atlantic Shores 1 contains 366 instances. Spot-checking these instances in the PDF view reveals that most are material references to important impacts not just incidental use of the word "major. SEE ORIGINAL COMMENT FOR IMAGES OF Filed Drive of Ocean Wind 1 Offshore Wind Farm Final Environmental Impact Statement May 2023 BOEM has ignored the risks associated with the fluids and chemicals/gases (SF6) contained in offshore installations. The infographic below calculates all of the industrial</p>	<p>Thank you for your comment. Through AMMM measures WQ-1 and WQ-2, accidental releases are anticipated to be reduced or minimized. Please see Section 3.4.2.5.1, <i>Impacts of One Project</i>. Sulfur hexafluoride is a gas, poorly soluble in water, and used in WTG switchgears in small quantities (approximately 3 kg). If there is a leak, it is more likely to affect air quality than water quality.</p>

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	fluids in the current U.S. offshore plans. Prior estimates for just the New Jersey 7500MW plan and 1100MW plan are 25 million gallons/2.5 million pounds of SF6 and 35 million gallons/5 million pounds of SF6 respectively. Creating such a risk which could become a nightmare on the East Coast in catastrophic storms or acts of war should be avoided. Relatedly the plans that would be implemented in the case of catastrophic spills are classified and therefore cannot be judged by the public. The public should know the completeness of the cleanup plans. SEE ORIGINAL COMMENT FOR The U.S. Plan for 86Gw of Off Shore Wind SEE ORIGINAL COMMENT FOR TABLE: Hazardous Material Risks with U.S. 2050 Offshore Wind Industrialization	
BOEM-2024-0001-0334-0006	Wrecking of marine habitat through increasing water temperature: We expect all further analyses to model increases in water temperature due to the blocking of normal water churning by the undersea installations. Furthermore for the farms further out we understand that the HVDC cooling installations will intake 8 million gallons a day of cool seawater and output that water at temperatures exceeding 90F. The creatures living in the vicinity of these installations will not survive these temperature increases. The ripple effect on the chain of life will be devastating. These behaviors contradict the assertion that offshore wind helps global climate issues. In fact it appears that they will gravely exacerbate problems. SEE ORIGINAL COMMENT FOR IMAGE: Bringing Renewable Energy to About 1.2 Million Homes and Supporting the UK Governments Strategy to Meet New Zero Greenhouse Emissions by 2050	Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of structures</i> for the discussion of hydrodynamics and discharges/intake for the HVDC cooling water intake.
BOEM-2024-0001-0334-0007	Poisoning of the fish in the vicinity: You do not forbid the use of sacrificial anodes as a method of protecting the undersea steel structures. So the builders will use them as the cheapest solution. We aren't supposed to use hot water from hot water tank heaters in our homes for cooking due to the sacrificial anodes contained within as they leach heavy metals into the water making it unsafe to consume. Sacrificial anodes have been used on oil rigs and boats for a long time. There has already been sensing of the heavy metal content in the North Sea from sacrificial anodes. Now New Jersey the East Coast and all of the coastal US have plans to fill the near-shore	Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of structures</i> for discussion on the sacrificial anodes. Additional text has been added. Please see Section 3.4.2.5, <i>Impacts of Alternative C (Proposed Action) – Identification of AMMM Measures at the Programmatic Stage</i> , for further information on WQ-1, which requires lessees to avoid using zinc sacrificial anodes.

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	waters with an explosion of structures likely using sacrificial anodes - significantly increasing the concentration of leached heavy metals.	
BOEM-2024-0001-0355-0018	My main concerns are: Contamination of our state's water resources. What are the components of the cables and their sheathing composed of and will there be a chance for any contamination of materials from these cables and sheathing or digging the trenches into our water supply?	Thank you for your comment. This will be included in the project-specific, COP-level NEPA analysis.
BOEM-2024-0001-0355-0048	The HVDC high voltage direct current converter station with required environmental containment walls is still a gamble on the Kirkwood-Cohansey aquifer which in case of a catastrophic accident could affect the drinking water in a high percentage of Jersey and all the home values along the 12.5-mile route of the cables. Once this large aquifer is compromised it will be a disaster for the State of New Jersey.	Thank you for your comment.
BOEM-2024-0001-0357-0056	Enclosure VI The Cold Pool Cumulative Impact An important factor impacting marine habitats and migratory patterns on the mid-Atlantic shelf is the "Cold Pool". This seasonal thermocline is one of the largest of its kind in the global ocean and extends from Nantucket to Cape Hatteras. Wind turbines have been shown to impact the mixing of ocean water both at the surface through their change in wind energy and at other levels through their physical structure. The Atlantic Shores draft EIS on page 3.5.54 makes passing mention of the mid Atlantic cold pool but subsequently in the no action or the action alternatives does not present or any assessment of the impacts on it. This is a glaring omission the DEIS. The Call pool with the impacted by all the projects off New Jersey and New York. Therefore this program EIS needs to provide a full assessment of the impact to the cold pool not just from this project but from all reasonably foreseeable actions including its own wind project approvals between the Hudson Shelf valley and Cape May NJ. Beyond that the impact on the Cold Pool both off the New Jersey coast and more broadly off the mid-Atlantic shelf from this project and in conjunction with the other foreseeable offshore wind projects must be carefully assessed. As mentioned in the July 22 2020 report of the Science Center for Marine Fisheries Management (a project funded by the National Science Foundation) in its critique of the BOEM Supplementary Environmental Impact Statement for the	Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of structures</i> for the discussion on hydrodynamics, including the Mid-Atlantic Bight Cold Pool.

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	Vineyard Wind Project: "Too much attention cannot be given to the Cold Pool" and "The weakening of the Cold Pool supports the potential of generating the most catastrophic ecological event on the continental shelf the world has ever seen". The potential impact of this and other such wind projects on the Cold Pool should be clearly understood before this or any new projects are permitted.	
BOEM-2024-0001-0362-0021	BOEM should detail information related to air and water quality impacts in the region associated with potential manufacturing port activities construction and ongoing operations and maintenance.	Section 3.4.2.3.2 provides an assessment of the impacts on water quality from port utilization and possible port improvements. Port improvement projects are described in Appendix D, Section D.2.5. If the individual projects include other port improvement components, the project-specific COP-level NEPA analysis will provide further details.
BOEM-2024-0001-0469-0012	The seafloor is an important reserve for natural carbon storage known as "blue carbon" in coastal and marine environments. NOAA's early research in Marine Protected Areas ("MPA") show the critical role this environment plays in sequestering carbon though fewer studies have been conducted in non-MPAs. [Footnote 32: Sara Hutto et al Mud Matters: Understanding the Role of Ocean Sediment in Carbon Sequestration OPEN COMM'NS FOR THE OCEAN (Feb. 13 2024) <a href="https://octogroup.org/mud-matters-understanding-the-role-of-ocean-sediments-in-storing-carbon/">https://octogroup.org/mud-matters-understanding-the-role-of-ocean-sediments-in-storing-carbon/</a> ] Industrial development that disturbs the seafloor can displace the stored carbon which can then remineralize into aqueous carbon dioxide in the ocean. [Footnote 33: Id.; Knut Heinatz & Maike Scheffold A First Estimate of Offshore Wind Farms on Sedimentary Organic Carbon Stocks in the Southern North Sea 9 FRONTIERS IN MARINE SCI. (Jan. 16 2023) <a href="https://doi.org/10.3389/fmars.2022.1068967">https://doi.org/10.3389/fmars.2022.1068967</a> ] Although the Draft PEIS highlights that climate change threatens the ocean's function as a carbon sink it does not compare the risk of carbon resuspension from seafloor disturbance especially accounting for BOEM's earlier projection that OSW projects in the United States are unlikely to significantly affect the global climate on their own. [Footnote 34: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5; BUREAU OF OCEAN ENERGY MGMT. VINEYARD WIND OFFSHORE WIND FARM FINAL ENVIRONMENTAL IMPACT STATEMENT vol. 2 at A-51 (March 2021)]	The project-specific COP-level NEPA analysis will provide further details on sediment resuspension specific to the NY Bight lease areas.

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	<a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Vineyard-Wind-1-FEIS-Volume-2.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/Vineyard-Wind-1-FEIS-Volume-2.pdf</a>	
BOEM-2024-0001-0469-0015	<p>Oceanographic Conditions The Mid-Atlantic cold pool is a seasonal temperature and nutrient stratification cycle that allows cold-water creatures to thrive in the North Atlantic. It results in cold water remaining trapped just above the seafloor so animals that prefer colder climates can remain further south than they otherwise would especially shellfish and the organisms that depend on them. [Footnote 44: See Travis Miles et al Could federal wind farms influence continental shelf oceanography and alter associated ecological processes? A literature review SCI. CTR. FOR MARINE FISHERIES &amp; RUTGERS SCH. ENV'T &amp; BIOLOGICAL SCIS. at 2-3 (Dec. 2020) <a href="https://scemfis.org/wp-content/uploads/2021/01/ColdPoolReview.pdf">https://scemfis.org/wp-content/uploads/2021/01/ColdPoolReview.pdf</a>] In the Mid-Atlantic Bight ("MAB") "over 2 million acres of the continental shelf have been leased for offshore wind energy projects that are under development including sites that overlap with the seasonal Cold Pool". [Footnote 45: Rebecca Horowitz et al Overlap Between the Mid-Atlantic bight Cold Pool and Offshore Wind Lease Areas ICES J. MARINE SCIS. at 1 (2023) <a href="https://academic.oup.com/icesjms/advance-article/doi/10.1093/icesjms/fsad190/7462579">https://academic.oup.com/icesjms/advance-article/doi/10.1093/icesjms/fsad190/7462579</a>] Many OSW studies were conducted in the North Sea because Europe already has industrial OSW installations to study. [Footnote 46: Miles et al supra note 45 at 1.] However the North Sea's cold pool is not as stratified as the Mid-Atlantic Cold Pool so the results are more representative of OSW impacts when the Cold Pool is not as stratified such as in the spring and fall. [Footnote 47: Id.] Additionally "many European lease areas use smaller capacity turbines with different spacing further adding to uncertainty about how relevant prior research is to MAB conditions". [Footnote 48: Horowitz et al supra note 46 at 2.] OSW installations could potentially change the patterns of the Cold Pool due to the structures themselves and the extraction of wind changing the naturally occurring current. [Footnote 49: Miles et al supra note 45 at 10.] "Turbines can disturb downwind wind fields by decreasing wind speed and increasing turbulence". [Footnote 50: L. Bennun et al supra note 42.] This is known as the "wind wake effect"</p>	<p>Thank you for your comment. Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of structures</i>, which discusses hydrodynamics, including atmospheric wakes and the Mid-Atlantic Bight Cold Pool.</p>

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	<p>and it can cause both upwelling and downwelling changing the distribution of temperature and nutrients "potentially affecting an area 10-20 times larger than the wind farm itself with possible knock-on ecosystem effects." [Footnote 51: Id.; see also Ute Daewel et al Offshore wind farms are projected to impact primary production and bottom water deoxygenation in the North Sea 3 COMMS. EARTH &amp; ENV'T (Nov. 24 2022) <a href="https://doi.org/10.1038/s43247-022-00625-0">https://doi.org/10.1038/s43247-022-00625-0</a> (Wind wake effects can increase or decrease zooplankton productivity by up to 10%)]Moreover it is unclear if the research conducted to date fully assessed and evaluated the impacts of the high-temperature discharge from the many once-through cooling systems (discussed in Section V) planned not only for the six New York Bight lease areas but for other projects in the area. As COA outlined in our comments on the Notice of Intent to Prepare the Draft PEIS the sea surface microlayer contains distinct microbial habitats and is central to a range of global biogeochemical and climate-related processes. [Footnote 52: Oliver Wurl et al Sea Surface Microlayer in a Changing Ocean A Perspective ELEMENTA: SCI. OF THE ANTHROPOCENE (2017) <a href="https://doi.org/10.1525/elementa.228">https://doi.org/10.1525/elementa.228</a>] BOEM acknowledged receiving COA's concerns about potential effects of offshore wind on the sea surface microlayer in COA's comments on the Notice of Intent to prepare the Draft PEIS. However BOEM did not provide a response to COA's comment discuss the role of the microlayer analyze the sea surface microlayer or provide a reason why they would not do so nor how the microlayer will be assessed and protected. [Footnote 53: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 appx. O at O-46.]The Cold Pool is an essential phenomenon for the survival of the Mid Atlantic ecosystem. The PEIS must not be finalized without a multi-year assessment study of the Cold Pool with independent scientific assessment.</p>	
BOEM-2024-0001-0469-0016	<p>Once-Through Cooling There is no detailed research on the projected impacts of once-through cooling systems in the six New York Bight OSW lease areas as those impacts will be evaluated during the COP NEPA review according to BOEM staff. Projects in the six Draft PEIS lease areas will likely use once- through cooling systems as it is</p>	<p>Thank you for your comment. CWA Section 316(b) requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts.</p>

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	<p>currently the only economically feasible method of cooling HVDC systems. [Footnote 54: BUREAU OF OCEAN ENERGY MGMT. SUPPORTING NATIONAL ENVIRONMENTAL POLICY ACT DOCUMENTATION FOR OFFSHORE WIND ENERGY DEVELOPMENT RELATED TO HIGH VOLTAGE DIRECT CURRENT COOLING SYSTEMS 5 (Apr. 2022) <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/HVDC%20Cooling%20Systems%20White%20Paper.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/HVDC%20Cooling%20Systems%20White%20Paper.pdf</a>] AC power does not travel well via undersea cables further than thirty miles offshore so projects sited further from shore must convert AC to DC through an HVDC substation which requires a cooling system and produces higher electromagnetic fields which could affect electrosensitive species. [Footnote 55: Id. at 1.] The once-through cooling process involves pumping in cool ocean water; filtering small particles sand and other elements smaller than 500 microns; impinging and entraining organisms within said water; adding biocides such as sodium hypochlorite to prevent growth in the system at 10-200 parts per million; and discharging heated treated water back into the ocean. [Footnote 56: Id. at 2.] Generally without citing to any specific source BOEM writes: "The warm water discharged is generally considered to have a minimal effect as it will be absorbed by the surrounding water and returned to ambient temperatures. Entrainment of potential prey resources would be minimal given the small number of [offshore substations] proposed per project. Entrainment of marine mammals that may depredate on entrained prey is discounted due to physical impedance by intake safety screens." [Footnote 57: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 at 3.5.6-29.] COA opposes the use of once-through cooling systems in all industries as they have significant adverse impacts on marine ecosystems. [Footnote 58: CLEAN OCEAN ACTION POSITION PAPER ON OYSTER CREEK NUCLEAR GENERATION STATION'S COOLING WATER SYSTEM (2010) (on file with COA).] Studies conducted on once-through cooling system discharges from other power plants have shown that these discharges are several degrees warmer than surface temperature of the receiving waterbody(ies) and are</p>	<p>The project-specific COP-level NEPA analysis will provide further details.</p>

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	<p>detrimental to marine communities and fish populations. Coastal power plants with once through cooling systems have been found to entrain and impinge millions of fish and larvae within the space of two years. [Footnote 59: URS CORP. NORMANDEAU ASSOCIATES INC. CHARACTERIZATION OF THE AQUATIC RESOURCES AND IMPINGEMENT AND ENTRAINMENT AT OYSTER CREEK NUCLEAR GENERATING STATION Tables 6-9 (Sept. 2008);] Once-through cooling systems significantly change the bacterioplankton community. [Footnote 60: Meora Rajeev et al Thermal discharge-induced seawater warming alters richness community composition and interactions of bacterioplankton assemblages in a coastal ecosystem SCI. REPORTS (Aug. 30 2021) <a href="https://www.nature.com/articles/s41598-021-96969-2">https://www.nature.com/articles/s41598-021-96969-2</a>; Jebarathnam Prince Prakash Jebakumar et al Impact of a Coastal Power Plant Cooling System on Planktonic Diversity of a Polluted Creek System 133 MARINE POLLUTION BULLETIN 378 (Aug. 2018) <a href="https://doi.org/10.1016/j.marpolbul.2018.05.053">https://doi.org/10.1016/j.marpolbul.2018.05.053</a>] In one study phytoplankton population density decreased by 64% zooplankton density decreased by 93% and loss of fish larvae impacted local fisheries. [Footnote 61: Jebarathnam Prince Prakash Jebakumar et al supra note 60.] Species that prefer warmer water such as sea turtles may be attracted to the warm water surrounding the outflow area which can change the composition of the marine community. Marine life that become habituated to the warmer temperature can be killed from thermal shock in the event of a planned or emergency shutdown of the cooling system. [Footnote 62: See Oyster Creek Nuclear Generating Station Fish Kill Monitoring Report (January 2000) NRC ML#003684420; Oyster Creek 2001 Annual Environmental Operating Report (February 2002) NRC ML#020660222; A. Cradic Oyster Creek Generating Station fined for water violations and fish kills: DEP seeks compensation for Natural Resources Damages New Jersey Department of Environmental Protection news release (December 12 2002) available for viewing at <a href="http://www.state.nj.us/dep/newsrel/releases/02_0131.htm">http://www.state.nj.us/dep/newsrel/releases/02_0131.htm</a>] There has never been a study in the North Atlantic offshore environment to determine what species would be impacted by once-through cooling systems through impingement or entrainment; such a study should</p>	

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	be conducted before large-scale once-through cooling systems are built in the New York Bight lease areas. According to the PEIS specific cooling systems will be chosen and evaluated during the individual environmental review of each project's COP and other agencies are responsible for ensuring compliance with pollution discharge requirements including thermal pollution. [Footnote 63: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 at 3.1-2.] However this is not possible until a thorough study of the impacts of once-through cooling systems is conducted. Then with NMFS BOEM needs to incorporate more parameters related to once- through cooling in the project design envelope such as ranges for the amount of water that would be pumped through amount of biocides that would be discharged and effects on local water temperature. Additionally BOEM must reconsider its characterization of once-through cooling as having minor impacts especially as there is no scientific basis for this determination.	
BOEM-2024-0001-0474-0005	Among other reasons the action is Arbitrary because the proposed action fails to properly consider that the offshore wind projects and development of leasehold interests impair the integrity of the ocean to the detriment of citizen stakeholders and the public.	Thank you for your comment. Please see Sections 3.4.2.4.1, <i>Impacts of One Project</i> , and 3.4.2.4.2, <i>Impacts of Six Projects</i> , for the impact analysis on water quality.
BOEM-2024-0001-0474-0009	Among other reasons the action is Arbitrary because the proposed action fails to prioritize the role of the ocean in tempering climate change and evaluate assess and mitigate the negative impact of the proposed offshore wind development on the ocean. Among other reasons the action is Arbitrary because the proposed action fails to recognize and evaluate the role of the ocean in the entire scheme of biodiversity and fails to evaluate assess and mitigate the negative impact of the proposed offshore wind development.	Thank you for your comment. Please see Sections 3.4.2.4.1, <i>Impacts of One Project</i> , and 3.4.2.4.2, <i>Impacts of Six Projects</i> , for the impact analysis on water quality.
BOEM-2024-0001-0530c	I want to know what's going to happen to the New York cold Bight area, when you've already said through your paperwork and your studies that these wind farms are going to do little to nothing to mitigate carbon footprint issues, to reduce carbon emissions, to combat global warming. On top of that, you already stated too that these windmills are going to have a dampening effect and that the winds are no longer going to cool the surface temperatures of the seas like they used to. On top of that you're also placing numerous	Please refer to response to comment BOEM-2024-0001-0528c for more information on impacts from offshore wind projects on GHG emissions. Additional analysis has been added to Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Discharges/Intakes</i> , to further describe the warm water discharges. Please also see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Presence of Structures</i> , which

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	substations in our cold bight area that are going to be constantly pumping out 90-degree water to increase the surface temperature. Has anybody considered how important the New York Bight cold bight is to global warming and what it does to cool down the Gulf Stream before it reaches the Arctic Circle.?	discusses hydrodynamics, including the Mid-Atlantic Bight Cold Pool. A discussion of the potential impacts of cooling system discharge and intake on finfish, invertebrates, and EFH is provided in Section 3.5.5.3.3. CWA Section 316(b) requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts. The project-specific COP-level NEPA analysis will provide further details.
BOEM-2024-0001-0528r	We know from studies of existing wind farms that both increases and decreases in phytoplankton and other plankton productivity are observed around wind turbines, essentially cancelling each other out over the whole region. But opponents of offshore wind often cite the 2022 paper by Daewal and colleagues in the North Sea of Europe as reason for concern, but conveniently ignore their finding of a 12% increase in zooplankton biomass in the presence of wind turbines. The PEIS itself cites a 2020 paper by Dannheim and colleagues which found increased primary productivity at local scales around wind turbines.	Thank you for your comment. Potential impacts from offshore wind activities on primary productivity are discussed in Section 3.5.2.4. Caution should be taken in extrapolating study outcomes from European wind farms to expected results in the NY Bight, as the environmental conditions are not equal. European wind farm facilities are in shallower waters with weak seasonal stratification, are in sheltered areas along the coasts, and are arranged with tight spacing of turbines (Lentz 2017; Hogan et al. 2023). Please also see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Presence of Structures</i> , which discusses hydrodynamic impacts in greater detail.
BOEM-2024-0001-0528z	Placement of converter stations and the use of cooling systems like the open loop cooling system mentioned on page 59, volume one of the PEIS. The cumulative impacts of these cooling systems are extremely concerning, especially if they're anything like those mentioned in sunrise wind documents which take in cool ocean water to dissipate heat produced through the A/C to D/C conversion of electricity. Each offshore cooling system will discharge up to 8,100,000 gallons of seawater daily with chlorine residuals and the temperature report per document is between 86 to 90°F per day. What happens to all the fish, larvae, phytoplankton, zoo plankton, and necessary microorganisms that end up in this wash cycle with bleaching chlorine?	Additional analysis has been added to Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Discharges/Intakes</i> , to further describe the warm water discharges. A discussion of the potential impacts of cooling system discharge and intake on finfish, invertebrates, and EFH is provided in Section 3.5.5.3.3. CWA Section 316(b) requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts. The project-specific COP level NEPA analysis will provide further details.
BOEM-2024-0001-0528z	Before proceeding with mass construction in Hudson Canyon, home of the unique marine environment with a cold pool, BOEM should	Thank you for your comment. Hudson Canyon is outside of the six NY Bight lease areas. However, as part of the subsequent COP

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	implement a pilot project, considering the studies on this cold pool were done in the North Sea, which is a different environment. Especially since the currents around the turbines are exactly what breaks down the cold pool.	NEPA analysis, BOEM plans to coordinate with the NOAA Office of National Marine Sanctuaries regarding the proposed designation of the Hudson Canyon National Marine Sanctuary. Please also see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Presence of Structures</i> , which discusses hydrodynamics, including the Mid-Atlantic Bight Cold Pool. Further, BOEM considered but dismissed from further consideration an alternative to build a pilot project (PEIS Chapter 2, Table 2-3). Data from sites that are constructed and operating (e.g., Block Island), as well as the pilot project in Virginia, were incorporated into this PEIS and will be incorporated into the development of project specific COPs and EISs.
BOEM-2024-0001-0529k	At the same time there are, are at least 50 power transfer stations that will discharge billions of gallons of contaminated, superheated wastewater.	Additional analysis has been added to Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Discharges/Intakes</i> , to further describe the warm water discharges. CWA Section 316(b) requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts. The project-specific COP-level NEPA analysis will provide further details.
BOEM-2024-0001-0529n	It is unclear how many of these sites will use once through cooling stations like those mentioned in sunrise wind documents, these cooling stations, taking cool ocean water to dissipate heat produced through the AC to DC conversion of electricity. Each offshore cooling station will discharge up to 8,100,000 gallons of sea water with chlorine residuals and the temperature per BOEM's document is between 86 to 90°F. What happens to all the fish, larvae, phytoplankton, zoo plankton, necessary microorganisms that end up in this wash cycle?	Additional analysis has been added to Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Discharges/Intakes</i> , to further describe the warm water discharges. A discussion of the potential impacts of cooling system discharge and intake on finfish, invertebrates, and EFH is provided in Section 3.5.5.3.3. CWA Section 316(b) requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts. The project-specific COP-level NEPA analysis will provide further details.
BOEM-2024-0001-0310m	There's a handful of other things over the history here that I wanted to call out. BOEM, you're not that interested in the contents of what's in these turbines and what is in all of the substations. So for the 7500 megawatt plan, all of which you will be reviewing all the	Thank you for your comment. The NY Bight lessees will prepare project-specific Spill Prevention Control and Countermeasures and Oil Spill Response Plans prior to construction that are followed throughout the life of the project and monitor for and

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	<p>individual plans for, there's 25 million gallons of industrial fluids in all of that construction that's sitting above the water just waiting for some destruction to dump it into the water.</p> <p>For the 1100 megawatt plan that goes up to 35 million gallons and this poster here shows what the U.S. plan for 86 gigawatts. Now, that would be BOEM managing all those all around the country. Right? And that's 117 million gallons of fluids, which if you total it up and compare it to things we're used to, that's 156 city water towers of fluids or 21 oil tankers worth of fluids sitting out there in the ocean waiting for some kind of pollution destruction. That's not too good for clean ocean. Right?</p>	<p>report any environmental releases or fish kills to the appropriate authorities or agencies. The Oil Spill Response Plans will need to meet USCG and BSEE requirements, which would provide for rapid spill response, cleanup, and other measures to minimize any potential impact on affected resources from spills and accidental releases, including spills resulting from catastrophic events.</p> <p>According to BOEM modeling (Bejarano et al. 2013), a release of 128,000 gallons (484,533 liters) is likely to occur no more often than once per 1,000 years, and a release of 2,000 gallons (7,571 liters) or less is likely to occur every 5 to 20 years. The probability of an accidental discharge or spill occurring simultaneously from multiple WTGs is extremely low.</p>
BOEM-2024-0001-0310n	Factor this with an unknown number of substations and offshore cooling systems that will constantly be pumping chlorinated water at 90 degrees Fahrenheit, killing all phytoplankton and microorganisms that get sucked in.	<p>Additional analysis has been added to Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Discharges/Intakes</i>, to further describe the warm water discharges. A discussion of the potential impacts of cooling system discharge and intake on finfish, invertebrates, and EFH is provided in Section 3.5.5.3.3.</p> <p>CWA Section 316(b) requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts. The project-specific COP-level NEPA analysis will provide further details.</p>
BOEM-2024-0001-0310o	<p>Sites that are more than 30 nautical miles offshore that are running HVDC will require offshore cooling systems, which are mentioned in the PEIS. And if they're like those described in Sunrise Wind's documents it's truly concerning. These cooling systems take in cool ocean water to dissipate heat produced through the AC to DC conversion of electricity.</p> <p>Each offshore cooling system will discharge up to 8,100,000 gallons of seawater with chlorine residuals per day and the temperature per documents is between 86 to 90 degrees Fahrenheit.</p> <p>What happens to all the fish larvae, phytoplankton, zooplankton and other necessary microorganisms that end up in this warm bleach wash cycle?</p>	<p>Additional analysis has been added to Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Discharges/Intakes</i>, to further describe the warm water discharges. A discussion of the potential impacts of cooling system discharge and intake on finfish, invertebrates, and EFH is provided in Section 3.5.5.3.3.</p> <p>CWA Section 316(b) requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts. The project-specific COP-level NEPA analysis will provide further details.</p>

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BOEM-2024-0001-0529gg	One is in response to some of the folks who testified who are concerned about the open loop cooling systems. For instance, the one being utilized by Sunrise Wind. I think it would be important for the PEIS to juxtapose, the open loop cooling system from an offshore wind farm against power plants, fossil fuel-based power plants. So, for instance, in Northport on Long Island, where I live. They kill billions, with a “b”, of finfish and fish larvae, juvenile fish, horseshoe crabs, crustaceans, and other marine species. So, all offshore, all energy infrastructure has an impact on our environment. We need to do a comparative analysis, so we choose the one with the least impact. And frankly, that's offshore wind.	Thank you for your comment. Since these projects are not related to the six NY Bight projects and site-specific details are not known at this time, we cannot make direct comparisons in this PEIS. However, we appreciate the commenter pointing this out in the public commenting process.
BOEM-2024-0001-0310t	What's been going on in the North Sea has been going on for quite some time now. So there are a lot of studies that are starting to come out on the effects of microclimate, on the effects of stratification, deoxygenation, sediment deposits. There's a lot of stuff coming out. Right? The research that we need, the data that we need to make more informed decisions with how we're going to approach renewable energy.	Thank you for your comment. Caution should be taken in extrapolating study outcomes from European wind farms to expected results in the NY Bight, as the environmental conditions are not equal. European wind farm facilities are in shallower waters with weak seasonal stratification, are in sheltered areas along the coasts, and are arranged with tight spacing of turbines (Lentz 2017; Hogan et al. 2023). Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Presence of Structures</i> , which describes potential hydrodynamic impacts.
BOEM-2024-0001-0310h	So might I ask what is the point? In fact, the proposed cooling stations will mimic climate change and kill off fish larvae, zooplankton, microorganisms, et cetera, by taking in cool, clean ocean water at up to 8.1 million gallons per day and mixing it with chemicals, such as bleach and discharging it back into the ocean at 86 to 90 degrees Fahrenheit.	Additional analysis has been added to Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Discharges/Intakes</i> , to further describe the warm water discharges. A discussion of the potential impacts of cooling system discharge and intake on finfish, invertebrates, and EFH is provided in Section 3.5.5.3.3. CWA Section 316(b) requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts. The project-specific COP-level NEPA analysis will provide further details.

## P.5.5 Bats

**Table P.5-5. Responses to Comments on Bats**

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BOEM-2024-0001-0325-0001	Bat Conservation International (BCI) wishes to provide information in response to draft programmatic environmental impact statement (PEIS) to analyze the potential impacts of wind energy development in six lease areas of the New York (NY) Bight. BCI has actively worked with the Department of Energy and energy producers to find methods that minimize bat mortality at wind turbines. Bats experience high rates of mortality as a result of collisions with land-based wind turbines with hundreds of thousands of individuals killed a wind facilities across the United States and Canada (Hein and Schirmacher 2016). Bats have been consistently observed in offshore environments across the world (Solick and Newman 2021). The reasons for bats to be active offshore are poorly understood but it is likely that some species migrate over portions of the ocean between landmasses (Ahln et al. 2009 Brabant et al. 2020) and use coastlines as migratory corridors. Coastal islands with foraging and roosting habitat are used as stopover sites for some migratory species (Tenaza 1966 Cryan and Brown 2007 Peterson et al. 2014a). Considering the risk land-based wind energy poses to some bat populations and the documented activity of bats offshore it is reasonable to assume that offshore wind energy development can contribute to declines in bat populations. Additionally offshore wind energy development has been shown to provide foraging and roosting habitat (Willmott et al. 2023) for bats and consequently might attract bats increasing the risk of mortality from collision with offshore wind energy turbines.	BOEM acknowledges the presence of bats in the offshore environment, as documented in PEIS Section 3.5.1. BOEM used the best available information to describe bat presence in the offshore environment in the PEIS. Bat presence in the offshore environment is low and represents a very small percentage of total populations onshore. Therefore, BOEM does not anticipate population-level effects from offshore wind activities. Refer to responses to comments BOEM-2024-0001-0325-0002 and BOEM-2024-0001-0325-0003 for additional information on bat presence offshore versus onshore.
BOEM-2024-0001-0325-0002	Unfortunately we feel the draft PEIS misinterprets or overlooks important aspects of the available science and therefore minimizes the potential negative impact offshore wind energy in the NY Bight region may have on bat species. While the risk of offshore wind energy to bats is largely unknown the level of observed bat activity and impact of onshore wind turbines indicates that there should be greater concern about offshore wind turbine impacts to bat populations than is currently evaluated in the draft PEIS. The	BOEM acknowledges the temporal difference between the survey data presented in Johnson (2011) and the NJDEP Ecological Baseline Studies survey data collected in 2020 and 2021 in Lease Area OCS-A 0499, to which the Johnson (2011) data is compared. However, various sources clearly indicate that bat activity levels are generally lower in the offshore environment compared to onshore, as cited in PEIS Section 3.5.1.1 (see Hein et al. 2021, Brabant et al. 2021, Stantec 2020, Dominion Energy 2022, Atlantic

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	<p>conclusion that risk to bats is low because offshore bat activity rates are less than Johnson 2011 is flawed. The sampling in Johnson 2011 occurred in 2007 and 2008 when the Appalachian range had a rich and abundant bat community not yet impacted by White-nose Syndrome. The high level of activity and migratory activity associated with the Appalachian range leads to some of the highest recorded levels of fatality in the United States sometimes greater than 100 bats per turbine (Kunz et al. 2007). The comparison of offshore bat activity to activity rates in the Appalachian mountains is flawed both spatially and temporally.</p>	<p>Shores 2022, and TetraTech 2022). In addition, the DOE funded an acoustic survey of bat activity offshore and at coastal sites (onshore mainland locations on and near the shoreline) in the New England Gulf of Maine, mid-Atlantic coast, and Great Lakes regions in 2012–2014. This was a very large survey effort across a wide area that detected a total of 565,158 bat passes during a total of 17,730 detector nights. The mean number of bat passes per night in offshore open water was 4.96, while the number of bat passes per night for coastal onshore was significantly higher at 112.6. This information has been added to PEIS Section 3.5.1 and is cited as Stantec 2016.</p> <p>BOEM used the best available information to describe bat presence in the offshore environment in PEIS Section 3.5.1. Bat presence in the offshore environment is low and represents a very small percentage of total populations onshore.</p>
BOEM-2024-0001-0325-0003	<p>Recent evidence shows activity levels are not drastically different onshore and offshore although offshore may be less distributed across time (i.e. more 'clumped'). Acoustic data from the Gulf of Maine and mid-Atlantic show levels of bat activity in the offshore environment are similar to those documented in open arid land in the United States with 2.57 passes/night at offshore locations in the Gulf of Maine and mid-Atlantic (Peterson et al. 2014b Peterson 2016) and average of 1.07 bat passes per detector night within the Coastal Virginia Offshore Wind Area (Tetra Tech Inc. 2022 Table O-2-2). For comparison activity rates in pre-construction onshore wind farm surveys averaged 1.89 bat passes per detector night with a range of 0.53 to 6.27 bat passes per detector night (Solick et al. 2020). Therefore the 6.2 bat passes per detector night in Lease Area OCS-A 0499 is on the high end of bat activity at wind energy facilities not low end of activity rates. Regional average bat fatalities range from 1.11-10.87 bats/MW capacity (AWWI 2020). Arid regions have an average of 1.99 (Pacific Southwest) and 6.01 (Southwest) bats/MW (AWWI 2020).</p>	<p>Open arid lands in the United States are outside of the bats' geographic analysis area defined in the PEIS and consist of an environment and habitats that are very different than the terrestrial area along the United States Atlantic coast. Refer to response to comment BOEM-2024-0001-0325-0002 regarding the comparison of bat presence in the offshore environment and onshore environment in the geographic analysis area.</p> <p>BOEM reviewed Appendix B in the AWWI (2020) study and acknowledges the low fatality numbers cited by the commenter for the arid regions of the United States. However, BOEM notes that the Northeast region shows 8.65 fatalities per MW onshore, which indicates a higher density of bats onshore in the Northeast.</p>
BOEM-2024-0001-0325-0004	<p>Eastern red bats are the most commonly detected and broadly distributed bat species off the coast of North America (Sjollema et al.</p>	<p>BOEM acknowledges the presence of eastern red bats in the offshore environment, as documented throughout PEIS Section</p>

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	<p>2014 Peterson 2016). Tracking data show they can travel vast distances over short periods of time with one individual documented flying 453 km in one night likely over the Atlantic Ocean between Long Island and New Jersey (Dowling et al. 2017). They were identified in 26 of 40 published visual records from the Atlantic and made up 89.8% of echolocation calls classified to species in acoustic surveys at structures off the Gulf of Maine and mid-Atlantic (Peterson 2016 Solick and Newman 2021). They are also broadly distributed occurring at 88% of offshore structures at 75% of which they were the primary species detected.(Solick and Newman 2021) This included a buoy located 18.8 km from shore where high levels of activity (8 passes/night) were recorded over a span of nine consecutive nights in August 2012 potentially illustrating a pulse of migratory activity or indicating that they used the buoy as a roost (Peterson 2016 Solick and Newman 2021). Aerial surveys conducted off the coasts of New Jersey Delaware and Virginia in September 2012 identified 11 eastern red bats from 16.9 to 41.8 km from land and a vessel-based survey documented a sighting about 44 km off the coast of Delaware (Hatch et al. 2013). Studies at the Coastal Virginia Offshore Wind Pilot Project documented eastern red hoard and silver-haired bats in the project area about 44 km offshore including acoustic recordings and observations of bats roosting on vessels (Bureau of Ocean Energy Management 2022). Acoustic monitoring at the Atlantic Shores Offshore Wind area recorded five species or species groups (Myotis) with eastern red bats being the most frequently recorded (BOEM 2023). Given the broad distribution and relatively high levels of activity of eastern red bats in the offshore environment and the high rates of mortality experienced by the species at terrestrial wind farms it is likely that offshore wind energy infrastructure will pose a high level of risk level to the species.</p>	<p>3.5.1 using the same information and studies referenced in the comment. However, as described in Section 3.5.1, bat presence for all species in the offshore environment is low and represents a very small percentage of total populations onshore. Therefore, the risk level to the species is low for all IPFs addressed for the offshore environment.</p>
BOEM-2024-0001-0325-0005	<p>Hoary bats have been regularly observed on islands in the Atlantic including the Orkney Islands (Barrett-Hamilton 1910) Iceland (Hayman 1959) Southampton Island (Hitchcock 1943) Newfoundland (Mauder 1988) and Bermuda (Allen 1923 VanGelder and Wingate 1961) with most records occurring in the fall indicating that members of this species fly considerable distances across the ocean seasonally.</p>	<p>BOEM acknowledges the presence of hoary bats in the offshore environment, as documented in PEIS Section 3.5.1. Offshore surveys at the Block Island Wind Farm, Coastal Virginia Offshore Wind Pilot, and Lease Area OCS-A 0499 identified hoary bat presence. However, as described in PEIS Section 3.5.1, bat presence for all species in the offshore environment is low and</p>

Comment No.	Comment	Response
	<p>Acoustic surveys off the northeastern coast of the continent reveal low levels of activity (4% of recordings) but broad distributions with occurrences at 88% of offshore survey locations (Solick and Newman 2021). Studies at two project areas off the coast of the US documented hoary bat activity in offshore wind call areas (BOEM 2022 BOEM 2023). Hoary bats can fly at high elevations (Peurach 2003) and at times without echolocating (Corcoran and Weller 2018 Corcoran et al. 2021) potentially causing them to be under sampled by acoustic surveys (Solick and Newman 2021). Despite apparently low levels of activity in the offshore environment given their broad distribution and high rates of fatality at terrestrial wind turbines we determined that the threat of offshore wind energy infrastructure is high for this species. With current predictions of a potential 90% reduction of the species' population by 2061 (Frick et al. 2017a) any additional threats (such as offshore wind energy) could reduce hoary bats chances at survival. The hoary bat was added to the USFWS workplan for a species status assessment in 2027.</p>	<p>represents a very small percentage of total populations onshore. Therefore, the risk level to the species is low for all IPFs assessed for the offshore environment.</p>
BOEM-2024-0001-0325-0007	<p>Collisions with wind turbines are the leading cause of mortality for several bat species and are a primary contributor to the dramatic decline of at least one species of bat in North America (Frick et al. 2017b Friedenber and Frick 2021). While the magnitude of effect that offshore wind infrastructure will have on bats is currently unclear precautionary measures should be put in place to minimize additional take of vulnerable bat species. While additional study is needed there are clear actions that can be taken as part of the PEIS.</p>	<p>BOEM acknowledges the presence of several bat species in the offshore environment in the geographic analysis area. Based on best available information— including literature, studies, and offshore bat surveys documented and described in PEIS Section 3.5.1—bat presence in the offshore environment is low and represents a very small percentage of total populations onshore. As such, BOEM anticipates the risk to bat species from offshore IPFs is low. However, though there is still some level of uncertainty regarding risk to bats offshore, the analysis in the PEIS is sufficient to support sound scientific judgments and informed decision-making related to bat distribution and use of the offshore environment as well as the potential for collision risk of bats (see PEIS Appendix E). Alternative C includes several bat AMMM measures that would result in learning more about bat presence in the offshore environment and bat interactions with offshore wind infrastructure. In addition, BOEM would consider additional or different AMMM measures for project-specific environmental analyses for a given NY Bight lease area for which a COP is submitted.</p>

## P.5.6 Benthic Resources

**Table P.5-6. Responses to Comments on Benthic Resources**

Comment No.	Comment	Response
BOEM-2024-0001-0089-0001	The NY EIS should be discarded as submitted. There are numerous instances where knowledge gaps exist that are dismissed as inconsequential to the project. Examples include gaps in knowledge of EMF emissions impacting benthic layers and the authors suggest that ongoing studies taking place at Block Island Wind Farm which has consistently operated at a fraction of its stated capacity or not at all should suffice as evidence that the project should forge ahead. This is IRRESPONSIBLE!	The PEIS uses the best available information and, therefore, complies with the procedural requirements of NEPA to predict potential impacts on benthic resources from expected development in the NY Bight lease areas. Although knowledge gaps exist, the available information is sufficient to support sound scientific judgments to inform decision-making for the projects, as discussed in the PEIS. Text regarding EMF emissions and potential impacts has been updated with the latest science. Models are most common in understanding EMF, and published studies rarely rely on measured EMFs. Measured cable EMFs are rare, especially for offshore wind projects. Block Island Wind Farm is used because there were actual measurements from those cables and the post-construction surveys show a thriving benthic ecosystem.
BOEM-2024-0001-0217-0004	Benthic environment destruction: concern that the construction of offshore energy infrastructure could damage the seafloor habitats that support Sand Lance populations a key food source for humpback whales. Positive impact of whales on the ecosystem	Thank you for your comment. Brief text about the sand lance and associated references have been added to the PEIS. Impacts on seafloor habitats will also depend on the ambient conditions. For example, when ambient levels of suspended sediment and the degree of variation throughout the year are high, then the degree of impact from suspended sediment is likely to be less during that same year.
BOEM-2024-0001-0262-0003	The destructive impact to marine ecosystems already being caused by the preliminary surveying is being blatantly ignored by organizations such as NOAA who are supposed to be acting in the best interest of marine wildlife. I can only imagine the destruction that will ensue once actual cable installation and construction begin.	Thank you for your comment. The PEIS is based on the best available science to date. Research on marine impacts of offshore wind development will continue to grow and future contributions to the knowledge base are expected.
BOEM-2024-0001-0313-0020	Page 2-8 goes on to state "Monopile and piled jacket are anticipated to be the most likely foundation types to be used for the NY Bight projects. Monopile foundations typically consist of a single steel cylindrical pile that is embedded into the seabed and is made up of sections of rolled steel plate welded together. A transition piece is fitted over the monopile and secured via bolts or grout from where the tower is attached. Piled jacket foundations are large lattice	Thank you for your comment. Sediment dispersion modeling from other OSW projects within the NJ and NY WEAs estimated that the maximum turbidity of all sediment disturbance due to various cable installation scenarios (>100 mg/L) would not last longer than 9.1 hours and that turbidity would be below 10 mg/L within 17.7 hours. Project-specific COPs and COP NEPA analyses will address particular mitigation measures, including but not

Comment No.	Comment	Response
	<p>structures fabricated of steel tubes welded together and typically consist of three- or four-legged structures to support WTGs and OSSs. For monopile and piled-jacket substructures the foundations would be driven to the target seabed penetration depths by hydraulic impact hammering vibratory hammering water jetting drilling or a combination of methods." Comment There are a number of concerns regarding the above statement that should be addressed during the environmental review process. There do not appear to be any indications that a turbidity curtain or other similar mitigation measures to reduce impacts from the sedimentation and impacts of increased turbidity will have on the surrounding benthic habitat - including water quality impacts.</p>	<p>limited to RP MUL-27, which aims to minimize sediment disturbance.</p>
BOEM-2024-0001-0313-0042	<p>3.5.2.1.1 Offshore Benthic Resources The PEIS states "Benthic invertebrates in the NY Bight area also include commercially viable species such as the Atlantic surfclam (<i>Spisula solidissima</i>) and ocean quahog (<i>Arctica islandica</i>) which have experienced mortality of large adults and declining recruitment (NEFSC 2017). Guida et al. (2017) found ocean quahogs and Atlantic surfclams were sparsely distributed within water depths of 98.4 feet (30 meters) with increased abundance in deeper waters reaching a maximum of 4025 quahogs per sample twice the amount of surfclam present per sample (Grothues et al. 2021; Guida et al. 2017). The shifting of increased abundance in deeper water supports the theory that warming waters in shallow offshore waters are driving these bivalves into deeper cooler waters (Grothues et al. 2021). As ocean temperatures increase the distribution and biology of Atlantic surfclam are also changing with likely effects on fishery productivity (Munroe et al. 2016). Atlantic sea scallops were absent within 98.4 feet (30 meters) water depth and sparse from 98.4 to 164 feet (30 to 50 meters) reaching the maximum near the edge of the Hudson Shelf Valley. See Section 3.6.1 Commercial Fisheries and For-Hire Recreational Fishing and Section 3.5.5 for additional information. Studies of the U.S. Atlantic coast have shown spatial shifts of benthic species in response to the warming ocean temperatures from 1990 to 2010 (Hale et al. 2017). With predicted continual temperature increases in the waters of the NY Bight area it is expected that the</p>	<p>BOEM agrees that filter feeders can improve water quality through filtration. Although some habitat will be lost due to the offshore infrastructure footprint, the additional hard structure can foster habitat for filter feeders as well, especially on the vertical structures.</p>

Comment No.	Comment	Response
	<p>shift of marine species distribution northward and to deeper waters would continue (BOEM 2021)." Comment Shellfish have been found to filter up 50 galls of water per day and are an integral biological component to improved water quality through their filtration processes. The PEIS should include an analysis of the amount of water quality benefits lost due to the extensive benthic area lost due to trench laying and the footprint of all structures.</p>	
BOEM-2024-0001-0313-0045	<p>Affected Environment and Environmental Consequences 3.5.2-14 "Due to the life cycles of demersal finfish and invertebrate species adverse impacts may be far-reaching (see Section 3.5.5). Elevated turbidity and sediment deposition would also impact seagrasses in inshore waters. Increased turbidity decreases the amount of light availability and may inhibit growth or recovery from disturbance (de Boer 2007; LaFrance Bartley et al. 2022)." "Cable emplacement activities in sensitive habitats such as SAV or mollusk reefs would have a greater impact and require longer periods for recovery. In areas where cable protection is added the benthic community would be permanently impacted." "Kraus and Carter (2018) studied seabed recovery following the burial of subsea cables on the continental shelf. Their results showed that water-jetted trenching methods take roughly 815 years to infill trenches depending on sediment availability mobility and water depth. They concluded that along the mid-shelf where water depths range from 98263 feet (3080 meters) recovery usually takes 2 years though it may exceed 5 years if the adjacent sediment supply is low (Kraus and Carter 2018)." Comment - Similar to the above comment the water quality impact of loss of SAV should also be reviewed in the PEIS. It is extremely concerning that permanent impacts are not comprehensively evaluated in the PEIS. The statement above regarding sediment redistribution is also concerning in that the composition of the sediment and the stratification will be different as compared to its natural state. Again the impacts to the benthic community do not appear to include the potential adverse impacts of suffocation of sensitive species the impacts from turbidity and the direct and indirect impacts to water quality.</p>	<p>The PEIS uses the best available information and complies with the procedural requirements of NEPA to predict potential impacts on benthic resources. The proposed cable routes and potential landing sites will be surveyed, and details will be provided in the project-specific COP. Substrates and habitats will be described in more detail at that time.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0331-0037	Theoretical scenario simulations provide evidence that the increasing amount of future OWF installations will substantially impact and restructure the marine ecosystem. Changes in mixed layer depth have been reported earlier in North Sea wind area as a consequence of offshore wind farm wakes due to the reduced wind induced mixing but also due to the upwelling and downwelling dipoles Since the dipole structure is associated with both an uplift and a depression in mixed layer depth and is variable in dependence of the wind direction. The marine ecosystem responds very clearly to the changes in the atmosphere leading to changes in ocean stratification advective processes and a systematic decrease in bottom shear stress. These changes can be expected to progress into higher trophic levels of the marine ecosystem. Additionally the estimated changes in organic sediment distribution and quantity could have an effect on the habitat quality for benthic species. Spatial distributions might change as it has been shown to depend on the available food quantity and quality as well as the prevailing bottom shear stress.	As stated in the most recent inclusive study for United States waters (National Academies of Sciences, Engineering, and Medicine 2023), “to date, few studies exist to assess the potential hydrodynamic and ecological impacts of offshore wind development, and those that do exist consist of modeling studies with limited observational data developed for wind farms in the North Sea, which have different hydrodynamic and ecosystem characteristics.” This study concluded that the hydrodynamic impacts would be difficult to distinguish from natural variability and other outside forces, such as climate change.
BOEM-2024-0001-0331-0039	The PEIS should have presented the level of impacts on re-structuring of marine ecosystems on energy extraction both above and below sea level. Impacts on the regional atmosphere multiple physical biological and chemical impacts on the marine system must be identified in the project PEIS. Complicating these effects underwater structures such as foundations and piles may cause turbulent current wakes which impact circulation stratification mixing and sediment resuspension.	Refer to the response to comment BOEM-2024-0001-0331-0037.
BOEM-2024-0001-0332-0011	EMF Electro-Magnetic Field Cable Emissions With regards to EMF there MUST be a threshold level of EMF emissions that are identified as acceptable or unacceptable for the marine environment and this should change in consideration to the water depth. The same emf emissions in deep open water that fish may feel react and get up over very well may have a much more powerful effect in shallow estuaries and bays.	As stated by Hogan et al. 2023 at this time, no thresholds of the acceptable or unacceptable levels of EMF emissions have been determined for the marine environment.
BOEM-2024-0001-0346-0013	The Draft PEIS Identifies A Wide Range of Impacts from Offshore Wind Development Against Which Site-Specific Analyses Will Need to Protect Fisheries and Fishing Grounds Scallops are particularly susceptible to offshore wind development. They are sessile and exist	Thank you for your comment. Chen (2021) looked at the potential impacts of offshore wind on regional scallop settlement and stated, "The results indicate that the scallop larval settlement exhibited a significant interannual variability...The larval transport

Comment No.	Comment	Response
	<p>at the mercy of pelagic and benthic conditions that allow for their settlement survival and growth. Among other things these conditions include bottom composition currents that bring nutrients to scallops and that cause larvae to settle and turbidity. As the PEIS explains wind farm development will change all these environmental attributes in a manner that is negative for the scallop resource. BOEM itself explained in the Draft PEIS: A synthesis of European studies by van Berkel et al. (2020) [Footnote 4:: Van Berkel et al. The Effects of Offshore Wind Farms on Hydrodynamics and Implications for Fishes Oceanography Vol. 33 Issue 4 p. 108-117 (2020). Available at <a href="https://tos.org/oceanography/assets/docs/33-4_van-berkel.pdf">https://tos.org/oceanography/assets/docs/33-4_van-berkel.pdf</a> (last accessed on June 24 2022).] summarized the potential effects of wind turbines on hydrodynamics the wind field and fisheries. Local to a wind facility the range of potential impacts include increased turbulence downstream remobilization of sediments reduced flow inside wind farms downstream changes in stratification redistribution of water temperature and changes in nutrient upwelling and primary productivity. (3.5.6-48) . . . In terms of the changes to currents the Draft PEIS identified at least two negative attributes of note for scallops: upwelling brings the phytoplankton that scallops eat to the surface (and away from the scallops) and forces warm surface waters detrimental to scallops' survival to the bottom. As the Draft PEIS further explains: Structures may reduce wind-forced mixing of surface waters whereas water flowing around the foundations may increase vertical mixing (Carpenter et al. 2016). During summer when water is more stratified increased mixing could increase pelagic primary productivity near the structure increasing the algal food source for zooplankton and filter feeders. Increased mixing may also result in warmer bottom temperatures increasing stress on some shellfish and fish at the southern or inshore extent of the range of suitable temperatures. (3.6.1-49) Localized turbulence and upwelling effects around the monopiles are likely to transport nutrients into the surface layer potentially increasing primary and secondary productivity. That increased productivity could be partially offset by the formation of abundant colonies of filter feeders on the monopole foundations. (3.6.1-49) While the PEIS tries to minimize</p>	<p>to the MAB is closely related to the intensity of the cold pool and temperature front." Miles et al. (2021) studied the potential effects of offshore wind farms on the Mid-Atlantic Bight Cold Pool. See Section 3.5.6.3.3 for further discussion. Refer to the response to comment BOEM-2024-0001-0331-0037 for a response to the general hydrodynamic changes.</p>

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	<p>these impacts as "localized" what BOEM really means is "local[ized] to a wind facility." (3.6.1-48) This clarification makes sense as wind turbines will only be 0.6 nautical miles apart from each other (3.6.1-49). Furthermore it is reasonable to consider the New York Bight wind lease areas as one giant facility. Four of these six areas are packed together in one unit with no particular provision made for their separation. "The overall impact on stratification is directly related to the scale of development." (3.5.2-29) Packing these six areas tightly together and developing them during the same time period can also yield "regional" changes in benthic stability and species composition. (3.5.2- 31-32) Indeed these six lease areas' concentration is a principal reason BOEM developed this Draft PEIS. None of this bodes well for the scallop settlement survival and growth especially with these lease areas being concentrated in the center of the Mid-Atlantic scallop resource.</p>	
BOEM-2024-0001-0346-0014	<p>The Van Berkel paper on which BOEM relies explains how broadly these hydrodynamic impacts have been observed: "Hydrodynamics play a pivotal role in controlling turbidity sedimentation salinity temperature and nutrient uptake in coastal systems." And these "hydrodynamic impacts are transferred to the ocean via two routes: (1) modification of the wind field and consequently the wave and current fields due to the direct effect of power extraction from the wind and (2) wind turbine foundations' effects on ocean currents and consequently on turbulence mixing and vertical stratification." These hydrodynamic effects were recorded to "extend 5-20 km in the downwind direction depending on weather conditions." For its part BOEM confirmed that: [B]roadscale hydrodynamic impacts could alter zooplankton distribution and abundance with impacts that may extend to tens of kilometers from structure foundations (Christiansen et al. 2022; van Berkel et al. 2020). (3.5.6-50) Further a second even more recent paper cited by BOEM also explained the impacts that offshore wind farms have on ocean hydrodynamics. The Draft PEIS reports that: Daewel et al. (2022) modeled the effects of offshore wind farm projects in the North Sea on primary productivity and found that there were areas with both increased and decreased productivity within and around the wind farms. There was a</p>	Refer to the response to comment BOEM-2024-0001-0346-0013.

Comment No.	Comment	Response
	decrease in productivity in the center of large wind farm clusters but an increase around these clusters in the shallow near-coastal areas of the inner German Bight and Dogger Bank (Daewel et al. 2022). (3.5.6-49) Scallops generally are not found in the shallower waters of the New York Bight as can be seen from relatively lower landings in Lease Areas OCS-A 544 and OCS-A 541. (3.6.1-12) Scallops generally begin to be found at depths of 20-25 fathoms.	
BOEM-2024-0001-0346-0015	The Draft PEIS likewise soft-pedals the potential impacts from offshore wind farms to scallop larval distribution. As FSF explained in its scoping comments BOEM commissioned an exercise to model the potential wind farms' impacts on larval distribution. The modeling predicts significant impacts on scallop larval distribution but the paper then rationalized that "The results of this modeling effort indicate that at a regional fisheries management level these shifts are not considered overly relevant with regards to larval settlement." (3.5.5-34) [Footnote 5: The BOEM-funded study in question is T. Johnson et al. Hydrodynamic Modeling Particle Tracking and Agent-Based Modeling of Larvae in the U.S. Mid-Atlantic Bight OCS Study BOEM 2021-049 (June 2021). Available at <a href="https://espis.boem.gov/final-reports/BOEM_2021-049.pdf">https://espis.boem.gov/final-reports/BOEM_2021-049.pdf</a> (last accessed on June 24 2022).] The actual Johnson et al. modeling tells a different story. Any reasonable review of Figures 1 and 2 (below) reveals a redistribution of scallop larvae over dozens of miles. Indeed due to the projected effects of wind farms south of Martha's Vineyard scallop larvae were redistributed along an area from well east of Nantucket to well west of Montauk. SEE ORIGINAL COMMENT FOR Figure 1: Predicted differences in settled larval sea scallop density (larvae/m2) from full build-out OSW lease offshore MA- RI area 12 MW turbines (1063 towers).Source: T. Johnson et al. SEE ORIGINAL COMMENT FOR Figure 2: Predicted differences in settled larval sea scallop density (larvae/m2) from full build-out OSW lease offshore MA- RI area 15 MW turbines (1063 towers).Source: T. Johnson et al.	Refer to the response to comment BOEM-2024-0001-0346-0013.
BOEM-2024-0001-0362-0023	BOEM should analyze the benefits derived from offshore wind developers conducting appropriate benthic surveys for cable routes	Based on BOEM's understanding of the comment, it is possible that surveys within the Lease Area could identify areas of contamination from previous sources. This information may be

Comment No.	Comment	Response
	and other activities that may exacerbate existing contamination from urban and storm runoff industry or historic use of the site.	useful for analyzing cable corridors or other infrastructure of specific wind projects during project-specific COP NEPA analyses.
BOEM-2024-0001-0447-0002	<p>Benthic Analysis</p> <p>This PEIS identifies total mortality of the benthic environment from scour protection. We agree the dropping of 1000 on tons of rock will completely change the environment on the sea floor. However it's even greater at 8 acres per windmill than .51 acres per windmill. We have no understanding how the science of this document can reach the conclusion that the result in benthic impact of a windfarm is negligible to minor of this sample project!</p>	<p>Thank you for your comment. The impact determinations are based on the best available science. Although some habitat conversion is expected due to cable and scour protections, the additional surfaces offer opportunities for the settlement of invertebrates, some of which are commercially important species such as mussels and oysters. A newly published study on the settlement success of the European flat oyster showed that granite had the highest settlement success. Granite is often used in scour protection for offshore wind projects (ter Hofstede et al. 2024). The majority of the substrate within the NY Bight is soft sediment. The amount of soft-bottom habitat that will be affected is relatively small compared to the available habitat in the surrounding area.</p>
BOEM-2024-0001-0469-0013	<p>Benthic communities are the foundation of the marine ecosystem. [Footnote 35: See Jacob P. Kritzer et al The Importance of Benthic Habitats for Coastal Fisheries 66 BIOSCIENCE 274 (Mar. 29 2016) <a href="https://doi.org/10.1093/biosci/biw014">https://doi.org/10.1093/biosci/biw014</a>] Marine mammals are certainly charismatic and generate high levels of media reporting and public concern but it is important to focus efforts on the species on which the charismatic species rely. The Draft PEIS proposes only two (2) mitigation measures designed specifically to avoid minimize mitigate and monitor impacts on benthic communities. Twenty (20) of the AMMM measures address benthic communities in addition to other resources. There has been little dedicated research on impacts to benthic communities particularly regarding how electromagnetic fields ("EMF") will affect them and the potential secondary impacts of those changes. [Footnote 36: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT appx. E at E-3.] In fact research on the ecological impact of EMF is lacking for most species and "Mid-Atlantic OSW development will expose important seasonally migrating (north south inshore offshore) finfish and elasmobranchs to EMFs as their movements will periodically cross cables". [Footnote 37: BUREAU OF OCEAN ENERGY MGMT. EFFECTS OF EMFS FROM UNDERSEA POWER CABLES ON</p>	<p>EMFs are discussed in Section 3.5.2.3 under cumulative impacts, as other offshore wind farms are planned within the NY Bight area. CSA and Exponent (2019) studied potential EMF effects on fish species of commercial or recreational fishing importance in southern New England and concluded, "The operation of offshore wind energy projects is not expected to negatively affect commercial and recreational fishes within the southern New England area. Negligible effects, if any, on bottom-dwelling species are anticipated. No negative effects on pelagic species are expected due to their distance from the power cables buried in the seafloor." Newer references of studies on DC cables emitting EMF have been added, and these align with CSA and Exponent 2019. It is important to note that cable configuration and spacing could lead to differences in the risk to benthic species. Details, including cable configurations, will be provided in project-specific COPs.</p>

Comment No.	Comment	Response
	<p>ELASMOBRANCHS AND OTHER MARINE SPECIES 1  <a href="https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Pacific-Region/Studies/2011-09-EMF-Effects.pdf">https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Pacific-Region/Studies/2011-09-EMF-Effects.pdf</a>; Zo L. Hutchison et al The Interaction Between Resource Species and Electromagnetic Fields Associated with Electricity Production by Offshore Wind Farms 33 OCEANOGRAPHY (2020) <a href="https://doi.org/10.5670/oceanog.2020.409">https://doi.org/10.5670/oceanog.2020.409</a>] Quantitative risk assessments would help determine what mitigation efforts are needed to reduce EMF impacts. [Footnote 38: Annemiek Hermans et al Do electromagnetic fields from subsea power cables effect benthic elasmobranch behaviour? A risk-based approach for the Dutch Continental Shelf 346 ENV'T POLLUTION (Apr. 2024) <a href="https://doi.org/10.1016/j.envpol.2024.123570">https://doi.org/10.1016/j.envpol.2024.123570</a>.] Though risks during embryogenic development and migration could be consequential is unclear whether or to what extent electrosensitivity will translate to behavioral or ecological change. [Footnote 39: Id.] Baseline studies are crucial as "distinguishing cable EMF effects from structure attraction or nearby fishing activity will be impossible without additional controls on the experimental setting". [Footnote 40: EFFECTS OF EMFS FROM UNDERSEA POWER CABLES ON ELASMOBRANCHS AND OTHER MARINE SPECIES supra note 38; Hutchison et al supra note 38.] BOEM must commission more study of EMF that determines the secondary effects of any behavioral responses to EMF before approving projects in the six New York Bight lease areas. Any assessment of EMF in the individual project review must include an estimate of the total area wherein EMF would be emitted accounting for all nearby OSW projects.</p>	
BOEM-2024-0001-0469-0014	<p>Another potential risk to benthic communities comes from an impact that is often presented as a benefit: [Footnote 41: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 at 3.5.5-44.] turbine foundations acting as artificial reefs. While artificial reef habitats may be beneficial for organisms that prefer those environments it is not necessarily a benefit for the naturally occurring marine wildlife and can alter the composition of the marine community and predator-prey dynamics near wind turbine installations. [Footnote 42: L. Bennun et al Biodiversity</p>	<p>The “reef effect” and adverse effects of habitat conversion on softbottom species and communities are addressed in Section 3.5.2.3.2., and 3.5.2.4.4. The Bennun et al. 2021 citation was added. Beneficial aspects of the reef effect have also been called out in nearby offshore wind projects, such as Empire Wind 1 and Atlantic Shores South. AMMM measure MUL-4 and RP MUL-12 incorporate ecological design elements in scour protection (e.g., using nature-based scour protection such as oyster beds or other artificial reefs) to</p>

Comment No.	Comment	Response
	Impacts Associated to Offshore Wind Power Projects INT'L UNION FOR CONSERVATION OF NATURE (2021) <a href="https://www.iucn.org/sites/default/files/2022-06/01_biodiversity_impacts_associated_to_off-shore_wind_power_projects.pdf">https://www.iucn.org/sites/default/files/2022-06/01_biodiversity_impacts_associated_to_off-shore_wind_power_projects.pdf</a> .] New habitats could even attract and facilitate the growth of invasive species especially if they are already present in the area but no AMMM measures address invasive species. [Footnote 43: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 at 3.5.2-14 Appx. G.] Similar to the analysis of marine mammals BOEM concludes that these unknowns do not prevent it from choosing among the Draft PEIS alternatives. Again this is unreasonable as benthic communities and sediment carbon storage are rarely analyzed in studies and serve a vital role in the marine ecosystem.	provide suitable substrate for increasing the probability of recolonization. While these do not directly address invasive species, colonization does inhibit the growth of many sessile invasives.
BOEM-2024-0001-0529k	And of course there's the thousands, tens of thousands of miles of cables emitting electromagnetic fields, including high voltage cables known to affect marine life.	An EMF analysis is provided in Sections 3.5.5.3.3 and 3.5.5.4.1. EMF exposure levels in the built environment are not expected to reach high enough energy levels to have an impact on populations, and there is no evidence to indicate that EMFs from undersea alternating current (AC) or DC power cables negatively affect commercially and recreationally important fish species (CSA Ocean Sciences Inc. and Exponent 2019; Gill and Desender 2020; NYSERDA 2017; SEER 2022; Taormina et al. 2018). Additionally, RP MUL-39 proposes using electric shielding on underwater cables to control the intensity of EMFs.
BOEM-2024-0001-0529cc	However, the reef effect is not what you've been told. The reef effect is actually called biofouling. You've got essential environment in the mid-Atlantic Bight, and by literally putting turbines, you are creating an environment that is ripe for invasives, such as sea-squirts as the muscles which are going to...Actually, there's a study, and let me see if I can find it, and if I can't, I can't in time. The Tethys has a fouling community on turbine foundations and scour protections. They basically become magnets for anything that happens to float by, and they completely change an essential environment into a hard substrate, and the ecosystems within it.	Thank you for your comment. The “reef effect” and adverse effects of habitat conversion on softbottom species and communities are addressed in Sections 3.5.2.3.2 and 3.5.2.4.4. The Bennun et al. 2021 citation was added. Additionally, as discussed in Section 3.5.2.4.2, <i>Benthic Resources</i> , a recent study published by Li et al. (2023) found that the artificial reef effect from wind farms in the North Sea could lead to a doubling of species richness and an increase of species abundance by up to two orders of magnitude. AMMM measure MUL-4 and RP MUL-12 incorporate ecological design elements in scour protection (e.g., using nature-based

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		<p>scour protection such as oyster beds or other artificial reefs) to provide suitable substrate for increasing the probability of recolonization. While these do not directly address invasive species, colonization does inhibit the growth of many sessile invasives.</p> <p>The introduction of invasive species is discussed in Section 3.5.2, <i>Benthic Resources</i>, under the accidental releases, cable emplacement and maintenance, and presence of structures IPFs.</p>
BOEM-2024-0001-0310o	Many believe on a cumulative level we're going to warm the ocean significantly. Thousands of miles of EMF laden cables, and these aren't telecom cables that people like to mention. These are high voltage electrical cables jet trenched through our ocean floor, plowing through all these ridges and ledges that provide habitat. It's sickening to think of.	<p>Cables associated with offshore wind projects will be buried in the ocean floor. Heat from the cables will be highly localized to the sediments within the immediate vicinity of the cables. Based on controlled experiments, Emeana and others (2016) measured &gt; 10°C increases in sediment temperature at distances ranging from 40 centimeters to over a meter from a cable source; these temperatures varied, depending on sediment substrate type and source temperature of the cable.</p> <p>An EMF analysis is provided in Sections 3.5.5.3.3 and 3.5.5.4.1 of the PEIS. Additionally, RP MUL-39 proposes the electric shielding on underwater cables to control the intensity of EMF.</p> <p>At this time, BOEM is not aware of any studies demonstrating increases in water column temperatures and decreases in CO<sub>2</sub> absorption as a result of the thousands of miles of existing operational submarine electric transmission cables.</p>
BOEM-2024-0001-0529v	<p>The PEIS states that artificial reefs provide valuable habitats to foster the biodiversity of marine invertebrates and finfish. So, their value is acknowledged in the document, but I am concerned that the PEIS seems to present full decommissioning as the default end of life plan for the wind farms, which would require any developer that wishes to retire any portion of the project in place to jump over additional hurdles. So given that the artificial reef benefits have already been well documented on other wind farms, we want BOEM to make partial decommissioning the default. This can be done by following the renewables to reef concepts that is presented in a 2015 paper by Smith and colleagues.</p> <p>This leaving the scour protection in place can ensure that the artificial reef communities that become established there over</p>	<p>Thank you for your comment. As discussed in Section 3.5.2.4.2, <i>Benthic Resources</i>, a recent study published by Li et al. (2023) found that the artificial reef effect from wind farms in the North Sea could lead to a doubling of species richness and an increase of species abundance by up to two orders of magnitude.</p> <p>Lessees are required to remove all human-made structures from the seafloor unless direct approval from BSEE is determined during the lessee's decommission application review.</p> <p>Decommissioning is covered by BSEE under 285.902, which details the decommissioning application review and approval process, while 285.910 details removal of facilities. Additionally, 285.909 details the authorization to have facilities remain in place; specifically, 285.909.909(c) speaks to facilities that will be</p>

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	<p>decades of operation, can remain there in perpetuity. A 2017 paper on Sustainable Decommissioning of Wind Farms by Topham and McMillan acknowledges that there's no one size fits all solution. So the specific decommissioning plan for each project will be site specific. But as a general rule, scour should be left in situ, because marine life will have flourished around scour, protecting any element of the wind farm. So preserving these reefs could be especially consequential for recreational and subsistence fishermen, as we anticipate that these reefs will become a destination for fishing activity akin to oil rig fishing in the Gulf of Mexico.</p> <p>It would be nonsensical to facilitate the growth of this ecological and economic activity only to remove it later. So, we are asking BOEM to take steps as early as possible to ensure the preservation of these reefs.</p>	<p>toppled in place or converted to artificial reef purposes (<a href="https://www.ecfr.gov/current/title-30/chapter-II/subchapter-B/part-285/subpart-I/subject-group-ECFR73f535d05e8b5d9/section-285.909">https://www.ecfr.gov/current/title-30/chapter-II/subchapter-B/part-285/subpart-I/subject-group-ECFR73f535d05e8b5d9/section-285.909</a>).</p> <p>BOEM will conduct project-specific NEPA analysis of the COP for each lease area, focusing on site- and project-specific analyses that were not already addressed by the PEIS.</p>

## P.5.7 Birds

**Table P.5-7. Responses to Comments on Birds**

Comment No.	Comment	Response
BOEM-2024-0001-0357-0007	Neither this draft program EIS or any project specific EIS presents a cumulative assessment of the deaths to the endangered /threatened piping plover and red knot bird as it attempts to migrate through the NJ/NY Bight area on its traditional routes. No substantive AMMM measures are presented to mitigate this risk (See Enclosure IV) .	Cumulative impact analyses for all birds collectively are addressed in PEIS Sections 3.5.3.3.3, 3.5.3.3.4, 3.5.3.4.4, 3.5.3.4.5, 3.5.3.5.4, and 3.5.3.5.5. Cumulative impacts on federally listed threatened and endangered species (including piping plover and red knot) are addressed in more detail as part of BOEM's consultation with the USFWS on a Programmatic Framework ESA Section 7 consultation, which was initiated on June 20, 2024.
BOEM-2024-0001-0357-0020	The closer in turbines will likely kill the piping plovers as they attempt to cross the wind complex to get to their nesting grounds on the island. Farther out we also have risk to the birds from the turbines in the other areas while they migrate but perhaps with more room for the bird to circumvent those complexes.	Impacts on federally listed threatened and endangered species (including piping plover) are addressed in more detail as part of BOEM's consultation with the USFWS on a Programmatic Framework ESA Section 7 consultation, which was initiated on June 20, 2024.

Comment No.	Comment	Response
BOEM-2024-0001-0357-0050	Enclosure IV Piping Plover Migration Routes Cumulative Impact The program EIS presents no meaningful AMMM measures to prevent the deaths of the piping plover and other migratory birds as they attempt to traverse the wind turbine complexes. The prior paths of the piping plover on its coastal migration are shown below. The operation of the turbines would impact the birds migrating offshore as well as those seeking to nest onshore for example at the Holgate and Barnegat Light locations on Long Beach Island NJ. SEE ORIGINAL COMMENT FOR MAP: Migratory routes of Piping Plovers Tracking stations Offshore Wind Energy Areas	Impacts on piping plover are addressed in more detail as part of BOEM's consultation with the USFWS on a Programmatic Framework ESA Section 7 consultation, which was initiated on June 20, 2024. The framework consultation includes the consideration of potential collisions with offshore wind turbines as well as impacts on nesting and AMMM measures to avoid and minimize impacts. In addition, a COP-specific BA for NY Bight lease areas that might be developed in the future would include project-specific analysis based on the most current and relevant piping plover information available at that time.
BOEM-2024-0001-0357-0051	The U.S. Fish and Wildlife Service provides monitoring and management of beach nesting birds at the Edwin B. Forsythe National Wildlife Refuge. The Refuge nesting sites both the Holgate and Little Beach Island Units provide some of the only habitat in the State closed to the public and free of human disturbance and detrimental beach management practices. The habitat at the sites is especially suitable for the State endangered piping plover as a result of optimal nesting conditions created by Superstorm Sandy and largely sustained since then through winter storms. As of the 2021 season the Refuge sites had the highest concentration of piping plovers in the state with Holgate having by far the most pairs (46). Furthermore on average in recent years Holgate has produced a higher fledgling rate than many sites in the state. The piping plover's existence is "threatened" under the Endangered Species Act (ESA) and should receive a review under that statute. About 86 plovers' nest in Holgate and Barnegat Light where they are protected others in the North Brigantine State Natural Area. It migrates offshore north-south PP1 and must cross the project area in and out from their nests. If heading toward turbines it would quite difficult for a 7-inch bird to first perceive and then avoid rotating blades with a 774-foot diameter and blade tip speeds approaching 200 miles per hour creating highly turbulent conditions. Assuming little avoidance of the entire wind complex to get to its historical nesting location as discussed below there is the potential for a high number of fatalities (PP2) estimated here at up to 31 percent per year. That is based on reference PP2 Figure 2.25 the average of the Chapin Dead Neck Avalon Stone Harbor results. It is also consistent with the percent of	<p>Impacts on piping plover are addressed in more detail as part of BOEM's consultation with the USFWS on a Programmatic Framework ESA Section 7 consultation, which was initiated on June 20, 2024. Consultation with the USFWS occur concurrently with the NEPA process, and there is no ESA regulatory requirement to have consultation completed when the Draft PEIS is issued (although BOEM strives to complete consultation as soon as possible).</p> <p>On June 20, 2024, BOEM initiated consultation with the USFWS on a Programmatic Framework ESA Section 7 consultation. In addition, a COP-specific BA for NY Bight lease areas that might be developed in the future would include project-specific analysis based on the most current and relevant piping plover information available at that time.</p> <p>BOEM notes that many of this commenter's comments (commenter ID BOEM-2024-0001-0357) are the same comments provided on BOEM's Atlantic Shores South Draft EIS and BA. (Atlantic Shores South is stated in several of these comments.) However, BOEM understands the general concerns and has responded in the context of the NY Bight lease areas.</p>

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	<p>transit area blocked by rotating blades and 2 flights per bird in and out. The Atlantic Shores South draft EIS presents no assessment of the turbine collision risk to the local endangered piping plover population that nests on the Island and must now cross the wind complexes to get there and back to its offshore migration routes. It discusses the existence of a preliminary biological assessment (BA) prepared for consultation under the Endangered Species Act but presents no results of that analysis in the draft EIS. It says that the final biological assessment will be available in the final EIS but that prevents the public from reviewing and commenting on this important impact. This is another example of lack of full disclosure and lack of coordination with other environmental reviews to the fullest extent practicable. This is another impact that must be presented in a supplemental draft EIS for public review.</p>	
<p>BOEM-2024-0001-0357-0052</p>	<p>Regarding turbine collision on page 3.5.3-18 the Atlantic Shores draft EIS purports to minimize the collision risk by pointing to a study by Madsen et.al. in 2012 that showed a 99% avoidance when turbines were spaced greater than 0.6 miles. The avoidance rate used in the DEIS is not well defined but it appears to be the probability that the bird will avoid the entire wind complex this needs to be clarified. But that study was for a particular bird species (the common elder) and a much smaller wind complex that it was able to fly around which the modeling then depicted. In the case here the piping plover considering both the Ocean Wind and the Atlantic Shores projects faces a 32-mile long barrier to making landfall. In addition the turbines proposed off LBI are much more powerful and carry greater pressure changes and turbulence one cannot just take results from small turbines and assume they hold for large ones. In addition that study did not show the collision risk to those birds that entered the wind complex which is the critical issue here facing the piping plover as well as the red knot. Further that study was for much smaller turbines with much different pressure and turbulence characteristics than the larger turbines proposed here. Finally it is unclear whether the piping plover has similar avoidance traits as the elder bird. Therefore the relevance of that study to the situation facing the piping plover is highly questionable. And there are other studies as shown below that present a much different and much</p>	<p>The PEIS paragraphs in which the Madsen et al. (2012) paper is referenced are concerning adverse impacts of additional energy expenditure due to minor course corrections or complete avoidance of offshore wind lease areas, not collision risk; this discussion is a general one and does not focus on any one bird species in particular. Madsen et al. (2012) examined the number of birds flying through the wind farm through the spacing between turbines, not around the entire wind farm, which is clearly stated in the PEIS. Additionally, although data on only the common eider was collected, the model simulations explored permeability scenarios to account for bird species with various levels of wind farm avoidance. Although WTGs to be used in lease areas on the Atlantic OCS (including the NY Bight lease areas) are expected to be larger, may result in greater pressure changes and turbulence than smaller turbines, and may be greater in number than the wind farm from which data was collected in the Madsen et al. (2012) study, the spacing between the WTGs will also be greater. As stated in the PEIS, "The 0.6- to 1-nautical mile (1.1- to 1.9-kilometer) spacing estimated for most structures that will be proposed on the Atlantic OCS is greater than the distance at which 99 percent of the birds passed through in the model." In addition, Vattenfall (2023) recently studied bird movements within an offshore wind farm. The study was robust in that</p>

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	<p>greater risk to the plover which should have been presented in the draft EIS.</p> <p>In either case the BOEM cannot assume a 99 percent turbine avoidance by simply referencing studies which reference other studies which in turn are based on much smaller turbines (e.g. 216-foot diameters) other bird species and different circumstances. On its face it does not seem at all realistic to expect a small bird to easily and often escape multiple rows of rotating turbine blades with diameters more than two football fields long a rotor swept area 13 times that used in previous studies and wind tip speeds approaching 200 miles an hour causing significant disruptions in air currents. Prior studies (PP2) acknowledge that the avoidance rate for the piping plover is simply not known. If the BOEM uses an avoidance percentage number it needs to provide a plausible explanation for it. Otherwise it should be conservative in its analysis. If the avoidance percentage is of the entire complex then the assumption of 99 percent avoidance is especially unfounded when we know historically that the piping plover's instincts are driving it towards its nesting ground on the Island and the direct path from its migratory routes to it is through the wind complex. There seems no basis to assume it will go tens of miles out of its way from that direct path to get there. So the avoidance rate is likely to be closer to zero than it is to 99 percent. Rather for a bird approaching these large turbines and their aerodynamics suggest otherwise. First it is not clear that the bird can even detect the rotating blades especially the outer part which are now moving at very high speeds. This causes vision blur and paradoxically is now greater with a larger turbine again because of their outward tip speeds approaching 200 miles an hour. If the bird does detect an obstacle and tries to change course there are additional difficulties. If it is approaching the turning blades against the wind it will experience a very significant pressure drop in front of the blades which will suck it in to the blade swept area. If it is approaching the turning blades with the wind behind it and seeks to change course it has the counter that wind speed which is likely to be significant during operation of the turbine. If it passes through the swept area it will experience that same pressure drop behind the blades. All of this suggests that a 99 percent avoidance through</p>	<p>seabirds were tracked inside the array with video cameras and radar tracks, which allowed for measuring avoidance movements with high confidence and at the species level. The study concluded that seabirds would be exposed to very low risks of collision in offshore wind farms during daylight hours. This was substantiated by the fact that no collisions or even narrow escapes were recorded in over 10,000 bird videos during the 2 years of monitoring. Refer to response to comment BOEM-2024-0001-0400-0022. Impacts on federally listed threatened and endangered birds (including piping plover) are addressed in more detail as part of BOEM's consultation with the USFWS on a Programmatic Framework ESA Section 7 consultation, which was initiated on June 20, 2024.</p> <p>The Programmatic Framework ESA Section 7 consultation considers collision risk for the piping plover and other ESA-listed bird species using Stochastic Collision Risk Assessment for Movement (SCRAM) models. The final report on the SCRAM model (Adams et al. 2022) is available at <a href="https://epis.boem.gov/Final%20Reports/BOEM_2022-071.pdf">https://epis.boem.gov/Final%20Reports/BOEM_2022-071.pdf</a>. SCRAM uses bird passage rates based on modeled flight paths of birds fitted with nanotag transmitters, rather than avoidance rates (Gilbert et al. 2022). Estimates of bird collisions will be part of the consultation.</p>

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	multiple rows of such situations is completely arbitrary and the BOEM needs to go back and present something realistic.	
BOEM-2024-0001-0357-0053	<p>It is not known if the BOEM is using the "BAND" model in its Biological Assessment (BA) to analyze collision risk as the bird goes through the wind complex. The description of the BAND model in other literature as a "static" model indicates that it scores a collision only when a bird actually hits a blade. The blades are relatively thin and the area occupied by the blades compared to the entire area swept by the rotation is very small so obviously using only that the risk of collision will be small. This does not account for the risk of injury or fatality from the extreme turbulence and pressure changes that the bird would experience as it passes through the rotor swept area and beyond it especially just downwind of the turbine. It ignores all the turbulence pressure changes and wind shear effects occurring in between and downwind of the blades which could also maim or kill a bird. Any use of the model without modification would seem especially inappropriate considering the huge 110-meter blade length and blade tip tangential speeds approaching 200 miles per hour. The BOEM needs to do a current realistic assessment of the risk of injury and fatalities here in its BA. It cannot rely on the BAND model as it did for the Vineyard Wind 1 Biological Assessment based on the model's limitations described above and other major drawbacks expressed by the U.S. Fish and Wildlife Service PP3. Collision Risk Models (CRMs): we expect that BOEM will apply CRMs to evaluate avian impacts in its BA. While limited CRMs are one of the only tools available to hypothesize potential impacts to birds from collision in the offshore environment. As such CRMs provide a mechanism for testing outcomes (e.g. observed collision rates) against the model predictions (e.g. expected collision rates) and BOEM must address the need to collect the data necessary to test these hypotheses. The DEIS should include a CRM-driven collision risk analysis for all species of conservation obligation which may occur within 20 km of the Atlantic Shores footprint and for which a current CRM would be appropriate even if the species has not been documented within the footprint. This should include a recent stochastic derivation of the Band model such as the McGregor (2018) version [Footnote 1: McGregor RM King S Donovan CR Caneco B</p>	<p>Collision risk for the piping plover, red knot, and roseate tern is addressed using the SCRAM model as part of the Programmatic Framework ESA Section 7 consultation that BOEM initiated with USFWS on June 20, 2024. The SCRAM model is specific to offshore wind on the U.S. Atlantic Ocean developed collaboratively between the USFWS, BOEM, University of Rhode Island, and Biodiversity Research Institute. Descriptions of the SCRAM model and limitations can be found in the final report on the model (Adams et al. 2022), which is available at <a href="https://epis.boem.gov/Final%20Reports/BOEM_2022-071.pdf">https://epis.boem.gov/Final%20Reports/BOEM_2022-071.pdf</a>. For all non-ESA listed bird species, BOEM anticipates NY Bight lessees would submit bird risk assessment information similar to that used for previous COP-specific NEPA reviews. The PEIS references two such documents from previous and adjacent lease areas—Empire Wind OCS-A 0512 and Ocean Wind 1 OCS-A 0498. As stated in the PEIS Section 3.5.3.4.1, the majority of the bird species identified in the impact assessments for these two lease areas are expected to have “minimal” to “low” overall exposure risk. Further, coastal birds are considered to have minimal exposure (occurrence) within the NY Bight lease areas because they are far enough offshore to be beyond the range of most breeding terrestrial or coastal bird species.</p> <p>Regarding Collision Risk Model daytime and nighttime flight patterns, SCRAM indirectly accounts for daytime and nighttime activity by using monthly averages of wind speed and turbine operation as inputs. If there was sufficient information about the timing of bird migration and what the turbines are doing during the same time frame, then the results would more directly reflect bird behavior with the operation of the wind farm. For instance, if most of the birds migrate between one hour before sunset and two hours after sunset, then BOEM would need information of what the turbines are likely to be doing during that time.</p>

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	<p>Webb A. 2018. A Stochastic Collision Risk Model for Seabirds in Flight:61. <a href="https://tethys.pnnl.gov/sites/default/files/publications/McGregor-2018-Stochastic.pdf">https://tethys.pnnl.gov/sites/default/files/publications/McGregor-2018-Stochastic.pdf</a>]. BOEM must be transparent in its CRM application. These models are extremely sensitive to the input parameters. A study by Cook et al. (2014) found that estimations of avoidance and collision risk from Band models were highly sensitive to the flux rate (total number of birds passing through the wind farm) corpse detection rate rotor speed and bird speed. Factors such as weather (i.e. wind speed and visibility) and habitat use would also affect the accuracy of these estimates as such factors would greatly influence avian flight patterns and behavior [Footnote 2: Cook ASCP Humphreys EM Masden EA Burton NHK. 2014. The Avoidance Rates of Collision Between Birds and Offshore Turbines. Scottish Marine and Freshwater Science 5:263. 62].</p> <p>Therefore the Draft EIS must provide the inputs used in its analysis for public comment and transparency. Providing CRM results without transparency to the inputs and analytical process would never be acceptable from a scientific perspective and therefore should not be acceptable from BOEM. Providing inputs would show whether BOEM followed the guidance provided by Band in assessing collision risk. These details regarding inputs should include but not be limited to avoidance behavior flight height flight activity flux rate corpse detection rate rotor speed bird speed and collision risk. Additionally CRMs should consider differences in daytime and nighttime flight patterns. As Band himself stipulates: For some species typical flight heights are dependent on the season and in such a case it will be best to use seasonally dependent typical flight heights in assessing collision risk for each month rather than average flight heights across the year...Flight activity estimates should allow both for daytime and night-time activity. Daytime activity should be based on field surveys. Night-time flight activity should be based if possible on nighttime survey; if not on expert assessment of likely levels of nocturnal activity...collision model[s] should take both day and night flights into account. Where there is no night-time survey data available or other records of nocturnal activity for the species in question (or for other sites if not at this site) it should be assumed</p>	

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	<p>that the Garthe and Hppop/ King et al. 1-5 rankings apply. These rankings should then be translated to levels of activity at night which are respectively 0% 25% 50% 75% and 100% of daytime activity. These percentages are a simple way of quantifying the rankings for use in collision modelling and they may to some extent be precautionary [Footnote 3: Band B. 2012. Using a collision risk model to assess bird collision risks for offshore windfarms. SOSS report for The Crown Estate Norway.</p> <p><a href="https://www.bto.org/sites/default/files/u28/downloads/Projects/Final_Report_SOSS02_Band1ModelGuidance.pdf">https://www.bto.org/sites/default/files/u28/downloads/Projects/Final_Report_SOSS02_Band1ModelGuidance.pdf</a>]. There are new derivations of the Band model under development namely the 3-D CRM for seabirds by the Shatz Energy Research Center [Footnote 4: Seabird Distribution in 3D: Assessing Risk from Offshore Wind Energy Generation Shatz Energy Research Center (2020) <a href="https://schatzcenter.org/2020/04/seabird3dstudy/">https://schatzcenter.org/2020/04/seabird3dstudy/</a>.] and stochastic CRM specific to ESA-listed species in southern New England from the University of Rhode Island [Footnote 5: Transparent Modeling of Collision Risk for Three Federally-Listed Bird Species to Offshore Wind Development US Fish and Wildlife Service with University of Rhode Island (Oct. 29 2020) <a href="https://www.boem.gov/sites/default/files/documents/environmental/environmental-studies/Transparentmodeling-of-collisionrisk-for-three-federally-listed-bird-species-to-offshore-wind-development_1.pdf">https://www.boem.gov/sites/default/files/documents/environmental/environmental-studies/Transparentmodeling-of-collisionrisk-for-three-federally-listed-bird-species-to-offshore-wind-development_1.pdf</a>. ]</p>	
BOEM-2024-0001-0357-0054	<p>BOEM Cannot Assume that Larger Turbines Further Apart Reduces Risks to Birds There is no substantial evidence to suggest that larger turbines spaced farther apart reduces risks to birds and it should be a goal of BOEM to understand the effects of displacement and mortality relative to turbine size and spacing. The size of turbines has grown substantially over the past decade and this trend is expected to continue. In its Vineyard Wind 1 project Vineyard Wind plans to use GE's 12 MW Haliade-X turbine which has a 220-meter rotor swept zone and is estimated to reach a maximum height of 260 meters above sea level. University of Virginia is currently developing 200-meter-long blades to power a 50-mw turbine with a potential rotor swept zone of approximately 400 meters. Given that the tower height would need to be more than 200 meters in height to</p>	<p>As stated in the PEIS, the effects of offshore wind farms on bird movement ultimately depends on the bird species, size of the offshore wind farm, spacing of turbines, and extent of extra energy costs incurred by the displacement of flying birds (relative to normal flight costs pre-construction) and their ability to compensate for this degree of added energy expenditure. Little quantitative information is available on how offshore wind farms may act as a barrier to movement, but there are some studies that provide information on bird movement through offshore wind farms. One study cited in the PEIS is Madsen et al. (2012), which found that increased turbine spacing coincided with increased numbers of birds flying through the wind farm. Further, Vattenfall (2023) recently conducted a robust study of bird</p>

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	<p>accommodate rotor blades of this size turbines could soon reach heights greater than 400 meters above sea level. Studies Karas (2009) [Footnote 6: Smallwood KS Karas B. 2009. Avian and Bat Fatality Rates at Old-Generation and Repowered Wind Turbines in California. The Journal of Wildlife Management 73:10621071.] and Johnston et al. (2014) [Footnote 7: Johnston A. A.S.C.P. Cook L.J. Wright E.M. Humphreys and N.H.K. Burton. 2014. Modeling Flight Heights of Marine Birds to More Accurately Assess Collision Risk with Offshore Wind Turbines. Journal of Applied Ecology 51 31-41.] which suggest that fewer larger turbines reduce avian collision risk are based on turbines less than 5 mw. As turbines increase in size they are more likely to encroach on airspace occupied by nocturnal migrants [Footnote 8: Id. 64 bird species.] while not necessarily avoiding airspace occupied by relatively lower flying foraging marine. Conversely studies by Loss et al. (2013) Choi et al. (2020) and Huso et al. (2020) find that bird deaths not only increase with turbine size but also suggest that the number of bird deaths from collision with wind turbines is proportional to the number of mw produced in a wind farm. Turbulence above and below the rotor swept zone can affect flight performance. If this should make birds more susceptible to physical interactions with turbines then larger turbines would only increase that risk. Additionally limiting risk evaluations to the rotor swept zone neglects the risk of collision from the tower itself and turbulence around the rotor swept zone. Suggestions that increased spacing (1 nm) between turbines would reduce risks to birds from both collision and displacement is unfounded as offshore wind farms in Europe do not provide this level of spacing and therefore there is no operational comparison to be made. Instead increased spacing means fewer turbines and less energy production within the footprint of the project so more projects (and more space) will be necessary to meet state and national energy goals. Furthermore greater space between turbines may increase collision risk if species vulnerable to collision end up using the wind farm more frequently. Unfortunately these are all unknowns and BOEM will need to fund studies to answer these questions. The Draft EIS should have included a risk assessment considering the full range of the potential rotor swept zone provided in the COP to assess 1) impacts from</p>	<p>movements within an existing offshore wind farm. The study tracked seabirds inside the array with actual video cameras and radar tracks, which allowed for measuring avoidance movements with high confidence and at the species level. The study concluded that seabirds would be exposed to very low risks of collision in offshore wind farms during daylight hours. This was substantiated by the fact that no collisions or even narrow escapes were recorded in over 10,000 bird videos during the 2 years of monitoring. Refer to response to comment BOEM-2024-0001-0400-0022.</p> <p>Aside from the few studies that are available on this matter, BOEM still maintains that bird presence on the Atlantic OCS is low based on the literature, studies, and other information documented and described in PEIS Section 3.5.3. As such, BOEM anticipates the risk to birds from any offshore IPF is low (even accounting for turbine spacing and size).</p> <p>For risk to federally listed threatened and endangered birds from offshore wind turbines, refer to responses to comments BOEM-2024-0001-0357-0051 and BOEM-2024-0001-0357-0053.</p> <p>Regarding unknowns and data gaps on birds' use of the of offshore environment, refer to response to comment BOEM-2024-0001-0400-0003.</p> <p>The lessees would need to comply with the Migratory Bird Treaty Act.</p>

Comment No.	Comment	Response
	collision and barrier effects to migrating birds including the piping plover and 2) potential increased habitat loss that may need to occur. Similarly the federally threatened and State endangered red knot is likely crossing the lease area as well and a similar analysis should be done for it. It has a critical habitat in the Holgate and North Brigantine areas during its fall migration (PP4). The results of all Atlantic Shore's Phase 1 and subsequent studies of its migration routes should have been included in the DEIS. The list of project authorizations should also include compliance with the Migratory Bird Protection Act and the criteria used to determine that.	
BOEM-2024-0001-0423-0012	<p>Birds/Bats</p> <p>The Draft PEIS notes the stressors that birds are experiencing including vulnerability to sea level rise and the increasing frequency of strong storms resulting from global climate change (page 3.5.3-11) and commercial fisheries by-catch (page 3.5.3-2 notes that approximately 2600 seabirds are killed annually on the Atlantic through commercial fishing activities). In addition to these stressors climate change is causing more intense droughts increasingly frequent wildfires mismatches between food supplies and migration times which impact bird habitat and migrations. The Draft PEIS meaningfully understates the beneficial effects from the six NY Bight projects since birds would benefit from the resulting reduction in climate change impacts that would occur when the six projects are in operation and producing renewable energy. This benefit may be difficult to quantify but qualitatively it would be expected and should be noted.</p> <p>The Draft PEIS states that [italicized: "potential impacts on birds within the NY Bight lease areas under six projects is not anticipated to be different compared to a single NY Bight project"] (Section 3.5.3.5.2 page 3.5.3-28) and that [italicized: "the incremental impacts contributed by Alternative C to the cumulative impacts on birds would be almost undetectable"] (Section 3.5.3.5.5 page 3.5.3-29). Yet the AMMMs for birds would still require extensive monitoring and reporting burdens with open- ended requirements for plan revisions. These AMMMs are duplicative as bird and bat monitoring requirements will come out of the ESA Section 7 consultation process</p>	<p>As stated in PEIS Section 3.3.2, some impacts of the NY Bight projects may not be measurable at the programmatic level, such as the beneficial impacts on climate change due to a reduction in greenhouse gas emissions. Beneficial impacts on climate change may be addressed in the COP-specific NEPA review document. The minimal difference in bird impacts under six projects and one project—and the impacts anticipated to be undetectable in the context of cumulative impacts—is primarily based on the current understanding that bird presence in the offshore environment is low. If bird presence is low, then there is unlikely to be any notable difference between one project and six projects because neither would have notable effects on bird populations. However, AMMM measures are still implemented by BOEM because there still is some level of uncertainty on the distribution and habitat use of birds in the offshore environment (refer to response to comment BOEM-2024-0001-0400-0003), and implementation of AMMM measures will improve the understanding of bird interactions with offshore wind farms and help inform the assessment of potential impacts on birds from construction and operation of offshore wind farms.</p>

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	during the project-specific NEPA reviews. A PEIS that requires such monitoring frameworks in a COP puts the cart before the horse.	
BOEM-2024-0001-0450-0004	<p>Avian Recommendations- Integrated Monitoring Systems: BOEM should require the deployment of integrated multi- sensor systems at project substations and selected turbines to improve avian impact detection and identification. This would enhance monitoring capabilities and allow for better estimation of collision and avoidance rates.- Adaptive Monitoring Plans: BOEM should require comprehensive monitoring plans that adapt to new information and technology. This includes reporting requirements to enable adjustments to monitoring approaches and consideration of new technologies or additional monitoring periods ensuring the effectiveness of mitigation measures.-</p> <p>Cumulative Impacts Assessment: BOEM should conduct a thorough assessment of cumulative impacts on marine and migratory birds across multiple spatial scales. This would involve considering non-Endangered Species Act (ESA) listed bird species in tracking studies focusing on larger-bodied species for large-scale assessments and transparently discussing poorly- understood areas of avian risk.</p>	<p>BOEM recognizes that monitoring and reporting after construction may be necessary. Based on COP approvals to date, BOEM anticipates monitoring and reporting may be part of the terms and conditions of future COP approval for any of the NY Bight lease areas, as well as adaptive management if impacts deviate substantially from the impact analysis in the EIS. BOEM anticipates that there will be technical innovations to sensor systems in the near future.</p> <p>The PEIS addresses cumulative impacts for the No Action Alternative, Alternative B, and Alternative C (see PEIS Sections 3.5.3.3.3, 3.5.3.3.4, 3.5.3.4.4, 3.5.3.4.5, 3.5.3.5.4, and 3.5.3.5.5). These assessments are based on the best available information regarding bird use on the Atlantic OCS and potential risk from offshore wind projects, as documented in PEIS Section 3.5.3. BOEM understands there are data gaps, uncertainties, and incomplete and unavailable information. However, as stated in PEIS Appendix E, BOEM concludes the PEIS is sufficient to support sound scientific judgments and informed decision-making and does not believe that there is incomplete or unavailable information on birds that is essential to making a reasoned choice among alternatives (refer to response to comment BOEM-2024-0001-0400-0003 and PEIS Appendix E for more information on this matter). In addition, COP specific NEPA documents for NY Bight lease areas that might be developed in the future would include project-specific bird information and cumulative effects analyses based on the most current and relevant bird information available at that time. Tracking studies of large-bodied birds for large scale assessments is something BOEM will consider.</p>
BOEM-2024-0001-0450-0020	<p>Avian Cumulative Impacts Analysis The cumulative impacts must be assessed with great care and focused purpose. This is especially true for marine birds and offshore migrating bats as their year-round ecological needs and conservation risks are fundamentally transboundary in nature. <i>[Footnote 84: Jodice PGR Suryan RM. 2010. The transboundary nature of seabird ecology. In: Trombulak SC</i></p>	<p>Refer to response to comment BOEM-2024-0001-0450-0004. In addition, the PEIS cumulative effects analysis accounts for all anticipated offshore wind projects along the Atlantic OCS that are in the geographic analysis area for birds (with an estimated 2,459 WTGs), and not just in lease areas adjacent to the NY Bight lease areas (see all wind projects in PEIS Figure 3.5.3-1), as well as other planned non-offshore-wind activities that may affect birds</p>

Comment No.	Comment	Response
	<p><i>Baldwin RF (eds) Landscape- scale conservation planning. Springer Dordrecht pp 139165.]</i></p> <p>Whereas the mitigation and monitoring approaches in many instances are responsive to wildlife concerns in the NY Bight PEIS we believe the attention devoted to cumulative impacts should be improved. The six lease areas in the NY Bight are configured such that at least three spatial scales would need a cumulative impacts analysis for birds. These include (1) the impacts of each individual lease area relative to the most proximate or adjacent lease area(s) (e.g. OCS-A 0541 and OCS-A 0542); (2) the contribution of each cluster of lease areas to each other (e.g. OCS-A 0541/0542/0539/0538 and OCS-A 0512/0544); and (3) the contribution of any individual lease and all six new lease areas to other adjacent wind areas spread along the Atlantic seaboard of the U.S. In each case the cumulative impacts of the NY Bight PEIS should address marine and migrant birds as well as bats within a hierarchical multi-scale framework. <i>[Footnote 85: This approach should be similar to that used by Garthe S Schwemmer H Peschko V Markones N Mller S Schwemmer P Mercker M. 2023. Large-scale effects of offshore wind farms on seabirds of high conservation concern. Scientific Reports 13: 4779. In that study cumulative impacts were examined for loons (Gavia stellata G. arctica) in a large area of the North Sea consisting of 14 offshore wind farms organized into 5 wind farm clusters. Displacement impacts were examined at multiple scales including within the wind farms out to 1 km zones and out to 10 km zones.]</i></p> <p>For cumulative effects analyses it is especially important to consider widespread non-ESA listed bird species in potential tracking studies to detect how avoidance attraction collision risk and displacement may occur for birds throughout the NY Bight PEIS project and adjoining lease areas. The focus for species selection might rely on project-site surveys in aggregate or the MDAT data but preferably both. Cross- project tracking studies could build on previous work that identifies the most susceptible species of marine birds <i>[Footnote 86: Marques AT Batalha H Bernardino J. 2021. Bird displacement by wind turbines: assessing current knowledge and recommendations</i></p>	<p>(see PEIS Appendix D for a description of planned activities). As stated in PEIS Section 3.5.3, given that the abundance of bird species that overlap with wind energy facilities on the Atlantic OCS is relatively small (see PEIS Figure 3.5.3-2), offshore wind activities would not appreciably contribute to impacts on bird populations.</p>

Comment No.	Comment	Response
	<p>for future studies. <i>Birds</i> 2:460475.] ones that are also sufficiently widespread throughout the NY Bight.</p> <p>Larger-bodied species of birds can make superior focal subjects for large-scale cumulative impacts assessment [Footnote 87: Garthe et al. 2023.] and for determining optimal locations to monitor and mitigate bird populations affected by offshore wind in a regional context. Other avian candidates for monitoring objectives in cumulative impacts assessments can be selected from species designated as having higher exposure scores or higher collision vulnerabilities from offshore wind projects along the Atlantic seaboard. [Footnote 88: Robinson Willmott JC Forcey G Kent A. 2013. <i>The Relative Vulnerability of Migratory Bird Species to Offshore Wind Energy Projects on the Atlantic Outer Continental Shelf: An Assessment Method and Database. Final Report to the U.S. Department of the Interior Bureau of Ocean Energy Management Office of Renewable Energy Programs. OCS Study BOEM 2013-207. 275 pp.</i>]</p> <p>Finally we strongly recommend more transparent discussion of poorly-understood subject areas where minimal risk to birds is now assumed based merely on limited knowledge or high uncertainties. This includes effects of low frequency sound (infrasound) during turbine operations a factor that could potentially interfere with avian navigation. [Footnote 89: Patrick SC Assink JD Basille M Clusella-Trullas S Clay TA den Ouden OF Joo R Zeyl JN Benhamou S Christensen-Dalsgaard J Evers LG. 2021. <i>Infrasound as a cue for seabird navigation. Frontiers in Ecology and Evolution</i> 9:812.] Indirect effects to marine birds from prey redistribution should be incorporated into adaptive monitoring frameworks. Removal of existing hard and/or soft bottom substrates or replacing them with vertical structures that act as artificial reefs could lead to ecosystem-scale alterations to fish and invertebrate prey resources [Footnote 90: Methratta ET Dardick WR. 2019. <i>Meta-analysis of finfish abundance at offshore wind farms. Reviews in Fisheries Science &amp; Aquaculture</i> 27:242260; Perry RL Heyman WD. 2020. <i>Considerations for offshore wind energy development effects on fish and fisheries in the United States. Oceanography</i> 33:2837.] thereby influencing avian habitat use and energetics around wind farms. [Footnote 91: Ronconi</p>	

Comment No.	Comment	Response
	<p><i>RA Allard KA Taylor PD. 2015. Bird interactions with offshore oil and gas platforms: Review of impacts and monitoring techniques. Journal of Environmental Management 147:3445; Dierschke V Furness RW Garthe S. 2016. Seabirds and offshore wind farms in European waters: Avoidance and attraction. Biological Conservation 202:5968.]</i></p> <p>Whether such effects are positive negative or neutral they should be evaluated within the NY Bight PEIS adaptive monitoring frameworks</p>	

### P.5.8 Coastal Habitat and Fauna

**Table P.5-8. Responses to Comments on Coastal Habitat and Fauna**

Comment No.	Comment	Response
BOEM-2024-0001-0063-0001	Environmental Disruption: The installation and operation of turbines in the New York Bight will disrupt the marine ecosystem potentially harming habitats and affecting the behavior of marine life.	Thank you for your comment.
BOEM-2024-0001-0122-0002	Additionally ecological changes and alterations to the local marine ecosystem raise environmental concerns that necessitate careful consideration. The devastating impact this will have on bird and bat mortality as well as the visual and noise impact on residents further contribute to the argument against wind turbines in the region. These concerns coupled with the possible negative effects on property values. Offshore wind turbines will have a negative impact on ecosystems industries and communities. We must not allow this to move forward!	Thank you for your comment. Impacts on birds and bats are analyzed in Sections 3.5.3 and 3.5.1, respectively. The visual impacts are analyzed in Section 3.6.9.
BOEM-2024-0001-0313-0048	Affected Environment and Environmental Consequences 3.5.4-14 The PEIS states "Temporary construction impacts on coastal fauna would be limited (see noise and traffic IPFs) as most individuals would avoid the construction areas (Goodwin and Shriver 2010). Land disturbance that does occur especially on shoreline parcels could cause short-term erosion and sedimentation impacts in coastal habitat. Altering dune and beach habitat could increase erosion and sedimentation because dune habitat serves as a crucial buffer zone against flooding. Federal and state agencies work with Atlantic coastal towns and other land managers to develop site-specific Beach Management Plans for the protection of federally and state-listed threatened and endangered species. The COP NEPA analysis	The project-specific COP-level NEPA analysis will coordinate with local towns and beach managers once the landing locations are identified to ensure consistency with relevant local management plans.

Comment No.	Comment	Response
	will coordinate with local beach managers once the landing locations are identified to ensure concurrence with local Beach Management Plans. Overall impacts from land disturbance on coastal habitat and fauna are expected to be minor." Comment DER is unaware of the existence of the aforementioned Beach Management Plan or the Federal and State government efforts to provide resources regarding same further it is all but certain that any plans for TOBAY Beach did not have any considerations for the impacts from offshore wind. Further any impediments to the shore as referenced above should be completely avoided where feasible especially where it could impact access to the Town's beachfront community and enjoyment of local resources and could impede environmental improvement measures regularly deployed by the Town such as dune grass planting.	
BOEM-2024-0001-0394-0003	Many forms of aquatic marine life have evolved to be highly dependent on sound because vision underwater is only useful for perceiving very short distances. Many forms of aquatic ocean life are only able to understand perceive or 'image' their environment using sound. The effects of sound on marine organisms is not receiving a proper examination. For most marine organisms use of and response to sound is necessary for the execution of essential life processes. For some vibration. The U.S. Offshore Wind program will make profound modifications to a very large portion of the ocean habitat on the outer continental shelf. The examination performed by BOEM and NOAA Fisheries has largely been focused on whether sounds expected to be generated by offshore wind activity are expected to be loud enough to cause permanent hearing losses. The scope so narrow that it will not be able to capture the environmental effects of this project that are reasonably likely to occur.	Noise is an IPF analyzed throughout the PEIS. The impacts of noise on coastal fauna are discussed for all alternatives in Section 3.5.4. The behavioral impacts of noise on species are further discussed in the corresponding sections for marine mammals, sea turtles, birds, bats, benthic resources, and finfish and invertebrates.

## P.5.9 Finfish, Invertebrates, and Essential Fish Habitat

**Table P.5-9. Responses to Comments on Finfish, Invertebrates, and Essential Fish Habitat**

Comment No.	Comment	Response
BOEM-2024-0001-0071-0002	Through noise pollution (I was part of a study that tested noise levels at VW construction as loud as 181dbs WAY TOO LOUD) through EMFs (we'll literally be putting radiant heat in our ocean floors) through the substations that will suck up 8000000 gallons of water each and heat it up to as high as 93°F cooking and killing plankton microbes and fish larvae through oil spills and through endangering migrating birds and bats. We will be endangering our natural food supply.	BOEM is analyzing several AMMM measures under Alternative C, including measures to reduce decibel (dB) levels using attenuation devices and shut-off protocols when animals are within the vicinity of sound sources. The design, location, construction, and capacity of the cooling water intake structures shall reflect the best technology available for minimizing adverse environmental impacts from the impingement and entrainment of all life stages of fish (e.g., eggs, larvae, juveniles, and adults) by the cooling water intake structures. Examples of RPs for noise include MUL-5, MUL-6, and MUL-7, including implementation of lowest noise practices for equipment, WTG installation methods, and adherence to International Maritime Organization (IMO) guidelines on vessel noise, which would reduce impacts from noise on finfish, invertebrates, and EFH.
BOEM-2024-0001-0093-0002	I believe that the wind turbines will encourage new habitats for fish life.	Thank you for your comment. You can read more about the reef effect in the Presence of Structures subheadings within Sections 3.5 and 3.6.
BOEM-2024-0001-0122-0004	Marine Ecosystem Disruption: The installation of offshore wind turbines will disturb marine ecosystems. Construction activities such as pile driving will create noise and vibrations that affect marine life and the presence of underwater structures can alter the behavior of marine species.	The impact of pile-driving on multiple species is discussed in Table 2.4 and Section 3.5. Acoustic thresholds are analyzed for multiple species. There are several AMMM measures that can be applied during pile-driving activities to address underwater noise.
BOEM-2024-0001-0176-0002	This push for Offshore Wind is nothing more than a massive experiment on our ocean and the entire marine ecosystem. Cooling systems taking in cool ocean water at up to 8100000 gallons per day and mixing it with chemicals such as bleach to keep the pipes clean and then dumping it back into the ocean at temp. between 86-90 degrees F. this will certainly mimic climate change kill off fish larvae zooplankton etc.	The analysis of warm water discharges from the offshore substations is included in Section 3.4.2. Warm water discharged from the offshore substations will have a minimal effect because it will be mixed by the surrounding water and returned to ambient temperatures. The overall impacts are expected to be minimal with no degradation of water quality. CWA Section 316(b) requires project-specific NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts. The design, location, construction, and capacity of the cooling water intake structures

Comment No.	Comment	Response
		will incorporate the best technology available for minimizing adverse environmental impacts from the impingement and entrainment of all life stages of fish (e.g., eggs, larvae, juveniles, and adults).
BOEM-2024-0001-0308-0001	The construction of wind turbines in the New York Bight poses a significant threat to the marine ecosystem particularly affecting numerous whale and fish species that frequent this area as reported by Gotham Whales. This includes several endangered species highlighting the critical nature of the threat.	BOEM has previously required developers to use protective measures—such as protective species observers, exclusion zones, and independent reporting,—to avoid whales and other protected species during project activities. A full list of measures aimed at protecting finfish, invertebrates, and EFH can be found in Table 3.5.5-8. Measures protecting marine mammals and sea turtles can be found in Tables 3.5.6-11 and 3.5.7-8, respectively.
BOEM-2024-0001-0313-0019	There are numerous concerns with the potential impacts of the open loop system mentioned above including the intake of phytoplankton and larvae that form a basis for the ocean food chain and the cascade of potential adverse effects. Again the concern and analysis should not be limited to just the NY Bight Area but the impact of the loss of the organisms and food supply in terms of the cumulative impacts for this technology for all the planned and future offshore wind projects in the sphere of ecological influence. Even the PEIS makes note on page 3.4.2-3 that "Phytoplankton is the foundation of the marine food web and their associated growth rates depend on nutrient (e.g. nitrogen phosphorus and carbon plus calcium and silicon are various micronutrients) availability in the water." Thus the impact to other trophic levels given the potential impact to the foundational structure of the marine food web should be analyzed.	Section 316(b) of the Clean Water Act requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impact from impingement and entrainment of aquatic organisms. Impacts of entrainment and impingement on finfish and invertebrates at HVDC converter intakes would be limited to the immediate area of the offshore substations and to intake volumes. Project design and specific intake volumes will be assessed in the NEPA analysis of each project-specific COP.
BOEM-2024-0001-0313-0044	Further there should be a quantification of the cumulative impacts of all project impacts to loss of filter feeding organism in terms of not just loss to commercial harvesting but in terms of water quality benefits correlated to the societal economic impact to decreased water quality as result of the proposed action. Estimating the dollar value of water quality benefits currently provided in the no action alternative as compared to the proposed action requires a multidisciplinary approach. A new study estimates that oyster and clam aquaculture provides \$2.85.8 million in services that remove excess nitrogen from the coastal waters of Greenwich Connecticut. The study was conducted by shellfish biologists economists and	Section 3.6.1.5.1 provides an assessment of shellfish, including AMMM measure COMFIS-3, which proposes the development of a Fisheries and Benthic Monitoring Plan, which would include surfclam and scallops and would be compatible with other regional data collection methods. This measure, if applied, would increase data and knowledge about the surfclam and scallop fishery, potentially resulting in the future development of other mitigation measures that may benefit those or other commercial or for-hire recreational fisheries.

Comment No.	Comment	Response
	<p>modelers from NOAA Fisheries NOAA National Centers for Coastal Ocean Science and Stony Brook University. It was recently published in Environmental Science &amp; Technology. Researchers used a "transferable replacement cost methodology" to estimate the ecological and economic value of nitrogen reduction that results from oyster and clam aquaculture in this coastal community. The replacement cost method puts a dollar value on ecosystem services by estimating what it would cost for humans to provide those services." (Source: NOAA Fisheries "How Much Is A Clam Worth To A Coastal Community?" April 05 2021). As the proposed action has the significant potential to dramatically reduce the filter feeding capacity of destroyed filter feeding organisms this should be analyzed and a compensation package and/ mitigation measures and plan for restoring what is lost should be provided if warranted in the PEIS.</p>	
BOEM-2024-0001-0313-0047	<p>Affected Environment and Environmental Consequences 3.5.2-15 The PEIS states "Electric and magnetic fields and cable heat: EMF would result from ongoing and planned transmission or communication cables. DC cables placed on the seafloor would generate a static magnetic field changing the natural geomagnetic field. Cables carrying AC which produce low-frequency EMF are the most commonly used in offshore wind farms to date. EMF effects from offshore wind cables on benthic habitats would vary in extent and significance depending on overall cable length the proportion of buried versus exposed cable segments and project-specific transmission design (e.g. HVAC or HVDC transmission voltage). The EMF intensity diminishes rapidly with distance but is considered a long-term impact as it is expected to be present in the environment for the life of the project. The maximum magnetic field expected for an offshore wind energy project's export cable EMF is about 165 milligausses (16.5 microteslas) dropping to 40 milligausses (4.0 microteslas) 3.26 feet (1 meter) above the cable a decrease in field strength of 76 percent (CSA and Exponent 2019). To put these values in perspective the strength of the Earth's DC magnetic field is approximately 516 milligausses (51.6 microteslas) along the southern New England Coast (CSA and Exponent 2019) and normal values of the Earth's geomagnetic field can range from 200 to 750 milligausses (20 to 75 microteslas) depending on the geographical location (Diez-</p>	<p>The Final PEIS considers the best available data and information that reflect the state of the science at the time of publication of the PEIS. An acknowledgment of uncertainty about the impacts of EMFs is included in Appendix E, <i>Analysis of Incomplete or Unavailable Information</i>. Future research about EMF exposure on benthic marine organisms may be incorporated into future project-specific COP NEPA analyses as information becomes available.</p>

Comment No.	Comment	Response
	<p>Caballero et al. 2022). At this time no thresholds of the acceptable or unacceptable levels of EMF emissions have been determined for the marine environment (Hogan et al. 2023). The impact of EMF on benthic habitats is an emerging field of study; as a result there is a high degree of uncertainty regarding the nature and magnitude of the effects on all potential receptors (Gill and Desender 2020). Recent reviews by Bilinski (2021) Gill and Desender (2020) Albert et al." Comment It is concerning that there is an admitted lack of scientific studies and evidence documenting the potential impacts to benthic organisms and the ecosystem as a result of EMF and cable heat. It would also stand to reason that the assumption should not be that there is no impact but should conversely be an assumption that there is an impact until proven otherwise in an abundance of caution to protect the environment.</p>	
<p>BOEM-2024-0001-0313-0058 and BOEM-2024-0001-0313-0059</p>	<p>Further, based on DER past experience, and comments from NYSDEC and responses from AECOM (source: Response to Comments Letter Dated: March 4, 2022 Technical Comment Letter South Brooklyn Marine Terminal – Port Infrastructure Improvements Project DEC ID: 2-6102-00120).</p> <ul style="list-style-type: none"> <li>Protected Species Time of Year Restrictions (TOYRs) -The narrative recognizes the need for compliance with the TOYRs however TOYR dates are not specified. TOYRs also will apply for in-water work associated with bulkhead/wharf improvements (such any in-water vibratory pile driving). To avoid impacts to federal-and state-protected species including migrating Atlantic sturgeon and spawning winter flounder no in-water activity shall occur between: <ul style="list-style-type: none"> <li>a. December 15 and March 1 in waters less than 20 feet; and</li> <li>b. March 1 and June 30 and between October 1 and November 30 in waters of any depth. <ul style="list-style-type: none"> <li>Response 2: Thank you for providing the TOYRs. The project will comply with these restrictions.</li> </ul> </li> </ul> </li> <li>Protected Species Protection Measures -Please indicate the size of the buffer zone that would trigger a shut down if a protected species is observed (as discussed in Section 8.1 of the Permit Information Packet). Additionally please also include the</li> </ul>	<p>The PEIS will not result in the approval of any activities in the NY Bight lease areas. Each lessee has the exclusive right to develop and submit a COP as outlined under 30 CFR 585.628. BOEM will then conduct project-specific COP NEPA analysis for each lease area that will focus on providing site- and project-specific analyses. Specific time of year restrictions for each project will depend on the proposed project activities and will be negotiated as part of the project permits.</p>

Comment No.	Comment	Response
	<p>Protected Species Shut Down buffer zone as a Best Management Practice to be implemented.</p> <ul style="list-style-type: none"> <li>Response 3: As described in the JPA the likelihood that protected species would be present in the Project Area during in-water construction activities is extremely low. Based upon review of the NOAA Fisheries Final Biological Opinion for the New Jersey Wind Port dated February 25 2022 which required no buffer zone for similar in-water work and implementation of other conflict- minimizing Best Management Practices pile installation (e.g. operator will begin pile driving with soft start 'warning taps' piles will be vibrated in for the majority of the installation and then driven the remainder of the way) the Applicant believes that a shutdown buffer zone is not necessary. Based on prior experience with pile driving operations these BMPs would cause any protected species present to leave the action area prior to the production of maximum noise levels reducing the risk of injury. Pile driving at the start of each day would commence with an initial set of three strikes with the hammer operating at 40% power. After a one-minute pause two more sets of three strikes separated by a one-minute pause would be performed with the hammer operating at 40% power. After a third and final one-minute pause normal hammer operations would commence. Further pile installation will be limited to dates outside of sturgeon TOYR lessening the likelihood of potential impacts to sturgeon species." <p>It is unclear if these restrictions will be in place for this project and if they have been factored in the construction schedule projections or if a waiver/permitting restriction relief will be sought from NYSDEC and what the consequences of same would be to the environment. AS this has the potential to impacts numerous project considerations this should be evaluated in the Final PEIS.</p> </li></ul>	
BOEM-2024-0001-0332-0008	<p>EFH Essential Fish Habitat</p> <p>The NYB leases are in the middle of the 20/30/40 fm midshore offshore fishing grounds which is some of the most productive</p>	<p>Impacts on sand lances and other fish are acknowledged in Section 3.5.5.1.4, <i>Essential Fish Habitat</i>. The addition of scour protection would result in short-term to permanent impacts on</p>

Comment No.	Comment	Response
	fishing grounds and also home to a number of prominent/historic wreck sites. The area's sand ridges are home to abundant colonies of sand lance aka sandeels which are a quintessential link in the food web. They are not only forage to ground fish and pelagic species but also whales and sea birds. Anyone who has fished these waters in the summertime knows the show is better than Sea World! Based on documents which detail [Embedded Hyperlink: <a href="https://www.researchgate.net/publication/262875861_Short-_and_long-term_effects_of_an_offshore_wind_farm_on_three_species_of_sandeel_and_their_sand_habitat">https://www.researchgate.net/publication/262875861_Short-_and_long-term_effects_of_an_offshore_wind_farm_on_three_species_of_sandeel_and_their_sand_habitat</a> ] the strong association of sand eels to sandy sediment sand eels will most likely be negatively affected by the radical change in habitats when hundreds of turbines and thousands of tons of rock scour protection are added around the turbine and substation bases. If and when sand eels leave so too do all of the other species.	softbottom habitat within the project area and would impart minor impacts on finfish, including the sand lance, though localized impacts would likely be greater. Habitat conditions would be unaffected after construction is complete. Impacts from six NY Bight projects would therefore remain negligible to major.
BOEM-2024-0001-0332-0009	How can it be that no HAPC (habitat areas of particular concern) are designated within the NYB yet summer flounder spawn in the winters on the OCS and use the areas during all four stages of their life cycle (egg larvae juveniles and adults)? Many other coastal species rely on the Chicken Canyon and Hudson Canyon during one or more life stages and use the NYB's lease areas. Also mako sharks should be of concern as they spend a lot of time in this area. As of 7/5/2022 U.S. fishermen may not land or retain Atlantic short fin mako sharks; however these water used to be prime shark fishing grounds. It seems many of these are conveniently overlooked. A lot of these ecologically sensitive area (what I would call HAPC) and fishing hot spots were detailed in the very basic early work of Buchanan at the NJDEP in 2010 NJ's Area of Interest Wind Power On The OCS. Was any of this really basic stuff even considered?	Habitat Areas of Particular Concern (HAPCs) are discrete subsets of EFH designated by the regional fishery management councils and represent high priority areas for conservation, management, or research, and they are necessary for healthy ecosystems and sustainable fisheries. The HAPCs for the study area are shown on Figure 3.5.5-2, along with the NY Bight lease areas. No designated HAPCs are located within the NY Bight lease areas; however, Section 3.5.5 discusses that summer flounder HAPCs may overlap with potential NY Bight offshore export cable corridors and vessel routes to the identified representative ports (see Chapter 2, <i>Alternatives</i> ).
BOEM-2024-0001-0334-0005	Damage to the shoreline: Our fishermen are aware of catastrophic losses of sea scallop populations in the vicinity of sonar work. It has killed them. This outcome is unacceptable and BOEM has allowed it to happen.	AMMM measure COMFIS-3 is aimed to benefit the scallop fishery by focusing on increasing data and knowledge about the scallop fishery. See Table 3.6.1-20.
BOEM-2024-0001-0345-0012	CCE also makes the following suggestions for inclusion in the final document: Benefits of Offsetting Fossil Fuel Plants In addition to the benefits listed in the PEIS [Bold Italics: CCE urges BOEM to consider	Thank you for your comment. Assessment of impingement from the cooling systems of two existing onshore fossil fuel plants is outside the scope of this NEPA analysis.

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	<p>the potential benefits of offsetting the need for the Northport Port Jefferson and E.F. Barrett power plants which are legacy fossil fuel power plants on Long Island.] During previous public meetings concerns were raised about the impact that the open-loop cooling systems of offshore wind farms will have on fish populations particularly Atlantic Cod. The Northport power plant which discharges directly into a marine environment (Long Island Sound) is responsible for the entrainment of almost 8.5 billion larvae and impingement of over 125000 fish each year. It is important for BOEM to note not only the potential adverse impacts of an offshore wind open loop system but to compare those impacts to the existing fossil fuel plants particularly the Northport and Barrett Plants that this project would reduce the need for.</p>	
BOEM-2024-0001-0352-0010	<p>In the finfish and EFH section Atlantic cod is referenced as a species that could benefit from increased hard bottom habitat resulting from project development. While we agree that it is important to ensure suitable habitats exist for Atlantic cod the New York Bight is not an important area for this species and the creation of new structures in this region may not confer a noticeable benefit. We remain concerned about the possible negative impacts of offshore wind construction on this species and we appreciate that acoustic impacts on cod and other fishes are discussed in this section.</p> <p>We are concerned that the discussion of open loop cooling systems underestimates potential effects on plankton including fish eggs and larvae (Section 3.5.2.4.1). For example the draft PEIS notes that discharge water for the South Coast project was predicted to reach 90F which is quite high. This was modeled to result in a 1.4 F increase up to 155 feet from the discharge point and was expected to result in mortality for many types of plankton. Impacts are described as negligible given that they are highly localized even when considered across all six New York Bight projects. It may not be appropriate to draw these conclusions without further consideration of the specific locations of these cooling systems within each lease area. We recommend a more detailed evaluation of this topic in the final PEIS and subsequent project-specific analysis.</p>	<p>Thank you for your comment. The estimated temperature and distribution of the discharge water provided from the predicted model developed by TetraTech and Normandeau Associates, Inc. in 2023 represents the current best available science.</p> <p>The Final PEIS considers the best available data and information that reflect the state of the science at the time of publication of the PEIS. An acknowledgement of uncertainty about the impacts of EMFs has been added to Appendix E, <i>Analysis of Incomplete or Unavailable Information</i>.</p> <p>Additional citations and clarifying text have been added to Final PEIS Section 3.5.5, <i>Impacts of the Proposed Action on Benthic Resources</i>, under <i>Presence of Structures</i>.</p>

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	<p>The draft PEIS seems dismissive of EMF impacts (Section 3.5.2.4.1). Given that large scale offshore wind projects are just now being installed off the East Coast this issue requires further study.</p> <p>We are also concerned that the draft PEIS downplays the potential for wind projects in these lease areas to result in expanding species distributions through the "steppingstone effect." The PEIS notes that wind projects in these lease areas may not notably contribute to the steppingstone effect given the existing network of artificial reefs off New York and New Jersey (Section 3.5.2.4.1). However the document fails to acknowledge that the six New York Bight lease areas are much further offshore than the existing artificial reefs. Fully built out along the East Coast offshore wind will result in a very large increase in artificial structures offshore that run from the seabed through the entire water column. Blue mussels for example may be demonstrating a steppingstone effect in the Block Island Wind Farm (Hogan et. al 2023[Footnote 2: Hogan F. B. Hooker B. Jensen L. Johnston A. Lipsky E. Methratta A. Silva and A. Hawkins (2023). Fisheries and Offshore Wind Interactions: Synthesis of the Science. 383p. <a href="https://repository.library.noaa.gov/view/noaa/49151">https://repository.library.noaa.gov/view/noaa/49151</a>] Section 1.1. and references therein).</p>	
BOEM-2024-0001-0362-0026	<p>Environmental Protection The draft PEIS reviews potential environmental impact from offshore wind development in the New York Bight and measures that could avoid minimize mitigate and monitor those impacts. The analysis explores potential impacts to bats benthic resources birds fish marine mammals sea turtles and wetlands. Environmental protection is a key requirement under the Outer Continental Shelf Lands Act (OCSLA) and NEPA and rigorous plans must be in place for offshore wind projects to comply with various state and federal statutes that projects are subject to. Offshore wind energy must be developed in an environmentally responsible manner that avoids minimizes and mitigates impacts to marine life and ocean users meaningfully engages stakeholders from the start and uses the best available science and data to ensure science- based and stakeholder-informed decision making. The PEIS should analyze potential cumulative impacts; benefits of mitigation measures; and adaptive management strategies. The analysis should include all relevant data and acknowledge relevant scientific</p>	<p>Thank you for your comment. The continuation of all other ongoing and reasonably foreseeable future activities described in Appendix D, <i>Planned Activities Scenario</i>, without the NY Bight projects, serves as the baseline for the evaluation of cumulative impacts. In Chapter 2, the impact of No Action Alternative; Alternative B, No Identification of AMMM Measures at the Programmatic Stage; and Alternative C, Identification of AMMM Measures at the Programmatic Stage, are discussed in light of the best available information. Incomplete or unavailable information (Data gaps) is described in Appendix Section E.1.7.</p>

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	<p>disagreements and data gaps. Avoiding sensitive habitat areas requiring strong measures to protect wildlife throughout each state of the development process and comprehensive monitoring of wildlife and habitat before during and after construction are all essential for the responsible development of offshore wind energy. The combination of alternatives should be chosen that ensures communities wildlife and the environment are protected while maximizing the creation of quality high-paying jobs and economic benefits.</p>	
BOEM-2024-0001-0528x	<p>The first article is “Offshore Wind Farms Are Projected to Impact Primary Production and Bottom Water Deoxygenation in the North Sea”, which is from <i>Communications, Earth and Environment</i>. Volume 3. Article number 292 by Ute Daewel, Naveed Akhtar, Nils Christiansen, and Corinna Schrum where they determine that associated wind wakes in the North Sea provoke large scale changes in annual primary production with local changes of up to plus or minus 10%. Not only at the offshore wind farm clusters, but also distributed over a wider region. The model also projects an increase in sediment, carbon, and deepen areas of the sor - of the Southern North Sea, due to reduced current velocities and decreased, dissolved oxygen inside area with already low oxygen concentration. Their results provide evidence that ongoing offshore wind farm developments can have a substantial impact on the structuring of coastal marines ecosystems on basin scales, and as one of the other previous speakers, it said, yes, there is an increase in some areas, however, the response quote the response in phytoplankton biomass is relatively small on average, but below 1%, both inside and outshore offshore wind farm cluster but can reach up to 10% locally, and that annual net, prime primary production changes in response to offshore wind wake effects in the southern North Sea areas both show areas with a decrease in areas with an increase for annual net primary production of up to 10 percent. Most obvious is the decrease in the center of the large offshore wind clusters in the inner German Bight, and at Dogger bank, which are both clearly situated in highly productive frontal areas and an increase in areas around these clusters in shallow near-coastal areas of the German Bight and at Dogger Bank. The second article is from <i>Frontiers in Marine Science</i>,</p>	<p>Thank you for your comment. Caution should be taken in extrapolating study outcomes from European wind farms to expected results in the NY Bight, as the environmental conditions are not equal. European wind farm facilities differ, as they are in shallower waters with weak seasonal stratification, in sheltered areas along the coasts, and arranged with tight spacing of turbines (Lentz 2017; Hogan et al. 2023). Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Presence of Structures</i>, which discusses hydrodynamics, including atmospheric wakes and the Mid-Atlantic Bight Cold Pool. Discussion of the two other references requested by the commenter—Christiansen et al. 2022 and Stoelinga et al. 2022 (ArcVera Renewables)—has been added to Appendix B.</p>

Comment No.	Comment	Response
	<p>February 2022. “The Emergence of Large-Scale Hydrodynamic Structures Due to Atmospheric Offshore Wind Farm Wakes” again by Christiansen and Daewel with Bughsin, Djath and Corrina Schrum. It talks about the large-scale surface heating up of up to .1 Celsius, imitating the effects of climate change in which an increase in sea surface temperature is also to be expected as a result of warming of the earth's atmosphere.</p> <p>Then ArcVera had recent study - ArcVera Renewables in August, 16 20, 16<sup>th</sup> 2022, which confirmed that severe under-prediction of long range wake losses by engineering wake loss models in common use and investigated long range wake loss potentials at the New York Bight offshore development sites, velocity deficits has high as Velocity deficits as high as one meter per second or 10% persist for up to persists for up to, or greater than 60 miles downwind of large or offshore arrays leading to long range energy deficits much greater than expected by most subjects experts using the weather research forecasting model, a firmly established high fidelity, numerical prediction model along with the Wind Farm parameters. Sorry, hard to sell this parameterization which was added to the model to account for the effects. We do feel the PEIS should be analyzing this ArcVera methodology as it relates the wind lease areas, cumulative wind lease areas and COPs and records of decision that have been submitted to the Atlantic Ocean to date.</p>	
BOEM-2024-0001-0528aa	<p>Marine food sources, such as planktons, mollusks, bivalves. The primary sources are affected by abnormal frequencies. Fish are affected by abnormal sounds and vibrations.</p> <p>Each species has its different vulnerability index, which is a critical component of all the overall risk assessment but it's not discussed, and that's quoted from your fine book there. The amount of marine real estate used for these turbine arrays will push natural-recurring feeding, breeding, migration, and navigation out of its natural areas.</p>	<p>The Final PEIS considers the best available data and information that reflect the state of the science at the time of publication of the PEIS.</p> <p>Acoustic thresholds are analyzed for multiple species. There are several AMMM measures that can be applied during pile-driving activities to address underwater noise as well. Additionally, examples of RPs for noise include MUL-5, MUL-6, and MUL-7. These include implementation of lowest noise practices for equipment, WTG installation methods, and direction to follow IMO guidelines on vessel noise, which would reduce impacts from noise on finfish, invertebrates, and EFH.</p> <p>A discussion regarding uncertainty about the impacts of underwater noise is included in Appendix E, <i>Analysis of Incomplete or Unavailable Information</i>. Future research will be</p>

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		incorporated into subsequent COP NEPA analyses as information becomes available.
BOEM-2024-0001-0310a	And one of the impacts of the EMF on -- one of the questions was what are the impact of EMF on species. They directed me to a specific page in which I read and it said EMF will affect all species of sharks, skates, electric eels, and the mating of flounder. And that was just one page and there was way too much in a 1400-page document to go on.	<p>An EMF analysis is provided in Section 3.5.5.3.3 and 3.5.5.4.1. EMF exposure levels in the built environment are not expected to reach high enough energy levels to result in impacts on populations, and there is no evidence to indicate that EMFs from undersea AC or DC power cables negatively affect commercially and recreationally important fish species (CSA Ocean Sciences Inc. and Exponent 2019; Gill and Desender 2020; NYSEDA 2017; SEER 2022; Taormina et al. 2018). Additionally, RP MUL-39 proposes the electric shielding on underwater cables to control the intensity of EMF.</p> <p>The Final PEIS considers the best available data and information that reflect the state of the science at the time of publication of the PEIS. An acknowledgment of uncertainty about the impacts of EMFs is included in Appendix E, <i>Analysis of Incomplete or Unavailable Information</i>. Future research about EMF exposure on benthic marine organisms may be incorporated into future project-specific COP NEPA analyses as information becomes available.</p>
BOEM-2024-0001-0529cc	Offshore wind will increase climate change by increasing sea surface temperature and will decrease the upwelling and downwelling of the ocean, which decreases the productivity of all marine food webs. The loss of current, and will increase the loss of productivity, and will extend according to ArcVera's studies, up to 60 miles leeward of where the lease area is. Basically, the wind acts as a block, and as such the sea surface, where current comes from will have less wind, and will actually warm the ocean, mimicking climate change and increasing the issues of climate change. The ocean is our carbon sink. Especially in the mid-Atlantic, we have something called the Mid Atlantic Cold Pool, which Rutgers did study on in 2021, and they are extremely concerned because it has been considered basically our safety mechanism, a large pool of cold water toward the bottom. By pile driving and jet plowing the ocean floor, and then creating this lack of upwelling and downwelling, we risk losing the protective	<p>Thank you for your comment. Section 3.4.1.4.3 and Appendix B, Section B.1.4 discuss potential impacts of WTGs on ocean temperatures.</p> <p>A discussion of the ArcVera study has been added in Appendix B. Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of Structures</i>, which discusses hydrodynamics, including atmospheric wakes and the Mid-Atlantic Bight Cold Pool.</p>

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	nature of the cold pool itself, which would literally put climate change on steroids.	
BOEM-2024-0001-0310o	Putting these monstrosities in Hudson Canyon, the home of hundreds of species of fish and protected marine mammals is unthinkable. This area has a unique cold pool which attracts these marine inhabitants. The currents around the turbines are exactly what breaks down the cold pool and ultimately because of the wind wake effect extending for up to 60 miles past a turbine zone, we believe it will decrease the upwelling and downwelling of the ocean and it will increase the sea surface temperature.	Avoidance of major OCS features was part of BOEM's planning process to identify lease areas (Section 1.2, Table 1-1, <i>History of BOEM planning and leasing activities in the NY Bight</i> ), and none of the NY Bight lease areas are in the Hudson Canyon. Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative, Presence of Structures</i> , which discusses hydrodynamics, including atmospheric wakes and the Mid-Atlantic Bight Cold Pool.

#### P.5.10 Marine Mammals

**Table P.5-10. Responses to Comments on Marine Mammals**

Comment No.	Comment	Response
BOEM-2024-0001-0063-0005	Noise and Vibrations: Noise and vibrations from offshore wind turbines will have adverse effects on marine life disrupting the natural behaviors and communication patterns of marine mammals and fish.	Thank you for your comment. The potential acoustic impacts on marine mammals due to operational turbine noise is discussed in detail in Section 3.5.6.3.3, and the effects on fish are discussed in Section 3.5.5.3.3.
BOEM-2024-0001-0071-0005	83 whales wash up on our shores last year never mind the dolphins horseshoe crab and other marine life. These deaths are strongly correlated with the beginning of construction and sonar mapping for offshore wind. Why are we still moving forward with these projects?	To date, no whale mortality has been attributed to offshore wind activities. The scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the three declared UMEs for whales in 2016 and 2017 were primarily determined to be caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). These UMEs began prior to any offshore wind activities in the Atlantic Ocean. NOAA, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities. Furthermore, the Marine Mammal Commission—an independent federal agency whose purpose is the protection of marine mammals—has stated in a <a href="#">letter</a> ,

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		“Despite several reports in the media, there is no evidence to link these strandings to offshore wind energy development. For more information on offshore energy development and whales, please see this fact sheet produced by the Bureau of Ocean Energy Management.”
BOEM-2024-0001-0176-0003	The unprecedented uptick in Whale and Dolphin deaths in the past 14 months is devastating and all of them while offshore wind vessels were surveying nearby. While you deny any connection between offshore wind and the deaths no full necropsies have been released meaning there is no evidence that there is not a connection. The Incidental Harassment Authorization is evidence! Level B Take-disrupting behavioral patterns including but no limited to migration breathing nursing breeding feeding or sheltering Level A Take- an act of annoyance pursuit torment that has the potential to injure a marine mammal or marine mammal stock in the wild. Read that again it's certain death and an invasion of THEIR ocean!	There is no causal connection between recent offshore wind development and large whale mortality, and such an assumption is contrary to the scientific consensus. The overwhelming scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities.
BOEM-2024-0001-0180-0002	Marine mammals are being threatened harmed and even killed with the full support of both BOEM and NOAA both proponents of the "incidental take" of potentially over 1000 marine mammals many protected by the Endangered Species Act. BOEM is being completely dismissive of the fact that shellfish and finfish stocks will be significantly harmed and commercial catch is already significantly down and often no longer viable where offshore wind farms are located. Thousands of birds and bats are being destroyed worldwide with the potential result of species extinction.	“Take” of a marine mammal is a term that is specifically defined under the Marine Mammal Protection Act (MMPA) and the ESA. While the PEIS analyzes impacts on ESA-listed species, the “taking” of a marine mammal is not determined through NEPA but through the MMPA and/or ESA. For clarity, BOEM does not authorize any permits or takes. Only the NMFS has this authority through the ESA or MMPA. To date, offshore wind developers have not applied for, and NMFS has not approved, any authorization to kill any marine mammals incidental to offshore wind site characterization surveys or construction activities. Authorized takes during construction in finalized authorizations have been limited to Level A and Level B takes by acoustic harassment. Additionally, authorized takes are based on modeling and are therefore likely proportional to but not the actual number of takes that will occur during activities. Authorized takes mean that the project may not exceed the authorized number of takes

Comment No.	Comment	Response
		<p>within the given time period of the issued permit. Consideration of takes that occur as a result of these projects is better characterized by protected species observer (PSO) reports. For example, from the published high-resolution geophysical (HRG) survey PSO reports from multiple offshore wind development projects within the U.S. Atlantic Ocean, professional PSOs recorded 2,696 large whale detections; of these, only 68 (2.5%) were detections that met Level B exposure criteria (animal distance and source operations).</p> <p>Consideration of other stressors that have resulted in mortality or injury of marine mammals (e.g., fisheries interactions, vessel strikes) are unrelated to the offshore wind projects considered part of the Proposed Action of this PEIS and are outside the scope of this assessment.</p> <p>Please see Tables P.6.13, P.6.5 and P.6.7 for responses regarding fisheries resources and bird and bat resources.</p>
BOEM-2024-0001-0217-0001	Lack of impact studies: The total impact of these projects on endangered species and their prey has not been adequately studied. This raises concerns about potential habitat degradation and disruption of critical ecological relationships and the fact there are no studies on what the overall impacts would be were the whole 100megawatts be built out along the several hundred mile swath that is the whale migratory pathway.	Substantial scientific data exist for offshore wind development that allow for an assessment of impacts. All available information regarding long-term, regional impacts of offshore wind projects has been considered in this PEIS.
BOEM-2024-0001-0217-0003	The potential benefits for the ecosystem through whale foraging needs further research. For instance one adult humpback whale sequesters as much carbon as 70 sq miles of Forest in one year yet there's no studies to what will happen if the whales abandon these offshore areas due to the acoustic vibrations and electromagnetic fields that risk whale habitat.	Thank you for your comment. Long-term impacts of marine mammal responses to the presence of these projects are considered in Section 3.5.6.3.3, specifically the WTG Operations subsection, the Presence of Structures subsection, and the Electric and Magnetic Fields and Cable Heat subsection. Because the locations of the six proposed NYB projects do not overlap with any critical habitat or BIAs, because no barriers to migration or movement would be expected, and based on all available information, no habitat abandonment due to these offshore wind projects is expected to occur.
BOEM-2024-0001-0217-0004	Benthic environment destruction: concern that the construction of offshore energy infrastructure could damage the seafloor habitats	Benthic impacts due to construction of offshore windfarm projects were considered in this PEIS. Based on the most recent data available, effects on the seafloor habitats would be limited

Comment No.	Comment	Response
	that support Sand Lance populations a key food source for humpback whales. Positive impact of whales on the ecosystem	to short-term disturbances. Therefore, no long-term effects on marine mammal prey species or marine mammal foraging are expected.
BOEM-2024-0001-0217-0005	Improved ecology: the positive ecological impact of humpback whales in the region through their foraging activities have contributed to a thriving Sand Lance population and overall ecosystem health.	Thank you for your comment. The impact assessment of the Proposed Action (Alternative C) considered mitigation that would reduce impacts to the extent possible for whale species such that no population-level effects or long-term foraging behavior effects would be realized for humpback whales.
BOEM-2024-0001-0217-0006	Increased wildlife presence: Despite rising sea temperatures and despite current scientific understanding the author observes an increase in whales tuna and sharks in the area potentially benefiting from the improved ecosystem due to increased whale activity precisely in the areas where the wind turbines are planned and endangered the whale habitat.	The most recent PAM data, visual observation studies, and density models include these observed shifts in marine mammal distribution. Additionally, offshore wind farms are expected to have long-term benefits for climate change impacts that are driving these changes in distribution, which would subsequently benefit marine life.
BOEM-2024-0001-0217-0007	Call for further research and caution:* Data lacking: Halt further installation until research to document the positive effects of whales and quantify the potential impacts of offshore energy projects before making decisions.* Urgency and caution: Fisherman and ecologists urge the government to approach offshore energy development with caution and prioritize protecting the benthic environment crucial for whale survival. Overall there is valid concerns about the potential negative impacts of offshore energy projects on marine ecosystems and calls for a more comprehensive approach that considers the broader ecological implications before implementing these initiatives.	Thank you for your comment. BOEM used the best available science to address impacts on marine mammals in the PEIS. Substantial scientific data exist for offshore wind development that allow assessment of impacts. All available information regarding long-term, regional impacts of offshore wind projects has been considered in this PEIS.
BOEM-2024-0001-0217-0008	Additional points to consider:* The excerpt focuses on the specific case of humpback whales and Sand Lance in the western Atlantic. The impacts of offshore energy projects on other species and ecosystems may vary depending on the location and specific technologies used.* Balancing energy needs with environmental protection is a complex challenge and finding sustainable solutions requires careful consideration of all stakeholders and potential outcomes.* Ongoing research and monitoring are crucial to understanding the potential impacts of offshore energy projects and adapting strategies to minimize harm to marine life.	The discussions in the PEIS are based on the best available science to date. Substantial scientific data exist for offshore wind development that allow assessment of impacts. All available information regarding long-term, regional impacts of offshore wind projects has been considered in this PEIS.

Comment No.	Comment	Response
BOEM-2024-0001-0224-0002	I would like to draw attention to several facts that raise environmental apprehensions in relation to the proposed action: Ecological Impact: The construction and operation of wind turbines in the NY Bight will disrupt the delicate balance of marine ecosystems impacting marine life migratory patterns and overall biodiversity.	The discussions in the PEIS are based on the best available science to date. Substantial scientific data exist for offshore wind development that allow assessment of impacts. All available information regarding long-term, regional impacts of offshore wind projects has been considered in this PEIS.
BOEM-2024-0001-0255-0001	Marine mammals such as whales during these months. It might be prudent to conduct the powerful survey work during the cold months off NJ. The survey work may be what is killing the whales. Also remember that a large percent of those shipwrecks occurred during the 19th century on the shoreline.	Thank you for your comment. Seasonal restrictions are implemented for several offshore wind activities as a protection measure for certain species. There is no causal connection between offshore wind surveys and large whale mortality. The overwhelming scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities.
BOEM-2024-0001-0284-0002	There has been a dramatic uptick in the number of deaths of whales and dolphins since the surveying started for these OSW projects. It has been more than a year since necropsies were first performed on the deceased marine life found in our ocean and on our shores. Why have we not seen any results? Why would these OSW projects be pushed along if the cause of death of these whales and dolphins have not been narrowed down?	The scientific community has determined that large whale mortality is primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). These determinations are based, in part, on published necropsy results. Please see the NMFS Marine Mammal Unusual Mortality Events page for the most recent necropsy information.
BOEM-2024-0001-0308-0002	The use of sonar for seabed mapping in the region generates noise levels up to 226 decibels at the source falling into the low-frequency range (LFI) which is within the hearing range of many whale and dolphin species. Analysis of NOAA data reveals a stronger correlation between the recent surge in whale mortalities and sonar mapping activities than with cargo ship traffic challenging the notion that increased ship traffic is the primary cause of these deaths. Statistical evidence further supports this argument. From 2020 to 2021 despite an 18.46% increase in ship traffic whale deaths astonishingly fell by 92.31%. The following year saw a 25.15% rise in ship traffic yet whale deaths still decreased by 53.85%. However a pivotal shift occurred from 2022 to 2023; ship traffic declined by 18.56% but whale deaths skyrocketed by 216.67%. This period coincides with a fourfold increase in surveying activities related to wind farm development leading to an alarming spike in whale fatalities in the New York/New Jersey area. Specifically 21 humpback whales perished which according to Gotham Whales' August 2022 count of 280 humpbacks	Most sonar used for HRG surveys is actually outside the low-frequency hearing group (see Ruppel et al. 2022). There is no causal connection between recent offshore wind development and large whale mortality, and such an assumption is contrary to the scientific consensus. The overwhelming scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities.

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	<p>in the region represents a significant loss of 7.5% of the population. Moreover NOAA's estimation that only one-third of whale deaths are detected suggests the actual impact could be even more devastating. These findings starkly contradict the argument that increased ship traffic is to blame for the rise in whale deaths. Instead they implicate the intensification of surveying traffic linked to wind farm development as a significant factor. Given that a substantial 7.5% of the humpback whale population in this region was lost in a single year and considering NOAA's admission that we may only be observing a fraction of the true number of fatalities it's clear that the environmental implications of proceeding with wind turbine construction in this sensitive area are profound. This data mandates immediate comprehensive research and a cautious approach by both the Bureau of Ocean Energy Management (BOEM) and NOAA before any further development is considered.</p>	
BOEM-2024-0001-0309-0006	<p>Further BOEM's haste in approving the PEIS is in direct opposition to a longstanding federal protection program and in danger of disrupting a protected species that the federal government spent all this time and money to save from endangerment: the North Atlantic Right Whale protections. The North Atlantic Right Whale has been the subject of significant concern and federal protection. Since the U.S. government has spent close to \$10M of taxpayer money to protect this endangered species why is this PEIS Project comprising six wind farm lease areas adjacent to the other projects already smack in the center of this federally endangered whale migration zone only nine miles from the Brigantine shore? [Footnote 19: See BOEM 2023-0030.] The cumulative effects of the vessel traffic and noise from BOEM's own PEIS is admittedly missing comparison with the mitigation effects and missing data such as NOAA takes [Footnote 20: See PEIS at D2-D2.9.1 at D-14; see also C-6 C-7.] and old outdated studies. [Footnote 21: Id. at D2-1; The Conservation November 15 2023 "As the US begins to build offshore wind farms scientists say many questions remain about impacts on the oceans and marine life." <a href="https://theconversation.com/as-the-us-begins-to-build-offshore-wind-farms-scientists-say-many-questions-remain-about-impacts-on-the-oceans-and-marine-life-216330">https://theconversation.com/as-the-us-begins-to-build-offshore-wind-farms-scientists-say-many-questions-remain-about-impacts-on-the-oceans-and-marine-life-216330</a> .] Therefore</p>	<p>The discussions in the PEIS are based on the best available science to date. Substantial scientific data exist for offshore wind development that allow assessment of impacts. All available information regarding long-term, regional impacts of offshore wind projects has been considered in this PEIS. Vessel strike risk is still considered as part of the No Action Alternative but is driven largely by non-offshore wind vessels, which are outside the scope of this PEIS.</p>

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	the mitigation measures fail - yet another reason for a No Action ruling.	
BOEM-2024-0001-0313-0049	<p>Affected Environment and Environmental Consequences 3.5.6-70</p> <p>The PEIS states "Noise: Under six NY Bight projects noise generated from pile-driving will increase due to the substantial increase in the number of foundations to be installed in the NY Bight area. If project construction is staggered for all six NY Bight projects such that only one is being constructed at any given time then the total sound produced would be the same as in the one NY Bight project scenario for a given time. However if there is overlap in construction for all six NY Bight projects such that multiple projects are being constructed simultaneously within a proximal geographic area then the total sound produced could greatly increase the ensonified region within which marine mammals must forage travel and communicate. The impact of unmitigated pile-driving noise on marine mammals would remain major for the NARW as there is a reasonable likelihood that auditory injury would occur and therefore population-level impacts affecting the viability of the species cannot be ruled out. Impacts remain moderate for all other mysticetes odontocetes and pinnipeds as auditory injury could result in population-level effects for some species but the long-term viability of populations would not be affected. These impacts are expected to result from impact pile-driving whereas vibratory pile-driving would result in only minor impacts on all marine mammals including NARWs." Comment Concerns exist about the cumulative impacts of noise and the synergistic and potential cacophonous auditory impacts from multiple ongoing activities. Similar to comment expressed about air quality impacts there is a potential for a concentrated and greater adverse impact to sound and impacts to organisms in the waterbody to humans and our quality of life. The analytical structure of the PEIS to examine the impact of one representative NY Bight Project does not account for the logarithmic nature of noise impacts for all 6 lease projects nor the quantified evaluation of a likely scenario where this activity could be happening all at once and have a greater deleterious impact</p>	<p>Substantial scientific data exist for offshore wind development that allow assessment of impacts. All available information regarding long-term, regional impacts of offshore wind projects has been considered in this PEIS. Project and site-specific noise exposure modeling will be conducted during the COP-level NEPA stage for individual projects. The assessment in this PEIS is intentionally qualitative because local environmental and project-specific conditions will affect noise production. Cumulative effects from multiple projects were considered in Section 3.5.6.3.3, and this information was carried forward in Section 3.5.6.5 during the assessment of Alternative C. Furthermore, the Proposed Action in this PEIS (Alternative C) analyzes the use of mitigation measures, which would not allow unmitigated pile driving.</p>

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BOEM-2024-0001-0326-0001	There has not been enough study on the impacts on the marine life that the windmills will cause. We are already seeing a large increase in mammal fatalities. Directly coinciding with sonar mapping of the ocean floor.	Offshore wind turbines have been in operation and have been the topic of many biological studies in Europe since the 1990s, and approximately 116 offshore wind farms operate in 12 European countries (more outside of Europe). Therefore, while this may be a newer industry in the United States, it is not one that is unstudied or that has unknown impacts. In regard to the marine mammal mortalities, there is no causal connection between recent offshore wind development and large whale mortality, and such an assumption is contrary to the scientific consensus. The overwhelming scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities.
BOEM-2024-0001-0328-0001	Please stop the development of wind farms- there needs to be unbiased studies of the whale's navigating system within their inner ear and the effects of sonar exploration and pile driving.	Thank you for your comment. Substantial scientific data exist for offshore wind development that allow assessment of impacts. All available information regarding potential impacts from offshore wind projects on marine mammals has been considered in this PEIS.
BOEM-2024-0001-0331-0004	the failure to coordinate and disclose results of other key environmental reviews e.g. the rulemaking proceeding under the Marine Mammal Protection Act and the overall level of obfuscation is unprecedented.	The results of all other environmental reviews of offshore wind projects conducted by BOEM (available to date) are published on its website, and all MMPA consultations conducted by NMFS for offshore wind projects available to date are available on its website. Additionally, NMFS is a cooperating agency for this PEIS and has reviewed/provided comments pertaining to its roles enforcing the MMPA and ESA. No specific NMFS ESA or MMPA consultations have been performed for this PEIS, given the programmatic nature of this evaluation, but coordination is ongoing with NMFS on a Programmatic Framework BA. Future

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		project-specific consultations will be conducted, and the results of those assessments will be similarly published as they are finalized.
BOEM-2024-0001-0331-0008	According to Scientists who participated in the National Academies of Sciences Engineering and Medicine examination of how constructing offshore wind farms in the Nantucket Shoals region southeast of Massachusetts could affect critically endangered North Atlantic right whales the concluded that there are knowledge gaps in understanding the impact of offshore wind.	Thank you for your comment. The NASEM (2023) report has been reviewed and incorporated into the PEIS to consider potential effects of offshore wind farms in this region.
BOEM-2024-0001-0331-0010	There are also a lot of knowledge gaps on the biology side including questions about what species of zooplankton are in the Nantucket Shoals region where they come from and what makes them aggregate into patches that are dense enough for right whales to eat. Right whale feeding in the Nantucket Shoals region isn't well understood so scientists need observations to determine which zooplankton types are targeted by right whales and where and when the whales feed." The PEIS is another example of BOEM's lack of relevant and rigorous scientific studies to use for the huge scope of these projects. The BOEM reports lack baseline data overall from offshore wind development from this region. There is a growing interest and evidence of how ocean sediments and marine mammals are useful to sequester carbon. However this has not been studied or assessed thoroughly yet and this proposed massive industrialization will cause more harm. The issue of Electromagnetic fields effects has not been scaled. There is a lack of rigorous and relevant research on pile driving impacts on marine mammals specifically baleen whales and the response of large whale species to extensive networks of wind turbines.	Thank you for your comment. Substantial scientific data exist for offshore wind development that allow assessment of impacts. All available information regarding potential impacts from offshore wind projects on marine mammals has been considered in this PEIS. The NASEM (2023) report information has been incorporated into the PEIS.
BOEM-2024-0001-0331-0019	The disturbance of marine life during the surveying construction and operation of the NY/NJ projects will be significant. The number of Level B Harassment Takes on the Atlantic Coast during the 2024-25 time period alone totals 249503 and the number of Level A Injury Takes during the 2024-25 time period totals 761. The total number of Level B takes of endangered species totals 920 and Level A Injury endangered species Takes total 9. This includes IHA Permits for 26 offshore projects from Massachusetts to South Carolina. The total	Authorized takes are based on modeling and are therefore likely proportional to but not the actual number of takes that <u>will</u> occur during activities. Authorized takes mean that the project may not exceed the number of takes authorized within the given time period of the issued permit. For example, from the published HRG survey PSO reports from multiple offshore wind development projects within the U.S. Atlantic Ocean, professional PSOs recorded 2,696 large whale detections; of these, only 68

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	number of Level B Harassment Takes for Atlantic Shores project permits alone will total 10998 during the time period including 35 takes for endangered species. (See Appendix A). The authorization of this cumulative level of takes is irresponsible and reckless.	(2.5%) were detections that met Level B exposure criteria (animal distance and source operations).
BOEM-2024-0001-0331-0023	PEIS Lacks Sufficient Information and Mitigation for Noise Impacts Noise impacts from pre-construction construction operations and maintenance and decommissioning will impact marine mammals and other marine life for entire life cycle of the projects in the 6 lease areas. Potential and unknown impacts include noise electromagnetic fields navigational safety changes to benthic and pelagic habitats behavioral changes in wildlife alternations to food webs invasive species concerns and pollution from increased vessel traffic heat and onshore and offshore infrastructure. We are attaching a Report and Congressional Testimony from Dr. Bob Stern of Save LBI as part of our comments to add to our public comment record (see Appendix B). Unless BOEM addresses the issues outlined in his report EIS will be inaccurate and misleading. There is a lack of basic research of the impacts of OSW energy development on large whale species in U.S. waters particularly in the mid-Atlantic region. It is reckless to move forward without the scientific baseline assessments for what harm may or could occur to whales before issuing any permits and authorizations including IHAs ITRs and associated LOAs including the failure to include crucial scientific assessments and consultations as follows:	Thank you for your comment. Substantial scientific data exist for offshore wind development that allow assessment of impacts. All available information regarding potential impacts from offshore wind projects on marine mammals has been considered in this PEIS. Additionally, given the programmatic nature of this assessment, BOEM expects project-specific analyses of noise and other effects will be conducted during future project NEPA stages, which will further address specific, quantitative effects from offshore wind development of these projects.
BOEM-2024-0001-0331-0024	In a May 2022 letter obtained under the Freedom of Information Act by Bloomberg Law Dr. Sean Hayes PhD Chief of Protected Species NOAA NEFSC clearly documents and confirms the NARW's fragile hold on existence. First the Chief of Protected Species notes that there are less than 350 remaining NARW animals. (Letter from Sean A. Hayes PhD Chief of Protected Species NOAA NEFSC to Brian R. Hooker Lead Biologist Bureau of Ocean Energy Management Office of Renewable Energy Programs dated May 13 2022.) Again we note the Draft North Atlantic Right Whale and Offshore Wind Strategy states that not one animal can be lost. In regard to the development phases of offshore wind Dr. Hayes states in his letter: "The development of offshore wind poses risks to these species which is	Thank you for your comment. The information contained in the Hayes (2022) letter has been included in this PEIS, and all consideration of effects is based on the best available science to date. Effects on the NARW population being driven by non-offshore wind-related activities (e.g., non-offshore wind vessel traffic, fisheries interactions) are outside the scope of this PEIS. These stressors are discussed in the PEIS as baseline information for comparison to the Proposed Action.

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	<p>magnified in southern New England waters due to species abundance and distribution. These risks occur at varying stages including construction and development and include increased noise vessel traffic habitat modifications water withdrawals associated with certain sub-stations and resultant impingement/entrainment of zooplankton changes in fishing effort and related potential increased entanglement risk and oceanographic changes that may disrupt the distribution abundance and availability of typical right whale food (e.g. Dorrell et al 2022)." It is clear that any further disturbance of the NARW species will have an impact on this critically endangered species. Some scientists estimate that the species will go extinct within 20 years with current threats. (Pennisi Elizabeth. "The North Atlantic right whale faces extinction." Science November 7 2017 <a href="https://www.science.org/content/article/north-atlantic-right-whale-faces-extinction">https://www.science.org/content/article/north-atlantic-right-whale-faces-extinction</a>.</p>	
BOEM-2024-0001-0331-0026	<p>According to statistical analysis and independent research by Apostolos Gerasoulis Professor of Computer Science at Rutgers University the construction of wind turbines in the New York Bight poses a significant threat to the marine ecosystem particularly affecting numerous whale and fish species that frequent this area as reported by Gotham Whales. This includes several endangered species highlighting the critical nature of the threat. The use of sonar for seabed mapping in the region generates noise levels up to 226 decibels at the source falling into the low- frequency range (LFI) which is within the hearing range of many whale and dolphin species. Analysis of NOAA data reveals a stronger correlation between the recent surge in whale mortalities and sonar mapping activities than with cargo ship traffic challenging the notion that increased ship traffic is the primary cause of these deaths. According to Gerasoulis statistical evidence further supports this argument. From 2020 to 2021 despite an 18.46% increase in ship traffic whale deaths astonishingly fell by 92.31%. The following year saw a 25.15% rise in ship traffic yet whale deaths still decreased by 53.85%. However a pivotal shift occurred from 2022 to 2023; ship traffic declined by 18.56% but whale deaths skyrocketed by 216.67%. This period coincides with a fourfold increase in surveying activities</p>	<p>Most sonar used for HRG surveys is actually outside the low-frequency hearing group range (see Ruppel et al. 2022). There is no causal connection between recent offshore wind development and large whale mortality, and such an assumption is contrary to the scientific consensus. The overwhelming scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). The NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities.</p>

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	related to wind farm development leading to an alarming spike in whale fatalities in the New York/New Jersey area. Specifically 21 humpback whales perished which according to Gotham Whales' August 2022 count of 280 humpbacks in the region represents a significant loss of 7.5% of the population. Moreover NOAA's estimation that only one-third of whale deaths are detected suggests the actual impact could be even more devastating.	
BOEM-2024-0001-0331-0027	We agree with Dr. Gerasoulis' belief that these findings starkly contradict the argument that increased ship traffic is to blame for the rise in whale deaths. Instead they implicate the intensification of surveying traffic linked to wind farm development as a significant factor. Given that a substantial 7.5% of the humpback whale population in this region was lost in a single year and considering NOAA's admission that we may only be observing a fraction of the true number of fatalities it's clear that the environmental implications of proceeding with wind turbine construction in this sensitive area are profound. This data mandates immediate comprehensive research and a cautious approach by both the Bureau of Ocean Energy Management (BOEM) and NOAA before any further development is considered. SEE ORIGINAL COMMENT FOR GRAPH: Humpback Whale Deaths per Year in Polygon includes NYNJRI new	The scientific community has determined that large whale mortality is primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales).
BOEM-2024-0001-0331-0045	I would like to focus on just one topic noise to whales and to we humans from these wind energy activities. The whales rely on noise for everything including communication. navigation sensing danger and finding food. If loud enough a noise can directly damage the whale's hearing at lower levels it disturbs their behavior. Disturbance may not sound so bad but it too can lead indirectly to serious harm and fatality for example through separation of a mother and calf because their communications are overridden or by a whale surfacing to lessen the noise while losing its ability to detect and avoid oncoming ships. Since December there have been nine whale strandings on the New Jersey coast. This is very unusual given that the annual average is seven. Of the nine four have been identified as possibly due to vessel strike and noise may be a contributing factor there with the remaining causes so far unresolved. The only recent	There is no causal connection between recent offshore wind development and large whale mortality, and such an assumption is contrary to the scientific consensus. The overwhelming scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities.

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	<p>difference offshore that we are aware of are the multiple wind energy vessels using high intensity noise devices to characterize the seabed. We commented a year ago to the National Marine Fisheries Service that the noise source number they were using for the strongest device was too low and the noise dissipation assumed too high and therefore the affected distance was significantly underestimated. With proper assumptions as shown in Table 1 the elevated noise from that device extends quite far and could affect a significant number of animals. Given the vessel presence and the noise levels there is ample reason to suspect that the surveys are a plausible cause of the recent deaths. At a minimum a thorough objective transparent investigation is warranted- that is not asking for much. Unfortunately the vessel surveys are just the beginning of the noise problems the whales will face. The noise from pile driving 49-foot diameter steel foundations into the seabed will be intense and require many strikes over a period of several years. Here again we find an underestimation of impacts as shown in Table 2. In our view the worst noise problem of all will come from the operation of the much larger turbines proposed today. We hired a respected acoustics engineering company to assess the noise levels generated from the full wind project proposed off LBI. Based on their results in Figure 1 the noise levels that baleen whales would avoid extend at least 93 miles from shore. With the critically endangered North Atlantic right whale migrating historically within 86 miles this project could potentially block its migration and seal its fate. This operational noise problem is not being addressed by the agencies and that is one reason why we sent a detailed letter to President Biden asking for his personal intervention (Attachment).</p>	
BOEM-2024-0001-0331-0047	<p>So where do we go from here? We recommend creation of a Science Board within NOAA with sufficient authority to initially conduct a thorough vessel survey investigation and then to establish protocols for government-wide use in predicting marine animal impact from noise. Beyond that this program cries out for some common-sense turbine siting criteria e.g. a turbine exclusion zone from shore and excluding turbines from primary whale migration corridors.</p>	<p>Thank you for your comment. BOEM will take your comment into consideration as it administers its program.</p>

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BOEM-2024-0001-0334-0004	<p>We cannot simply accept at face value that you are operating truthfully about the effects of sonar on marine mammals. The increase in ocean mammal deaths is now commonly understood to result from the aftermath of exposure to sonar and other sonic surveying. Expect that the assertion that "there is no evidence that sonar is killing the whales and dolphins" (much like the tobacco industry's "there's no evidence that cigarette smoking causes cancer") will have to pivot to proving to the public that the dead mammals found have no issues in their navigational tissues. Further evidence is emerging every week with more compelling correlations between whale deaths and recent sonar boat activity. If the evidence mounts sufficiently to sway a (fair) court of law you might expect to be instructed to rescind your take authorizations and the ability to grant any further ones will end. It is not lost on me and many others that take authorizations are legal for U.S. companies only yet foreign companies are using a thin veil of U.S. shell companies to skirt this and that is. SEE ORIGINAL COMMENT FOR GRAPH: Whale Deaths/Offshore Wind Survey Vessels NJ/NY</p>	<p>There is no causal connection between recent offshore wind development and large whale mortality, and such an assumption is contrary to the scientific consensus. The overwhelming scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities.</p>
BOEM-2024-0001-0345-0015	<p>Whale Death Analysis</p> <p>There has been a great deal of misconception around the impact offshore wind will have on whales and other marine mammals. This myth was raised frequently during the public comment period for this PEIS. CCE thanks BOEM as well as NOAA for their proactive approach in putting out public factsheets and up-to-date information explaining that the increase in whale strandings and fatalities is not linked to offshore wind activity. However the misconception still remains that wind surveys are responsible for whale mortality events and that the "authorized takes" allowed by offshore wind companies could be killing whales. It would be helpful for the final PEIS and for the individual projects' DEIS moving forward to better clarify the difference between a "Level A" and "Level B" take and what direct impacts including nuisance impacts are actually being authorized to occur during construction and operation of these turbines.</p> <p>[Underline: CCE also recommends BOEM include more detailed information on not only the ongoing rigorous studies and data being collected to minimize impacts to whales to the greatest extent</p>	<p>Thank you for your comment. BOEM agrees with all points made about the misconceptions regarding offshore wind activities and the whale strandings and appreciates your feedback. Regarding the comment about including this as a discussion in future NEPA documents, BOEM will take this into consideration as it administers its program. Due to the programmatic nature of this assessment, MMPA consultation will not be conducted. However, MMPA consultations are expected for the individual projects included in this PEIS, and BOEM will consider including clarification of Level A and Level B impacts in future NEPA documents. Individual project MMPA authorizations will have PSO reports on the NMFS MMPA authorization website for each project.</p>

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	<p>possible and but also to include data on what is actually causing the unusual mortality events. In the absence of facts myths spread.] It is important to note that the increase in whale mortality events started in 2016 far before any offshore wind development was occurring off our shores. That in fact there is no evidence that offshore wind is a contributing factor to any of these strandings or deaths. Necropsies have been performed on approximately half of the 181 whales that died through February 2023. The results showed that 40% had evidence of either entanglement in fishing gear or a ship strike. This is consistent with studies across the country and the globe which identify ship strikes and fishing gear as the greatest human threats to these species. Since the Covid pandemic there is a 35% increase in the volume of shipping to NY and NJ ports since 2019. Furthermore approximately 40% of these cargo ships are carrying oil an impact that could be offset by reliance on local renewable energy like offshore wind. In addition marine mammal scientists have identified that not only do we have more whales in the New York Bight but they are staying in this region longer due to increased food supply. As offshore wind projects move forward offshore wind companies are conducting regular survey work. Each offshore wind vessel is mandated to have an independent protected species observer (PSO) onboard who collects valuable data about marine mammal activity in the survey area. The information from offshore wind surveys and PSOs should be collected by BOEM and made publicly available on a regular basis to aid other vessels and commercial fishing operations in avoiding areas with whale sightings. [Underline: The positive impacts of reducing our reliance on oil cargo ships and the potential benefits of the in-depth whale monitoring data collected by the offshore wind companies should be considered by BOEM in the PEIS.] Thank you for your consideration of our comments.</p>	
BOEM-2024-0001-0350-0001	<p>The greatest concern is that the combined excessive noise created by these six projects will severely harm whales and other protected species. This is especially true for the incredibly loud clangor made from driving the monstrous monopiles that hold up the enormous wind turbines into the waterbody's floor. Construction of all six</p>	<p>The discussions in the PEIS are based on the best available science to date. The PEIS serves as a relevant review of the existing knowledge for future wind development projects and scientific researchers to consider. Additionally, project and site-specific noise exposure modeling will be conducted during the COP-level NEPA stage for these projects. The assessment in this</p>

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	projects may occur simultaneously further exacerbating the cacophony.	PEIS is intentionally qualitative because local environmental and project-specific conditions will affect noise production. Cumulative effects from multiple projects were considered in Section 3.5.6.3.3, and this information was carried forward in Section 3.5.6.5 during the assessment of Alternative C.
BOEM-2024-0001-0350-0003	On this matter the PEIS is absolutely absurd. It is structured like a project environmental impact statement (EIS) so the pile-driving impacts are supposedly addressed in a technical appendix on "acoustics;" in this case it is "Appendix J: Introduction to Sound and Acoustic Assessment." The operative word in the appendix title is "Introduction" as it is basically an academic treatise. In fact it starts off by explaining at length how underwater sound is measured. We do finally get to the Bight but that is about as far as the discussion goes. What we find instead is a regurgitation of an academic paper that bears no resemblance to the six projects this assessment is supposed to be addressing To begin with the draft uses just two theoretical sites with a mere 60 turbines each for a total of 120 turbines. BOEM says these six real sites are expected to develop up to 7000 MW of generating capacity and recent site designs use 13 MW turbines which would require approximately 540 turbines or almost five times as many as discussed in the draft. Furthermore the PEIS study uses noise levels from small 6 MW turbines. At that size we are discussing a sum closer to 1200 turbines or roughly ten times as many as are considered. The potential impact of 120 turbines is clearly not helpful in assessing 1200. To make matters worse the pile driving noise level referenced in the study is for driving a roughly 20-foot diameter pile which is very small by present and future standards. Today's 13 to 15 MW turbines use piles closer to 40 feet in diameter. Moreover gigantic 20 MW turbines have just been introduced which might take 60-foot diameter piles. The noise level is based on the energy of the pile-driving hammer and bigger piles require a greater amount of energy to drive so there is a significantly greater amount of noise realistically that what is accounted for in the draft.. One wonders why BOEM did not measure the noise from the much bigger piles that were being driven back in July just off Rhode Island? The answer seems to be that BOEM did not want to put any	The discussions in the PEIS are based on the best available science to date. The PEIS serves as a relevant review of the existing knowledge for future wind development projects and scientific researchers to consider. The PEIS does not assess impacts from individual projects, which will be analyzed in their own COP-level NEPA analysis and tier off this analysis. Additionally, project and site-specific noise exposure modeling will be conducted during the COP-level NEPA stage for these projects. The assessment in this PEIS is intentionally qualitative because local environmental and project-specific conditions will affect noise production. Cumulative effects from multiple projects were considered in Section 3.5.6.3.3, and this information was carried forward in Section 3.5.6.5 during the assessment of Alternative C. Additionally, the two offshore wind projects that were recently installed or are being installed offshore Rhode Island and Massachusetts did include acoustic measurements of pile driving noise. However, given the timing of these activities, the reports are not yet available for incorporation into this PEIS. BOEM will incorporate this information into future reports when available.

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	serious work into this PEIS. In short the academic acoustic case considered in the PEIS tells us absolutely nothing about the potentially immense noise impact of the six projects supposedly being assessed. There is quite literally no environmental impact assessment here. This vacuum seems to hold for virtually the entire PEIS with no real assessment of the six projects. There is certainly nothing of substance on noise. As environmental impact statements go this one is essentially useless.	
BOEM-2024-0001-0354-0015	POINT VI The approval of the within NY Bight Industrial Wind Turbine Project without independent peer reviewed scientific research on the negative impacts upon marine mammals and in particular the North American Right Whale is violative of the Endangered Species Act and NEPA.	Thank you for your comment. The discussions in the PEIS are based on the best available science to date.
BOEM-2024-0001-0354-0016	An even more appalling aspect of the within proposal can be seen in the lack of scientific method and any good faith attempt at a complex economic evaluation to be applied to the critically threatened North American Right Whales. This species is in dire jeopardy due to this specific proposal and the threat of pollution generating windfarms proposed to be constructed directly in the right Whales' primary and sole migratory waterways off the New Jersey Coast. With approximately three hundred fifty (350) North Atlantic Right Whales left in the entire world the DEIS barely touches the surface as to the potentially devastating if not terminating impact of this vast industrial project itself and numerous ongoing adverse impacts presented. From a noise perspective pollution generating standpoint and otherwise the construction operation and totally ignored dismantling and decommissioning process of the gigantic wind turbines themselves has insufficiently been addressed. Moreover the Draft Environmental Statement does not recognize the legal and moral standing of such an invaluable threatened species whose inspirational value beauty and potential worth as to biodiversity for our planet and to life itself cannot be overstated. How outrageous is it that this entire species of the North Atlantic Right Whales in all likelihood is being condemned to extinction by this juggernaut of industrial windfarm construction in this treasured creature's only habitat and migratory living pathways. What	Thank you for your comment. Substantial scientific data exist for offshore wind development that allow assessment of impacts. All available information regarding potential impacts from offshore wind projects on marine mammals has been considered in this PEIS. However, an economic evaluation of NARW is outside the scope of this PEIS.

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	arrogance and true ignorance of science has been presented!. What is the value of this species now being wiped off the face of the earth?	
BOEM-2024-0001-0355-0001	With the proposed OSW projects I see a whole list of negatives and no positives at all. The list of negatives include: Marine/Mammal Deaths the evidence exists that there IS a correlation with survey vessels driving pilings with whale deaths and other mammals and disruption of the ecosystem. The marine life and ecosystem in our oceans will undergo significant transformations potentially leading to the extinction of some marine mammals. (BOEM reference material on Marine Life )	There is no evidence of death or serious injury from offshore wind preconstruction surveys or from offshore wind pile driving or offshore wind vessel strike. The greatest transformational threat to the marine ecosystem is climate change. There is no causal connection between recent offshore wind development and large whale mortality, and such an assumption is contrary to the scientific consensus. The overwhelming scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities.
BOEM-2024-0001-0355-0023	With the proposed OSW projects I see a whole list of negatives and no positives at all. The list of negatives include: - Marine/Mammal Deaths the evidence exists that there IS a correlation with survey vessels driving pilings with whale deaths and other mammals and disruption of the ecosystem. The marine life and ecosystem in our oceans will undergo significant transformations potentially leading to the extinction of some marine mammals. (BOEM reference material on Marine Life )	Duplicate comment. Refer to response to comment BOEM-2024-0001-0355-0001.
BOEM-2024-0001-0355-0051	From the BOEMRE-2011-09 report: "Many fundamental questions about sensory system mechanisms and life functions supported by these senses [ <b>have not been resolved.</b> ]" Just a small fraction of marine species have been directly studied for magnetic or electric senses." I also want to call your attention to the attached article. This is just one of many of the RISKS of these HIGH VOLTAGE underground cables. Again [ <b>more time and studies are needed before you can approve these permits</b> ]. There are SO MANY	The discussions in the PEIS are based on the best available science to date. Available data suggest marine mammals are minimally magneto-sensitive and, as discussed in the PEIS, impacts would be limited to effects on prey. However, the inherent cable protections built into subsea cables are expected to mitigate EMFs produced, and additional mitigation measures considered under Alternative C would further reduce the risk of

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	UNANSWERED questions actually more questions than answers. This must not be approved until more information is available and the DEP can make an informed confident decision. For your reference this is one of many instances where BOEM supplies no evidence despite the data that is there and make empty non-validated claims. There is clear data to support the opposite of what they say. See Evidence Video.	effects from the expected development in the NY Bight lease areas.
BOEM-2024-0001-0356-0002	The first of which is the outdated permissible decibel level used by NOAA for Incidental Takes. Recent Congressional testimony by Rand Accoustics showed that the geotechnical survey levels are actually in certain cases 16 decibels louder than what is permitted. With this updated independent information the NOAA proxy numbers used in this EIS are incorrect and need to be re-addressed at the very least. Researchers have repeatedly brought this information before BOEM and NOAA many times and both BOEM and NOAA refuse to acknowledge that the original decibel levels are far from correct. See the attached document referenced from Rand Accoustics.	The methods used to estimate acoustic ranges and the regulatory thresholds used to assess effects are considered the best available science and are used consistently and correctly in the permitting literature.
BOEM-2024-0001-0357-0001	The six New York Bight areas are shown in Exhibit 1 along with the nearby New Jersey wind energy area. Wind energy development off the New Jersey coast is unique with regard to all other US projects because it proposes development both close to shore and farther from shore in fact impacting the entire 50-mile-wide historic migration corridor of the critically endangered North Atlantic right whale.	Thank you for your comments. The discussions in the PEIS are based on the best available science to date regarding existing environmental conditions and marine mammal distribution, such that effects from projects in this region are sufficiently covered in the PEIS.
BOEM-2024-0001-0357-0005	Need to Consider Full Real Area Impact for Project Decisions in the NJ/NY Area. Off the New Jersey coast the BOEM uniquely proposes energy projects both close to shore and farther out. As presented below there are many environmental impacts from those projects that have significant cumulative effects on the offshore New Jersey and New York Bight areas. Neither this draft program EIS or any project specific EIS provides a cumulative impact analysis of turbine operation from all these projects on the whale. Such an assessment of the impact of concurrent turbine operation from all projects on the migration of the North Atlantic right whale (NARW) is provided here in Enclosure II. It can be seen that concurrent turbine operation of the projects in the New Jersey area and the New York Bight areas	Thank you for your comments. The discussions in the PEIS are based on the best available science to date regarding existing environmental conditions and marine mammal distribution, such that effects from projects in this region are sufficiently covered in the PEIS.

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	leaves no viable path for the North Atlantic right whale to migrate. Therefore with respect to AMMM measures this program EIS or a project-specific EIS should include alternatives among projects and options within projects such as lesser turbine powers greater spacing the use of direct drive versus gearbox turbines turbine exclusions zones in the lease areas away from the whale's migratory paths and other initiatives to allow for migration of the whale (see Enclosure I).	
BOEM-2024-0001-0357-0010	Neither this draft program EIS or any project specific EIS presents a cumulative assessment of the marine mammal takes from concurrent project vessel surveys using high intensity noise devices to characterize the seabed. Such vessel surveys have been implicated in spikes of recent whale deaths along the New Jersey and New York coasts. But no AMMM measures are provided to address this problem such as reducing vessel survey areas and establishing a cooperative data sharing program to minimize the number of vessels needed and this sounds like you're not seeing. (see Enclosure VII).	Cumulative impacts for marine mammals of the proposed alternatives are assessed in Sections 3.5.6.5.2 and 3.5.6.5.4 of the PEIS. AMMM measures in the PEIS may be applied to all projects within the six NY Bight lease areas. However, these measures do not reflect additional measures that could be required for each individual project, or potential measures developed for future data sharing opportunities.
BOEM-2024-0001-0357-0015	To the NARW: Once BOEM does that it would find for example with the respect to the cumulative impacts of [Bold: operational] turbine noise on the migration of the North Atlantic right whale as presented in Enclosure II that one critical avoidance measure is to choose between close in and farther out projects. Wind projects in both the close-in Atlantic Shores lease area and the farther out NY Bight areas leave no path for the right whale to migrate past New Jersey dooming it. The BOEM must chose one it cannot have both. Once it reaches that inescapable conclusion the choice should among projects should be obvious.	Thank you for your comment. BOEM will take your comment into consideration as it administers its program. This PEIS does not approve or disapprove any projects; that will occur at the project-specific COP-level NEPA analysis level. However, the discussions in the PEIS are based on the best available science to date. The potential acoustic impacts on marine mammals from operational turbine noise and potential behavioral disturbances from the presence of structures are discussed in detail in Section 3.5.6.3.3. Results of this assessment concluded that migratory pathways may be altered but would not be fully blocked for any marine mammal species.
BOEM-2024-0001-0357-0016	With the close-in Atlantic Shores project we have the blocking off an historic primary 12-mile- wide migration corridor of the right whale adjacent to that project area. Farther out we would still have obstruction of the whales migration from those areas as well.	Thank you for your comment. BOEM will take your comment into consideration as it administers its program. This PEIS does not approve or disapprove any projects; that will occur during the project-specific COP-level NEPA analysis.
BOEM-2024-0001-0357-0021	So if an offshore wind energy program proceeds that choice to protect the right whale should be obvious. The Atlantic Shores project must be terminated to preserve the New Jersey shore experience and leave a path for the right whale to migrate.	Thank you for your comment. BOEM will take your comment into consideration as it administers its program. This comment is addressing Atlantic Shores not the NY Bight. The NY Bight PEIS does not approve or disapprove any projects; that will occur during the project-specific COP-level NEPA analysis.

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BOEM-2024-0001-0357-0034	Within the above framework the following AMMM measures should be considered in the EIS: With the respect to the cumulative impacts of construction [Bold: and operational] noise on the migration of the North Atlantic right whale discussed in Enclosure II: 1. One critical avoidance measure is to choose between close in and farther out projects. Wind projects in both the close-in Atlantic Shores lease area and the farther out NY Bight areas leave no path for the right whale to migrate past New Jersey the federal agency must chose one it cannot have both. Once it reaches that inescapable conclusion the choice should be obvious.	Thank you for your comment. BOEM will take your comment into consideration as it administers its program. This PEIS does not approve or disapprove any projects; that will occur during the project-specific COP-level NEPA analysis.
BOEM-2024-0001-0357-0036	With the close-in Atlantic Shores project we have the blocking off an historic primary 12-mile- wide migration corridor of the right whale adjacent to that project area. Farther out we would still have obstruction of the whales migration from those areas as well.	Thank you for your comment. BOEM will take your comment into consideration as it administers its program. This PEIS does not approve or disapprove any projects; that will occur during the project-specific COP-level NEPA analysis.
BOEM-2024-0001-0357-0049	Effect on Whales & other Marine Mammals. Compounding this problem the synergistic impact of the vessel traffic change and the operational noise impact from the larger turbines will have a significant impact on the migration of the North Atlantic right whale and other marine mammals. As discussed in Enclosure the strip between the Atlantic Shores lease area and the Hudson South area has been a primary migration corridor for the North Atlantic right whale. That same strip has been proposed by the U. S Coast Guard as a deep. deep draft vessel corridor. Also as shown in Enclosure II the noise levels in that corridor from turbine operation will be above that that will disrupt the whale's migration and disturb and disorient any whale attempting to migrate through it. Worsening the situation further are experimental results showing that one reaction of the right whale to such noise is to surface to lessen the noise which would make it more susceptible to strike from those deep draft and other vessels in the corridor. Therefore the synergistic effect of the concentrated vessel traffic and whale migration in the same narrow corridor the disorienting effect on the whale from turbine operational noise and the tendency of whales to surface to avoid that noise could have a devastating effect on marine mammals off the coast of New Jersey. The BOEM the Coast Guard	Thank you for your comment. BOEM will take your comment into consideration as it administers its program. This PEIS does not approve or disapprove any projects; that will occur during the project-specific COP-level NEPA analysis. However, the discussions in the PEIS are based on the best available science to date. The potential acoustic impacts on marine mammals from operational turbine noise and potential behavioral disturbances from the presence of structures are discussed in detail in Section 3.5.6.3.3. Results of this assessment concluded that migratory pathways may be altered but would not be blocked for any marine mammal species.

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	and NOAA should immediately convene to assess that synergistic affect and at a minimum provide analysis of it in this NY Bight EIS.	
BOEM-2024-0001-0357-0058	The cumulative impact of the vessel surveys it's not just a matter of adding the take estimates from each survey. It needs to correct the NMFS practice of using unsupported low noise source levels from a surrogate device rather than higher levels from measurements of the devices being used. It needs to correct the NMFS practice of using the 20 dB loss factor for spherical spreading beyond the range where such optimistic spreading occurs. The combined impact of those significantly reduces the actual distance where noise above 160 dB exists from one and a half miles using proper assumptions to 0.1 miles using the erroneous ones. With proper source levels and transmission losses it can be shown that there are numerous scenarios for example a survey vessel traveling parallel to and overtaking a whale where the threshold for permanent hearing loss will be exceeded and many other cases where the threshold for temporary hearing threshold loss will be exceeded. The cumulative impact analysis should address those scenarios and visibly show its modeling assumptions not relegate them to an opaque computer model on it was survey table to learn from group that time by a number of another name are: well these days or more users will block or use a know where the need for new hires or am	Based on the scientific literature (e.g., Ruppel et al. 2022) the 20 log (i.e. not 20 dB) transmission loss coefficient is the correct spreading loss to use for calculations. Several in situ field measurements support this transmission loss coefficient for HRG surveys.
BOEM-2024-0001-0357-0063	The agencies provide no specific noise source attenuation system that would achieve this reduction. Nor do they provide technical justification for the assumed 10 dB attenuation upon which they relies heavily for certain calculations and conclusions. Without that specific proposal and justification the assumption appears to be arbitrary and designed to artificially keep the level A take number from direct injury according to the current calculations below the biological removal rate for the right whale. Regarding source attenuation it should be noted first that the use of bubble curtains or other systems that are placed immediately around the pile are inherently limited because they cannot attenuate ground-borne re-radiated sound. Therefore appreciable attenuation is not achieved for the sound that resonates through the ground into the far field. More of the sound emitted during impact pile driving resonates from	Thank you for the comment. Noise attenuation technology continues to evolve, and there are many options available today, either a single solution or a combination of solutions, that can reach 10 dB or more of noise attenuation from the unmitigated case (Bellmann et al. 2020). Examples of the growing number of noise attenuation solutions include the IHC-Noise Mitigation Screen, OffNoise Solutions GmbH's Hydro-Sound Damper, the big bubble curtain or double bubble curtains (available from several suppliers), and the Grout Annulus Bubble Curtain. In addition, there are alternative hammer designs (e.g., IQIP-Pulse and Menck Noise Reduction Unit) that can be used to reduce the noise associated with impact pile driving over traditional methods. As the commenter points out, near-field resonate systems can be tuned to target the

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	<p>the ground than through the water column (Caltrans. 2015. Technical guidance for assessment and mitigation of the hydro acoustic effects of pile driving on fish State of California Department of Transportation Sacramento California) and such sound is also of lower frequency impacting LFC's such as the right whale. In the NMFS proposed rule under the MMPA the Level A take number for the right whale shown in Table 24 of less than one is critically dependent on the January through April exclusion timeframe (should also include December) and the assumed 10 dB attenuation of the pile driving noise source. However regarding the assumed attenuation at the source there is only a general reference to the use of bubble curtains in Section 11.2.12 with no specifics as to how it will be achieved in practice. That section also refers to prior measurements of noise attenuation systems that are reasonably expected to achieve greater than a 10 dB broadband attenuation. However there is no reference provided for those measurements and that assurance and it is unlikely that any prior measurements would be relevant to these new large diameter monopiles and jacket foundations. The discussion of sound attenuation methods in the rule's Appendix B Section 2.4 also does not inspire confidence regarding achieving a 10 dB attenuation. It does mention the difficulties encountered with needing larger bubbles for lower frequencies as discussed further below. According to the references provided the single bubble systems appear limited to piles less than 8 meters in diameter even though these piles could be as large as 15 meters. The Bellman reference states that noise attenuation systems for jacket foundations are limited yet the Tables in the project's MMPA Application include 10 dB and higher attenuations for construction schedule 2 involving jacket foundations. The references indicate that for monopile foundations double bubble curtains or other auxiliary systems will be necessary but it's not clear that those will be successful for these diameters. In short much of the discussion is not relevant to the large diameter monopile foundations here or the jacket foundations. There is no specific proposal made that would be expected to achieve a 10 dB attenuation in the context of this project.</p>	<p>reduction of sound at specific frequencies. This is an active field of research, and the technology is continually evolving. The commenter is referred to the Bellmann et al. 2020 technical report entitled, "Underwater noise during percussive pile driving: influencing factors on pile-driving noise and technical possibilities to comply with noise mitigation values" for details on the proven effectiveness of these systems alone or in combination with other systems.</p>

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BOEM-2024-0001-0357-0064	<p>Absent evidence to the contrary assumptions regarding broadband noise attenuation from air bubble curtains should be less than 5 dB as recommended in Buehler 2015 titled Technical Guidance for Assessment and Mitigation of the Hydro acoustic effects of Pile Driving on Fish (see page 410). On page 218 Buehler (2015) cites actual project results of 0 to 5 dB of attenuation. Measured noise levels in the report titled Underwater Sound Levels associated with Driving Steel Piles at the Vashon Ferry Terminal Laughlin April 2010 show in Table 2 the effect of bubbles on root mean square (rms) noise values to be 1 dB. The report titled Underwater Reduction of Marine Pile Driving using a Double Pile Reinhall December 2015 shows a maximum 5.5 dB reduction in rms levels for a bubble curtain. The Caltrans 2015 study cited above has also stated that even in the near field an assumed source level reduction should be limited to 5 dB because of the uncertainties associated with the degree of attenuation that would be provided by a bubble curtain. Thus achieving a 10 dB reduction would require an auxiliary system such as a double wall pile. However as discussed below even that would not address the problem of achieving reductions at the lower frequencies relevant to the right whale's hearing range. We have seen no written enforceable commitment from the Atlantic Shores management to achieve a 10 dB broadband attenuation. Also as shown below there are significant technical problems in achieving such a large attenuation for the lower whale-hearing frequencies needed to protect right whales. In addition since noise source levels are not presented there is no way of measuring the noise level and verifying that a 10 dB attenuation is achieved in practice. Therefore the BOEM and the NMFS should not assume more than a 5 dB broadband attenuation. With that even using the questionable small exposure ranges and takes estimates criticized in Save LBI's comments on the proposed rule the rule document admits that the project would cause Level A noise takes of the right whale absent mitigation. But as discussed below even that 5 dB is not applicable to the lower frequency situations involving the right whale and other LFC's.</p>	<p>Thank you for the comment. A section introducing some of the noise attenuation technologies has been added to the acoustic appendix for the final PEIS.</p> <p>Noise attenuation technology continues to evolve, and there are many options available today, either a single solution or a combination of solutions, that can reach 10 dB or more of noise attenuation from the unmitigated case (Bellmann et al. 2020). Examples of the growing number of noise attenuation solutions include the IHC-Noise Mitigation Screen, OffNoise Solutions GmbH's Hydro-Sound Damper, the big bubble curtain or double bubble curtains (available from several suppliers), and the Grout Annulus Bubble Curtain. In addition, there are alternative hammer designs (e.g., IQIP-Pulse and Menck Noise Reduction Unit) that can be used to reduce the noise associated with impact pile driving over traditional methods.</p> <p>The commenter is referred to the Bellmann et al. 2020 technical report entitled, "Underwater noise during percussive pile driving: influencing factors on pile-driving noise and technical possibilities to comply with noise mitigation values" for details on the proven effectiveness of these systems alone or in combination with other systems.</p>

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BOEM-2024-0001-0357-0065	<p>Noise Source- Low Frequency Attenuation.</p> <p>Regarding pile driving the proposed MMPA rule project Application and the NMFS Biological Opinion are incomplete and flawed because they do not address attenuation in the most relevant frequency range for the right whale and other LFC's. In that regard it is not broadband attenuation that is critical here but attenuation of noise levels in the frequency range less than 1000 Hertz as this is the range that overlaps right whale hearing. Attenuating the sound at lower frequencies requires larger bubbles; and practical problems have been raised regarding the control of bubble size distribution and the production of a sufficient number of large bubbles (several centimeters) that are necessary to achieve efficacy at low frequencies (see Measurements of Construction Noise during Pile Driving of Offshore Research Platforms and Wind Farms Rainier Matuschek and Klaus Betke NAG/DAGA 2009 Rotterdam). More specifically in the study titled Underwater Noise Emission Due to Offshore Pile Installation: A Review Article in Energies June 2020 DOI: 10.3390/en13123037 by Tsouvalas of Delft University of Technology it was stated that "For piles with diameters larger than 6 meters that are used as foundation piles of offshore wind turbines the acoustic energy is radiated at frequencies between 100 and 400 Hz (Section 4.3). At such low frequencies the desired bubble radii to stimulate resonance range between 8 mm and 32 mm near the surface are between 14 mm (1.4 cm) and 50 mm (5 cm) at a water depth of 30 meters. The creation of bubbles of such large radii is rather difficult especially in the harsh offshore environment. Thus despite the role that resonance phenomena may play in sound absorption the wave reflection caused by the impedance mismatch between the seawater and the air bubble curtain seems to be the single most significant mechanism leading to noise reduction". As discussed above achieving a 10 dB attenuation would require an additional auxiliary system such as a double walled pile. Such a system was employed and measured in the Vashon Ferry Terminal report cited above. However a frequency analysis of the noise reductions between the unmitigated piled driving and the double wall pile shows e.g. in Figures 9c and 11a very little noise attenuation</p>	<p>Thank you for the comment.</p> <p>At the present time, there is no MMPA application for the PEIS. Noise attenuation technology continues to evolve, and there are many options available today, either a single solution or a combination of solutions, that can reach 10 dB or more of noise attenuation from the unmitigated case (Bellmann et al. 2020). Examples of the growing number of noise attenuation solutions include the IHC-Noise Mitigation Screen, OffNoise Solutions GmbH's Hydro-Sound Damper, the big bubble curtain or double bubble curtains (available from several suppliers), and the Grout Annulus Bubble Curtain. In addition, there are alternative hammer designs (e.g., IQIP-Pulse and Menck Noise Reduction Unit) that can be used to reduce the noise associated with impact pile driving over traditional methods. As the commenter points out, near-field resonate systems can be tuned to target the reduction of sound at specific frequencies. This is an active field of research and the technology is continually evolving.</p> <p>The commenter is referred to the Bellmann et al. 2020 technical report entitled, "Underwater noise during percussive pile driving: influencing factors on pile-driving noise and technical possibilities to comply with noise mitigation values" for details on the proven effectiveness of these systems alone or in combination with other systems.</p>

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	occurring below 1000 Hz in the right whale's primary hearing range and the addition of bubble curtains in Figure 11d does not change that. This was not unexpected because as discussed above much of that low frequency sound was re-radiated from the seabed and not affected by the double pile or the close to source bubble curtains. Therefore even such auxiliary systems will not provide significant attenuation in the low frequency range nor will bubble curtains.	
BOEM-2024-0001-0357-0066	[Bold: Consequently the BOEM and NMFS should assume no source attenuation in their calculations of exposure ranges and take estimates for the right whale and other low frequency cetaceans.] For higher hearing frequencies they should assume more realistic attenuation numbers less than 5 dB with technical justification for them. In light of all these noise attenuation limitations it would be irresponsible for the BOEM and the NMFS to simply accept the applicant's assurances that a 10 dB can or will be achieved and proceed based in large part on such a broad (frequency-wise) tenuous and unsupported assumption. [Bold: Many of the agency's positive conclusions have depended on that assumption. Therefore those conclusions in the project EIS's the MMPA rulemaking and the Biological Opinion need to be revisited.]	Thank you for the comment. A section introducing some of the noise attenuation technologies has been added to the acoustic appendix for the final PEIS. Noise attenuation technology continues to evolve, and there are many options available today, either a single solution or a combination of solutions, that can reach 10 dB or more of noise attenuation from the unmitigated case (Bellmann et al. 2020). Examples of the growing number of noise attenuation solutions include the IHC-Noise Mitigation Screen, OffNoise Solutions GmbH's Hydro-Sound Damper, the big bubble curtain or double bubble curtains (available from several suppliers), and the Grout Annulus Bubble Curtain. In addition, there are alternative hammer designs (e.g., IQIP-Pulse and Menck Noise Reduction Unit) that can be used to reduce the noise associated with impact pile driving over traditional methods. The commenter is referred to the Bellmann et al. 2020 technical report entitled, "Underwater noise during percussive pile driving: influencing factors on pile-driving noise and technical possibilities to comply with noise mitigation values" for details on the proven effectiveness of these systems alone or in combination with other systems.
BOEM-2024-0001-0368-0001	I have grave concerns about many aspects of the installation of dozens if not hundreds of offshore wind turbines. Since your area of concern is the environmental impact of these projects I will restrict my comments to that. Regarding sonar which can be deadly I was presented with information that many tests have been performed and that any sonar being deployed is within "safe" parameters. I am not a scientist and I cannot dispute your findings but I think any reasonably thinking person can look at the vast increase in numbers	Thank you for your comment and your concern. The sonar implicated in any marine mammal injury (primarily long distance anti-warfare sonar) is not the same sonar being used for offshore wind surveys, which consists only of three types: 1) <i>Bathymetric mapping</i> uses multibeam echosounders to map the depth and shape of the seafloor and backscatter to interpret density of the top few centimeters of the seabed. All modern nautical and navigation charts depend on bathymetric mapping,

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	<p>of dead sea mammals along the Jersey shore that occurred during increased use of sonar at the same time and make a logical correlation between the two. I simply cannot believe your argument.</p>	<p>which is conducted frequently (sometimes as much as annually in high traffic commercial passages) to ensure navigation data are accurate. Bathymetric mapping is also a key component in dredging, beach renourishment, and post-storm surveying to certify navigable waters.</p> <p>2) Seafloor Imaging is another method of seafloor shape characterization; it typically uses side scan sonar for high-definition detail of the seafloor. This method is used in many applications, including underwater archaeology, coral reef mapping, wreck mapping, and hazard identification. For offshore wind applications, seafloor imaging is required by BOEM to identify all potential archaeological sites (e.g., shipwrecks), fish habitats such as hard bottom communities or sand ridges, and other sensitive habitats that cannot be disturbed as part of the offshore wind development.</p> <p>3) <i>Sub bottom profiling</i> not only acquires data for the surface of the seafloor but also penetrates several meters into the seafloor for a picture of subsurface materials and geology. Sub bottom profiling is used regularly for sand source identification and characterization for beach renourishment and restoration activities along the entire Eastern seaboard. Identification and monitoring of these sand resources through sub bottom profiling is critical to maintain ongoing sand resources for coastal resilience, particularly after storms such as Hurricane Sandy. Sub bottom profilers include CHIRP Sonar (which is the same type of sonar method used in the “fish finders” common on commercial and recreational fishing vessels). There is no causal connection between recent offshore wind development and large whale mortality, and such an assumption is contrary to the scientific consensus. The overwhelming scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers</p>

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		University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities.
BOEM-2024-0001-0381-0002	What will the underwater cables noise/vibrations ships etc. do to the marine life all along the eastern seaboard?	Underwater noise effects on marine mammals from various noise sources, including vessel and cable laying activities, are discussed in detail in Section 3.5.6.3.3 of the PEIS.
BOEM-2024-0001-0394-0002	The findings of federal scientists at NOAA-Fisheries (National Marine Fisheries Service) were that the project represented a threat to the continued existence of the North Atlantic Right Whale. The agency wrote a letter in May of 2022 to BOEM recommending for harm mitigation a buffer zone bounded on the east by the depth line where the Nantucket shoals depth measures 30 m and extending southwest for 20 km (12 mi). There was a big expos by Bloomberg News in November of 2022 that BOEM was not heeding the federal government's own scientists at NOAA-Fisheries. The Mayflower DEIS reveals that BOEM ruled out doing this because it considers the power purchase agreement to have irretrievably committed whatever portion of the lease area is necessary for power production outlined in the agreement which was formed in 2020 three years before conclusion of the environmental inquiry as to the project's effects. This means the decision as to whether to commit ocean resources to any specific purpose is being made ahead of the environmental review which examines what the environmental consequences will be. This runs counter to the intent of the environmental law.	Thank you for your comment. BOEM will take your comment into consideration as it administers its program. This PEIS does not approve or disapprove any projects; that will occur during the project-specific COP-level NEPA analysis. Additionally, the findings of the Hayes (2022) memo were included in the impact assessment discussion of this PEIS.
BOEM-2024-0001-0394-0004	We also found examination of effects on migratory birds in the DEIS to be inadequate. Many birds use infrasound for essential migration timing ensuring that energy expenditure does not exceed energy reserves and that deadly storms are avoided. There have been 3 dead right whale calves this year showing NOAA's lack of care towards whale populations and reducing speed limits for recreational vehicles jet skis and tourist whale watching vehicles. Many states (with the exception of Massachusetts) have not updated their recreational sea vehicle speed limits at all. Moreover unlike in	There have been no reported vessel strikes from offshore wind vessels during any preconstruction or construction activities to date. Vessel transits are monitored electronically and by on-board observers, and all sightings of ESA-listed whales must be reported regardless of whether any strike avoidance was required. There is no causal connection between recent offshore wind development and large whale mortality, and such assumption is contrary to the scientific consensus. The overwhelming scientific consensus is that offshore wind activity is

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	<p>Europe the NOAA does not provide fishermen free gear and tackle to reduce risks to whales. Instead they impose burdens on fishermen who continue to try to make a living despite increasingly crowded waters and now wind turbines that don't work. Wind turbine parts cannot be recycled. Their cable causes whale entanglements and death. Their blasting also causes whale death in addition to school confusion and changed migration patterns. If you develop these wind turbines you will be signing the death warrant of the right whale.</p>	<p>not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities.</p> <p>Additionally, effects of cable emplacement and maintenance, UXO detonations, and decommissioning from the proposed NYB projects are considered in this PEIS both without mitigation (Section 3.5.6.4) and with mitigation (Section 3.5.6.5).</p>
BOEM-2024-0001-0425-0006	<p>The approval of the within NY Bight Industrial Wind Turbine Project without independent peer reviewed scientific research on the negative impacts upon marine mammals and in particular the North American Right Whale is violative of the Endangered Species Act and NEPA. True science involves constantly emerging new evidence and findings along with the everchanging challenges imposed as to prior conclusions. As such contrary to the non-scientific "group think" and massive amounts of money driven public relations press releases behind the current wind turbine projects such sentiment ignores scientific methods of ongoing experimenting at the very least through realistic peer reviewed scientific pilot projects. True science involves constantly emerging new evidence and findings. This process necessarily continually involves the ongoing application of extensive scientific research which is then applied to the previously accepted theories. Such a true application of peer reviewed science especially applied to growingly obsolete wind turbine construction would support the revision if not rejection of prior dogma as to allegedly "settled science". As I have testified previously only from a partially facetious standpoint the rush to judgment approach as to this specific proposal to construct massive windfarms off New Jersey represents non-scientific "group think" with the devastating</p>	<p>Thank you for your comment. BOEM used the best available science to address impacts in the PEIS, but will take this comment into consideration as it administers its program. This PEIS does not approve or disapprove any projects; that will occur during the project-specific COP-level NEPA analysis.</p>

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	<p>potential to trample upon scientific inquiry and research. Such immense pressure from those supporting such colossal development of this offshore industrial site off of the precious New Jersey Coast unfortunately has facilitated many knee-jerk feel-good reactions which totally ignore the required economic and scientific vetting process. During a prior era particularly relevant to the coast of New Jersey our town and I were subjected to enormous pressures exerted by those supporting ocean dumping generated by a foreign corporation's pipeline off our beautiful and incalculably valuable portion of the New Jersey shore. Similar subconscious and actual influences are once again being exerted in favor of a foreign corporation looking to create another potential ocean dumping site off New Jersey's shoreline. I would truly beseech BOEM officials to rise above the narrow bureaucratic rubber-stamping of the within proposal in favor of the true application of scientific method to the entire cumulative and indirect impacts of the current project as well to windfarms off of New Jersey's Coast in general. Just as one heartfelt objector testified in a virtual hearing as to the threats proposed by foreign corporations to our country's national symbol the bald eagle these threats are very real whether proposed by a non-American entity or a corporation based in our own country. An even more appalling aspect of the within proposal can be seen in the lack of scientific method and any good faith attempt at a complex economic evaluation to be applied to the critically threatened North American Right Whales. This species is in dire jeopardy due to this specific proposal and the threat of pollution generating windfarms proposed to be constructed directly in the right Whales' primary and sole migratory waterways off the New Jersey Coast. With approximately three hundred fifty (350) North Atlantic Right Whales left in the entire world the DEIS barely touches the surface as to the potentially devastating if not terminating impact of this vast industrial project itself and numerous ongoing adverse impacts presented. From a noise perspective pollution generating standpoint and otherwise the construction operation and totally ignored dismantling and decommissioning process of the gigantic wind turbines themselves has insufficiently been addressed. Moreover the</p>	

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	Draft Environmental Statement does not recognize the legal and moral standing of such an invaluable threatened species whose inspirational value beauty and potential worth as to biodiversity for our planet and to life itself cannot be overstated. How outrageous is it that this entire species of the North Atlantic Right Whales in all likelihood is being condemned to extinction by this juggernaut of industrial windfarm construction in this treasured creature's only habitat and migratory living pathways. What arrogance and true ignorance of science has been presented! What is the value of this species now being wiped off the face of the earth?	
BOEM-2024-0001-0469-0009	In the Draft PEIS section on marine mammals BOEM states that impacts from the presence of structures would likely be minor for non-North Atlantic right whale mysticetes and odontocetes but the appendix on incomplete and unavailable information indicates that it is unclear how large marine mammals will respond to the presence of "extensive networks of new structures" in their environment. [Footnote 20: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT appx. E at E-6.] For the North Atlantic right whale ("NARW") BOEM discusses the precarious status of the species and risks OSW presents such as stress response from vessel noise auditory masking and vessel strikes. [Footnote 21: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 at ES-11 3.5.6-24-25.] BOEM projects that impacts to the North Atlantic right whale could be as high as "major" because the population's high mortality rate low fecundity and small size make it so that "all human-caused mortalities have the potential to impact their population status". [Footnote 22: Id. at 3.5.6-10.] Given the dire status of the North Atlantic right whale any impacts to the species are unacceptable.	Thank you for your comment. BOEM used the best available science to address impacts and assign impact-level determinations in the PEIS.
BOEM-2024-0001-0469-0010	Because marine mammal hearing is difficult to study animals are often grouped based on anatomy rather than studying the hearing of specific species and how they may be impacted by surveying activities and construction noise. [Footnote 23: Id. at 3.5.5-9.] There is a particularly glaring data gap regarding baleen whale hearing. [Footnote 24: Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site	Thank you for your comment. BOEM acknowledges data gaps in marine mammal hearing studies in Section 3.5.6.1.3 of the PEIS, and the marine mammal hearing groups used throughout follow the scientific recommendations from NMFS (2018) and Southall et al. (2019), which incorporate the best available data on marine mammal hearing to date.

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	<p>Characterization Surveys Off New York New Jersey Delaware and Maryland 89 FR 753 761 (Jan. 5 2024) ("no direct measurements of hearing ability have been successfully completed for mysticetes").] A 2015 University of Santa Cruz study indicated that pinnipeds were more sensitive to high-frequency noise than was previously predicted. [Footnote 25: Kane Cunningham Pinniped Hearing in a Changing Acoustic Environment U.C.S.C. ESCHOLARSHIP (2015) <a href="https://escholarship.org/uc/item/737223k8">https://escholarship.org/uc/item/737223k8</a>] The same study outlined a myriad of factors that could affect how noise travels in the marine environment suggesting that frequency is far from the whole story of how noise reaches and affects pinnipeds. [Footnote 26: Id.] In section 3.5.6.1.3 of the Draft PEIS the majority of the references are to studies that are more than ten (10) years old; some date as far back as 1985. [Footnote 27: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 at 3.5.6-13-21.] This speaks to how little is currently understood especially given that proposed OSW development has increased exponentially in the New York Bight in a short amount of time. Changes to a population or species can happen quickly so if BOEM has an underdeveloped understanding of marine mammal species' current status the agency cannot accurately plan for future protections and mitigation of potential impacts. This makes it even more concerning that New York Bight projects are expected to have "major" impacts to scientific research surveys. [Footnote 28: Id. at ES-12.] NOAA has reported that this will increase uncertainty in assessments for fisheries and endangered species consultation: "By disrupting NOAA Fisheries survey programs and the advice that depends upon them regional wind development will result in major adverse impacts on U.S. fisheries stakeholders including fishermen and fishing communities and the American public who consume American seafood and who also expect the recovery and conservation of endangered species and marine mammals." [Footnote 29: NOAA Technical Memorandum NMFS-NE-291 Fisheries and Offshore Wind Interactions: Synthesis of Science at 184 (March 2023)]</p>	

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	<a href="https://repository.library.noaa.gov/view/noaa/49151/noaa_49151_DS1.pdf">https://repository.library.noaa.gov/view/noaa/49151/noaa_49151_DS1.pdf</a>	
BOEM-2024-0001-0469-0011	<p>Moreover marine mammals have been stranding off the coast of New York and New Jersey in larger numbers than normal since December 2022 remaining elevated through March 2023 and spiking again in summer 2023. [Footnote 30: MARINE MAMMAL STRANDING CENTER Current Cetacean Data <a href="https://mmmc.org/current-cetacean-data">https://mmmc.org/current-cetacean-data</a> (last visited Mar. 12 2024); Alexandra George Why Have So Many Dead Whales Washed Ashore Along the New Jersey New York Coasts in 2023? ABC EYEWITNESS NEWS (Sept. 1 2023) <a href="https://abc7ny.com/climate-change-dead-whale-beached-tri-state-area/12901186/">https://abc7ny.com/climate-change-dead-whale-beached-tri-state-area/12901186/</a>.] This correlates in time to OSW pre-construction activities but it is unclear what role the OSW activities may have played if any because there was no independent region-specific study commissioned on marine mammals in the New York Bight despite COA and many concerned citizens and elected officials calling for one. Whatever the cause of the increased marine mammal mortalities it is clear that the marine environment is already experiencing stress which makes it even more important to use the precautionary principle proving no harm before moving forward with an activity before adding more stressors in the form of surveying and construction noise vessel traffic and new networks of structures. BOEM concluded that the data gaps do not impede its ability to make a reasoned choice between the Draft PEIS alternatives despite also indicating that adverse impacts including injury or death to marine mammals and sea turtles could still occur because of the data gaps outlined in Appendix E. [Footnote 31: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 at 4.2-3.] The agency's conclusion is unreasonable on its face and especially so given the amount of other unanswered research questions and known risks arising from OSW energy development.</p>	<p>There is no causal connection between recent offshore wind development and large whale mortality, and such an assumption is contrary to the scientific consensus. The overwhelming scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities.</p>
BOEM-2024-0001-0473-0001	<p>Please consider the following from RODA regarding offshore wind development: "There are opportunities for mutual wins however offshore wind development is an ocean use that directly conflicts with fishing and primary food production while imposing significant impacts on marine habitats biodiversity and physical oceanography."</p>	<p>Thank you for your comment. BOEM will take your comment into consideration as it administers its program.</p>

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	As marine mammal deaths continue BOEM and NOAA have failed to "Thoroughly assess cumulative impacts of OSW to whales and other protected resources including all project phases and components and impacts to migration and food availability". Offshore wind is being advanced via excessive Incidental Harassment Authorizations and disregard for the MMPA and ESA. The Synthesis in Science report indicates "major gaps" in knowledge regarding the adverse impacts across nearly all manner of topics affected by offshore wind development. Environmental impact statements show connections between survey activity and an increase in vessel strikes and deaths due to construction activity yet agencies still profess there is no connection. There are contradictions across agencies and documents. Wind turbine failures and adverse impacts are finally coming to light around the world. I'm implore those with authority and integrity to halt further progress until assessments can be made of the damage already done since the installation of Block Island. I fully support the comments from Clean Ocean Action Save LBI and the plethora of other individuals and groups supplying data against further wind development.	
BOEM-2024-0001-0512-0001	I am commenting because I strongly oppose the proposed offshore wind lease areas in the New York Bight. As a concerned citizen of New Jersey I believe that these projects could have severe negative impacts on our communities and the surrounding environment. One of my primary concerns is the threat posed to endangered species such as the Atlantic Right Whales and other marine life. The construction and operation of offshore wind farms have the potential to disrupt crucial habitats and migration routes causing irreversible harm to what is an already vulnerable species. This ecological disruption would have far-reaching consequences for the delicate balance of our marine ecosystems.	Thank you for your comment. The PEIS discusses any potential impacts associated with the development of offshore wind within the NY Bight to protected species and the marine environment.
BOEM-2024-0001-0524-0001	The construction of wind turbines in the New York Bight poses a significant threat to the marine ecosystem particularly affecting numerous whale and fish species that frequent this area as reported by Gotham Whales. This includes several endangered species highlighting the critical nature of the threat. The use of sonar for seabed mapping in the region generates noise levels up to 226	There have been no reported vessel strikes from offshore wind vessels during any preconstruction or construction activities to date. Vessel transits are monitored electronically and by on-board observers, and all sightings of ESA-listed whales must be reported regardless of whether any strike avoidance was required. There is no causal connection between recent offshore

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	<p>decibels at the source falling into the low-frequency range (LFI) which is within the hearing range of many whale and dolphin species. Analysis of NOAA data reveals a stronger correlation between the recent surge in whale mortalities and sonar mapping activities than with cargo ship traffic challenging the notion that increased ship traffic is the primary cause of these deaths. Statistical evidence further supports this argument. From 2020 to 2021 despite an 18.46% increase in ship traffic whale deaths astonishingly fell by 92.31%. The following year saw a 25.15% rise in ship traffic yet whale deaths still decreased by 53.85%. However a pivotal shift occurred from 2022 to 2023; ship traffic declined by 18.56% but whale deaths skyrocketed by 216.67%. This period coincides with a fourfold increase in surveying activities related to wind farm development leading to an alarming spike in whale fatalities in the New York/New Jersey area. Specifically 21 humpback whales perished which according to Gotham Whales' August 2022 count of 280 humpbacks in the region represents a significant loss of 7.5% of the population. Moreover NOAA's estimation that only one-third of whale deaths are detected suggests the actual impact could be even more devastating. These findings starkly contradict the argument that increased ship traffic is to blame for the rise in whale deaths. Instead they implicate the intensification of surveying traffic linked to wind farm development as a significant factor. Given that a substantial 7.5% of the humpback whale population in this region was lost in a single year and considering NOAA's admission that we may only be observing a fraction of the true number of fatalities it's clear that the environmental implications of proceeding with wind turbine construction in this sensitive area are profound. In addition each turbine will need: 187 gallons of grease 40 gallons hydraulic oil 106 gallons of gear oil 1585 gallons of dielectric fluid 793 gallons of diesel fuel 243 lbs of sulfur hexafluoride 357 gallons Propylene glycol 48 gallons Ethylene glycol This is not clean energy! This data mandates immediate comprehensive research and a cautious approach by both the Bureau of Ocean Energy Management (BOEM) and NOAA before any further development is considered.</p>	<p>wind development and large whale mortality, and such an assumption is contrary to the scientific consensus. The overwhelming scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities. The fluids and amounts required for turbine operation are provided in the PEIS.</p>

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BOEM-2024-0001-0547-0007	Further BOEM's haste in approving the PEIS is in direct opposition to a longstanding federal protection program and in danger of disrupting a protected species that the federal government spent all this time and money to save from endangerment: the North Atlantic Right Whale protections. The North Atlantic Right Whale has been the subject of significant concern and federal protection. Since the U.S. government has spent close to \$10M of taxpayer money to protect this endangered species why is this PEIS Project comprising six wind farm lease areas adjacent to the other projects already smack in the center of this federally endangered whale migration zone only nine miles from the Brigantine shore? [Footnote 19: See BOEM 2023-0030.] The cumulative effects of the vessel traffic and noise from BOEM's own PEIS is admittedly missing comparison with the mitigation effects and missing data such as NOAA takes [Footnote 20: See PEIS at D2-2; D2.9.1 at D-14; see also C-6 C-7.] and old outdated studies. [Footnote 21: Id. at D2-1; The Conservation November 15 2023 "As the US begins to build offshore wind farms scientists say many questions remain about impacts on the oceans and marine life." <a href="https://theconversation.com/as-the-us-begins-to-build-offshore-wind-farms-scientists-say-many-questions-remain-about-impacts-on-the-oceans-and-marine-life-216330">https://theconversation.com/as-the-us-begins-to-build-offshore-wind-farms-scientists-say-many-questions-remain-about-impacts-on-the-oceans-and-marine-life-216330</a> .] Therefore the mitigation measures fail - yet another reason for a No Action ruling.	See response to comment BOEM-2024-0001-0309-0006.
BOEM-2024-0001-0530c	Nobody listens to us. What about the effects of the survey areas? We've seen massive reductions in our fish populations and fish stock assessments since the surveying of the areas happened. This fall, all's we caught was dead scallops and dead clams and dead horseshoes in the areas that were once lively thresholds for all sorts of black sea bass, scup, summer flounder. And these things, whenever a survey vessel would show up, would disappear. The animals that couldn't get out of the way like the scallops, clams, and horseshoe crabs all died. And you're going to tell us that these vessels have nothing to do with the massive amount of whales and mammals that have washed ashore in the last year?	Potential impacts on scientific research and surveys are covered in detail in Section 3.6.7. NMFS and BOEM have prepared a Federal Survey Mitigation Implementation Strategy for the Northeast U.S. region (Hare et al. 2022) that describes impacts on fishery participants and on the conservation and recovery of protected species. This implementation strategy also defines stakeholders, partners, and other ocean users that will be engaged throughout the process and identifies potential resources for successful implementation through the duration of wind energy development in the Northeast U.S. region. BOEM is committed to working with NOAA toward a long-term regional solution to account for changes in survey methodologies as a result of offshore wind farms.

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		Please refer to response to comment BOEM-2024-0001-0528f regarding recent marine mammal strandings.
BOEM-2024-0001-0528f	<p>What kinds of sound decisions can be made if this monitoring cannot be completed prior to construction of one of the many projects along our coast?</p> <p>In this document BOEM listed potential for negligible to major impacts to whales. That is the full possible range of impact, confirming that the impact of our mammals is not in a fully known.</p>	<p>Thank you for your comment. Substantial scientific data exist for offshore wind development that allow assessment of impacts. All available information regarding potential impacts from offshore wind projects on marine mammals has been considered in this PEIS. Additionally, given the programmatic nature of this assessment, BOEM expects project-specific analyses of noise and other effects will be conducted during subsequent project NEPA stages that will further address specific, quantitative effects from offshore wind development of these projects.</p> <p>Further, the Final PEIS analyzes AMMM measure MM-3, which would require lessees to conduct long-term PAM or contribute to a research fund to support PAM on the lease area for 1 year before construction through at least 3 years but no more than 10 years of operations. If MM-3 were adopted as a COP T&amp;C, then this data could be used to support additional analysis on noise impacts on marine mammals.</p>
BOEM-2024-0001-0528f	<p>Agencies that claim there's no evidence linking these deaths to offshore wind have not provided evidence otherwise, or any scientific support for such a statement.</p> <p>The lack of due diligence in investigating cetacean deaths and transparency is alarming, to say the least. Without this long-term baseline data we cannot begin to determine causality from marine mammal deaths or other environmental impacts we are bound to see.</p>	<p>There is no causal connection between recent offshore wind development and large whale mortality. This assumption is contrary to the overwhelming scientific consensus that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). These determinations are based, in part, on published necropsy results. NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities. For additional information on these UMEs, see <a href="https://www.fisheries.noaa.gov/national/marine-life-distress/active-and-closed-unusual-mortality-events">https://www.fisheries.noaa.gov/national/marine-life-distress/active-and-closed-unusual-mortality-events</a>.</p>

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BOEM-2024-0001-0528w	<p>In the required appendix on incomplete and and unavailable information, the P.EIS shows multiple concerning data gaps. Data on the distribution of multiple species of whales and dolphins is lacking. The effects of electromagnet magnetic fields on benefit communities, sea turtles, and marine mammals are not well understood.</p> <p>For baleen whales, BOEM is extrapolating the effect of the effect of pile driving noise from studies on responses to air guns, and little research at all has been conducted on sea turtle hearing. Scientists do not know how marine mammals will will respond to the presence of artificial structures in their environment. A pilot project would have been the only way to determine this beforehand, which is why COA has long advocated for a pilot project before full scale development.</p>	<p>Thank you for your comment. The Final PEIS uses the best available information and complies with the procedural requirements of NEPA to predict potential impacts on marine mammals.</p> <p>An acknowledgment of uncertainty about the impacts of EMFs is included in Appendix E, <i>Analysis of Incomplete or Unavailable Information</i>. Future research about EMF exposure on marine organisms may be incorporated into future project-specific COP NEPA analyses as information becomes available.</p> <p>Further, BOEM considered but dismissed from further consideration an alternative to build a pilot project (PEIS Chapter 2, Table 2-3). Data from sites that are constructed and operating (e.g., Block Island) as well as the pilot project in Virginia were incorporated into this PEIS and will be incorporated into the development of project-specific COPs and EISs.</p>
BOEM-2024-0001-0528w	<p>At the in-person meeting in New Jersey we learned that BOEM made compromises on the amount of baseline, passive, acoustic monitoring it would require to accommodate the expeditious timeframe of offshore wind development.</p>	<p>Thank you for your comment. BOEM believes that a 1-year baseline is sufficient for the NY Bight region because there are ongoing PAM efforts already underway in NY Bight that could provide more than a 1-year baseline.</p> <p>Additionally, the Final PEIS analyzes AMMM measure MM-3, which would require lessees to conduct long-term PAM or contribute to a research fund to support PAM on the lease area for 1 year before construction through at least 3 years but no more than 10 years of operations. The requirements in this AMMM measure are consistent with previously applied COP T&amp;Cs.</p>
BOEM-2024-0001-0529f	<p>My other point of view is, why does BOEM need to give, take charts or provide take charts to these wind companies? New York wind companies, allowing them to kill so many marine life.</p> <p>In the beginning, NOAA said wind development, sonar testing or the wind turbines would not affect the whales. Now they come out and say, oh, yes, they will affect the whales, they will harm the whales or harass the whales, but they will not kill the whales. But if you talk to any marine biologists, they will tell you a harmed whale, or harassed whale is a dead whale. These whales that you want to show that are</p>	<p>Thank you for your comment. There is no evidence of death or serious injury from offshore wind pre-construction surveys or from offshore wind pile driving or offshore wind vessel strike.</p> <p>The greatest transformational threat to the marine ecosystem is climate change. Please refer to response to comment BOEM-2024-0001-0528f for more information on recent marine mammal strandings.</p> <p>As documented in Section 3.5.3, presence of birds in the offshore environment is low; therefore, BOEM anticipates that the risk to birds from offshore wind development and operations would be</p>

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	<p>struck by something, are struck by boats and other marine things because they are fleeing for their lives from the noise that the wind farms are creating. Let's start telling the America the truth about what wind turbines will do to our ocean floor and our fishing industry.</p> <p>So please start telling America the truth. Stop giving, take charts. You gave take charts out in out, in, out in the inland and said they could kill so many birds, and they're far surpassing the amount of birds that they were supposed to kill. And now these wind farms are being fined for it. Same thing is going to happen to our whales. 68 dead whales, is on your hands.</p>	<p>low. Potential collisions and disruption of behavior and flight patterns are addressed in Section 3.5.3. Potential impacts on federally threatened and endangered birds are addressed through the ESA Section 7 requirements.</p>
BOEM-2024-0001-0528ee	<p>I'm a conservation biologist, and I'm very concerned about offshore wind development, especially regarding its impact on whale populations. We have seen an unprecedented increase in whale strandings in the New York and New Jersey area over the past 14 months which directly corresponds with offshore wind vessel activities in our area.</p> <p>So, while many say that there's no evidence linking offshore wind to the recent whale deaths, no one is at the same time, no one is providing evidence that offshore wind activity is not a contributing factor to these strandings. So, we, I feel we definitely need to have more studies on the potential impact that offshore wind will have not just on marine mammals, but on all marine life prior to construction of these wind turbines. As it stands right now, scientists really do not know how the construction of thousands of wind turbines will impact the marine ecosystem.</p>	<p>Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0528f regarding recent marine mammal strandings.</p>
BOEM-2024-0001-0529n	<p>According to 3.5.7-33 PES New York Bight, glauconitic sands may be present in New York Bight lease areas depending on the classification of the glauconitic sands present, there could be challenges associated with potential offshore wind development in these areas. Specifically.</p> <p>Specifically, some glauconitic sands are difficult or even impossible to drill through and cause high friction and increase noise during pile driving. Developers discovered glauconitic sands during construction installation, noise levels will likely increase as they determine if the</p>	<p>Thank you for your comment. The Final PEIS acknowledges the possibility for glauconite soils to be present in the NY Bight lease areas and identifies potential impacts associated with glauconite. Specifically, text within Section 3.5.5.5.1 (page 3.5.5-42) has been enhanced to discuss the correlation between the presence of glauconite sand and the potential need to use an increased level of hammer strike energy during pile driving operations for WTG installation. Additional details will be addressed at the COP-specific NEPA stage.</p>

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	glauconitic is possible. We need to know if glauconitic exists before any construction begins. Developers need to be required to disclose this prior to any IHAs being issued, considering sound may be much louder, leading to higher mortality.	
BOEM-2024-0001-0529o	For example, in this document, BOEM lists the potential for negligible to major impacts to whales. That is the full possible range of impact. Confirming the impact to marine mammals is not fully known. Even assuming a moderate cumulative impact will cause more harm than the species can handle. So how do you gauge and plan monitoring mitigation efforts when you don't know what to expect?	Thank you for your comment. Substantial scientific data exist for offshore wind development that allow assessment of impacts. All available information regarding potential impacts from offshore wind projects on marine mammals has been considered in this PEIS. Additionally, given the programmatic nature of this assessment, BOEM expects project-specific analyses of noise and other effects will be conducted during subsequent project NEPA stages, which will further address specific, quantitative effects from offshore wind development of these projects.
BOEM-2024-0001-0529o	Over the past 13 months, 99 cetaceans, including 38 whales and 61 dolphins and porpoise have died just in the New York New Jersey Bight that we know of. That does not include the countless others outside the Bight or the ones we could not locate records for, or that never washed ashore. Agencies that claim that there is no evidence linking the deaths to offshore wind have not provided any scientific support. The lack of due diligence in investigating the cetacean deaths and transparency is alarming, to say the least. COA is concerned that these grim headlines can be more common without proper investigations into how the construction and operation of these concrete and steel jungles in the ocean will affect marine habitats and behavioral responses, such as feeding, mating, and migration patterns. We owe it to the many vulnerable and endangered species of marine mammals, sea turtles and fish to understand the inevitable repercussions of building an obstacle course in their home. The ocean is without boundaries, and the increased noise, vessel traffic, and potential, chemical and electromagnetic field exposure that come with offshore wind infrastructure need to be investigated cumulatively to understand the total impact to a species.	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0528f regarding recent marine mammal strandings.
BOEM-2024-0001-0529p	I personally added up the IHAs. There are over 1 million takes on marine mammals for offshore wind, dating back to 2014. Why is anyone saying that offshore wind doesn't cause harm to whales	Authorized takes are based on modeling and are therefore likely proportional to but not the actual number of takes that <u>will</u> occur during activities. Authorized takes mean that the project may not

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	when we have legal documentation of offshore wind corporations requesting to cause harm to whales? What is this delusion? Is there some sort of miraculous plan to build offshore whale without vessels and pile driving? Are offshore, is offshore wind somehow different than the other vessels that are killing North Atlantic right whales?	exceed the authorized number of takes within the given time period of the issued permit. For example, from the published HRG survey PSO reports from multiple offshore wind development projects within the U.S. Atlantic Ocean, PSOs recorded 2,696 large whale detections; of these, only 68 (2.5%) were detections that met Level B exposure criteria (animal distance and source operations). Please refer to response to comment BOEM-2024-0001-0528f regarding recent marine mammal strandings.
BOEM-2024-0001-0529t	In the required appendix on incomplete and unavailable information, the PEIS shows there are significant gaps in scientific knowledge of how the offshore wind industry will affect marine wildlife. Example, data on the distribution of multiple species of whales and dolphins is lacking. The effects of electromagnetic magnetic fields affect the communities, sea turtles and marine mammals are not well understood. For Baleen whales, BOEM is extrapolating the effect of pile, the effect of pile driving noise from studies on response to air guns, which is a different technology, and little research has been conducted at all on sea turtle hearing. Scientists don't know how marine mammals will respond to the presence of artificial structures in their environment. And outside of the PEIS, scientific research has also outlined multiple ways in which offshore wind poses risks to marine life. Increased vessel activity, noise, and in this particular geographic area, potentially changing the patterns of the North Atlantic Cold Pool, a unique seasonal temperature cycle that allows cold water creatures to thrive here.	Thank you for your comment. The Final PEIS uses the best available information and complies with the procedural requirements of NEPA to predict potential impacts on marine mammals. An acknowledgment of uncertainty about the impacts of EMFs is included in Appendix E, <i>Analysis of Incomplete or Unavailable Information</i> . Future research about EMF exposure on marine organisms may be incorporated into future project-specific COP NEPA analyses as information becomes available.
BOEM-2024-0001-0529t	Clean Ocean Action is not claiming, but there is definitive proof that offshore winds is the cause of the spike in whale deaths, but we also cannot rule out, offshore wind is a potential factor either because of the data gaps. This is why Clean Ocean Action has been calling for an independent peer reviewed scientific study. We need to conclusively determine why so many whales have been dying in the New York Bight.	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0528f regarding recent marine mammal strandings.

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BOEM-2024-0001-0310c	So if fluke disappear what's -- where do they go? It's not going to be because of industrial offshore wind. They won't have the evidence to support that. We've seen that with the whale killings.	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0528f regarding recent marine mammal strandings.
BOEM-2024-0001-0310g	The last thing I would like, I'd like to add, BOEM, President Biden, Governor Murphy, the whales and dolphins sadly have been the canary in our coal mine. And I'm sorry it gets me choked up, but they are warning us of the coming dangers of what's going to happen to our ocean environment. I ask that you heed those warnings and stop offshore wind.	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0528f regarding recent marine mammal strandings.
BOEM-2024-0001-0310h	The unprecedented uptick in whale and dolphin deaths in the past 14 months is devastating, and all of them while offshore wind vessels were surveying nearby. While you deny any connection between offshore wind and the deaths, no full necropsies have been released meaning there is no evidence that there is not a connection. The Incidental Harassment Authorization is evidence. Level B harassment refers to acts that have the potential to disturb a marine mammal or marine mammal stock in the wild by disrupting behavioral patterns, including but not limited to migration, breathing, nursing, breeding, feeding, or sheltering. Level A harassment means any act of annoyance, pursuit, torment that has the potential to injure a marine mammal or marine mammal stock in the wild. It is certain death and it is an invasion of their ocean.	There is no causal connection between recent offshore wind development and large whale mortality. This assumption is contrary to the overwhelming scientific consensus that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 are primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities.
BOEM-2024-0001-0310j	I am here representing those without a voice, our whales. I am very concerned about the impact that the proposed offshore wind projects will have on our humpback whale population in the New York and New Jersey waters. Over the last 20 years, from 2002 to 2022, the average number of humpback whale strandings in New Jersey is 1.47 per year. Now that suddenly changed in the last 12 months. From December 2022 to December 2023, there were 11 dead humpback whales off New Jersey, and ten humpback whales dying off New York waters. In New Jersey, that's a 750 percent increase in the number of dead whales in one year. Just think about that for a second. 750 percent increase. This major increase in the number of whale deaths doesn't just happen by accident. Many people, myself included, do not think	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0528f regarding recent marine mammal strandings.

Comment No.	Comment	Response
	<p>that it's a coincidence that the whales started dying off New York and New Jersey waters when offshore wind surveying activity in our ocean was at its highest. We hear from NOAA all the time that there is "no evidence that offshore wind activity has contributed to the recent uptick in whale deaths," but this really isn't a scientific response and it's not good enough. Is there evidence that offshore wind activity is not causing these whale deaths?</p> <p>That is really the question we need to have answered. It's imperative that we find out what is causing this massive increase in whale deaths before any more projects are approved. Humpback whales like all whales are protected under the Marine Mammal Protection Act. Because of the alarming and unprecedented increase in whale deaths, all activity that can potentially be contributing to these deaths must be halted until a full and thorough investigation can be completed.</p> <p>There also needs to be baseline studies of the current humpback whale population in the New York and New Jersey waters conducted along with a pilot study to determine the environmental impact prior to offshore wind construction.</p>	
BOEM-2024-0001-0310m	Give us time to -- give us more time, because we'd like to take away your take authorizations	<p>"Take" of a marine mammal is a term that is specifically defined under the MMPA and the ESA. While the PEIS analyzes impacts on ESA-listed species, the "taking" of a marine mammal is not determined through NEPA but through the MMPA or ESA. For clarity, BOEM does not authorize any permits or takes. Only the NMFS has this authority through the ESA or MMPA. To date, offshore wind developers have not applied for, and NMFS has not approved, any authorization to kill any marine mammals incidental to offshore wind site characterization surveys or construction activities. Authorized takes during construction in finalized authorizations have been limited to Level A and Level B takes by acoustic harassment.</p>
BOEM-2024-0001-0310n	<p>We have been fed lies about an "unusual mortality event" that started in 2016 and how it's unrelated to the offshore wind activity because "construction wasn't even started yet." We were fishing when surveying activity started in late 2015 and has increased dramatically from a few survey vessels occasionally surveying to</p>	<p>Thank you for your comment. The scientific community has determined that the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales).</p>

Comment No.	Comment	Response
	dozens of survey vessels working around the clock in the past year and a half. We see our fishing grounds disturbed and our stocks leave the area as soon as the survey vessels show up. We are catching an unprecedented amount of dead clams, scallops, horseshoe crabs and other shellfish in areas that have been surveyed.	
BOEM-2024-0001-0529gg	Also, some are saying, we have never seen whales die, and I think it's very important that the PEIS, identify when the unusual whale mortality event started, which was in 2017, way prior to any offshore wind exploration ever occurred.	Thank you for your comment. The scientific community has determined that the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales).
BOEM-2024-0001-0310s	Just -- just seeing over the past year the amount of mortality that's happened because of this preconstruction. They're not even building the things yet, you know. Sound can do a lot of things to creatures on this planet. And, you know, what happens when they start pounding these pilings in, you know? That's even worse from what I'm seeing. All the research that I've been looking at on computers and books and libraries, I get to it and at the very end there's 12, 15 pages of where they got their information from. Did they actually go out and do anything? No. They took somebody's report, put it into another report. Look what I got, you know.	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0528f regarding recent marine mammal strandings.
BOEM-2024-0001-0310s	What's happening with the sonars, they're putting sounds in the water that they don't recognize, which I guess puts them in a panic and sorry it's not a direct correlation, but interferes with their migration. Their, you know, everything that they live for, and it maybe it causes a boat strike, but it wouldn't have happened if that noise wasn't there and they didn't recognize it, you know. It's like somebody coming up and bashing you on the side of the head, you know.	Most sonar used for HRG surveys are actually outside the low-frequency hearing group (Ruppel et al. 2022). There is no causal connection between recent offshore wind development and large whale mortality. This assumption is contrary to the overwhelming scientific consensus that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined that the three declared UMEs for whales in 2016 and 2017 were primarily caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for the minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine

Comment No.	Comment	Response
		mammal mortality has been attributed to offshore wind activities.
BOEM-2024-0001-0310u	For heaven's sake, do an investigation on the whales. You know, what the heck. What's the, you know, what is the problem? Do an investigation. You haven't provided the evidence. We don't have evidence that it did, but we are -- we think it's plausible.	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0528f regarding recent marine mammal strandings.
BOEM-2024-0001-0529jj	Since 2017, NOAA Fisheries has permitted, or is considered, or is considering permitting 108 vessels to conduct geophysical survey activities over more than 10,000 survey days, resulting in more than 113,000 instances of harassment, level B takes of marine mammals. And we all know that these, this type that was from NRDC themselves, and in a letter to BOEM. And we all know that takes our harassment. You can, everybody knows that a deaf whale is a dead whale, and if a whale loses its calf, they search for each other for eternity. What you're doing is an atrocity, and it needs to stop.	Authorized takes are based on modeling and are therefore likely proportional to but not the actual number of takes that will occur during activities. Authorized takes mean that the project may not exceed the authorized number of takes within the given time period of the issued permit. Consideration of takes that occur as a result of these projects is better characterized by PSO reports. For example, from the published HRG survey PSO reports from multiple offshore wind development projects within the U.S. Atlantic Ocean, PSOs recorded 2,696 large whale detections; of these, only 68 (2.5%) were detections that met Level B exposure criteria (animal distance and source operations).
BOEM-2024-0001-0529kk	I can tell you that for decades, I have followed the Center for Coastal Studies out of Cape Cod and they do whale research. And they, major killers of whales are ship strikes and entanglement in fishing gear. And that is not new. That is decades and if we don't address climate change, we don't have to worry about the whales, we have to worry about anything because we're unleashing chaos.	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0528f regarding recent marine mammal strandings.

## P.5.11 Sea Turtles

**Table P.5-11. Responses to Comments on Sea Turtles**

Comment No.	Comment	Response
BOEM-2024-0001-0175-0003	[Bold: Cable Emplacement:] According to the NY Bight Draft PEIS 3.5.7-38 [Underline: Severe injury or mortality for sea turtles] "Cable emplacement and maintenance: Under six NY Bight projects the total area of seafloor disturbance would increase due to the substantial increase in the number of cables installed and maintained in the NY Bight area. Additionally construction of six NY Bight projects would increase the amount of dredging equipment and activities used during installation of the cables. As discussed in Sections 3.5.7.3.3 and 3.5.7.4.1 direct impacts from dredging particularly entrainment typically result in severe injury or mortality for sea turtles". How is this protecting the ocean's environment and sea life?	Thank you for your comment. The text in Section 3.5.7.4.2 referenced in this comment is specific to Alternative B, which assesses the risk of impacts without the AMMM measures. The Proposed Action in this PEIS is Alternative C, which includes the application of AMMM measures to reduce potential adverse effects on sea turtles from the NY Bight projects. Additionally, this PEIS does not approve or disapprove any projects; this would occur during the project-specific COP-level NEPA analysis.

## P.5.12 Wetlands

**Table P.5-12. Responses to Comments on Wetlands**

Comment No.	Comment	Response
BOEM-2024-0001-0313-0050	5.8.5.1 Impacts of One Project The PEIS states "Requiring developers to consider how to adjust project design to minimize impacts on environmental resources such as by siting onshore infrastructure to avoid wetlands or using HDD to pass underneath sensitive wetlands could reduce overall wetland impacts (MUL-23). The site selection of the onshore landfall and substation locations and the onshore cable routes would have the highest influence on the magnitude of impacts on wetlands. Impacts of Alternative C could be less than those of Alternative B on wetlands due to potentially less disturbance to wetlands; however the AMMM measures do not eliminate the potential for more substantial wetland impacts. Additionally compliance with federal state and local wetland regulations which would apply to any alternative would also require the avoidance and minimization of wetlands impacts. Therefore Alternative C is not anticipated to have a meaningful change in	All proposed NY Bight projects will be required to demonstrate compliance with the NEPA process along with other applicable environmental laws, such as Section 404(b)(1) Guidelines of the CWA. A thorough analysis of potential impacts on wetlands resulting from alternatives would be evaluated once projects are identified.  BOEM anticipates that onshore infrastructure components would be intentionally located in disturbed or developed areas (e.g., along existing roadways and ROW) to avoid and minimize potential impacts on wetlands. In addition, the onshore interconnection cables would likely be installed underground using trenchless construction techniques such as jack-and-bore and HDD at wetland and waterbody crossings, where feasible, to further avoid impacts on these resources. All activities would be required to comply with federal, state, and local regulations

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	impacts compared to Alternative B. The impacts for the land disturbance IPF under Alternative C would not be different than for Alternative B which would range from negligible to moderate due to the unknown locations of onshore project components and extent of wetland impacts those project components would incur. MUL-18 involves the use of shared transmission infrastructure among the NY Bight lessees and is therefore only applicable to the analysis of six NY Bight projects." Comment It is concerning that there is no meaningful analysis of potential impacts to wetlands and that it appears to be segmented from the environmental review by being deferred to the COP which based on multiple reference in the PEIS is not a required document though it appears that the potential adverse impacts should be part of the PEIS in terms of the larger plan of scale. Further this mitigation measure is very vague and thus prevents consideration of impacts and comments for consideration. Affected Environment and Environmental Consequences 3.6.2-7	related to the protection of wetlands by avoiding or minimizing impacts. If impacts would not be entirely avoided, mitigation would be anticipated to compensate for wetland loss. Applicants would identify compensatory wetland and stream mitigation based on the requirements of USACE, the New York State Department of Environmental Conservation (NYSDEC), and/or NJDEP as part of the Section 404 permitting process. MUL-23, which proposes developers consider how to avoid or reduce potential impacts on important environmental resources by adjusting project design, is currently an RP for consideration.

### P.5.13 Commercial Fisheries and For-Hire Recreational Fishing

**Table P.5-13. Responses to Comments on Commercial Fisheries and For-Hire Recreational Fishing**

Comment No.	Comment	Response
BOEM-2024-0001-0063-0002	Impact on Fishing: The New York Bight is a vital area for commercial and recreational fishing. The presence of wind turbines will restrict fishing activities leading to economic losses for the local fishing industry. It will DESTROY our fishing industry!	Thank you for your comment.
BOEM-2024-0001-0089-0002	Other problems include the referencing of work submitted by organizations that have benefitted directly from Orsted such as Montclair State University Woods Hole Oceanographic Institute and others. There are numerous insta where impacts that would result in most any commercial endeavor taking place in the ocean waters in the case of this EIS for offshore wind have been dismissed as negative or minimal impact.	The Final PEIS considers the best available data and information that reflect the state of the science at the time of publication of the PEIS. Future research conducted may be incorporated into future project-specific COP-level NEPA analyses as information becomes available.
BOEM-2024-0001-0122-0001	I am opposed to offshore wind and here is why! A primary issue revolves around the anticipated disruption to the local fishing industry where the displacement of traditional fishing grounds and	Thank you for your comment. The NY Bight lease areas were designed to avoid certain commercial fishing activities, based on stakeholder input and task force meetings held from 2017 to 2021.

Comment No.	Comment	Response
	the creation of physical barriers could significantly impact the livelihoods of fishermen.	
BOEM-2024-0001-0122-0003	Impact on Fisheries: Offshore wind farms will disrupt traditional fishing grounds leading to the displacement of fishing activities. The construction and operation of wind turbines will interfere with established fishing routes impacting the livelihoods of fishermen.	Thank you for your comment. The NY Bight lease areas were designed to avoid certain commercial fishing activities, based on stakeholder input and task force meetings held from 2017 to 2021.
BOEM-2024-0001-0331-0007	Many officials have been warning us of the risks of rushing thought the approval and construction of the offshore wind projects. BOEM has approved projects despite repeated warnings from the National Marine Fisheries Service about damage to the environment and fishing industry. NMFS has stated that "we are building the ship while sailing it. " The NJ Department of Environmental Protection Official has stated " We are learning as we go."	Thank you for your comment.
BOEM-2024-0001-0331-0016	The New York Bight covers 488000 acres in addition to the 423184 acres of the other offshore wind projects in the NY/NJ area. This is a total of almost a million acres of wind development activity destruction of our ocean and marine life. According to BOEM's table D-2 there will be 1103 wind turbines in the New York Bight which will be next to another 713 in contiguous lease areas. That is a total of 1816 wind turbines! There will also be a total of 6333 miles of export and interarray cables in the ocean for all projects. The cumulative impacts of the New York Bight as well as the other contiguous offshore wind projects will devastate the fishing industry and destroy a sustainable food source.	Thank you for your comment. There are several mitigation measures in place to reduce the cumulative impacts of the anticipated development in the six NY Bight lease areas. The identified AMMM measures applicable to commercial fisheries and for-hire recreational fishing are presented in Table 3.6.1-20.
BOEM-2024-0001-0331-0034	The PEIS Does Not Sufficiently Address Fishing Industry Impact and Proposed Mitigation Will Not Save the Industry The fishing industry has grave concerns over the impact of the project. Ed Baxter a commercial fishman with the Fishermen's Dock Cooperative in Point Pleasant Beach NJ claims "what we're really worried about is the cabling. It's death." According to Baxter "The offshore power cables and export cables coming ashore could potentially shut mobile gear fisheries like scallop dredging out of those routes if fishermen can't be safe that their gear won't snag on the cables." This is especially concerning because the Orsted Block Island Wind Farm of five turbines has had problems maintaining adequate sediment coverage over its cables. Problems with maintaining cable depth have been	Scallop dredge gear has penetration depths of 1–15 centimeters in sand and 1–35 centimeters in mud (Eigaard et al. 2016; Paschen et al. 2000). The minimum cable burial depth is 3 feet (over 90 centimeters), with a target depth of 6 feet, as outlined in Table ES -1. AMMM measure MUL-19 would require periodic post-installation cable monitoring, and protocols for cable maintenance are in place. The NY Bight lease areas were designed to avoid certain commercial fishing activity, based on stakeholder input and task force meetings held from 2017 to 2021. In Section 3.5.2-24, BOEM suggests the maximum temperature of discharge water from an HVDC converter OSS would be 90°F

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	<p>reported with the ongoing Vineyard Wind project too according to Baxter. The New York Bight cable routes could run near an area called Mud Hole a shallow trench between the ship traffic lanes should of New York Harbor which is a very productive fishing area. Fishing in this area can all be endangered by offshore wind development. Fisherman are concerned too with future offshore substations and their cooling water systems which handle water at 86-90 degrees F along with a lack of transparency about anti-fouling chemicals that may be in the water systems. Seawater life pumps can accelerate the maturing process for larvae disrupt the natural process and can lead to high mortality rates and fish defects. Offshore wind structures will have their own SWLP capable of generating an average of 4-5.3 million gallons of water flow per day. This extreme power brings water and anything small enough to fit through the steel bar filters to the surface in minutes. BOEM has yet to document the temperature of the discharge water by the cooling systems although it claims that warm water effects on surrounding ocean are "likely to be extremely minimal". But there is no research to support this claim. Mitigation includes banking on engineering advancements but there is no confirmation on the effects. The entrainment of ichthyoplankton during operation is based on outdated NOAA National Centers of Environmental Information (NCEI) electronic database. Estimates are from NOAA's Marine Resource Monitoring Assessment and Prediction (MARMAP) program from 1977 to 1987 and by the Ecosystem Monitoring program from 1995 through 2017 throughout the North Atlantic region. Based on BOEM reporting on entrainment the mortality for plankton is assumed to be 100%. Higher water temperatures typically accelerate species' lifecycles including but not limited to lobster egg production cod egg development pollack spawning monkfish egg disintegration and haddock eggs.</p>	<p>(32°C), which was modeled to result in a 1.4°F (1°C) water temperature increase up to 155 feet (47 meters) from the discharge point (TetraTech and Normandeau Associates, Inc. 2023). In Section 2-7, BOEM acknowledges chemicals such as bleach (sodium hypochlorite) may be used in order to prevent growth in the system and keep pipes clean (Middleton and Barnhart 2022). The entrainment mortality assumes 100% of any organism entrained, not the number of organisms within the region.</p>
BOEM-2024-0001-0331-0035	<p>The Point Pleasant Fishing co-op claims that the tallies listed in the PEIS for the value of landings from the six lease areas between 2008-2021 are understated. The table was modeled using Vessel Trip Report and vessel logbook data to estimate catch and landings based on the percentage of a trip that overlapped with each lease area according to BOEM documents. According to Point Pleasant co-op</p>	<p>Thank you for your comment. BOEM uses the best available data from our partner agencies. Vessel Trip Reports are used, as they focus on the landings, value, and the ports used. The Final PEIS considers the best available data and information that reflect the state of the science at the time of publication of the PEIS, including the most recent available landing data from</p>

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	"The numbers are not averages. Instead they are taking the lowest year they can. NOAA Fisheries itself won't use Vessel Trip Reports data in stock assessment." BOEM must defer to the fishing industry and NOAA in determining the baseline statistics for fish catch and landings. Without accurate numbers the true impact and mitigation will be inaccurate and ineffective to say the least. The mitigation measures listed in the COMFIS-6 Table G-1 are not an acceptable solution to the fishing industry or the loss of a sustainable food source. Typical of BOEM in table 4.2-1 its document preparers recite their cookie cutter unrealistic conclusions about the impact of the offshore wind project on the commercial fisheries and for hire recreational fishing but fail to answer the question whether the fishing industry and a sustainable food source will survive offshore wind. "Based on the anticipated duration of construction and installation and O&M activities BOEM does not anticipate irreversible impacts on commercial fisheries and for-hire recreational fishing. The NY Bight projects could alter habitat during construction and installation and O&M activities limit access to fishing areas during construction and installation or reduce vessel maneuverability during O&M. However the conceptual decommissioning of the NY Bight projects would reverse those impacts. Irretrievable impacts (lost revenue) could occur due to the loss of use of fishing areas at an individual level."	NOAA and NMFS. Future data will be incorporated into future project-specific COP-level NEPA analyses as information becomes available.
BOEM-2024-0001-0332-0002	The offshore waters of the NY Bight (NYB) have long supported populations of coastal fishery resources (CFR) highly migratory fish species (HMS; e.g. tunas billfish mahi mahi sharks) and many fisheries that target them. Serving as a migratory corridor for numerous CFR and HMS (Galuardi and Lutcavage 2012; Vaudo et al. 2016; Kohler and Turner 2019) NYB is ecologically-important and contains Essential Fish Habitat (EFH; i.e. the waters and substrate necessary for spawning feeding and growth to maturity) for many economically important species as well as a handful of endangered and critically endangered species.	Thank you for your comment. See response to comment No. BOEM-2024-0001-0371-0028.
BOEM-2024-0001-0332-0003	Recreational Fishing Contributions NYB also contains historical fishing grounds for iconic species [Bold: and supports an extensive HMS recreational fishery in which thousands (NJ/NY Private Boat 6927 including charter/head boat the total is 7779; 2022 NOAA	Section 3.6.1 discusses commercial fisheries and for-hire recreational fishing. Additional discussion of private recreational fishing from shore or personal vessel can be found in Section

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	<p>Fisheries HMS SAFE Report) of vessels participate each year]. In 2021 recreational anglers in New Jersey and New York contributed \$4.2Billion in economic output and supported 28290 jobs. (Southwick 2021) Imagine the updated numbers due to inflation. A large portion of this recreational fishing effort occurs within popular fishing areas that have been leased for offshore wind development. The diversity of the rich fisheries and the threat from offshore wind development's impacts are not bound by lease area borders. The Socio-Economic Impact of OCS Wind Energy Development on Fisheries in the US Atlantic predates the NYB Leases. Therefore the economic impacts as well as a cumulative analysis of impacts to the fisheries must be completed for the entire region. [Bold: There must be a comprehensive assessment of baseline recreational fishing effort for both coastal CFR &amp; HMS in NYB and the associated Wind Energy Areas.]At the recent NYB Draft PEIS BOEM public meeting (Feb 8th in Toms River) I reviewed the recreational fishing hand out and poster (3.6.1-22). I questioned subject matter expert Brandon Jensen (Fisheries Biologist at BOEM) [Bold: Why is the recreational fishing industry which I am part of largely left out in Section 3.6.1?]</p>	<p>3.6.8, <i>Recreation and Tourism</i>. The economic impact of wind development in the lease areas is discussed in Section 3.6.3. The NY Bight lease areas were designed to avoid certain fishing activity based on stakeholder inputs and task force meetings held from 2017 to 2021. The Final Lease Sale Decision Memorandum explains that areas were removed from the leases to avoid conflict with fishing grounds (BOEM 2021). Figure 3.6.1-22 shows that the Prime Fishing Grounds have very little overlap with the NY Bight lease areas.</p>
BOEM-2024-0001-0332-0004	<p>3.6.1-38: "Based on NMFS data there is no substantial for-hire recreational fishing activity in any of the six lease areas." This is far from true. And due to this oversight Table 3.6.1-16 misrepresents the small business revenue from inside the NYB lease areas. The fishing hot spots known as the Resor Atlantic Princess Chicken Canyon Triple Wrecks and the Corvallis The Star 20/30 Fm Curve among others are all in the same area. Large fleets of 50-100+ recreational private vessels commonly congregate in small areas when tuna fishing. These same areas are popular sharking mahi cod and sea bass fishing areas. I can somewhat agree with "the most impacted species includes cod in OCS-A 0544 (NMFS 2023h) and bluefin tuna red hake and black sea bass in OCS-A 0538 (NMFS 2023j)." However the chart (3.6.1-22) poorly represents the recreational fishing effort with a long fishing history in the NYB and more specifically in the lease areas. There's more effort at the hot spots mentioned (in and around the NYB lease areas) than the Barnegat Ridge (also a fishing hot spot) which is painted with significantly more fishing effort. SEE ORIGINAL COMMENT FOR MAP.</p>	<p>For-hire recreational fishing activity has been added to Figure 3.6.1-22. Further information on private recreational tourism can be found in Section 3.6.8.</p>

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	<p>In blue OCS-A 0538 is better known as owned by Attentive Energy. This 131.7 square mile lease area is located 42 miles east of Barnegat Inlet and 54 miles south of Fire Island Inlet NY. It is the summertime tuna fishing mid-shore grounds in addition to being home to a number of prominent wreck sites. There are major data gaps that the PEIS must consider. Recreation catch and effort data is severely lacking and there is little to no spatial data collected for recreational private boat anglers. MRIP through APAIS (Access Point Angler Intercept Surveys) collect catch per trip data do not record specific fishing spot/location data only the location of the intercept and the general area of fishing such as shore private for-hire. NOAA's own study finds their estimates are way off and their program needs an overhaul. [Bold: The lack of information on recreational fishing does not constitute a free pass for evaluating PRIVATE RECREATIONAL fishing impacts occurring in the leases.]</p>	
BOEM-2024-0001-0332-0005	<p>The state and feds largely do not know exactly where private anglers fish and do not know where these same boats transit unless monitoring AIS which the majority of private boats do not have. To learn more about this I believe that there must be work done now similar to what URI/CRMC/RISA did to determine where anglers are fishing and where anglers are from but must look at the broader area to obtain private recreation fishing effort in federal waters. BOEM must formulate recreational fishing surveys (not MRIP) that directly obtain recreational fishing information (even if qualitative) to help characterize the fishing activity within the lease areas. To do this developers should be required to collect data (survey and engage with the recreational fishing community). This engagement must come with significant oversight so that developers can't just check a box by doing nothing like they do now by relying on MRIP. Extrapolating private recreational fishing spatial data utilizing a fishing app like Fish Rules such as in Scott Steinback's (Economist with NOAA Fisheries) work is suspect. Many saltwater anglers know the rules before they go fishing. Some anglers may check the rules via app but the location when checking is not necessarily where they fished. It would be a different story if it was a fish catch logging app (like Fish Brain) that tracks the gps and needs a photo's metadata locations to acquire position. But still there are not enough anglers</p>	<p>Thank you for your comment. Individual developers will collaborate with private fishers through their fisheries representatives, who will convey applicable information to the developer during the project-specific COP-level NEPA analysis and COP preparation phase. The fisheries representatives would represent the needs of the fishing community. Private angling is further discussed in Section 3.6.8, Recreation and Tourism.</p>

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	participating so the sample size is far too small. It is unfathomable that this amount of time and progress has passed without baseline data.	
BOEM-2024-0001-0332-0006	<p>The Negative Reef Effect Production vs Aggregation Despite what Anglers For Offshore Wind promotes the majority of the recreational fishing community does not support offshore wind. Many of the anglers I talk to have major concerns. Not all marine life flourishes in a hard bottom ecosystem and it does not necessarily help NJ and NY anglers. It brings a lot of uncertainties to the table many of which management has no handle on. OSW is not a magical solution to help the fisheries fix climate change fix ocean acidification and the changing currents. It adds a lot of uncertainty and jeopardizes the ecosystem. Turbines are offshore fish attracting/aggregating devices which greatly increase fish catchability. This is stated in 3.6.1 as a benefit to for-hire recreational fisheries however this is a very large issue that fisheries managers must understand and manage properly. The fish will come from other fishing grounds and these concentrations will be easier and quicker to catch leading to localized and regional depletion. Overfishing can happen fast resulting in a closure of the fishery and then economic hardship follows. Or effort is turned to another species which stresses another fishery. "Some fisheries could experience substantial disruptions indefinitely even with the implementation of the AMMM (avoidance minimization mitigations monitoring) measures. "OCS Study BOEM 2015-037 3.2.3 Artificial Reef Aggregation: Many aspects of the fisheries resources communities within the wind energy areas are expected to be affected through habitat changes and the introduction of new structures; species abundance density composition diversity dominance size classes and productivity (McCann 2012; Rodmell and Johnson 2005). The introduction of new structure is expected to provide new habitat for species to colonize and aggregate around and the local communities are expected to change from non-structure based to structure based (BOEM DOE/EIS-0470 2012). Species compositions of artificial reefs have been found to differ from natural reefs and their presence can also affect the surrounding biodiversity thus areas outside the footprints of these wind energy areas may be impacted (Inger et al. 2009).At</p>	<p>Potential impacts on scientific research and surveys are covered in detail in Section 3.6.7. NMFS and BOEM have prepared a Federal Survey Mitigation Implementation Strategy for the Northeast U.S. region (Hare et al. 2022<a href="https://media.fisheries.noaa.gov/2022-12/TechMemo-292-revised-title-page_0.pdf">https://media.fisheries.noaa.gov/2022-12/TechMemo-292-revised-title-page_0.pdf</a>) that describes impacts on fishery participants and on the conservation and recovery of protected species. This implementation strategy also defines stakeholders, partners, and other ocean users that will be engaged throughout the process and identifies potential resources for successful implementation through the duration of wind energy development in the Northeast U.S. region. BOEM is committed to working with NOAA toward a long-term regional solution to account for changes in survey methodologies as a result of offshore wind farms.</p> <p>The reef effect observed around foundations of offshore wind turbines may not be as beneficial as natural habitats; however, it is still beneficial, considering habitat modifications. An ecological halo effect is also noted from artificial reefs, including offshore wind turbine foundations. Reeds et al. (2018) found this distance to be about 15 meters.</p> <p>Fishers will not be restricted outright, as they are for European wind farms. However, situational and temporary closures for navigation and operational safety may require re-routing, especially during construction activities.</p>

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	one offshore wind energy facility the species diversity was lower on turbines compared to nearby natural boulders indicating the artificial reef effect of the turbines was not as beneficial as having natural rocky habitat (Wilhelmsson and Malm 2008). Background research did indicate there may be potential positive impacts if these areas have exclusion zones the areas may act as marine protected areas (MPA) for fisheries resources (Inger et al. 2009). Access can not be restricted!	
BOEM-2024-0001-0332-0007	Another negative reef effect is the altering and possibly stopping of the seasonal movement of fish to the inshore waters. This could impact availability to the non-boat-owning or only small boat owning inshore fishing segment of the public. Inshore/nearshore anglers (private rec for-hire party/charter) will lose opportunity if fish are aggregating around OFW structures. They will need to run further offshore which adds time and fuel costs. I classify this impact as an environmental justice issue since non-boat owners are most impacted and the mitigation solution is being focused on anglers who have the means to access the OFW structures in a private or for hire boat. Some can and will fish these areas on head boats and for-hire boats BUT that represents less than 9% of total trips. Land based trips represent the vast majority of fishing effort in the state of NJ in any given year and that mode (as well as the fishing tackle retail bait & tackle manufacturers boat builders and ancillary businesses) is expected to bear the brunt of the negative reefing impacts. These potential losses and the environmental justice must be reviewed and included.	Thank you for your comment. While Section 3.6.1 discusses commercial fisheries and for-hire recreational fishing, additional discussion of private recreational fishing from shore or personal vessel can be found in Section 3.6.8, Recreation and Tourism. The economic impact of wind development in the lease areas is discussed in Section 3.6.3, and environmental justice is covered in Section 3.6.4.
BOEM-2024-0001-0332-0010	Safety At Sea Navigational Safety NOAA Fisheries 2022 Stock Assessment and Fishery Evaluation Report Atlantic HMS Section 7 Safety Data [Embedded Hyperlink: <a href="https://www.fisheries.noaa.gov/s3/2023-06/SAFE-Report-062223.pdf">https://www.fisheries.noaa.gov/s3/2023-06/SAFE-Report-062223.pdf</a> ] must include updated information to include and evaluate the safety issues within the recreation fishery safety at sea fishing vessel risk assessment navigation through WEAs. From all documents I can gather this is totally overlooked. While this is outside the scope of the DPEIS: In March 23 2022 the NJ Marine Resources Administration was involved in dialogue with several other state/federal agencies regarding the need and appropriate size	The known artificial reefs of New York and New Jersey are shown in Figure 3.6.1-22. There are no mapped artificial reefs in any of the NY Bight lease areas considered in this PEIS. The project-specific COP-level NEPA analyses will address proposed export cable corridors that may be planned closer to the artificial reefs.

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	of a buffer between offshore wind turbines and artificial reefs and fish havens. Some of these reef sites have material right along the edge and commonly outside of the actual boundaries. There was discussion with the NJ MFC Offshore Wind Advisors which suggested 1-2NM buffer area to minimize damage to the reef habitat during construction from sound vibration sediment plums as well as safe drifting and transiting. With regards to NJ saltwater fishing 25% of all fishing trips occur on a NJ reef site and 65% of bottom fishing occurs on the reefs. There is significant effort and traffic in these areas. To the best of my knowledge this was largely ignored.	
BOEtM-2024-0001-0334-0008	Heavy metal content in our seafood is already a concern tarnishing the joy of eating seafood. Offshore wind installations are going to increase this threat to our seafood products from the near shores. (If our fishermen are even going to be able to operate with all the best fishing lands being inaccessible which we believe they will not). Any claim that the turbine bases will be fine fish habitat is absolute nonsense. We will not want to eat fish caught anywhere near the turbines. AND YOU CAN FORGET ABOUT MITIGATING THE LOSS OF COMMERCIAL FISHING CATCHES BY ESTABLISHING FISH FARMS IN THE WIND FARM LEASE AREAS. Here are some sea-ready offshore wind bases laced with sacrificial anodes. I was able to spot a few; see if you can locate them below: SEE ORIGINAL COMMENT FOR IMAGE of posts and New Sacrificial Anode and Degraded Sacrificial Anode BOEM should be concerned about this and calculate the concentrations of heavy metals that will be leached into a wind farm area and tell the truth about the abortion into creatures living there and the probably concentration into our seafood.	A study by Kirchgerog et al. (2018) demonstrated that in the North Sea, the use of aluminum anodes as opposed to zinc anodes would reduce the total annual emissions for an offshore wind farm with 80 WTG monopile foundations by a factor of around 2.5 (118 tons) due to the higher current capacity. Table 3.4.2-7 suggests AMMM measures to avoid using zinc sacrificial anodes on external components to reduce the release of metal contaminants in the water column.
BOEM-2024-0001-0346-0003	The Draft PEIS seems to consider itself able to proceed in the face of impacts on commercial fisheries that range from minor to major with the consolation that if a compensation plan is undertaken these major impacts might only be moderate. But the scallop fishery does not want to have to rely on compensation; instead the industry wants to continue to be able to fish safely on a vibrant and healthy Mid-Atlantic scallop resource that is centered in the New York Bight. And while NEPA might allow compensation as a way to mitigate adverse impacts compensation does nothing to protect the values that OCSLA affirmatively requires protecting. BOEM was wise to	Thank you for your comment. The NY Bight lease areas were designed to avoid certain commercial fishing activity based on stakeholder inputs and task force meetings held from 2017 to 2021. The Final PEIS includes a Fisheries & Benthic Habitat Monitoring Plan (COMFIS-3) AMMM, which addresses impacts on scallops, and RP COMFIS-5, which includes fisheries monitoring survey plans for before, during, and after construction.

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	develop a Draft PEIS to underpin New York Bight windfarm development; however if the Draft PEIS proceeds as currently structured it will not be setting future site specific NEPA and OCSLA analyses up for success as relates to the scallop fishery. The time is at hand for BOEM to develop and consider the fisheries impact minimization and pelagic habitat minimization alternatives in a manner that would enable the scallop resource and the scallop fishery to coexist in the New York Bight with offshore wind development.	Additional site-specific alternatives will be analyzed at the COP-specific NEPA stage, when more details will be known about each project.
BOEM-2024-0001-0346-0004	New York Bight Windfarm Lease Areas Are Centered on An Area of Major Scallop Productivity and Production The Draft PEIS definitively shows that the adverse impacts of wind farm development on the scallop resource and scallop fishery in the New York Bight will be far onto the "major" end of the spectrum. It is beyond reasonable dispute the scallop fishery will be the most adversely affected fishery from wind development in the New York Bight. From 2008-2021 the scallop fishery landed \$236270000 in scallops from the six New York Bight lease areas. (3.6.1-11) [Footnote 1: This was 82% of the overall value of landings of \$285087000 from what BOEM calls the "most impacted species." (3.6.1-12-13)] FSF repeatedly urged BOEM not to center offshore wind development atop historic Mid-Atlantic scallop beds. But BOEM knowingly went ahead and designated and leased those areas. And even among the six lease areas themselves those areas with the most potential impact on scallops and the scallop fishery are set to be among the first New York Bight lease areas to be developed. New Jersey just awarded power purchase agreements for two lease areas that collectively had over \$100000000 in scallop landings between 2008 and 2021. Attentive Energy lessee of area OCS-A-538 has been awarded a power purchase agreement from New Jersey in its latest competition. According to NOAA Fisheries data a full \$61925000 in scallop landings came from lease area OCS-A 0538. This was the most of any area. (3.6.1-11). Another \$4131000 in scallops came from Invenergy lease OCS-A 0542 Invenergy being the second lessee New Jersey selected. (3.6.1-11)	Thank you for your comment. The NY Bight lease areas were designed to avoid certain commercial fishing activity based on stakeholder inputs and task force meetings held from 2017 to 2021. The Final Lease Sale Decision Memorandum explains that areas were removed from the leases to avoid the mid-shelf scarp (BOEM 2021). Per the memo, "Specifically, in response to the commercial fishing industry BOEM excluded area adjacent to the scallop access area, included a buffer between select leases and removed areas of high value and benthic diversity." Additional information is found in Section 5.1.4.1 of the memo. BOEM will evaluate project-specific impacts based on the project-specific COP before issuing a record of decision. The Final PEIS includes a Fisheries & Benthic Habitat Monitoring Plan (COMFIS-3) AMMM, which addresses impacts on scallops, and RP COMFIS-5, which includes fisheries monitoring survey plans for before, during, and after construction.
BOEM-2024-0001-0346-0016	Moreover the issue here is not about an impact over the entire range of the New England Fishery Management Council's authority over scallops. Rather it concerns the impact of six lease areas	Thank you for your comments. Suggested citations have been reviewed, and the Chen 2021 citation was added.

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	<p>clustered tightly together in the center of the mid-Atlantic scallop resource. The question is whether these wind farms will disperse scallop larvae from areas of historical productivity (based on a combination of benthic and pelagic conditions) to areas that are less hospitable to scallop growth settlement and survival. As FSF previously explained in its comments on the New York Bight lease areas based on modeling conducted by Chen et al. [Footnote 6: See C. Chen et al. Assessing Potential Impacts of Offshore Wind Facilities on Regional Sea Scallop Larval and Early Juvenile Transports NOAA Grant Number: NA19NMF450023 (May 6 and 12 2021) (hereinafter "Share Day Report") (attached hereto in part as Exhibit 3; the full report is available at <a href="https://s3.amazonaws.com/nefmc.org/Doc.14.a-UMASSD_WHOI_short_report_05_6_12_2021_revison.pdf">https://s3.amazonaws.com/nefmc.org/Doc.14.a-UMASSD_WHOI_short_report_05_6_12_2021_revison.pdf</a>).] wind farms will alter patterns of scallop larval settlement. The Chen study was performed by researchers from the University of Massachusetts Dartmouth School of Marine Science and Technology ("SMAST") and the Woods Hole Oceanographic Institution ("WHOI") who modeled scallop larval flow around wind turbines. Using the turbine array plans for Vineyard Wind which is located near (but not adjacent to) a scallop access area the Nantucket Lightship Scallop Access Area the researchers examined the windfarm's future impacts on scallop settlement abundance and dispersion via oceanographic modeling. The presentation on this work provided at the 2021 Scallop RSA Share Day explained: Selecting 2010 and 2013 (two years with significant larval settlement in the Southern New England] region) as pilot study years we used the couple Scallop-IBM and NS-FVCOM/NECOFS model system to examine the impact of offshore WTG deployment in the lease area of OCS-A-501 on the dispersal and settlement of scallop larvae in the region. The preliminary results show that the WTGs can significantly enhance the mesoscale eddy circulation and turbulent mixing within and around the turbine area reducing the horizontal larval dispersion and pushing the larvae offshore. The model suggests that the impact of WTGs on scallop larvae in the SNE could considerably change the larval abundance in the Nantucket Lightship Closed Area (NLCA). Share Day Report at 2-3. Set forth below is Figure 9 from the RSA Share Day Presentation</p>	

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	<p>which demonstrates these impacts: SEE ORIGINAL COMMENT FOR FIG 9: Locations/abundances of settled super-individuals (left) and distributions of the settled larval density (right) in the SNE region for the cases with and without WTGs on November 30 2013. The black box indicates the Nantucket Lightship Closed Area. Gray dots are the WTG's locations.</p>	
<p>BOEM-2024-0001-0346-0017</p>	<p>The Share Day Report further explained the model output in the following way: The preliminary results show that the flow field significantly changed with WTGs. The flow tended to push the larvae offshore during the 2010 and 2013 simulation period (Figs. 8 and 9). The WTGs produced mesoscale flows and enhanced vertical mixing within and around individual WTGs which considerably reduced the horizontal dispersion around the wind energy development area. In those two years a large number of larvae were advected into the Nantucket Lightship Closed Area. Although larval behaviors play a critical role in the larvae dispersal and settlement by altering the flow-induced advection experienced at different depths the WTGs seem to significantly change vertical mixing and horizontal advection as well as horizontal turbulent dispersion. Using a so-called ensemble larval swimming behavior approach we calculated the mean percentage and deviation of settled scallop larvae for the cases with and without WTGs. Changes in the flow field due to WTGs tended to push the larvae together and advected them as a group offshore. As a result the settle percentage in the Nantucket Lightship Closed Area increased considerably. (Fig. 10). Share Day Report at 15. Figure 10 of the Report is copied below: SEE ORIGINAL ATTACHMENT FOR FIG 10: The mean percentage and standard deviation of settled scallop larvae averaged over 2010 and 2013 for the cases with and without WTGs. The calculation was done for ensembled results with diel and semidiurnal larval behaves in the ocean mixed layer. Black dots: locations of individual WTG. While these studies do not assess the potential impacts of windfarms in the New York Bight on scallop larvae the overall findings would indicate that impacts in this area should be expected to have similar effects on the aggregation and advection of larvae. Offshore wind development not only negatively affects the scallop resource it affects scallop fishing. Scallops are fished with mobile gear and</p>	<p>Thank you for your comment. See response to BOEM-2024-0001-0346-0016.</p> <p>The PEIS analyzed an RPDE with the closest spacing possible; however, more will be known at the COP-specific NEPA stage, when project specifics will be analyzed. The PEIS includes an RP that encourages lessees to propose consistent turbine layouts across adjacent lease areas as well as increased spacing as ways to reduce impacts. Lessees may propose greater spacing in their project-specific COPs to account for these concerns.</p>

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	<p>scallop vessels are among the largest vessels in the U.S. New England and Mid-Atlantic fishing fleet. Correspondingly they have the least opportunity to be able to maneuver and fish within a wind farm. In the depths of water that scallops are found in the New York Bight lease areas a scallop dredge is towed several football fields behind the fishing vessel. Thus AMMMs that require cable burial and avoidance of methods that raise the profile of the seabed (COMFIS-2 and COMFIS-4) will have limited utility for relatively larger bottom tending mobile gear fishing vessels because they will not be able to tow through wind farms with turbines spaced only 0.6 n.mi. apart. As the Draft PEIS concedes "Certain sectors of the commercial fishing industry will likely be at higher risk operating within an offshore wind farm (e.g. mobile gear such as trawls and dredges) due to maneuverability and entanglement hazards." (3.6.1-46)</p>	
BOEM-2024-0001-0347-0003	<p>General Recommendations: Environmental monitoring plans are a critical aspect to OSW projects. However we have noticed two challenges: lack of coordinated data sharing from OSW with fisheries scientists managers other entities and with the general public; and emphasize analyzing and understanding cumulative impacts. BOEM should utilize its authorities to require OSW developers share data that is useful to scientific efforts to better understand fisheries and potentially mitigate the unavoidable impacts from OSW on federal fisheries surveys. Through the programmatic approach in the NY Bight WEA we encourage BOEM to explore scientific opportunities to better understand cumulative impacts from OSW development in the NY Bight. There are extensive fisheries in and around the NY Bight. We encourage BOEM and developers to develop COPs to avoid and minimize the impacts to sensitive ecosystems physical fishing activities and navigation through leases to other fishing grounds. BOEM has included numerous AMMMs which would address this such as utilizing shared infrastructure among various projects. Recreational data will continue to be a challenge for BOEM NOAA Fisheries and other entities in assessing OSW impacts in the NY Bight. We encourage BOEM to seek additional data sources for improving the understanding of spatial and temporal recreational fishing effort in and around the NY Bight leases. The NY Bight serves as a migration corridor for many important fisheries. ASGA</p>	<p>Thank you for your comment. BOEM has included an RP, MUL-26, that encourages lessees to coordinate monitoring and survey efforts, meet regional data requirements and standards proposed by ROSA and RWSC, and make results from monitoring publicly available. BOEM encourages lessees to analyze and consider implementing RPs as they may further avoid and minimize impact; however, RPs are not part of the Proposed Action. Several other AMMM measures and RPs are included in the PEIS that could reduce potential impacts on sensitive habitats, highly migratory species and other fishes, commercial and recreational fishing, and navigation. BOEM agrees that additional information and available data could be used to help improve fisheries science and management.</p>

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	encourages BOEM (through OSW Developers) to explicitly monitor highly migratory and other fish species before during and after construction. Requiring developers to affix acoustic telemetry receivers on OSW structures is one such example that could substantially improve fisheries science and management in addition to other marine mammals.	
BOEM-2024-0001-0352-0012	We recommend that all fisheries data be updated through 2023 in the final PEIS. The draft PEIS includes data through 2021 which is already three years out of date.	Data is updated through 2022 where possible, which is the latest that is accessible. Tables 3.6.1-6 through 3.6.1-13 only have data available through 2021.
BOEM-2024-0001-0352-0013	The potential benefits of MUL-25 which would require wider spacing of the area (1 nm in one orientation) seem to be underestimated. This could allow for easier transit and better search and rescue outcomes compared to narrower spacing and could have a material effect on fisheries operations. We are also concerned that the draft PEIS indicates wider spacing for six projects would have essentially the same impacts as for one project (Section 3.6.1.5.2). This evaluation seems to conflict with a statement made in the cumulative impacts evaluation: "BOEM anticipates that the cumulative impacts on commercial fisheries and for-hire recreational fishing associated with NY Bight projects when combined with impacts from ongoing and planned activities including offshore wind would be unchanged (negligible to major) because some commercial and for-hire recreational fisheries and fishing operations could experience substantial disruptions indefinitely even with these project-specific mitigation measures."	As described in Section 2.2, because the locations of turbines for the six lease areas are unknown, the PEIS analyzes a hypothetical project with the closest spacing possible for the turbine layout. The PEIS includes an RP that encourages lessees to propose consistent turbine layouts across adjacent lease areas as well as increased spacing as ways to reduce impacts. Lessees may propose greater spacing in their project-specific COPs to account for these concerns.
BOEM-2024-0001-0357-0019	Closer in we have commercial fishing losses to New Jersey ports on the order of \$8 million over the project life. Farther out we may have a similar fish loss. Farther out we have scallop beds but they are predominantly outside of the Hudson South area. The scallop fishermen themselves have not called for no development in Hudson South but rather for a five nautical mile buffer zone in the southeast section of that area.	Thank you for your comment. See response to BOEM-2024-0001-0346-0004.
BOEM-2024-0001-0357-0022	To Fisheries: Neither this draft program EIS or any project specific EIS presents a cumulative assessment of the impact of all the contemplated projects on the fisheries fishing and downstream businesses and fish consumers. Each project area disturbs/threatens	See response to BOEM-2024-0001-0383-0008.

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	certain fisheries (e.g. scallop and surf clam beds) and depending on the turbine spacing eliminates their availability for harvesting. The reduced availability of accessible productive fields forces the fishermen to compete on the remaining limited areas and raises further questions on long term sustainability in accordance with the Magnuson- Stevens Fisheries Conservation and Management Act. The solution proposed in several project specific EISs is to provide a financial reparations plan to protect local fishermen for their reduced catch. But those project EISs include no assessment of the total loss of revenue and jobs nor to downstream businesses nor to the public from the reduction in fish harvesting across the wider geographic area.	
BOEM-2024-0001-0362-0003	Protect fisheries wildlife and marine ecosystems by utilizing data sharing the best available science and data and adaptive management strategies to avoid minimize mitigate and monitor environmental impacts;	Thank you for your comment. After further consideration, BOEM has removed MUL-24 from the Final PEIS.
BOEM-2024-0001-0383-0004	Fisheries baselines: The PEIS Appendix D describes ongoing activities for various resources considered by the PEIS and uses them to establish baseline conditions. Appendix D states that "The baseline conditions and trends described here serve as the basis for analysis of the No Action Alternative and cumulative impacts." [Footnote 9: Appendix D at <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/NY%20Bight_DraftPEIS_AppD_PlannedActivitiesScenario_508.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/NY%20Bight_DraftPEIS_AppD_PlannedActivitiesScenario_508.pdf</a> p. D-1.] However section D.2.9.2 Fisheries Use and Management BOEM specifies very little focusing on three state initiatives (one of which appears to take place in state waters only) and one ASMFC multiyear strategic plan. [Footnote 10: Ibid p. D-17 18.] All these initiatives are virtually inapplicable/unimpactful to fisheries in the New York Bight area of consideration. Instead BOEM omits the detailed data on fisheries regulation that occur in the area of analysis which restricts fisheries in time in space in quota etc. and truly provides the context for cumulative impacts. We have discussed this issue with BOEM for nearly a decade. Federally permitted and managed commercial fisheries cannot simply relocate activity- they are highly regulated and are subject to many spatial and gear restrictions that prevent fishing activity from "relocating"	The NY Bight overlaps two of NMFS's eight regional councils to manage federal fisheries: the Mid-Atlantic Fishery Management Council (MAFMC), which includes New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina; and the New England Fishery Management Council (NEFMC), which includes Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut.  The Proposed Action's structures could affect accessibility or availability of fish and transit in the lease and cable areas, and it would therefore affect commercial fisheries and for-hire recreational fishing, to the extent that effort is removed from the area. Restrictions on maneuverability due to the presence of structures could displace some fishing vessels, increasing conflict over alternative fishing grounds. While the Proposed Action may affect all fisheries and all gear types, there are some gear types that may be more adversely affected. Bottom tending mobile gear is more likely to be displaced than fixed gear. The fixed gear fisheries, including the lobster and gillnet fisheries, are less likely to be displaced. However, some fixed gear methodologies, like the length of the pot trawl, may be modified to improve performance in a wind facility.

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	<p>when a wind farm is sited on a commercial fishing ground. These are real impacts that should be analyzed as the baseline for commercial fisheries. This is particularly important when conducting the cumulative impacts analysis as the cumulative impacts of more de facto exclusion zones or restrictive areas resulting from offshore wind developments do not take place in a vacuum; they take place in the context of existing closure and restricted areas. However now this information is readily available to BOEM and must be incorporated into all analysis.</p>	
BOEM-2024-0001-0383-0005	<p>In 2023 the Council Coordination Committee (CCC) which consists of the leadership of all Regional Fisheries Management Councils [Footnote 11: See <a href="https://www.fisheries.noaa.gov/national/partners/council-coordination-committee">https://www.fisheries.noaa.gov/national/partners/council-coordination-committee</a>.] in response to the Biden Administration's Executive Order 14008- the same Executive Order championed by BOEM in the New York Bight PEIS as part of the Purpose and Need of the Proposed Action-[Footnote 12: See PEIS at <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/_NY%20Bight_DraftPEIS_Vol1_Chapters1-4_January2024_508.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/_NY%20Bight_DraftPEIS_Vol1_Chapters1-4_January2024_508.pdf</a> p. ES-4.] released a report on the Conservation Areas in the U.S. Exclusive Economic Zone to measure fisheries conservation efforts across the United States. [Footnote 13: See <a href="https://www.fisherycouncils.org/area-based-management">https://www.fisherycouncils.org/area-based-management</a>.] We have included a copy of that report along with this comment. The report developed with standard methodology and scientific evaluation of expert Council staff analyzed the number of geographical conservation areas- defined under "Ecosystem Conservation" "Year-round Fishery Management" "Seasonal Fishery Closures or Other"- per fishery management region in the U.S. EEZ. [Footnote 14: See <a href="https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6489c43523c0b1595a5b8d54/1686750280097/Evaluation-of-Conservation-Areas-Report-2023.pdf">https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6489c43523c0b1595a5b8d54/1686750280097/Evaluation-of-Conservation-Areas-Report-2023.pdf</a> p. 23.] The total number of conservation areas in New England is 47; the total number of conservation areas in the Mid Atlantic is 45 [Footnote 15: Ibid.] as of information available on March 31 2022. [Footnote 16: See <a href="https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e">https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e</a></p>	<p>Please see response to comment No. BOEM-2023-0001-0383-0004.</p>

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	<p>/t/6489c43523c0b1595a5b8d54/1686750280 097/Evaluation-of-Conservation-Areas-Report-2023.pdf p. 11.] These fishery management conservation areas combined with no overlap account for 86.5% of the New England EEZ and 68.1% of the Mid Atlantic EEZ. [Footnote 17: See <a href="https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6489c43523c0b1595a5b8d54/1686750280 097/Evaluation-of-Conservation-Areas-Report-2023.pdf">https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6489c43523c0b1595a5b8d54/1686750280 097/Evaluation-of-Conservation-Areas-Report-2023.pdf</a> p. 24.] Therefore the baseline conditions for commercial fishing are extremely restricted. Unlike offshore wind farms which have no spatial regulatory restrictions federally managed commercial fisheries are highly spatially restricted.</p>	
BOEM-2024-0001-0383-0006	<p>In particular 40.7% of the New England EEZ and 58.3% of the Mid Atlantic EEZ prohibit mobile bottom tending gear year-round. [Footnote 18: See <a href="https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6489c43523c0b1595a5b8d54/1686750280 097/Evaluation-of-Conservation-Areas-Report-2023.pdf">https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6489c43523c0b1595a5b8d54/1686750280 097/Evaluation-of-Conservation-Areas-Report-2023.pdf</a> p. 25.] This is extremely important for BOEM to include as a baseline for offshore wind development activities as mobile bottom tending gear such as that used by Sea freeze vessels in particular will be unable to safely operate in a wind farm. Both the New England and Mid Atlantic CCC report analysis is applicable to the New York Bight PEIS as fisheries permitted by NOAA's Greater Atlantic Regional Office and managed by both the New England Fisheries Management Council and the Mid Atlantic Fisheries Management Council take place within the PEIS area. [Footnote 19: See <a href="https://www.fisheries.noaa.gov/about/greater-atlantic-regional-fisheries-office">https://www.fisheries.noaa.gov/about/greater-atlantic-regional-fisheries-office</a>.] Charts of both the New England Fishery Management Council conservation areas and Mid Atlantic Fishery Management Council conservation areas are available in Appendix A of the CCC report.[Footnote 20: See <a href="https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6489c43523c0b1595a5b8d54/1686750280 097/Evaluation-of-Conservation-Areas-Report-2023.pdf">https://static1.squarespace.com/static/56c65ea3f2b77e3a78d3441e/t/6489c43523c0b1595a5b8d54/1686750280 097/Evaluation-of-Conservation-Areas-Report-2023.pdf</a> Appendix A p. 30-41 of 86.]We request that these be added to BOEM's fisheries baseline for all offshore wind development actions.</p>	Please see response to comment No. BOEM-2023-0001-0383-0004.

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BOEM-2024-0001-0383-0008	Small Business Administration Regulatory Flexibility Act Analysis: In 2022 in response to BOEM's Draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries the Small Business Administration's Office of Advocacy sent BOEM a very strongly worded letter stating that "BOEM must conduct a Regulatory Flexibility Act (RFA) analysis of its proposals to adequately understand the impacts of offshore wind development activities on small businesses... For all rules that are expected to have a significant economic impact on a substantial number of small entities the RFA requires federal agencies to assess the impact of the proposed rule on small entities and to consider less burdensome alternatives." We have attached the letter along with these comments and request that the RFA analysis be conducted as part of this PEIS as well as all BOEM actions. The SBA "heard from small commercial fishermen port operators marine equipment retailers onshore processors fish markets and other fishing industry representatives" and determined that "In addition to analyzing the direct impacts to commercial fisheries BOEM must also consider the direct effects on coastal communities and onshore marine businesses that rely on the commercial fishing industry for revenue. Any decrease in landings results in a direct decrease in revenue for producers fish markets and marine supply gear repair and fuel shops." BOEM has never conducted such analysis in any of its documents. We request that this analysis be conducted as part of this PEIS and all other BOEM actions. BOEM cannot leave these impacts unaddressed; neither can it leave such analysis to the developer as the PEIS proposes. We discuss this below.	Thank you for your comment. Small business analysis is used as a proxy for the Regulatory Flexibility Act requirements. An analysis of impacts on small businesses is provided in Section 3.6.3. Revenue exposure cannot be quantified at the programmatic level but will be addressed during the project-specific, COP-level NEPA analysis.
BOEM-2024-0001-0426-0006	Will the turbines have any effect on our fishing industry and the people who have made their living in it for generations?	The analyses of the impacts on the fishing industry from potential development in the six NY Bight lease areas are provided in Sections 3.6.1 and 3.6.3.
BOEM-2024-0001-0447-0003	The alternative measures (AMMMs) for the NY Bight lease area only contains 3 Alternatives: No Action Defer Adoption of AMMMs or the Proposed Action of Adoption of AMMMs. The PEIS states that the cumulative impacts of Alternative C to finfish invertebrates and EFH range from negligible to major adverse as well as minor beneficial. The only way this conclusion could be reached is if it assumes that artificial reef creation will add to fisheries. But this would only	The analysis in Section 3.6.1 differentiates between the adverse and beneficial impacts on commercial fisheries and for-hire recreational fishing.

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	benefit recreational fishers. As we have continued to identify the commercial fishing fleet cannot operate in these areas with gear workable around these reefs. So recreational fishing consideration must be separated since we now assume this document realizes there is a major adverse impact to commercial finfish fishing and a possible benefit to recreational reef fishermen.	
BOEM-2024-0001-0447-0004	Secondly artificial reefs create exclusion zones for mobile bottom tending gear fisheries. Mobile bottom tending gear can hang up on existing reefs- whether natural or artificial- and cause gear loss/damage as well as safety situations. So the next assumption is that all clamming and scallop fishing will be impossible in these areas.	BOEM recognizes that the presence of structures and scour material can lead to entanglement or gear loss/damage. AMMM measures included in Appendix G provide measures to reduce this risk. Project-specific COPs may include additional measures proposed by the lessees.
BOEM-2024-0001-0447-0008	Mitigation and Spacing Also worth noting is the majority of fishing gear types will be unable to work in these arrays. Specifically gill net bottom trawls purse seine midwater trawls and clam and scallop dredges need at least a 2 nm spacing between each array. This has been shared countless time and to date has never been included in a design proposal. As such the PEIS should have considered a greater array spacing to allow commercial operation or assume these areas will be closed to most gear types fished in NJ commercially. Thus mitigation must be considered that includes the fact that these areas will be closed to commercial fishing.	As described in Section 2.2, because the locations of turbines for the six lease areas are unknown, the PEIS analyzes a hypothetical project with the closest spacing possible for the turbine layout. The PEIS includes an RP that encourages lessees to propose consistent turbine layouts across adjacent lease areas as well as increased spacing as ways to reduce impacts. Lessees may propose greater spacing in their project-specific COPs to account for these concerns.
BOEM-2024-0001-0452-0008	Artificial Reef Effect is Not Universally Beneficial to Commercial Fisheries BOEM continues to tout the benefits of ""artificial reef"" for commercial fishing and in so doing fails to demonstrate understanding of the differences between recreational and commercial fishing and different commercial fishing gear types and target stocks. Mobile bottom tending gear industry members have stated for years that natural and artificial reefs pose serious safety risks for operators and loss/damage to gear; therefore areas with potential for hang-ups from foundations and scour protection especially in tightly clustered arrays of 0.6 x 0.6 nm creates exclusion zones for mobile gear types. Moreover many commercially harvested species in the Bight require soft sand or mud substrate at various life stages and cannot survive in hard structure environments. Rather than qualitative unscientific statements regarding large-scale habitat conversion any discussion of this nature	See response to comment No. BOEM-2024-0001-0447-0003.

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	should provide specific details about affected stocks and operations with appropriate references. Introduction of hard artificial substrate should appropriately be identified as a major adverse impact to certain fisheries in the final PEIS.	
BOEM-2024-0001-0452-0015	Best Practices for Informing OSW Layouts In pursuit of its mission to achieve the best possible outcomes for U.S. commercial fishermen (and a healthy marine environment on which they depend) RODA has made extensive efforts to communicate directly with OSW developers. An example of constructive work between two industries was conducted with a lessee in the New York Bight on its project design. [Footnote 20: See ROD's comments to the NOI to prepare an EIS for Empire Wind available at <a href="http://rodafisheries.org/wp-content/uploads/2021/07/210726-Empire-Wind-NOI_submitted.pdf">http://rodafisheries.org/wp-content/uploads/2021/07/210726-Empire-Wind-NOI_submitted.pdf</a> ] In situations where an OSW developer is genuinely willing to consider changes to its project design to accommodate a greater degree of fishing access similar exercises with regional fishermen prior to finalization of project design are likely to mitigate impacts. Opportunities for these approaches must be maintained in the final PEIS as a mitigation measure for projects.	Thank you for your comment. Additional site-specific NEPA analyses will be conducted for each of the six NY Bight projects once COPs are submitted and will allow for additional opportunities for mitigation.
BOEM-2024-0001-0453-0003	Page 78- Food Security Concerns The accumulation of West Coast fishing ground loss to OSW development will greatly exacerbate the serious ongoing problem of foreign fish imports to the U.S by Russian government activities of Russian fish reprocessing (laundering) and export to the U.S. by China enabling the Russians to increase military efforts to overthrow the legitimate government of Ukraine. As it is over 85% of U.S. consumed seafood is imported while California Oregon Washington and Alaska struggle to market domestic fish...Volume 3 Appendices - page 26: The first five California leases should serve as a demonstration project allowing sufficient time to study the performance and environmental and socioeconomic effects of these wind farms. This will allow adaptive management and avoidance of future problems.	Thank you for your comment. Analysis of California or west coast offshore wind development is not part of this NEPA analysis for the NY Bight PEIS.
BOEM-2024-0001-0453-0004	Socio-economic Impacts: Due to the size scope and number of federal and state agencies involved in regulating offshore wind development since 2018 California commercial fishermen and their	See response to comment No. BOEM-2024-0001-0453-0003.

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	<p>associations have been inundated with requests for consultation. The time and energy to respond to each request for consultation has a fiscal impact and burden for fishermen who participate in ongoing and regular meetings about offshore wind development permitting processes and other activities. This also had a negative financial impact on their crew and families since fishermen are often not compensated for their service For those fishing industry leaders in this situation they must take time off from work to attend each meeting or consultation. This puts considerable strain and stress on fishermen who participate in the many consultations and meetings associated with offshore wind. Further most fishermen are self-employed and do not have funds to pay for staff or consultants' time participating in fisheries consultations and other offshore wind meetings. In nearly all consultations CEC has learned of the need to financially compensate fishermen for their time and expertise that they are being asked to provide. Further fishermen require resources to build their internal capacity and technical assistance to support their review of permitting and environmental documents data and materials related to offshore wind. The above is well crafted and provides questions which BOEM and the scientists they work with continue to discount. BOEM moves forward regardless of the consequences to our coastal waters and the marine biosphere. In addition there is no plan for avoidance with endangered and protected species of whales and seabirds in the siting construction and operational phases of OSW development. Loss or reduction of primary building blocks in the marine food chains such as phytoplankton or copepods due to OSW is an open question. It will likely remain so as it appears to be of no concern or consequence to BOEM when measured against the realization of their stated OSW goals. BOEM's use of the term "PEIS" is a misnomer. These are PEIS's in name only and the methodology formulated to support their pre-formed conclusions is not credible. Nor can it be without filling in the large data gaps instead of blithely ignoring their existence.</p>	
BOEM-2024-0001-0474-0006	<p>Among other reasons the action is Arbitrary because the proposed action will destroy and decimate the livelihoods of commercial and recreational fishers to the detriment of all citizens and members of the public. Among other reasons the action is Arbitrary because the</p>	<p>The purpose of the PEIS is to identify AMMM measures that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. The PEIS does not approve any projects. Each individual COP submitted by a</p>

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	<p>programmatic view does not accurately measure the cost of the destruction and decimation of commercial and recreational fishing and further the federal government actors have failed to urge New Jersey state government actors to protect such livelihood. Among other reasons the action is Arbitrary to the extent that New Jersey commercial fishers are denied equal protection of law in that New Jersey government actors have failed and refused to enact protections which are imposed by other state government actors such as creation of mitigation and remediation funds and commercial fishers in New Jersey will be harmed and impacted by the proposed action development of the offshore wind projects more than commercial fishers from other states in the same leasehold development area. Among other reasons the action is Arbitrary because the failure and refusal of the New Jersey government actors to protect commercial fishers is a dereliction of duty which the purported federal partners should address and correct as a proper mitigation action in light of the destruction and decimation of commercial and recreational fishing due to the proposed federal action as to which the New Jersey government actors weakly and wrongfully acquiesce. Among other reasons the action is Arbitrary because the destruction and decimation of commercial and recreational fishing will impact a critical food source impacting all citizens and members of the public and the Draft PEIS does not evaluate assess or mitigate such negative impact. Among other reasons the action is Arbitrary because the destruction and decimation of commercial and recreational fishing will impact a critical food source impacting all citizens and members of the public but the analysis in the programmatic review does not measure and address the public interest in preserving a critical food source.</p>	<p>developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the construction and installation, O&amp;M, and conceptual decommissioning of the project, including cumulative effects.</p>
BOEM-2024-0001-0512-0003	<p>The fishing industry faces substantial risks due to the installation and formation of power cable networks and offshore substations which would make it impossible for them to continue fishing safely. This would disrupt valuable fishing grounds and unnecessarily jeopardize the livelihoods of countless fishermen and their families.</p>	<p>See response to comment No. BOEM-2024-0001-0474-0006.</p>
BOEM-2024-0001-0530b	<p>I basically looked at the fisheries effort -recreational fishing effort slide and explained and expressed my call it “anecdotal” opinion and information based on the recreational fishing effort that is shown</p>	<p>Thank you for your comment. Section 3.6.1 discusses commercial fisheries and for-hire recreational fishing. Additional discussion of private recreational fishing from shore or personal vessel can be</p>

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	and depicted on the chart using some NOAA Fisheries information. To the best of my knowledge, that information is compiled from MRIP data and also VTR/eVTR reporting. The large portion of recreational fishing effort that I believe is being missed out on is due to the failures of MRIP, which are well known by NOAA Fisheries and it's being corrected at this time.	found in Section 3.6.8, <i>Recreation and Tourism</i> . The estimates of fishing pressure were obtained from NOAA's Marine Recreational Information Program, which is currently the best publicly available source of recreational fishing data. The analysis in Section 3.6.1 differentiates between the adverse and beneficial impacts on commercial and for-hire recreational fisheries, including the reef effect of the turbines. See the response to BOEM-2024-0001-0332-0004 regarding the location of recreational fishing activity within the lease area. Individual developers will collaborate with private fishers through their fisheries representatives, who will convey applicable information to the developer during the project-specific COP-level NEPA analysis and COP preparation phase. The fisheries representatives would represent the needs of the fishing community. Private angling is further discussed in Section 3.6.8, <i>Recreation and Tourism</i> .
BOEM-2024-0001-0530b	I believe there's a lack of recreational fishing dollars and cents there with regards to the GDP or economic contributions to GDP for the recreational side of things. I feel that you guys, or I should say, I feel that NOAA and BOEM has a handle on the for-hire and federally-inspected vessels. And that is due to the information coming from the VTR (the vessel trip reporting) and the eVTR (electronic vessel trip reporting) from the party head boat charter and all that. But I feel there's a pretty large gap due to the limitations of MRIP. And I feel that the recreational industry as a whole; that could be bait-and-tackle retail; that could also be tackle manufacturers; it could also be media, say magazines, video (there's a large subset of the recreational community that makes you know their money off the media side of things). They're totally overlooked in regards to this - in regards to this topic.	Thank you for your comment. Please see response to comment BOEM-2024-0001-0530b for more information on recreational fishing information.
BOEM-2024-0001-0530b	However, I look further east of there, very popular area 15 miles east is the Resor and another say five to 10 miles east of there, the Triple Wrecks, also north and also little south. If you basically draw a triangle between the Atlantic Princess, the Triple Wrecks, and the Resor you kind of have a triangle there that has a large amount of effort in the summertime for recreational anglers that are shark	Thank you for your comment. For-hire recreational fishing activity in the areas noted in the comment has been added to Figure 3.6.1-22. Further information on private recreational tourism can be found in Section 3.6.8.

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	fishing and tuna fishing. There's also sea bass, cod, Mahi, Wahoo, sometimes Marlin - a lot of different things.	
BOEM-2024-0001-0528h	<p>I will also say that there are no beneficial impacts to commercial fisheries in the area. The primary means of commercial fishing in that area is mobile tending bottom gear, which will be precluded from fishing in these areas. The fact that the spacing is about half a mile wide is completely ludicrous. It actually violates all of the other - I know coastguard recommendations in other areas. I would like to see an analysis on vessel transit through this lease area on a diagonal. Commercial fishing vessels are told all the time by BOEM that they are, you know, completely allowed to fish in these areas. Well, our trawl cables, which have the net behind the boat can be, you know, a quarter of mile to a half a mile long. Which would totally preclude any mobile tending bottom gear from fishing in this area. And any transit on a diagonal, that means that the spacing between the turbines and a diagonal is probably going to be about a quarter of a mile wide.</p> <p>Those types of impacts and complete exclusion of commercial fisheries in the area need to be analyzed.</p>	<p>Thank you for your comment. The PEIS analyzed a RPDE with the closest spacing possible; however, more will be known at the COP NEPA stage when project specifics are known. The PEIS includes an RP that encourages lessees to propose consistent turbine layouts across adjacent lease areas as well as increased spacing as ways to reduce impacts. Lessees may propose greater spacing in their project-specific COPs to account for these concerns. BOEM acknowledges that restrictions on maneuverability due to the presence of structures could displace some fishing vessels, increasing conflict over alternative fishing grounds, and that bottom-tending mobile gear is more likely to be displaced than fixed gear.</p>
BOEM-2024-0001-0529f	<p>Our fishing industry is about to lose its livelihood, because what you will do to the ocean floor will destroy the ability of our fishermen and women to fish. This not only affects the men out in the water, but affects the dock workers, it affects the packing plants, it affects the transport people, affects the fish markets.</p> <p>Who wants fish that's made, that comes from a foreign country. We need our fishing industry, and you need to stop this farce and tell the truth. Wind turbines will not have any effect on climate change.</p>	<p>Thank you for your comment. The analyses of the impacts on the fishing industry from potential development in the six NY Bight lease areas are provided in Sections 3.6.1 and 3.6.3. No single project can reduce GHG emissions enough to have a measurable impact by itself on climate change. The GHG emission reductions from one NY Bight project would contribute individually, in combination with all other GHG reductions, toward slowing the rate of climate change.</p>
BOEM-2024-0001-0528z	<p>The negligible effects on the most productive lucrative fishing grounds, are extremely concerning, not only within these lease sites, but also the placement of thousands of miles of VMF-laden cables that will be trenched through the ocean floor, plowing through plowing through these ledges and ridges that provide habitat is unthinkable.</p>	<p>Thank you for your comment. The analyses of the impacts on the fishing industry from potential development in the six NY Bight lease areas are provided in Sections 3.6.1 and 3.6.3, as well as AMMM measures and RPs that could reduce impacts. In Section 3.6.1, the Final PEIS describes potential impacts under the Proposed Action as negligible to moderate for commercial fisheries and for-hire recreational fisheries, and minor beneficial on for-hire recreational fisheries for either one or six NY Bight projects.</p>

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BOEM-2024-0001-0528z	Habitats like the mud hole and monsters ledge in the New York Bight should be off limits.	Thank you for your comment. Prime Fishing Grounds of New Jersey, including the Mud Hole and Monster's Ledge, have been added to Figure 3.6.1-22. Further information on private recreational tourism can be found in Section 3.6.8. BOEM will still conduct project-specific NEPA analysis of the COP for each lease area that will focus on providing site- and project-specific analyses that were not already addressed by the PEIS. Project-specific alternatives will be considered by BOEM and cooperating agencies at the COP NEPA stage.
BOEM-2024-0001-0529n	We are going to destroy the economy of our coastal communities. People come to the shore for seafood and boating, both will be eliminated. Say goodbye to seafood. You want to talk about job creation. What about the generational jobs you're taking? Thousands of commercial fishermen will lose everything. The jobs that stem from this industry will be lost further draining the economies of our coastal communities. We're talking billions in GDP and billions in labor. Party boats will be a thing of the past. No fish for recreational fishermen, restaurants. The list goes on and on. Cumulative impacts equals cumulative assumptions. The negligible effects on the most productive lucrative commercial fishing grounds are extremely concerning not only within these lease sites.	Thank you for your comment. The analyses of the impacts on the fishing industry from potential development in the six NY Bight lease areas are provided in Sections 3.6.1 and 3.6.3, as are AMMM measures and RPs that could reduce impacts. In Section 3.6.1, the Final PEIS describes potential impacts under the Proposed Action as negligible to moderate for commercial fisheries and for-hire recreational fisheries, and minor beneficial on for-hire recreational fisheries for either one or six NY Bight projects.
BOEM-2024-0001-0529n	An area on the map shaded in green, a proposed fairway, the block marked Barnegat to Narragansett Fairway and separation area above and the block east of that fairway marked Hudson Canyon to Ambrose precautionary area. This area is an extremely lucrative fishing area for both the commercial and recreational fishermen. No cable substations and or cooling stations should be placed in this area, known as the Mud Hole. No cables, substations, and or cooling stations should be placed near Monster's Ledge.	Thank you for your comment. Avoidance of major OCS features was part of BOEM's planning process to identify lease areas (Section 1.2, Table 1-1, <i>History of BOEM planning and leasing activities in the NY Bight</i> ), and none of the NY Bight lease areas are in the Hudson Canyon. Prime Fishing Grounds of New Jersey, including the Mud Hole and Monster's Ledge, have been added to Figure 3.6.1-22. Further information on private recreational tourism can be found in Section 3.6.8.
BOEM-2024-0001-0310b	One of the main topics here basically I wanted to bring to the forefront is the recreational fishing contributions. New York Bight also contains historical fishing grounds for iconic species and supports an extensive high migratory fish species recreational fishery in which thousands as far as New Jersey and New York together Private Boat high migratory species permits that's 6927, and if you	Section 3.6.1 discusses commercial fisheries and for-hire recreational fishing. Additional discussion of private recreational fishing from shore or personal vessel can be found in Section 3.6.8, <i>Recreation and Tourism</i> . The economic impact of wind development in the lease areas is discussed in Section 3.6.3.

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	<p>want to include charter/head boats the total comes to 7,779. That's based on NOAA 2022 Fisheries HMS SAFE report of vessels participate each year. So you see there's a large amount of participation effort here in the New York Bight in terms of recreational fishing. In 2021, recreational anglers in New Jersey and New York contributed \$4.2 billion in economic output and supported 28,290 jobs. That's from Southwick 2021. All these, all my references cited here on the last page. Just imagine what these updated numbers would like look right now, you know, with the current state of inflation. A large portion of the recreational fishing effort occurs within popular fishing areas that have been leased out for offshore wind development. The diversity of the rich fisheries and the threat from offshore wind development's impacts are not bound by lease area borders. The socioeconomic impact of OCS Wind Energy Development on fisheries in the U.S. Atlantic predates the New York Bight leases. So therefore the economic impacts, that's a document, pretty heavy one that I believe is 2017. It's on the last page here. That's far before the New York Bight leases come out. So that needs to be relooked at, rehashed through call it. Therefore the economic impacts as well as a cumulative analysis of impacts to the fisheries must be completed for the entire region. There must also be a comprehensive assessment of baseline recreational fishing effort for both coastal fishery resources and also highly migratory fish species within New York Bight and the associated Wind Energy lease areas.</p>	<p>The NY Bight lease areas were designed to avoid certain fishing activity, based on stakeholder input and task force meetings held from 2017 to 2021. The Final Lease Sale Decision Memorandum explains that areas were removed from the leases to avoid conflict with fishing grounds (BOEM 2021). Figure 3.6.1-22 shows that the Prime Fishing Grounds have very little overlap with the NY Bight lease areas.</p>
BOEM-2024-0001-0310b	<p>If you take a look at 3.6.1-39 based on National Marine Fisheries Service data, there is no substantial for-hire recreational fishing activity in any of the six lease areas. That's word-for-word quote. That couldn't be further from the truth. The fishing hot spots that I know as the Resor, Atlantic Princess, Chicken Canyon, Triple Wrecks and the Corvallis, The Star, 20/30 fathom Curve, are just a few amongst the same area that are fished regularly. Large fleets sometimes 50 to 100 plus recreational private vessels sometimes congregate in small areas when tuna fishing in the summertime. I can agree somewhat with "the most impacted species includes cod in the lease area of 544 and also bluefin tuna, red hake, black sea bass in lease area 538." However the chart 3.6.1-39 poorly represents the recreational fishing effort with a long fishing history</p>	<p>Thank you for your comment. For-hire recreational fishing activity in the areas noted in the comment has been added to Figure 3.6.1-22. Further information on private recreational tourism can be found in Section 3.6.8.</p>

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	<p>in the New York Bight and more specifically in the lease areas. There's significantly more effort at the hot spots mentioned above as well as the Barnegat Ridge, which is also a fishing hot spot, which happens to actually be painted in this particular graphic or this chart. There are major data gaps that the PEIS must consider. Recreational fishing catch and effort data is severely lacking and there is little to no spatial data collected for recreational private boat anglers, which is Marine Recreational Information Program through Access Point Angler Intercept Surveys (APAIS) which collects catch per trip data do not record specific fishing spot or location data, only the location of the intercept and the general area where the anglers are fishing such as shore, private, for-hire. NOAA's own study finds their estimates are way off and their program needs overhauling. The state and feds largely do not know exactly where private anglers are fishing and do not know where these same boats transit unless monitoring AIS, which is not -- which the majority of the private fleets do not have.</p>	
BOEM-2024-0001-0310b	<p>I am concerned that turbines are offshore fish attracting/aggregating devices which greatly increase fish catchability. This is stated in 3.6.1 as a benefit to the for-hire recreational fisheries. However, this is a very large issue that fisheries managers must understand and properly manage. The fish will come from other fishing grounds and these concentrations will be easier and quicker to catch leading to localized and regional depletion. Overfishing can happen fast resulting in a closure of the fishery and then economic hardship follows. Our effort is turned to another species which stresses another fishery. It's kind of a domino effect. "Some fisheries could experience substantial disruptions indefinitely, even with the implementation of the AMMM," which for anybody who doesn't know and read these thick books with a lot of acronyms, it's avoidance, minimization, mitigation and monitoring measures.</p>	<p>Thank you for your comment. Sections 3.6.1 and 3.6.3 present the analyses of the impacts on the fishing industry from potential development in the six NY Bight lease areas, as well as AMMM measures and RPs that could reduce impacts. Potential impacts on scientific research and surveys are covered in detail in Section 3.6.7. NMFS and BOEM have prepared a Federal Survey Mitigation Implementation Strategy for the Northeast U.S. region (Hare et al. 2022) that describes impacts on fishery participants and on the conservation and recovery of protected species. This implementation strategy also defines stakeholders, partners, and other ocean users that will be engaged throughout the process, and it identifies potential resources for successful implementation through the duration of wind energy development in the Northeast U.S. region. BOEM is committed to working with NOAA toward a long-term regional solution to account for changes in survey methodologies as a result of offshore wind farms.</p> <p>The reef effects observed around foundations of offshore wind turbines may not be as beneficial as natural habitats; however, they are still beneficial, considering habitat modifications. An ecological halo effect is also noted from artificial reefs, including</p>

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		<p>offshore wind turbine foundations. Reeds et al. (2018) found this distance to be about 15 meters.</p> <p>BOEM acknowledges that restrictions on maneuverability due to the presence of structures could displace some fishing vessels, increasing conflict over alternative fishing grounds, and that bottom-tending mobile gear is more likely to be displaced than fixed gear.</p>
BOEM-2024-0001-0310b	New York Bight leases are in the middle of the 20/30/40 fathom midshore offshore fishing grounds, which is some of the most productive fishing grounds and also home to a number of prominent/historic wreck sites. The area's sand ridges are home to abundant colonies of sand lance and I find them to be a quintessential link in the food web. They're not only forage to ground fish and pelagic species but also whales and sea birds.	<p>Thank you for your comment. For-hire recreational fishing activity has been added to Figure 3.6.1-22. Further information on private recreational tourism can be found in Section 3.6.8. Brief text about the sand lance has been added to Section 3.5.5.1.4. Impacts on seafloor habitats will also depend on the ambient conditions. For example, when ambient levels of suspended sediment and the degree of variation throughout the year are high, then the degree of impact from suspended sediment is likely to be less during that same year.</p>
BOEM-2024-0001-0310b	There's a document here which I have a link to, which shows the strongest association of sand eels to sandy sediment, sand eels will most likely be negatively affected by the radical change in habitats when hundreds of turbines and thousands of tons of rock scour protection are added around the turbine and substation bases. If and when the sand eels leave, so do all of the other vital species.	<p>Thank you for your comment. Brief text about the sand lance has been added to Section 3.5.5.1.4. Impacts on seafloor habitats will also depend on the ambient conditions.</p> <p>The addition of scour protection would result in short-term to permanent impacts on softbottom habitat within the project area and would impart minor impacts on finfish, including the sand lance, though localized impacts would likely be greater. Habitat conditions would be unaffected after construction is complete. Impacts from six NY Bight projects would therefore remain negligible to major.</p>
BOEM-2024-0001-0310b	How can it be that no HAPC, habitat areas of particular concern, are designated within the New York Bight, yet summer flounder spawn in the winters on the Outer Continental Shelf and use the areas during all four stages of their life cycle (egg, larvae, juveniles as well as adults)? Many other coastal species rely on the Chicken Canyon and Hudson Canyon during one or more of their life stages and use the New York Bight's lease areas as well.	<p>HAPCs are discrete subsets of EFH that are designated by the regional fishery management councils; represent high priority areas for conservation, management, or research; and are necessary for healthy ecosystems and sustainable fisheries. The HAPCs for the study area are shown on Figure 3.5.5-2, along with the NY Bight lease areas. No designated HAPCs are within the NY Bight lease areas; however, Section 3.5.5 discusses that summer flounder HAPCs may overlap with potential NY Bight offshore export cable corridors and vessel routes to the identified representative ports (see Chapter 2, <i>Alternatives</i>).</p>

Comment No.	Comment	Response
BOEM-2024-0001-0310b	A lot of what was detailed in the very basic early work of Buchanan, which is a New Jersey DEP 2010 study was overlooked as well in the New Jersey Area of Interest wind power on the Outer Continental Shelf.	Thank you for your comment. The NY Bight lease areas were designed to avoid certain fishing activity based on stakeholder inputs and task force meetings held from 2017 to 2021. The Final Lease Sale Decision Memorandum explains that areas were removed from the leases to avoid conflict with fishing grounds. (BOEM 2021). Figure 3.6.1-22 shows that the Prime Fishing Grounds have very little overlap with the NY Bight lease areas.
BOEM-2024-0001-0310c	McCann study in 2012 found that flounder was one of the few species that showed avoidance characteristics around the heavy EMF around these cables. Specifically it noted that flounder catches decreased around the high power turbines in Denmark. Now, flounder as I will tell you is the straw that stirs the drink at the Jersey Shore and for the recreational fishing community, which as another commenter noted is a multibillion dollar industry in New Jersey. Summer flounder migrate inshore and offshore twice a year. They come inshore in April, May. And that is the most important, the critically most important recreational species here at the Jersey Shore.	Thank you for your comment. An EMF analysis is provided in Sections 3.5.5.3.3 and 3.5.5.4.1. Also, Sections 3.6.1 and 3.6.3 present analyses of the impacts on the fishing industry from potential development in the six NY Bight lease areas, as well as AMMM measures and RPs that could reduce impacts. The NY Bight lease areas were designed to avoid certain fishing activity, based on stakeholder input and task force meetings held from 2017 to 2021. The Final Lease Sale Decision Memorandum explains that areas were removed from the leases to avoid conflict with fishing grounds. (BOEM 2021). Figure 3.6.1-22 shows that the Prime Fishing Grounds have very little overlap with the NY Bight lease areas.
BOEM-2024-0001-0310h	Thousands of miles of EMF laden cables buried on the ocean floor severely altering and decimating the homes of scallops, clams, flounder, lobster, crabs, et cetera. In fact, there's limited to no real world data concerning the negative impact this will have on a now thriving ecosystem.	An EMF analysis is provided in Sections 3.5.5.3.3 and 3.5.5.4.1. EMF exposure levels in the built environment are not expected to reach high enough energy levels to result in impacts on populations, and there is no evidence to indicate that EMFs from undersea AC or DC power cables negatively affect commercially and recreationally important fish species (CSA Ocean Sciences Inc. and Exponent 2019; Gill and Desender 2020; NYSERDA 2017; SEER 2022; Taormina et al. 2018). Additionally, RP MUL-39 proposes the electric shielding on underwater cables to control the intensity of EMF. The Final PEIS considers the best available data and information that reflect the state of the science at the time of publication of the PEIS. An acknowledgment of uncertainty about the impacts of EMFs is included in Appendix E, <i>Analysis of Incomplete or Unavailable Information</i> . Future research about EMF exposure on benthic marine organisms may be incorporated into future

Comment No.	Comment	Response
		project-specific COP NEPA analyses as information becomes available.
BOEM-2024-0001-0310n	<p>We attend meetings and have our thoughts and comments ignored only to be shown BOEM'S cherry-picked data about how much we stand to lose only to see the actual financial figures at less than one-third of the realistic numbers. None of these economic figures taking into the cumulative effects of the decline of the commercial fishing industry.</p> <p>The jobs just don't end at the boat. Dock workers, mechanics, metal fabricators, truck drivers, restaurants and many shore side products we harvest. This is the last of the wild caught, organic, sustainably harvested protein on earth with one of the lowest carbon footprints. It astonishes me that in this day and age, with constant food insecurity issues, that we would jeopardize the harvest of some of the healthiest protein for a form of energy production that has proven itself to be unreliable, inefficient, expensive and fraught with endless failures.</p>	<p>Thank you for your comment. Sections 3.6.1 and 3.6.3 present analyses of the impacts on the fishing industry from potential development in the six NY Bight lease areas, as well as AMMM measures and RPs that could reduce impacts.</p> <p>Previously, lessees have entered into agreements to provide job training so that residents near these communities can benefit from the job creation. Turbine technicians, for example, are skilled jobs that are not temporary. Jobs that rely on tourism have been evaluated near an existing offshore wind project (Block Island), and it was found that there was no negative impact in that area, where the project is significantly closer to shore than the ones in this PEIS.</p>
BOEM-2024-0001-0310o	<p>The negligible effects on the most productive, lucrative fishing grounds are extremely concerning, not only within these lease sites. An area on charts known as the Mudhole has been heavily surveyed by multiple developers for export cable routes. This is an extremely lucrative fishing area for both the commercial and recreational fishermen.</p> <p>No cables, substations and/or cooling systems should be placed in this area. No cables, substations and/or cooling systems should be placed near Monsters Ledge. The cumulative impacts of these lease sites will decimate a healthy sustainable resource and industry.</p>	<p>Thank you for your comment. Prime Fishing Grounds of New Jersey, including the Mud Hole and Monster's Ledge, have been added to Figure 3.6.1-22. Further information on private recreational tourism can be found in Section 3.6.8.</p> <p>BOEM will still conduct project-specific NEPA analysis of the COP for each lease area, which will focus on providing site- and project-specific analyses that were not already addressed by the PEIS. Project-specific alternatives will be considered by BOEM and cooperating agencies at the COP-specific NEPA stage.</p>

## P.5.14 Cultural Resources

**Table P.5-14. Responses to Comments on Cultural Resources**

Comment No.	Comment	Response
BOEM-2024-0001-0255-0003	The NJ Council of Divers and Clubs (NJCD&C) is an organization of 14 sport diving clubs many individual divers and some sport diving shops. We would like to remind you that there are an estimated 3000 shipwrecks off New Jersey that have occurred in the last 300 years. Some of those wrecks are buried but those that protrude above the bottom are the reefs of New Jersey that are focal points for marine life and provide habitat and food for fish and sea turtles. They are also heavily fished and dove on and some may be of archaeological value.	Thank you for the information about historic resources present in the offshore marine environment. The commenter does not pose a question or raise issues with the environmental analysis.
BOEM-2024-0001-0313-0051	3.6 Socioeconomic Conditions and Cultural Resources The PEIS States "National Register Bulletin 38 (Parker and King 1990 revised 1992 and 1998) defines a traditional cultural property as a "[historic property] that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history and (b) are important in maintaining the continuing cultural identity of the community." TCPs may be locations places or cultural landscapes and have either or both archaeological and aboveground elements." Comment Reviewing this definition of traditional cultural property above it is important to note that TOBAY Beach is part of the Town's cultural identity and as the crown jewel of the Town of Oyster Bay we are seriously concerned about the potential impacts to the viewshed quality of life noise and vibratory impacts impaired water quality larger plan of scale impacts direct and indirect impacts substantial disturbance throughout the water and land environments.	The PEIS analyzes effects on quality of life, noise, vibrations, and water quality in Section 3.6.3, <i>Demographics, Employment, and Economics</i> ; Section 3.6.5, <i>Land Use and Coastal Infrastructure</i> ; and Section 3.4.2, <i>Water Quality</i> . These effects will be further analyzed at the project-level NEPA review once a COP is submitted. Regarding the referenced Section 3.6 of the PEIS, BOEM does not intend to identify specific historic properties through this programmatic evaluation. Developers of individual leases will be required to make a reasonable and good faith effort in accordance with the Section 106 regulations and BOEM's survey guidelines to identify historic properties, including traditional cultural properties (TCPs). BOEM will assess results of these surveys to analyze the effects of each project—including visual, vibrational, and auditory effects—on historic properties during the COP-level environmental reviews. Thank you for identifying Tobay Beach as a potential TCP. BOEM will continue to consult with the interested consulting parties on the effects of individual proposed projects on this potential TCP.
BOEM-2024-0001-0357-0043	With respect to the projects visible impact on historic properties on Long Beach Island New Jersey: 1. Limits on the total project nameplate capacity to allow flexibility in turbine size and number 2. A turbine exclusion zone from shore of at least 17.2 miles consistent with what the BOEM has agreed to provide for New York State	The closest turbine would be located 20 nautical miles (37 kilometers) from shore, which satisfies the concern expressed in the comment.

Comment No.	Comment	Response
	emanating from the Beach Haven Historic District to reduce historic resources adverse visible impact and 3. A turbine exclusion zone of at least 17.2 miles consistent with what the BOEM has agreed to provide for New York State emanating from the Barnegat Light lighthouse to reduce historic resources visible impact.	
BOEM-2024-0001-0373-0001	Within the cultural resources geographic analysis area for New York Bight there are expected to be over one hundred (100) sunken military craft. These craft range in age from the late eighteenth to the twenty-first century. Several of these craft are owned by the Department of the Navy (DON) whereas the remainder are owned by other U.S. government agencies are foreign military craft or their country of origin is unidentified. The type of craft represented in the DON collection spans a wide spectrum including but not limited to wooden sailing vessels steamboats destroyers submarines and aircraft. All sunken military craft are protected from unauthorized disturbance by the Sunken Military Craft Act of 2004. While the larger study area hosts a large number of sunken military craft there are presently no known sunken military craft within the six lease areas themselves.	Thank you for the information regarding sunken military craft and the Sunken Military Craft Act of 2004. BOEM will require each lessee to conduct surveys to identify cultural resources as well as historic properties listed on or eligible for listing on the NRHP. BOEM will consult with the Naval History and Heritage Command (NHCC) to determine if any marine cultural resources are sunken military craft.
BOEM-2024-0001-0373-0002	The following comments specifically relate to the PEIS for your consideration.1. In the discussion of marine cultural resources the following is offered: "Based on known historic and recent maritime activity in the region the NY Bight lease areas composing the knowable Programmatic Marine APE have a high probability for containing shipwrecks downed aircraft and related debris fields that may be subject to potential impacts by seabed-disturbing activities from offshore wind development in the NY Bight area (BOEM 2012 2013)" (PEIS pg 3.6.2-7). Recommend adding the following sentence the intent of which is to acknowledge that some of these resources are likely protected sunken military craft: "A portion of these marine cultural resources are likely to be sunken military craft which are afforded protection against unauthorized disturbance under the Sunken Military Craft Act of 2004 (H.R. 4200 108th Congress: Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005)." 2. In the discussion of impacts related to anchoring (PEIS pg 3.6.2-13) please consider adding the Sunken Military Craft Act to the list of existing federal and state requirements to avoid impacts to maritime	Thank you for these comments. BOEM has revised Table 3.6.2-2 and Section 3.6.2.3.2 under the Anchoring IPF to include reference to the Sunken Military Craft Act of 2004. BOEM will continue to invite the NHHC to consult on each of the NY Bight COP reviews. Through the Section 106 consultation procedures for the COP review stage outlined in the Draft Programmatic Agreement for the NY Bight, the NHHC will be afforded the opportunity to review and comment on historic property identification, evaluation of NRHP eligibility, assessment of effects, and consultation regarding the applicability of avoidance or minimization measures and/or the development of mitigation measures and historic property treatment plans regarding potential sunken military craft.

Comment No.	Comment	Response
	<p>cultural resources as it prohibits unauthorized disturbance to sunken military craft. 3. For Avoidance Minimization Mitigation and Monitoring (AMMM) measures directed at cultural resources specifically avoidance the following is provided: CUL-2: "BOEM establish and lessees comply with requirements for all protective buffers recommended by BOEM for each marine cultural resource (i.e. archaeological resource and ASLFs) based on the size and dimension of the resource. If an adverse effect cannot be avoided the lessee will be required to conduct further investigations to minimize or resolve effects on these historic properties." NHHC is requesting that BOEM codify the established minimum avoidance buffer of 50 meters (164 feet) around the outer detectable extents of any presumed or confirmed sunken military craft in toto regardless of location size and dimension of the resource. This avoidance buffer would never decrease in size but may need to be increased based on the character and sensitivity of the archaeological site in question. If avoidance of a sunken military craft is not practicable BOEM shall consult with the Naval History and Heritage Command regarding the development of an appropriate Historic Property Treatment Plan. Finally to address potential effects to sunken military craft during the Section 106 process please find attached draft language to be included in the project's PA. We are happy to discuss these stipulations or provide additional information if needed so please let us know.</p>	
BOEM-2024-0001-0357-0068	<p>Regarding determining which properties are adversely affected the Section 106 process is seriously flawed and misleading. First it relies on a very restrictive criteria to determine adverse effect which has not been used in prior DOI Section 106 processes that an order for a property to be adversely affected there must be a direct line of sight to the wind turbines. It thus ignores the contextual criteria that in fact the BOEM has used in the past which if used here would result in many more properties being adversely affected. Even by its own restrictive criteria it is not clear how it applies that criteria and why certain properties are not adversely affected. For example the turbines would be visible from the Barnegat Light lighthouse and a number of properties in the Beach Haven Historic district which are currently considered by BOEM not to be adversely affected. That</p>	<p>Thank you for your comment. There is ample precedent for DOI determining adverse effects on historic properties through the Section 106 process, pursuant to CFR § 800.5(a). This PEIS is not intended to comprehensively identify adversely affected historic properties, but to serve as a framework for such identification, assessment, and resolution of adverse effects as well as for Section 106 consultation for individual COPs in the NY Bight. The property-specific analysis will be conducted during the individual COP stage for each project within the NY Bight. Section 304 of the NHPA (54 U.S.C. 307103) grants federal agencies the authority to withhold from disclosure to the public information about the location, character, or ownership of a historic property, if the Secretary of the Interior determines that</p>

Comment No.	Comment	Response
	<p>incorrect determination could be affected by the fact that the Section 106 visibility consultant continues to present misleading information to the public regarding the frequency of the visibility of the wind turbines. Despite repeated comments by save LBI the consultant continues to refer to a meteorological report to support conclusions that the turbines will be rarely visible from shore. That report addresses the visibility of an undisclosed height object mostly from the Atlantic City airport over ground cover with entirely different meteorological conditions than what are occurring here. The results of that report and whatever is being looked at and whatever visibility measure is being discussed have absolutely no bearing on the visibility of 1000-foot-high wind turbines from the shore over the sea. The BOEM should cease presenting this misleading information to the public immediately. Finally the Section 106 process has not disclosed the presence of submerged prehistoric and Paleo-Indian sites and artifacts which are thought to be present in the lease area. It hides this information in a confidential Appendix. The BOEM must address that issue forthrightly. It can disclose whether such sites and artifacts have been identified through its vessel surveys without disclosing their exact location and present that data to the general public and the Native American tribes rather than restricting everything to a confidential status. This is a critical issue because once foundations are pile-driven into the seabed those sites and artifacts will be lost forever.</p>	<p>disclosure may risk harm to the historic property or impede the use of a traditional religious site by practitioners. BOEM requires lessees to provide public summaries of archaeological reports that can be shared with the public.</p> <p>Avoidance and/or minimization measures to protect archaeological sites, or mitigation measures if avoidance is not feasible, will be developed through consultation during the specific review for each COP. BOEM also requires lessees to develop and implement post-review discovery and monitoring plans.</p>
BOEM-2024-0001-0423-0033	<p>Appendix I: National Historic Preservation Act Section 106 Appendix V to the draft Programmatic Agreement in Appendix I provides an example of the contents of a Memorandum of Understanding to resolve adverse impacts for offshore wind projects. Stipulation II.B.1. provides proposed minimization measures for the Visual Area of Potential Impact including the following conditions for approval of the COP:"a. [italicized: Lessee will use uniform WTG design speed height and rotor diameter to reduce visual contrast and decrease visual clutter.]b. [italicized: Lessee will use uniform spacing to decrease visual clutter...]"These constraints upon the Bluepoint Wind Project seem excessive compared to the marginal utility of these conditions especially given the location of the Bluepoint Wind Lease Area. A less visually disruptive configuration of</p>	<p>Thank you for this comment. The suggested stipulations in the template Memorandum of Agreement in Appendix V of the Draft Programmatic Agreement for the NY Bight are based on stipulations that were consulted upon and included in executed Memorandums of Agreement for other offshore wind projects. The origin of this language is based on consultation with the ACHP, Tribal Nations, State Historic Preservation Officers (SHPOs), and other consulting parties, and therefore expeditious to consider for future offshore wind development. The intent of this programmatic effort to include an example Memorandum of Agreement template is to circulate these possible stipulations early for timely consideration and constructive application or adaptation to each individual project.</p>

Comment No.	Comment	Response
	a new wind farm (but still a new visible wind farm) will not reduce the degree of change to the historic character of a property. These requirements suffer from the "one size fits all" approach that is endemic throughout the Draft PEIS. Section 106 impact mitigation is especially ill-suited for this methodology of applying one prescriptive program to all projects. Section 106 analysis and action must be guided by careful consideration of historic and culturally significant properties and which projects will and will not have impacts on those properties. After that consideration an equally careful program for addressing such impacts should be developed in a thoughtful manner. For example projects that are farther from shore and will have visual impacts that range from zero to de minimis can and should not mitigate for non-existent impacts and projects that have more significant visual impacts should be subject to a customized and carefully shaped mitigation program that allows for full clean energy development while mitigating any impacts to such properties if any.	
BOEM-2024-0001-0436-0021	NHPA Programmatic Agreement During the scoping process BOEM recognized that this PEIS provides an opportunity for National Historic Preservation Act consultation to update and improve the current NHPA Programmatic Agreement for the New York Bight. This remains a valuable and attainable goal but it will require effective coordination with State Historic Preservation Officers (SHPOs) Tribal Historic Preservation Officers (THPOs) and lease holders on the timeframe of development of the Final PEIS. A revised Programmatic Agreement should provide an appropriate level of specificity based on experience with Section 106 issues in the offshore wind development context and be open for signature with the release of the Final PEIS. Such an improved Programmatic Agreement should be executed by BOEM and consulting parties at the time of BOEM's ROD.	This comment acknowledges consultation being conducted by BOEM with SHPOs, Tribal Historic Preservation Officers (THPOs), and others and asserts that the Section 106 Programmatic Agreement should be executed prior BOEM's issuance of the NEPA ROD. BOEM intends to execute the Programmatic Agreement for the NY Bight in advance of the ROD. BOEM has been engaged with Tribal Nations, THPOs, SHPOs, and ACHP for more than 2 years while drafting this Programmatic Agreement. The level of specificity requested in the comment will be analyzed during the individual COP Section 106 consultations.
BOEM-2024-0001-0528ff	We assert that it should be mandatory that Tribal cultural monitoring be mandatory both offshore and onshore. We believe it should be mandatory that Tribal participation be involved in permitting and leasing of the of the lands of our submerged lands.	BOEM supports Tribal monitors and has encouraged this participation through past Memorandums of Agreement. PSO training has not always explicitly been in previous Memorandums of Agreement because these memorandums are typically broad to fill Tribal needs, though PSO training would fall under Memorandums of Agreement.

Comment No.	Comment	Response
		Additionally, the NY Bight Programmatic Agreement for compliance with Section 106 of the NHPA outlines the procedures that will be followed for the identification of historic properties and the assessment of adverse effects for both marine and terrestrial archaeological resources. As stipulated in the Programmatic Agreement, lessees are to coordinate with Tribal Nations early in the planning and design process, prior to historic property investigations or surveys, to coordinate survey planning and sharing of information related to sites of religious and cultural significance to Tribal Nations.

### P.5.15 Demographics, Employment, and Economics

**Table P.5-15. Responses to Comments on Demographics, Employment, and Economics**

Comment No.	Comment	Response
BOEM-2024-0001-0063-0006	Economic Viability and Cost Concerns: Critics raise concerns about the economic viability of offshore wind projects pointing to the high costs of implementation and the potential burden on consumers especially with government subsidies.	Thank you for your comment. Refer to response to comment BOEM-2024-0001-0357-0059.
BOEM-2024-0001-0071-0004	Millions of jobs and lives are at stake here for the sake of a few temporary jobs filled by out of state workers with the intentions of a greener world. From the commercial fishermen to plant workers truck drivers fish mongers restaurants etc the list goes on. This isn't just an industry it's our heritage and our history.	Thank you for your comment. Previously, lessees have entered into agreements to provide job training so that residents near these communities can benefit from the job creation. Turbine technicians, for example, are skilled jobs that are not temporary. Jobs that rely on tourism have been evaluated near an existing offshore wind project (Block Island), and it was found that there was no negative impact in that area, where the project is significantly closer to shore than the ones in this PEIS.
BOEM-2024-0001-0171-0002	[Underline: Jobs & Economy]-Transitioning to a clean energy future isn't just a win for the environment it's a win for local businesses the many union members who will be put to work and to New Jersey's overall economy.-The cost of wind energy is stable. Wind is free so the cost of energy is consistent once wind energy installations are built. In contrast fossil fuels are subject to volatile price swings and global events that create unwelcome surprises on energy bills.-Wind energy boosts U.S. economic growth and creates local union jobs. As wind energy grows so do the positive economic impacts. In 2021	Thank you for your comment.

Comment No.	Comment	Response
	new wind projects added \$20 billion to the country's economy. Wind turbine technician is the fastest growing job in the U.S. and is projected to grow by 44% in the next decade.-Wind energy supports local communities. Wind can power our homes and our way of life. Wind provides a stable source of tax revenue delivering [Underline: an estimated \$1.9 billion] [Hyperlink: <a href="https://cleanpower.org/facts/wind-power/">https://cleanpower.org/facts/wind-power/</a> ] in state and local tax payments and land-lease payments every year. This is extra revenue that communities can put towards schools reducing tax-burdens for homeowners and boosting local infrastructure projects.	
BOEM-2024-0001-0313-0014	Consistent with ORECRFP22-1 and promoting the intent of the New York Buy American Act the solicitation sets a minimum U.S. iron and steel purchase requirement for all projects awarded to encourage domestic steel production and requiring developers to provide opportunities for U.S.- based steel suppliers to participate in the growing offshore wind industry.	Thank you for your comment.
BOEM-2024-0001-0313-0052	3.6.3.5 Impacts of Alternative C (Proposed Action) Adoption of AMMM Measures Demographics Employment and Economics Comment Upon review of the economic impacts analyzed there is surprisingly no analysis whatsoever about the direct impact to ratepayers as a result of the proposed action. While it is important to quantify economic impacts to commercial fisheries the concern that will impact all of our residents and is of serious concern to taxpayers is what is the economic impact to the fee and rate structure to a homeowner? While it is understandable that there are a number of variable factors quantification with explanation of ranges should be provided as local taxpayers should not be forced to encumber the cost of regional and global problems especially not without full and transparent disclosure in the section on economic impacts.	Refer to response to comment BOEM-2024-0001-0357-0059.
BOEM-2024-0001-0314-0001	I am opposed to the development of off-shore wind farms off the coast of New Jersey. This is an issue that should be voted on by the citizens of New Jersey. Several critical issues including the cost of maintenance lifespan of turbines cybersecurity and the security of undersea cables for these wind farms must be addressed. The cost of maintaining offshore wind turbines could potentially add significant financial burdens to New Jersey citizens and businesses that rely on power in the state. Given the harsh marine environment these	Wind turbines are designed to withstand hurricanes, and new technologies are being tested in areas that are most susceptible to strong hurricanes. See also response to comment BOEM-2024-0001-0357-0059.

Comment No.	Comment	Response
	<p>turbines require regular expensive maintenance to prevent corrosion mechanical failures and other issues. There is also the consideration of potential damage due to hurricanes. The substantial maintenance costs are very likely to lead to higher electricity costs for New Jersey residents. It is also impossible to forget that in the previous attempt at wind farms the New Jersey Senate and Legislature voted to give over 1 billion to Orsted that was supposed to go to NJ taxpayers to help with energy rates.</p> <p><a href="https://www.insuranceinsider.com/article/2bm55t8cub6fynl009qtc/global-insurers-section/average-offshore-wind-loss-increased-sevenfold-2012-2021-gcube">https://www.insuranceinsider.com/article/2bm55t8cub6fynl009qtc/global-insurers-section/average-offshore-wind-loss-increased-sevenfold-2012-2021-gcube</a><a href="https://upcommons.upc.edu/bitstream/handle/2117/329731/master-thesis-xavier-turc-castell-.pdf#page31">https://upcommons.upc.edu/bitstream/handle/2117/329731/master-thesis-xavier-turc-castell-.pdf#page31</a><a href="https://santiemidwest.com/blog/10-top-lubrication-challenges-in-wind-turbines/">https://santiemidwest.com/blog/10-top-lubrication-challenges-in-wind-turbines/</a><a href="https://www.nrel.gov/wind/offshore-supply-chain-road-map.html">https://www.nrel.gov/wind/offshore-supply-chain-road-map.html</a></p>	
BOEM-2024-0001-0322-0002	<p>Offshore wind holds the promise of improved sustainability new jobs and increased economic activity. We look forward to working with BOEM to advance these goals while ensuring navigation safety which must remain paramount as wind energy development proceeds. Thank you again for the opportunity to comment. I would be pleased to provide additional comments or further information as needed.</p>	Thank you for your comment.
BOEM-2024-0001-0331-0028	<p>PEIS Section 3.63 Demographic Employment and Economics Lacks Critical Information and Mitigation In Section 3.63 Demographic Employment and Economics BOEM claims that this section includes a discussion of the analysis area and the potential impacts from the Proposed Action alternatives and ongoing and planned activities. There is a reference to Appendix B Supplemental Information and Additional Figures and Tables for detailed demographic housing and employment information. Where is the discussion of the impacts? This document serves no purpose in identifying the offshore wind impacts to the New Jersey economy along with cost impact of offshore wind projects to ratepayers. Without this analysis the ratepayers/residents businesses will not have a clear understanding of the impact to their energy bills and any cost/ benefit analysis will be incomplete.</p>	<p>Thank you for your comment. BOEM understands that this PEIS does not provide the specificity the commenter needs to understand the impacts on their energy rates or businesses. This PEIS provides an overview of the entire potential impact area and the types of impacts that may occur. In a project-specific COP NEPA analysis, those specific analyses can be conducted once project size, scope, and location are defined. Those NEPA documents will be available for public comment as well. See also response to comment BOEM-2024-0001-0357-0059.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0331-0029	In determining the number of jobs gained or lost due to the projects the lack of any analysis concerning lost jobs in the commercial and industrial businesses due to higher energy costs results in an incomplete and misrepresented cost/benefit analysis. In addition higher energy costs impacting our government municipalities counties and school districts which will be passed onto taxpayers should be included. The lost jobs in the current fossil fuel energy industries including but limited to South Jersey Gas headquarters in Atlantic City should be included. Offshore wind companies and BOEM's EI analysis is misleading as it only includes jobs gained and ignores jobs lost. Both positive and negative impact to jobs and impact to costs for ratepayers and taxpayers must be included in future COPs and DEIS documents. Lastly any payments made from taxpayer money to fund offshore wind facilities wind ports etc. must be included in the economic analysis as an offset to job numbers or economic impact as these payments are transfer payments from taxpayers used to "buy" jobs and fund the offshore wind economy. Without these adjustments to the usual Wind Developers and BOEM's calculations of economic impact their conclusions will be misleading and highly inaccurate.	Refer to responses to comments BOEM-2024-0001-0331-0028 and BOEM-2024-0001-0357-0059.
BOEM-2024-0001-0331-0032	What are the risks of building an energy system such as offshore wind that is dependent on weather when BOEM outlines in the PEIS that weather events will continue to be more severe and catastrophic. BOEM claims that the PEIS is a more holistic approach to determining the impacts of offshore wind. The wind developers and BOEM include standard statements about the purpose and need for the offshore wind projects to achieve climate goals. But without including the determination of impacts and mitigation of offshore wind intermittency grid reliability and weather dependent energy in the environmental impact studies the studies are incomplete and misleading. The PEIS Does not Adequately Address Hurricane Impact and as Result BOEM is Exposing Taxpayers and Rate Payers to a Huge Financial Risk The PEIS includes one paragraph (Vol 1page 2-22) regarding hurricanes and storms and fails to offer any mitigation measures of how energy would be restored. NJBPU in its 2/14/24 Memorandum Docket No. QO24010008 addresses their concerns over hurricane impact to the viability of wind energy off the east	Thank you for your comment. BOEM does acknowledge that severe weather events have increased in frequency. A benefit realized by wind energy is that it reduces the need for fossil fuels that are one cause of climate change and these weather events. Turbines are built to withstand storms and, as the commenter points out, studies and improved technologies to secure them during hurricanes continue to be developed. BOEM does require developers to use the best practices available. Refer to response to comment BOEM-2024-0001-0357-0059 concerning energy supplies and rates. The PEIS does not address energy supply or the restoration of power. This issue must be addressed by individual power suppliers, and it is not within the scope of this analysis.

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	<p>coast. Per their memo they state "Atlantic hurricanes pose a significant potential threat to the State's burgeoning OSW sector. Despite this risk relatively little technical research has been devoted to quantifying and assessing Atlantic hurricane impact upon OSW projects. As a result regulators developers and insurers have limited tools at their disposal to mitigate this risk or ascertain whether the risk warrants design modifications. The prevailing uncertainty surrounding what is widely perceived as a substantial threat to OSW largely without scientific or engineering backing serves as a considerable obstacle to the development of OSW. Development of advanced technical research quantifying and assessing hurricane risk is therefore necessary to aid developers regulators and insurers in mitigating hurricane risk and providing improved design standard baselines." The NJBPU is working with NOWRDC to prepare an in-depth analysis of the hurricane threat and the study will only begin on March 1 2024 and conclusions are expected to be completed by February 2026. This timeline and lack of knowledge puts ratepayers and taxpayers at great risk since investment of taxpayer and rate payers money continues without sufficient knowledge of hurricane impact on offshore wind energy. As decommissioning funding policy becomes more lax and private insurance coverage seems more costly and less likely taxpayers and rate payers will be footing the bill for damages.</p>	
BOEM-2024-0001-0331-0033	<p>The PEIS does address the risk of sabotage and the socioeconomic disruption that would follow it. In today's world the threat of sabotage to offshore wind projects is real (witness the sabotage of the Nord stream pipeline). Because of their locations the turbines are easily accessible. While the structures are robust and separated the transmission stations and transmission corridors where the power from many turbines comes together would be the more likely targets. One or two hits could knock out many megawatts of power. The structures and rotating blades produce radar clutter which can make it difficult to detect intruders on the surface. Subsurface activities would be expected and difficult to detect due to the underwater vibration noise from the turbines and transformers. The PEIS should provide an assessment of the risk and potential mitigation. It should show consultation with the DOD and preventive</p>	<p>Thank you for the comment. BOEM does consult with federal agencies, including the Department of Defense, at the lease sale stage to ensure proposed activities do not interfere with national security. Further, just as national security has included assurances for other offshore industries such as oil and gas, offshore wind security is addressed by other tools outside of this NEPA document and outside of BOEM's jurisdiction.</p>

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	measures. It should include consultation with the BPU and electric utilities and show how back up power will be provided. While the PEIS process need not spell out the details of the security plan it should include consultation with law enforcement to ensure an effective response plan is put in place by the operator if an incident occurs. A comment along those lines should be included in the PEIS to assure the public that appropriate precautions have been taken and a specific judgment made by BOEM on the acceptability of the risk and the impact on system reliability. Such plans are routinely required of nuclear projects with specific threat levels assessed addressed and tested such as the Aircraft Impact Rule.	
BOEM-2024-0001-0334-0014	By now you should be wondering if you aren't simply wasting your time. Perhaps feed that concern back up the chain of command. It can be expected that the whole offshore wind debacle is going to be called into question this year. - Is any of this actually fiscally attractive? The numerous wind build cancellations seems to indicate it is not. Investors are beginning to shy away from offshore wind and redeploy their money elsewhere.	Thank you for your comment.
BOEM-2024-0001-0345-0011	CCE also thanks BOEM for evaluating not only the potential adverse environmental impacts, but also the potential benefits including... local job benefits and more.	Refer to response to comment BOEM-2024-0001-0071-0004.
BOEM-2024-0001-0355-0003	With the proposed OSW projects I see a whole list of negatives and no positives at all. The list of negatives include: <ul style="list-style-type: none"> <li>• Increase in utility costs by at least 2 - 3 times.</li> </ul>	Refer to response to comment BOEM-2024-0001-0357-0059.
BOEM-2024-0001-0355-0005	With the proposed OSW projects I see a whole list of negatives and no positives at all. The list of negatives include: <ul style="list-style-type: none"> <li>- Increase in tax rates to pay for their construction and maintenance.</li> </ul>	Refer to response to comment BOEM-2024-0001-0357-0059.
BOEM-2024-0001-0355-0009	With the proposed OSW projects I see a whole list of negatives and no positives at all. The list of negatives include: <ul style="list-style-type: none"> <li>• Major decrease in property values.</li> </ul>	BOEM has added to Final PEIS Section 3.6.3.4.1 an analysis of the impacts of the NY Bight projects on property values, citing recent studies. BOEM has not found any evidence that offshore wind projects located as far offshore as the NY Bight projects would have any impact on property values.
BOEM-2024-0001-0357-0011	Neither this draft program EIS or any project specific EIS provides an assessment of the cumulative socioeconomic impact on the region	Refer to response to comment BOEM-2024-0001-0357-0059.

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	from the increased residential commercial and industrial electric rates from all of the projects (see Enclosure VIII).	
BOEM-2024-0001-0357-0059	Electric Rates-Cumulative Impact Electric cost: offshore wind is an expensive energy source but the Interior Department provides no analysis of the economic cost of the program from electric rate increases to residents and businesses. As shown in the chart below the full project for 5300 megawatts Atlantic Shores project off New Jersey maturing in 2033 requires exorbitant increases in State-wide electric bills to be economically viable 20 25 and 30 percent for residential commercial and industrial users respectively (Source: Impact of New Jersey Offshore Wind Program on State Electric Rates Edward. P O'Donnell White Strand Consulting LLC November 2023). Those increases grow substantially as more wind projects enter the generation mix. SEE ORIGINAL COMMENT FOR GRAPH: Figure 5- Percentages NJ Electric Rate Increase Due to Offshore Wind The socioeconomic effects of such electric rate increases on households should be assessed. In particular the impact of reduced revenues and lost jobs in the commercial and industrial sectors should be assessed in any programmatic EIS.	The price of the power generated by the projects will be determined by offtake agreements, also known as power purchase agreements, negotiated between the offshore wind companies and electric distribution companies, subject to each state's offshore wind procurement laws and regulations. The electric distribution companies that acquire the power from the projects will distribute and sell the power to their customers. While the offtake agreements may influence the electricity prices paid by ratepayers in the states where the power is purchased, the exact cost cannot be known at this time, as electricity rates are affected by myriad factors, including current demand for electricity, the mix and price of other generation sources (e.g., other offshore wind projects, natural-gas power plants), and other factors, including natural events like high summertime temperatures. In electricity markets where wind power is generated, the electricity cost for ratepayers may be variable, such as when the market is saturated with electricity due to windy seasons, or conversely, when there is less wind and the power demand may be higher, causing rates to increase. COP-specific NEPA documents will be better able to conduct analyses concerning costs and rates when projects are defined and power purchase agreements are in place.
BOEM-2024-0001-0362-0001	Offshore wind is a vital clean energy solution that presents a once-in-a-generation opportunity to advance this mission if projects are developed in an equitable and environmentally responsible manner with high-road labor standards and attention to environmental justice. Offshore wind projects have the potential to lift up the working class with family-sustaining union jobs deliver benefits to communities hardest hit by climate change and economic inequality and protect wildlife and critical habitats at every stage of development.	Thank you for your comment.
BOEM-2024-0001-0362-0002	We appreciate BOEM's draft PEIS analyzing the potential impacts of offshore wind energy development in the six leased areas in the New York Bight. The final sale notice for these lease areas included lease stipulations designed to promote the development of a robust	Thank you for your comment.

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	<p>domestic supply chain advance flexibility in transmission planning and create good paying union jobs. The leases require winning bidders to make efforts to enter into project labor agreements (PLAs); and require engagement with Tribes underserved communities ocean users and agencies. The lease stipulations also incentivize the use of domestically sourced components and require developers to create plans for contributing to the creation of a robust domestic supply chain. While BGA continues to urge BOEM to include more robust stipulations and bidding credits in its future leases these requirements and incentives properly implemented will help ensure that projects:</p> <ul style="list-style-type: none"> <li>• Maximize the creation of quality high-paying union jobs over projects' lifetime;</li> <li>• Expand U.S. manufacturing along robust domestic regional and local supply chains;</li> <li>• Deliver community benefits with attention to improving access to disadvantaged communities;</li> </ul>	
BOEM-2024-0001-0362-0005	<p>We support BOEM's intent to use the PEIS as an opportunity to analyze the potential impacts of offshore development in the region including environmental and socioeconomic impacts. This should include the potential beneficial climate job creation job quality and community impacts of development in these lease areas as well as impacts to the regional supply chain. The future individual project environmental impact statements (EISs) should contain more detailed and project specific environmental and socioeconomic analysis. The PEIS can be beneficial in analyzing the impacts on a regional scale but should not undermine the gravity of BOEM's environmental and socioeconomic priorities or developers' accountability for upholding them.</p>	<p>BOEM agrees with the commenter that project-specific NEPA documents will contain environmental and socioeconomic analyses that will provide additional assurances that BOEM is holding developers accountable for these priorities.</p>
BOEM-2024-0001-0362-0006	<p>The draft PEIS includes important analysis of employment demographics environmental justice and environmental mitigation. However there are ways the final PEIS can be strengthened through a deeper analysis of these topics. In the following sections we make several recommendations for preparing the final PEIS. To summarize we strongly urge BOEM to provide details related to creating high-quality union jobs; training and employment benefits; domestic</p>	<p>BOEM has provided lease incentives for developers to maximize the creation of quality high-paying union jobs; expand U.S. manufacturing along domestic, regional, and local supply chains; and deliver community benefits with attention to disadvantaged communities. Each developer will develop its specific plan as part of its COP, which will be reviewed by BOEM and will be a part of each project's project-specific NEPA analysis.</p>

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	supply chains; ensuring environmental justice; and environmental protection.	
BOEM-2024-0001-0362-0007	We appreciate BOEM including an analysis of socioeconomic benefits in the PEIS. As part of the NEPA process BOEM is required to review environmental social and economic data related to the proposed project. In NEPA Congress declared: "It is the continuing policy of the Federal Government...to create and maintain conditions under which man and nature can exist in productive harmony and fulfill the social economic and other requirements of present and future generations of Americans."	Thank you for your comment.
BOEM-2024-0001-0362-0008	We believe that this depth of assessment is aligned with NEPA guidance. BOEM's July 2017 study "Evaluating Benefits of Offshore Wind Energy Projects in NEPA" states: "NEPA analyses (Environmental Assessments [EAs] or Environmental Impact Statements [EISs]) typically focus on adverse impacts to the environment. However NEPA analyses also need to include environmental and socioeconomic benefits analyses." [Footnote i: U.S. Department of Interior Evaluating Benefits of Offshore Wind Energy Projects in NEPA. July 2017. <a href="https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/Final-Version-Offshore-Benefits-White-Paper.pdf">https://www.boem.gov/sites/default/files/environmental-stewardship/Environmental-Studies/Renewable-Energy/Final-Version-Offshore-Benefits-White-Paper.pdf</a> ] The study also states that benefits analysis should consider electricity system benefits including injecting power into the existing grid; average retail cost of power; evaluating system benefits from offshore wind energy production; environmental benefits over key periods of a projects life-cycle including water wetlands biological and cultural resources recreation and tourism fisheries safety soils land use air quality noise and raw materials used for construction; and socioeconomic considerations. The study describes that although NEPA does not specifically require a socioeconomic assessment it does require an integrated use of the social sciences to assess impacts on the human environment. These requirements paired with President Biden's commitments to union labor environmental justice and the protection of natural resources should result in a thorough analysis that ensures communities workers and Tribes realize project benefits while protecting communities wildlife and the environment from	Thank you for your comment.

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	adverse impacts. Given this scope we urge BOEM to consider the following recommendations to fully evaluate environmental and socioeconomic impacts in the PEIS.	
BOEM-2024-0001-0362-0009	To create these conditions it is imperative that BOEM plays a role in ensuring that the positive impacts of offshore wind projects are maximized and delivered equitably while using the best available science and data to establish measures to avoid minimize mitigate and monitor environmental and wildlife impacts as well as their social implications. This will require that all offshore wind lease contracts and permitting activities ensure the application of high-road employment practices community benefits agreements (CBAs) best management practices and other means to ensure that projects are developed in an environmentally responsible manner and that benefits are maximized and equitable distributed.	Thank you for your comment. Refer to response to comment BOEM-2024-0001-0362-0014. In addition, AMMM measure EJ-1a (previously part of EJ-1 in the Draft PEIS) requires a communications plan and RP EJ-2 encourages an Environmental Justice Impact Mitigation Plan to minimize potential community impacts over the life of a project and to inform communities how lessees plan to communicate employment and other opportunities. The commenter also asks that BOEM make assurances about employment and community benefits through community benefits agreements. It must be noted that BOEM does not have jurisdiction to make those assurances. Community benefits agreements are negotiated between industry and local officials; BOEM is not involved.
BOEM-2024-0001-0362-0010	Creating accessible high-quality union jobs. The PEIS should analyze and provide information related to potential job creation including direct indirect and induced jobs from development in the lease areas. Furthermore BOEM should analyze not only anticipated job creation but the potential job quality impacts and benefits associated with this development. The U.S. Department of Labor (DOL)'s Good Jobs Initiative highlights equity and job quality principles and metrics that should be strongly considered by BOEM for use in the PEIS and future EISs. The equity and job quality principles include proactively addressing racial equity; reducing barriers to opportunity; supporting the creation of good-paying jobs with the free and fair choice to join a union; providing opportunities for all workers including underrepresented workers to be trained and placed in good-paying jobs; utilization of PLAs and/or local hire provisions training and placement programs for underrepresented workers; and adopting an equity and inclusion program/plan focused on procurement material sourcing construction inspection and hiring. [Footnote ii: U.S. Department of Labor (DOL) Previous Bipartisan Infrastructure Law (BIL) grants with focus on equity and job quality. <a href="https://www.dol.gov/general/good-jobs/making-good-jobs-through-federal-investments">https://www.dol.gov/general/good-jobs/making-good-jobs-through-federal-investments</a> ] These are great examples of	Refer to responses to comments BOEM-2024-0001-0362-0006 and BOEM-2024-0001-0362-0020.

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	metrics related to equity and job quality and should be considered for evaluating the job creation benefits of offshore wind development and should inform future BOEM review of project-specific construction and operations plans.	
BOEM-2024-0001-0362-0011	<p>The draft PEIS includes the following information related to potential economic impacts:</p> <ul style="list-style-type: none"> <li>• Overall size of the projects: full development of leases has potential to create 5.6-7 GW of offshore wind energy.</li> <li>• BOEM estimates development of the six projects to total 1103 turbines 22 offshore substations and thousands of miles of cable.</li> <li>• The counties in New York and New Jersey most likely to experience economic impacts.</li> <li>• The ports with potential to support construction installation and decommissioning; and</li> <li>• The potential impacts to the commercial fishing and recreation and tourism industries.</li> </ul> <p>The PEIS would benefit from analysis of potential job creation and job quality impacts of development in the region as well as workforce development needs. Specifically the PEIS should provide an assessment of the following categories related to job creation job quality and job training:</p>	Thank you for your comment. Refer to response to comment BOEM-2024-0001-0362-0013.
BOEM-2024-0001-0362-0012	<p>Manufacturing. Maximizing the creation of manufacturing jobs across a domestic offshore wind supply chain is key for this industry to fulfill its economic benefit potential. Supply chain constraints caused by global bottlenecks are one of the greatest risks for achieving 30 GW of offshore wind by 2030. [Footnote iii: National Renewable Energy Laboratory (NREL) The Demand for a Domestic Offshore Wind Energy Supply Chain January 2022. <a href="https://www.nrel.gov/docs/fy22osti/81602.pdf">https://www.nrel.gov/docs/fy22osti/81602.pdf</a>.] According to the National Renewable Energy Laboratory (NREL) the average and maximum job creation utilizing 25% domestic content versus 100% domestic content in offshore wind projects results in a difference of approximately 30000- 40000 jobs from 2023-2030. The PEIS and future EIS should analyze the potential for projects to source domestically manufactured components. The PEIS should specify job categories as well as associated potential direct indirect and induced</p>	Refer to response to comment BOEM-2024-0001-0362-0013.

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	<p>jobs; gross state product; and anticipated personal income anticipated from the development. The analysis should also include an assessment of education and certifications necessary to access each job category; the training average wages hours career advancement physical demands and safety information; as well as any commitments developers have made or secured from suppliers to ensure workers have the free and fair choice to join a union such as through a union neutrality agreement. This information is essential for the U.S. workforce to have equitable access to employment opportunities. The PEIS should also include information about the material quality standards and certifications needed to secure a supplier contract with an offshore wind developer in the region. This information is critical for U.S. companies to access opportunities especially minority women and veteran owned businesses. Finally the PEIS and future EIS should contain information about the offshore wind energy components that will be manufactured outside the United States in order to understand the full potential of employment benefits from a mature domestic offshore wind supply chain.</p>	
BOEM-2024-0001-0362-0013	<p>Operations and Maintenance (O&amp;M). Similarly for O&amp;M job impacts the assessment should specify O&amp;M job categories anticipated job numbers in each category and associated potential direct indirect and induced jobs; gross state product; and anticipated personal income. It should also include an assessment of education and certifications necessary to access those jobs; training average wages career advancement hours physical demands and safety information; as well as any commitments developers have made or secured from suppliers to ensure workers have the free and fair choice to join a union such as through a union neutrality agreement. The PEIS should also indicate the number of jobs that if any require specialized experience that would prohibit workers in the United States from accessing those jobs and the specific experience and training that is required. When it comes to training the assessment should specify whether workers will need to go overseas to receive training and the duration of that training. The PEIS should specify jobs categories related to the operation and maintenance of every aspect of</p>	<p>BOEM has provided lease incentives for developers to maximize the creation of quality high-paying union jobs; expand U.S. manufacturing along domestic, regional, and local supply chains; and deliver community benefits with attention to disadvantaged communities (87 <i>Federal Register</i> 2446). Each developer will develop its specific plan as part of its COP, which will be reviewed by BOEM and will be a part of each project's project-specific NEPA analysis and COP approval process.</p>

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	offshore wind development including the turbines cables and onshore and offshore substations.	
BOEM-2024-0001-0362-0014	<p>Construction. This PEIS and future EIS should assess potential construction jobs associated with development in the lease areas including any construction jobs anticipated to prepare ports for assembly preparation of cable routes and interconnections and the construction or site preparation of any manufacturing facilities. Consistent with the previous two categories BOEM should specify job categories job numbers in each category and potential direct indirect and induced jobs; gross state product; and anticipated personal income. The PEIS should also include an assessment of education and certifications necessary to access each job category and training average wages hours career advancement physical demands and safety information. If any construction jobs require specialized experience that prohibit workers in the United States from accessing these jobs that should also be detailed including the number of jobs as well as the training and experience required. The PEIS should also specify whether workers will need to go overseas to receive training and the duration of that training. The PEIS should include a discussion of how PLAs and Community Workforce Agreements (CWAs) will help ensure job quality and community benefits in the region. The PEIS should also include the status of PLAs or CWAs associated with the projects in the region. A PLA is an instrument to predict and control project timelines and labor costs. A PLA establishes the terms and conditions of employment of workers on specific construction projects including wages hours working conditions and dispute resolution methods. These agreements can be utilized at the state and local level to ensure high-road labor standards and timely project completion. PLAs promote safe quality cost-effective project delivery by providing project owners with unique access to the safest most productive best-trained skilled craft labor available in any given market. They can also help to ensure equitable access to jobs by including diversity equity and inclusion and local hire provisions. CWAs can go a step further on diversity equity and inclusion and are negotiated with both unions and community partners. According to the AFL-CIO CWAs "go well beyond the traditional experience and use of PLAs to explicitly</p>	<p>Thank you for your comment. Project labor agreements and CWAs are project-specific and have not yet been created for the projects covered by this PEIS. BOEM has provided lease incentives for developers to maximize the creation of quality high-paying union jobs; expand U.S. manufacturing along domestic, regional, and local supply chains; and deliver community benefits with attention to disadvantaged communities (87 <i>Federal Register</i> 2446). Per the lease, the lessee must make every reasonable effort to enter a project labor agreement covering the construction stage of the proposed project. Also refer to response to comment BOEM-2024-0001-0362-0034.</p>

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	address the legitimate needs and interests of urban communities that have historically been excluded from the benefits of economic development." CWAs frequently include local hire provisions targeted hire of low-income or disadvantaged workers and the creation of pre-apprenticeship pathways. Registered apprenticeship utilization should also be documented including the types of apprenticeships to ensure that they are union programs or DOL-certified and the ratio of apprentices to journeymen in each program.	
BOEM-2024-0001-0362-0015	Training and Employment Benefits. BOEM should include an analysis of existing or potential developer strategies in the state or region for investing in workforce training programs to support offshore wind development and include detailed information regarding training in the PEIS and future EIS. Lessees should invest in training programs that are portable; accredited; have stackable credentials; include safety training standards and disaster response measures; and are industry recognized. BOEM should also analyze opportunities for developers to invest in programs that prioritize the training of Justice40 communities as well as disadvantaged and displaced workers and provide wrap-around support services to support their enrollment. Disadvantaged workers include workers dislocated from fossil-fuel jobs, workers of color, women, formerly incarcerated workers, workers who live in environmental justice communities, workers with disabilities, and veterans. Workforce training investments should provide the option to enter into a memorandum of understanding with community stakeholders unions and companies and other strategies to support recruitment retention interviews upon completion and successful placement of graduates in apprenticeships or internships. Lessees should consult with labor unions and community groups to ensure training investments result in increased equitable access to safe quality jobs that will also provide more efficient operations.	Thank you for the comment. In AMMM measure EJ-1a (previously part of EJ-1 in the Draft PEIS), lessees must provide an Environmental Justice Communications Plan that includes (among other requirements) when, how, and to whom employment opportunities are advertised and how the lessee plans to maximize access to those opportunities for low-income and minority populations, including but not limited to the communication and advertising for training programs and hiring processes. The Final Environmental Justice Communications Plan shall be submitted to BOEM within 90 calendar days of the ROD on a project-specific COP NEPA review.
BOEM-2024-0001-0362-0016	Many unions run high-quality registered workforce development programs that train participants in various trades that have transferable skills to the offshore wind industry. However for a U.S. workforce to access opportunities in offshore wind developers must share information about the specific skills training and certifications	Refer to response to comment BOEM-2024-0001-0362-0015.

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	<p>required as well as information about employment opportunities. This information along with specific commitments to develop durable pathways for minority contractors and workers into training and employment is invaluable. Union-affiliated training registered apprenticeship and pre-apprenticeship programs many of which offer wrap-around services to support trainees through the programs are the premier mechanisms for building career pathways and help ensure that workers have a clear path towards skills advancement and career development. These programs can also help promote equity and fairness in the workplace by providing training and career advancement to individuals from underrepresented groups.</p>	
BOEM-2024-0001-0362-0017	<p>Pre-apprenticeship programs aim to ensure that workers can qualify for entry into an apprenticeship program and have the skills and support they need to succeed. These programs are generally designed to target certain populations or demographics such as low-income workers, workers of color, women, and other marginalized communities. Additionally many unions offer training throughout a member's career to enable them to stay up to date with changes in technology. The most successful pre-apprenticeship programs are those affiliated with registered apprenticeships or other contractually agreed on-the-job training programs. Apprenticeships are registered through a state apprenticeship agency or through the DOL. Registered apprenticeships are paid positions that combine on-the-job training with classroom instruction in a trade. Construction unions operate robust registered apprenticeship programs while industrial unions work with employers on joint labor management training programs that also provide a combination of classroom and on-the job skills training. When these programs are paired with recruitment strategies such as partnering with a community group to provide information about workforce and training opportunities and providing wrap-around services the benefits can be even greater. Many examples of programs providing such services can be found in the November 2022 workforce development White House fact sheet. [Footnote iv: The White House: FACT SHEET: President Biden Celebrates New Commitments toward Equitable Workforce Development for Infrastructure Jobs November 2 2022.</p>	Refer to response to comment BOEM-2024-0001-0362-0015.

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	<a href="https://www.whitehouse.gov/briefing-room/statements-releases/2022/11/02/fact-sheet-president-biden-celebrates-new-commitments-toward-equitable-workforce-development-for-infrastructure-jobs/">https://www.whitehouse.gov/briefing-room/statements-releases/2022/11/02/fact-sheet-president-biden-celebrates-new-commitments-toward-equitable-workforce-development-for-infrastructure-jobs/</a> ]	
BOEM-2024-0001-0362-0018	BOEM should also analyze language access needs for local communities to access jobs benefits and how to address the needs. Demographics such as language or education should be taken into account to ensure jobs and training are accessible to a diverse workforce. Any agreements that developers have made to increase access be it to jobs in manufacturing O&M construction or otherwise should be detailed to increase transparency and the local community's ability to access these resources and benefits.	Refer to response to comment BOEM-2024-0001-0362-0015. In addition, the Environmental Justice Communications Plan (AMMM measure EJ-1a [previously part of EJ-1 in the Draft PEIS]) must specifically target low-income and minority populations—and communities identified by applicable state-level environmental justice and related screening tools—and advance meaningful engagement based on each affected community's unique communication and information needs.
BOEM-2024-0001-0362-0020	For example CBAs are an important way to ensure that development projects provide real and meaningful community benefits. CBAs can be expansive in scope and are often negotiated with both union and community partners. Because they are legally-binding agreements they provide a higher level of accountability and enforceability and can therefore help ensure that specific workforce and community benefits are provided. CBAs can ensure that developers are held accountable for providing the benefits they promise and that community groups have a say in the development process. Local Hire provisions often included in CBAs are another important tool to support the hiring of workers from within the state or local community. Without this provision work crews from out of state can be brought in minimizing the job creation benefits for the local community. BOEM should analyze the benefits of requests made by local communities such as requests for CBAs or community governance of offshore wind projects.	Thank you for the comment. BOEM agrees that enforceable community benefits agreements are powerful tools communities can use to influence the partnership with offshore industries to create opportunities in affected communities. However, BOEM is not a party to those agreements. In addition, lessees can include information on community benefits agreements in their COPs as evidence of their actions to mitigate potential impacts in local communities.
BOEM-2024-0001-0362-0030	Utilizing Domestic Content Maximizes Benefits and Supports National Security. It is evident that utilization of domestic content in offshore wind projects is imperative for reaching our federal goals. The March 2022 offshore wind energy supply chain report by the NREL states that supply chain constraints caused by global bottlenecks are one of the greatest risks for achieving our national offshore wind goals. [Footnote xi: NREL The Demand for a Domestic Offshore Wind Energy Supply Chain January 2022. <a href="https://www.nrel.gov/docs/fy22osti/81602.pdf">https://www.nrel.gov/docs/fy22osti/81602.pdf</a> .] The modeling in the	Thank you for your comment. The Biden-Harris Administration signed a Memorandum of Understanding with nine East Coast states and four federal agencies on September 21, 2023 to expand America's offshore wind supply chain to benefit workers and communities, plan and build transmission infrastructure to connect projects to the grid, and advance innovation to reduce deployment barriers and lead on cutting-edge technologies. This Memorandum of Understanding was created to address the

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	<p>report also shows that average and maximum job creation utilizing 25% domestic content versus 100% domestic content in offshore wind projects results in a difference of approximately 30000-40000 jobs from 2023-2030. [Footnote xii: Ibid.] In addition across renewables even a modest increase in manufacturing produces an additional 45000 good manufacturing jobs per year and an additional \$5 billion in wages through the 2020s as the United States continues greening its electricity grid. [Footnote xiii: Princeton University Working Paper: Influence of High Road Labor Policies and Practices on Renewable Energy Costs Decarbonization Pathways and Labor Outcomes April 13 2021. <a href="https://netzeroamerica.princeton.edu/img/Working_Paper-High_Road_Labor_and_Renewable_Energy-PUBLIC_RELEASE-4-13-21.pdf">https://netzeroamerica.princeton.edu/img/Working_Paper-High_Road_Labor_and_Renewable_Energy-PUBLIC_RELEASE-4-13-21.pdf</a>] Further domestic content requirements are unlikely to influence wind power capital costs. [Footnote xiv: Ibid] And as emphasized in a number of President Biden's executive orders national security is also protected by utilizing domestic content.</p>	<p>concerns expressed in the comment. See also BOEM-2024-0001-0362-0034.</p>
BOEM-2024-0001-0362-0033	<p>Supporting U.S. manufacturing also has equity implications. Data shows that the decline in U.S. manufacturing has been devastating to the middle-class especially for Black and Hispanic workers and other workers of color who disproportionately do not hold college degrees and who experience discrimination limiting access to better-paying jobs. [Footnote xix: Economic Policy Institute (EPI) Botched policy responses to globalization have decimated manufacturing employment with often overlooked costs for Black Brown and other workers of color January 31 2022. <a href="https://files.epi.org/uploads/239189.pdf">https://files.epi.org/uploads/239189.pdf</a>] Manufacturing wages are substantially larger than in non-manufacturing industries for median-wage non-college-educated employees with Black workers in manufacturing earning 17.9% more; Hispanic workers earning 17.8% more Asian American Pacific Islander (AAPI) earning 14.3% more; and white workers earning 29% more. [Footnote xx: Ibid.]</p>	<p>Thank you for your comment. The Biden-Harris Administration states that investments in the U.S. offshore wind industry have increased by \$7.7 billion since 2022, and the number of companies looking to support this supply chain has risen 54% to 4,100 companies across all 50 states. With the AMMM measures included in this PEIS, BOEM anticipates that communities will have opportunities to realize supply chain and employment benefits at all income levels and by all socio-economic groups.</p>
BOEM-2024-0001-0362-0034	<p>Union Labor Benefits Workers and Projects. Across sectors the DOL reports that unions raise wages for all workers and the Bureau of Labor Statistics reports that non-union workers earn just 83% of what unionized workers earn. [Footnote xxi: DOL The Union Advantage. <a href="http://www.dol.gov/general/workcenter/union-advantage">www.dol.gov/general/workcenter/union-advantage</a>]</p>	<p>Thank you for the comment. BOEM is supporting the establishment of a durable domestic supply chain that can sustain the U.S. offshore wind industry and safe, expeditious, and orderly development in the OCS. To</p>

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	<p>[Footnote xxii: Bureau of Labor Statistics (BLS) Union Members 2021. <a href="https://www.bls.gov/news.release/pdf/union2.pdf">www.bls.gov/news.release/pdf/union2.pdf</a>] It's no wonder that union approval is at its highest since 1965 with 68% approving of labor unions and even higher numbers of support specifically among young people and people of color. [Footnote xxiii: The White House White House Task Force on Worker Organizing and Empowerment Report February 2022. <a href="https://www.whitehouse.gov/wp-content/uploads/2022/02/White-House-Task-Force-on-Worker-Organizing-and-Empowerment-Report.pdf">www.whitehouse.gov/wp-content/uploads/2022/02/White-House-Task-Force-on-Worker-Organizing-and-Empowerment-Report.pdf</a>] The White House report on "Worker Organizing and Empowerment" says that support for a union increases to 74% for workers aged 18 to 24 75% for Hispanic workers 80% for Black workers and 82% for Black women workers. [Footnote xxiv: xxiv ibid. ] The report also contains guidance for how unions advance equity for underserved populations including greater transparency around pay and higher wages greater job security and increased access to career pathways for women and workers of color. [Footnote xxv: DOL How the Task Force is advancing equity across underserved communities by supporting worker organizing and collective bargaining. <a href="https://www.dol.gov/sites/dolgov/files/general/labortaskforce/docs/508_union-fs-1.pdf">www.dol.gov/sites/dolgov/files/general/labortaskforce/docs/508_union-fs-1.pdf</a> ] PLAs are a proven way to ensure workers in the construction sector have access to the benefits and protections of unions.</p>	<p>advance this vision, BOEM has included the following three lease stipulations for the NY Bight area:</p> <ul style="list-style-type: none"> <li>• The first stipulation requires the lessee to establish a statement of goals in which the lessee will describe its plans for contributing to the creation of a robust and resilient U.S.-based offshore wind supply chain. The lessee must provide regular progress updates to BOEM, and BOEM will make these updates publicly available.</li> <li>• The second stipulation would incentivize the lessee to procure major offshore wind components domestically through operating fee credits.</li> <li>• Finally, BOEM has included a lease stipulation encouraging lessees to make every reasonable effort to enter into project labor agreements covering the construction stage of any project proposed for the leased area. Offshore wind projects are large, complex construction efforts and are well suited for project labor agreements.</li> </ul>
BOEM-2024-0001-0362-0035	<p>Moreover ensuring developers negotiate a PLA supports BOEM's proprietary interest in ensuring orderly and efficient operations. President Biden's Executive Order 14063 Use of Project Labor Agreements for Federal Construction Projects issued February 4 2022 underscores the benefits of utilizing PLAs for large-scale construction projects. "Project labor agreements provide structure and stability to large-scale construction projects[and] avoid labor-related disruptions by using dispute-resolution processes to resolve worksite disputes and by prohibiting work stoppages including strikes and lockouts. They secure the commitment of all stakeholders on a construction site that the Project will proceed efficiently without unnecessary interruptions." [Footnote xxvi: White House Executive Order on Use of Project Labor Agreements for Federal Construction Projects Feb. 4 2022.</p>	<p>Refer to response to comment BOEM-2024-0001-0362-0034.</p>

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	<p><a href="https://www.whitehouse.gov/briefing-room/presidential-actions/2022/02/04/executive-order-on-use-of-project-labor-agreements-for-federal-construction-projects/">https://www.whitehouse.gov/briefing-room/presidential-actions/2022/02/04/executive-order-on-use-of-project-labor-agreements-for-federal-construction-projects/</a>] PLAs have been demonstrated to reduce project costs for developers save public funds in the long run and produce increased economic benefits for the local community. [Footnote xxvii: Illinois Economic Policy Institute (ILEPI) Efficiencies of Project Labor Agreements May 18 2015. <a href="https://illinoisepi.org/site/wp-content/themes/hollow/docs/wages-labor-standards/Illinois-PLAs-in-CDB-Projects-FINAL.pdf">https://illinoisepi.org/site/wp-content/themes/hollow/docs/wages-labor-standards/Illinois-PLAs-in-CDB-Projects-FINAL.pdf</a>] In addition PLAs often lead to safer working conditions as a result of a more skilled workforce that union training programs provide. [Footnote xviii: Stockholm Environment Institute Calculating Maritime Shipping Emissions Per Traded Commodity April 2019. <a href="https://www.sei.org/publications/shipping-emissions-per-commodity/">https://www.sei.org/publications/shipping-emissions-per-commodity/</a>] A 2021 Canadian study found that unionization in institutional commercial and industrial construction maintenance and repair work was associated with a 25% lower lost-time injury rate 23% lower incidence of musculoskeletal lost-time injury claims and 16% lower incidence of critical lost time injury claims.[Footnote xxix: <a href="https://iwh.on.ca/sites/iwh/files/iwh/reports/iwh_report_union_safety_effect_construction_update_2021.pdf">iwh.on.ca/sites/iwh/files/iwh/reports/iwh_report_union_safety_effect_construction_update_2021.pdf</a> ] Data also suggests that accidents in the construction industry are more common in states with low-road contractors. [Footnote xxx: UC Berkeley Labor Center Workforce Issues and Energy Efficiency Programs: A Plan for California's Utilities May 2014. <a href="https://laborcenter.berkeley.edu/pdf/2014/WET-Plan-Appendices14.pdf">https://laborcenter.berkeley.edu/pdf/2014/WET-Plan-Appendices14.pdf</a> ] Union firms are also 16% less likely to report difficulty in filling open positions 13% less likely to fail in retaining skilled workers and 21% less likely to report project delays due to retention issues which is key to timely and efficient deployment during construction labor shortages. [Footnote xxiv: <i>ibid.</i>] Because PLAs often include provisions around apprenticeship utilization and recruitment of women minorities veterans and other underrepresented workers they also contribute to more equitable career pathways for a diverse workforce. These data points are important to consider as BOEM undergoes the NEPA review process.</p>	

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BOEM-2024-0001-0421-0002	In addition to supporting cleaner healthier and more sustainable communities by transitioning off expensive fossil fuels these offshore wind projects would provide thousands of good-paying union jobs and bolster the region's economy. Our country urgently needs a massive build up of clean energy sources. My state of New Jersey has been a leader in supporting offshore wind energy. To maximize the supply chain port infrastructure and workforce investments we must continue developing a steady stream of clean sustainable offshore wind projects. To make this happen we must take whatever responsible steps we can to remove barriers to moving forward with these projects while protecting our marine ecosystem.	Thank you for your comment.
BOEM-2024-0001-0426-0003	From an economic perspective the following questions remain largely unanswered: What will offshore generation and transmission cost and how will it be funded?	Refer to response to comment BOEM-2024-0001-0357-0059.
BOEM-2024-0001-0426-0005	What about the ability of developers to follow through on their financial commitments if projected returns do not materialize? Will developers have the funds to decommission when that time comes or will they plunge special purpose subsidiaries into bankruptcy leaving rate payers to clean up their mess?	Refer to response to comment BOEM-2024-0001-0357-0059.
BOEM-2024-0001-0433-0002	The potential lease areas in the NY/NJ Bight will help bring family-sustaining and union jobs directly to New Jerseyans. Offshore wind will be at a more stable cost to ratepayers as well since it is not subject to the volatile economic climate of the fossil fuel industry that creates unwelcome surprises on energy bills.	Thank you for your comment.
BOEM-2024-0001-0436-0008	Moreover as part of the No Action Alternative the Final PEIS must fully analyze the impacts of this assumed inaction in terms of not only avoided impacts but unrealized environmental benefits and socioeconomic gains as well.	Thank you for your comment. The No Action Alternative does consider impacts of not developing the six NY Bight offshore wind projects. See Section 3.6.4.4.3 of the PEIS.
BOEM-2024-0001-0441-0001	The offshore wind industry presents substantial economic opportunities for women entrepreneurs in New Jersey. As this sector continues to grow it creates a demand for various goods and services ranging from engineering and construction to maintenance and logistics. Women-owned businesses can tap into these supply chain opportunities providing services and products needed for offshore wind projects and increasing job opportunities for local communities.	Thank you for your comment.

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BOEM-2024-0001-0468-0002	Offshore wind projects in the New York Bight have the potential to create thousands of jobs and generate substantial economic activity. A study from Wood Mackenzie shows that building offshore wind projects in the New York Bight can support up to 25000 development and construction jobs from 2022 to 2030 as well as an additional 7000 jobs in communities supported by this development. The study also concludes the lease area also has the potential to support up to 4000 operations and maintenance jobs annually and approximately 2000 community jobs in the following years.	Thank you for your comment. BOEM has included the following information from that study in Final PEIS Section 6.3.4.3. Zhang et al. (2020) estimates that the jobs supported by all development in the NY Bight area are 100 annual development jobs (2022 – 2029) and 32,200 construction jobs (2025–2030). Determination of where those jobs may occur will depend on project locations.
BOEM-2024-0001-0468-0004	<p>As the White House wrote in its Offshore Wind Fact Sheet: "The President recognizes that a thriving offshore wind industry will drive new jobs and economic opportunity up and down the Atlantic Coast in the Gulf of Mexico and in Pacific waters. The industry will also spawn new supply chains that stretch into America's heartland as illustrated by the 10000 tons of domestic steel that workers in Alabama and West Virginia are supplying to a Texas shipyard where Dominion Energy is building the Nation's first Jones Act compliant turbine installation vessel. "Federal leadership in close coordination with states and in partnership with the private sector unions and other key stakeholders is needed to catalyze the deployment of offshore wind at scale." ...the Administration is taking coordinated steps to support rapid offshore wind deployment and job creation:</p> <ol style="list-style-type: none"> <li>1. Advance ambitious wind energy projects to create good-paying union jobs</li> <li>2. Investing in American infrastructure to strengthen the domestic supply chain and deploy offshore wind energy</li> <li>3. Supporting critical research and data-sharing.</li> </ol> <p>"We can and we must create a high-road offshore wind industry that maximizes the creation of quality family-sustaining jobs delivers community benefits expands domestic manufacturing and develops a robust local supply chain while also avoiding minimizing mitigating and monitoring environmental justice impacts and ensuring access to the benefits for low-income and Black Brown Indigenous and People of Color ("BIPOC")." As the National Environmental Policy Act ("NEPA") is intended to ensure large-scale development projects "foster and promote the general welfare to create and maintain conditions under which man and nature can exist in productive</p>	Thank you for your comment.

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	harmony and fulfill the social economic and other requirements of present and future generations of Americans" union labor must be mobilized and expanded to ensure offshore wind jobs pay family-sustaining wages benefits have worker protections have advancement and career pathways and maximize job creation.	
BOEM-2024-0001-0470-0016	<p>[Italics: a) The PEIS fails to fully assess the socioeconomic impacts of higher electric prices on Eastern States that already carry the economic burden of cleaner electricity assets]. As Table 8 demonstrates using carbon dioxide as an indicator even in 1970 (at the point when the modern CAA was first passed) the eastern seaboard states already had cleaner generation than counterparts in the Midwest and South. Since that time the eastern states have consistently invested in more clean generation especially hydro and nuclear to avoid using their finite and valuable airshed carrying capacity as a dumping ground for conventional pollutants and greenhouse gases. This advanced investment in green technology lead to positive outcomes but also created much higher electricity prices for businesses and residents (See Table 9). [See original attachment for Table 8: Per Capita Energy-related Carbon Dioxide Emissions* by State (19702021)][Bold: Source: U.S. Energy Information Administration State Energy Data System and EIA calculations made for this analysis. *Metric tons of energy-related carbon dioxide per resident][Table 9: States with Highest Electricity Rates (12/23)]State: Hawaii; Price per KWh (cents per hour): 41.60State: Rhode Island; Price per KWh (cents per hour): 30.88State: California; Price per KWh (cents per hour): 29.11State: Massachusetts; Price per KWh (cents per hour): 28.85State: Maine; Price per KWh (cents per hour): 28.04State: Connecticut; Price per KWh (cents per hour): 26.86State: New Hampshire; Price per KWh (cents per hour): 24.98State: Alaska; Price per KWh (cents per hour): 24.70State: New York; Price per KWh (cents per hour): 22.52State: Vermont; Price per KWh (cents per hour): 21.09State: Michigan; Price per KWh (cents per hour): 18.55State: DC; Price per KWh (cents per hour): 17.75State: New Jersey; Price per KWh (cents per hour): 17.59State: Pennsylvania; Price per KWh (cents per hour): 17.53State: Maryland; Price per KWh (cents per hour): 17.46State: Wisconsin; Price per KWh (cents per hour): 16.48State: Delaware;</p>	Refer to response to comment BOEM-2024-0001-0357-0059.

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	Price per KWh (cents per hour): 16.32State: Ohio; Price per KWh (cents per hour): 15.69State: Nevada; Price per KWh (cents per hour): 15.55State: Florida; Price per KWh (cents per hour): 15.26[Table End][Bold: Source US EIA]	
BOEM-2024-0001-0470-0017	<p>An unrecognized economic consequence of this disproportionate "greening" of Eastern Seaboard electricity (and other systems such as transportation) is the airshed subsidy provided to dirtier states by the clean coastal states. In effect the freed up eastern airshed assets are the earned return-on-investment (ROI) from the substantial clean energy investment over previous decades (with corollary increases in electricity costs). This airshed capacity has been expropriated by states whose continued dirty coal and natural gas plant emissions move into and use the airshed absorption capacity freed up by the multi-decade east coast clean investment. Said another way more westerly areas that continued burning coal were using the unacknowledged "emission credits" created by the eastern state utilities and ratepayers that transitioned their energy and cut emissions. The states that still had coal as their leading source of electricity in 2021 illustrates this wealth transfer (see Figure 2) . Greener coastal states downwind of brown states have effectively subsidized cheaper dirtier electricity production for decades. This wealth transfer is largely ignored by economists and the Governors of eastern clean states who continue to give away the hard-earned airshed ROI their residents paid for in their electric bills. This historic recapitalization underwritten by eastern state residents manifests in the already high price for electricity. As Table 9 shows of the twenty states with the highest electricity prices thirteen are (already) green eastern states. The current 6 cents per KWh for wholesale electricity in New Jersey will be affected by the NJBPU orders allowing OSW generators to receive payments averaging more than 15 cents per kilowatt. The full suite of socioeconomic impacts for unsegmented OSW system buildout including all the costs that fold into retail price increases are not analyzed in the PEIS (or by utility commissions and state leaders). In addition the PEIS must evaluate the socioeconomic costs of jobs losses business closure or relocation opportunity losses and other diminishment of economic development caused by high electricity prices. [Footnote 8: To illustrate this point the Biden</p>	Refer to response to comment BOEM-2024-0001-0357-0059.

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	Administration is using federal funds to support a planned \$20 billion Intel chip manufacturing complex in Ohio. This electricity-intensive industry is being sited in a state that gets over 50% of its electricity from natural gas 37% from coal and only 4% from renewables. The average retail price of electricity in Ohio is 10.64 cents/kWh when accounting for reductions to business.][See original attachment for Figure 2: Coal Remains Largest Source of Electricity Generation in 15 States] It makes no socioeconomic sense for any state with a clean generation portfolio to prematurely retire existing electricity assets while states with the highest GHG outputs per capita continue using coal generation.	
BOEM-2024-0001-0470-0018	[Italics: b) The PEIS fails to assess the full cost of needed storage and backup generation facilitates to meet forecast demand using portfolio-mandated generation assets] As noted above NYSDA estimates that by 2040 NY will need about 12 GW of energy storage and over 17 GW by 2050 to integrate renewable generation while decarbonizing and maintaining grid reliability. To date New Jersey has planned for 2 GW of storage capacity. The socioeconomic impacts including land acquisition construction and operation costs as well as safety to surrounding communities inter alia of building and operating these battery and other storage facilities has not been assessed or disclosed in the PEIS.	Thank you for your comment. The storage needed and the land acquisition, construction, and operation costs cannot be disclosed for this PEIS. This project-specific information will be available for COP-specific NEPA analyses when project designs are available.
BOEM-2024-0001-0512-0002	The potential economic implications of these projects are also very alarming to me. The cost of electricity generated by these offshore wind farms is significantly higher than that of what we can get from conventional energy sources. Taxpayers should not be burdened with subsidizing in any way these projects that are potentially very detrimental to our communities especially when there are more cost-effective and environmentally sustainable alternatives available that do not have the potential to disrupt our valuable industries.	Refer to response to comment BOEM-2024-0001-0331-0032.
BOEM-2024-0001-0522-0001	I SUPPORT OFFSHORE WIND ENERGY DEVELOPMENT IN THE NEW YORK BIGHT FOR THE FOLLOWING THREE REASONS: 1. Jobs I support offshore wind development off the Jersey coast because a strong offshore wind industry will create thousands of well-paying union jobs. Transitioning to a clean energy future isn't just a win for the environment it's a win for local businesses the many union members who will be put to work and to New Jersey's overall economy. New	Thank you for your comment.

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	Jersey's highly trained workforce is ready to step up to the plate and deliver clean offshore wind to millions of families across our region. I commend BOEM for its efforts to support economic development so far and ask you to proceed quickly to ensure that New Jersey workers and communities see the benefits.	
BOEM-2024-0001-0528aa	The effects of the unnatural structures will force loss of generational commercial jobs for just a few temporary jobs. As somebody said before, there were 80,000 jobs. But there's 9 million people in New Jersey. What percentage is that? That's not really a lot.	Thank you for your comment. Previously, lessees have entered into agreements to provide job training so that residents near these communities can benefit from the job creation. Turbine technicians, for example, are skilled jobs that are not temporary. Jobs that rely on tourism have been evaluated near an existing offshore wind project (Block Island), and it was found that there was no negative impact in that area where the project is significantly closer to shore than the ones in this PEIS.
BOEM-2024-0001-0529u	I'd like to draw attention to Salem County, New Jersey, where there is a proposed built port currently in development. It is vital, component in the offshore wind vision that holds the key job creation, providing dedicated spaces for staging and assembly and manufacturing of the wind components.	Thank you for your comment. BOEM acknowledges the potential for the New Jersey Wind Port to support the NY Bight projects and analyzes this as a representative port in the Final PEIS.
BOEM-2024-0001-0529ff	and then also, what about the money for the rate and taxpayers that this is going to cost? Nobody is saying anything about that. They're saying that this is, you know, going help everyone in New Jersey, but they're not saying, everyone has to look these facts up. They're not saying anything about the money that it's going cost, the rate in taxpayers on their electric bills, and they will go up. It's a fact, but nobody's really looking into it.	Thank you for your comment. The price of the power generated by the projects will be determined by offtake agreements, also known as power purchase agreements, negotiated between the offshore wind companies and electric distribution companies, subject to each state's offshore wind procurement laws and regulations.

## P.5.16 Environmental Justice

**Table P.5-16. Responses to Comments on Environmental Justice**

Comment No.	Comment	Response
BOEM-2024-0001-0171-0003	[Underline: Health]-Production and combustion of fossil fuels releases dangerous pollutants into the air. These pollutants result in a wide range of health impacts including early death heart attacks respiratory disorders stroke and exacerbation of asthma. Communities of color often suffer a disproportionate burden of these health impacts due to systemic racism and historically living closer to power plants. Investing in offshore wind won't just fight climate change it will also help communities and urban residents breathe easier by lessening air pollution.-BOEM must act quickly to secure our clean energy future to protect the health of an entire generation of children.	Thank you for your comment. Air emissions are analyzed under each action alternative and include the potential benefits NY Bight projects may have on EJ communities.
BOEM-2024-0001-0313-0011	In addition to required Environmental Mitigation Plans Fisheries Mitigation Plans Stakeholder Engagement Plans and New York Workforce and Jobs Plans Proposers must demonstrate a detailed understanding of potential benefits and burdens to Disadvantaged Communities from their projects. This requirement aligns with the principles of a just transition outlined in the Climate Act.	BOEM agrees; COP-specific NEPA documents will provide site-specific analysis, which will include community characteristics at a more granular level. These NEPA documents will also be available for public comment. The COP-specific NEPA documents will assess potential benefits and impacts on communities with environmental justice concerns. Application of AMMM measure EJ-1a (previously part of EJ-1 in the Draft PEIS), the Environmental Justice Communications Plan, should address and communicate potential benefits and burdens.
BOEM-2024-0001-0362-0019	Ensuring Environmental Justice The draft PEIS includes the following information related to environmental justice: The counties where onshore infrastructure may be located the counties with representative ports that may be used by the NY Bight projects as well as the counties closest to the NY Bight lease areas that may be affected by construction and operation of the NY Bight projects. Factors that can impact communities including air emissions cable emplacement/maintenance lighting noise port utilization and presence of structures. Avoidance minimization mitigation and monitoring measures. The draft PEIS provides a good initial framework for analyzing environmental justice impacts from offshore wind development but more detailed and community	BOEM agrees that more detailed and community-specific analyses are needed as project planning progresses to ensure that there will not be disproportionate and adverse impacts. These analyses should be included in the COP-specific NEPA documents. For more information, see BOEM-2024-0001-0435-0048 and BOEM-2024-0001-0313-0011 comment responses. Application of AMMM measure EJ-1a (previously part of EJ-1 in the Draft PEIS), the Environmental Justice Communications Plan, could help minimize impacts. OSW projects are developed by private entities and are therefore not considered federal investments as referenced in Justice40. BOEM regularly evaluates whether any of its programs qualify as Justice40 programs under

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	specific analyses are needed as project planning progresses. Without known details for port transmission and turbine construction the specificity of the analysis is lacking. The Biden administration has made historic commitments to environmental justice including the goal for 40% of the overall benefits of federal investments to flow to disadvantaged communities. While benefits from offshore wind projects are not explicitly considered in Justice40 generally any federal program that addresses climate change clean energy and energy efficiency clean transit affordable and sustainable housing training and workforce development legacy pollution and clean water infrastructure is considered a J40 covered program. BOEM should analyze how development in the lease areas can ensure that communities and Tribes receive the maximum possible benefits.	guidance from the Office of Management and Budget, CEQ, and the National Climate Advisor.
BOEM-2024-0001-0362-0024	Pre-construction construction and post-construction monitoring should be conducted especially in areas of known vulnerability such as those adjacent to known sources of contaminants or near environmental justice communities.	BOEM acknowledges that the PEIS does not provide the specificity needed to determine whether there could be disproportionate and adverse cumulative impacts for potentially affected communities with environmental justice concerns (see Section 3.6.4.2, <i>Scope of the Environmental Justice Analysis</i> ). The COP-specific NEPA documents should include baseline assessments of existing stressors/pollution burden in the proposed locations for the permit activities. BOEM appreciates the recommendation of implementing monitoring in proposed project locations to ensure there are not disproportionate and adverse impacts. AMMM measures EJ-1a (previously part of EJ-1 in the Draft PEIS) and EJ-3 are intended to provide an avenue for community members to identify impacts over the life of the projects, and for lessees to document their responses to concerns as they are raised. Note that EJ-2 has been revised to be an RP as an "Environmental Justice Impact Mitigation Resources Plan."
BOEM-2024-0001-0423-0015	Environmental Justice Ocean Wind has concerns about the approach BOEM is taking to environmental justice (EJ) impacts and AMMMs put forward in the Draft PEIS.[bold: EJ-1] would require a lessee to create an Environmental Justice Communications Plan.[bold: EJ-2] would require as part of the COP submission of an Environmental Justice Community Mitigation Resources Plan (EJ Plan) for providing households in EJ populations that are impacted by activities described in the COP with any supplies or mitigation resources	The lessee has an opportunity in the COP-specific NEPA document to demonstrate the impact of its workforce development and employment initiatives. The determination of the benefits of offshore wind to communities with environmental justice concerns was not assessed as "major beneficial" at this time. BOEM has revised the AMMM measures EJ-1 (now EJ-1a and EJ-1b [RP] in the Final PEIS) and EJ-2 (now an RP) to further reduce potential duplication with state and local requirements.

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	<p>needed to reduce adverse impacts. Aside from onshore construction in most instances associated with Alternative B BOEM has indicated that offshore wind development will generally have minimal and temporary adverse impact to environmental justice resources. BOEM has highlighted that in many instances offshore wind activities will lead to "moderate beneficial impacts" (Draft PEIS Section 3.6.4.6.4). In Section 3.6.4.5.2 BOEM states that [italicized: "Six NY Bight projects could have long-term moderate beneficial impacts on environmental justice populations if workforce development and employment initiatives are implemented for local communities."] Note that in both New York and New Jersey workforce development and employment activities bringing economic benefits of clean energy to EJ communities are part of their Offshore-wind Renewable Energy Certificate (OREC) solicitations thus Ocean Winds would suggest that the benefits of offshore wind to EJ should be categorized as "major beneficial". Any onshore development associated with offshore wind would be subject to local and state laws and permitting. As BOEM notes in Draft PEIS Section 3.6.4.1.1 [italicized: "both New York and New Jersey have identified environmental justice communities at the U.S. Census block-level using criteria that exceed the federal environmental justice community definitions."] Ocean Winds notes that both states have robust laws that address the protection of environmental justice communities from the impacts of planned industrial activity. For example as an addition to its 2019 Climate Leadership and Community Protection Act (Chapter 106 of Acts of 2019) last year New York enacted the strongest environmental justice law in the United States. The new law provides that the Department of Environmental Conservation [italicized: "shall not issue an applicable permit for a new project if it determines that the project will cause or contribute more than a de minimis amount of pollution to a disproportionate pollution burden on the disadvantaged community."] NY Environmental Conservation Law Sec. 70-0118. In 2020 New Jersey adopted an environmental justice law that imposed substantive limitations to development and assessment of cumulative and disproportionate impacts (NJ P.L. 2020 Chapter 92). Both states have laws requiring assessment of potential impacts on</p>	<p>As revised, lessees may indicate which state or local requirements address the AMMM measures and can reference applicable specific plans prepared to meet state or local requirements to satisfy the AMMM measures. Note that EJ-2 has been revised to be an RP as an "Environmental Justice Impact Mitigation Resources Plan." EJ-2 recommends documenting whether local requirements are in place that would reduce impacts and address the need for mitigation resources. AMMM measure EJ-1a does not require duplication of state or local requirements provided the lessees can document which specific state or local requirements address the AMMM measure.</p>

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	<p>overburdened communities and outreach to affected communities. Both states also require documentation of communication and efforts at avoidance, minimization, mitigation, and monitoring as part of their OREC solicitation requirements. Unless BOEM is bringing into question local and state ability to enforce their own laws and regulations BOEM should assume that offshore wind projects would meet applicable state permitting and EJ laws in EJ communities defined by those states in ways determined by those states which are the closest to those communities. Separate federal plans would be redundant and create additional unnecessary burden on developer creating cost that ultimately will find their way to the bills of electricity customers including residents of EJ communities. As BOEM notes in Draft PEIS Section 3.6.4.1.4 [italicized: "Environmental justice assessments are strongly place-based analyses."] Deferring to States on the Environmental Justice Populations within their jurisdiction would support a place-based approach.</p>	
BOEM-2024-0001-0441-0002	<p>The growth and evolution of the offshore wind industry in New Jersey represents tremendous opportunities to dial back the effects of decades of fossil-fuel emissions provide historically disadvantaged communities with access to the green economy education and workforce development and allow small business owners to grow their businesses in connection to this emergent industry. It is important that the Bureau of Ocean Energy Management's Draft PEIS process take a hard look at mitigation recommendations that would delay the construction of offshore wind projects as well as the tremendous economic benefits they would unlock for women owned businesses and overburdened communities.</p>	<p>Thank you for your comment. The PEIS evaluates the effects of development of the NY Bight projects and identifies and analyzes AMMM measures that would avoid, minimize, and mitigate those effects. The AMMM measures presented in the Draft PEIS have been substantially revised to provide opportunities for lessees to document how existing state or local requirements would meet the AMMM measures, and to further reduce potential duplication of mitigation requirements. BOEM does not anticipate that EJ-1a (previously part of EJ-1 in the Draft PEIS) and EJ-3 would alter project timelines. Note that EJ-2 has been revised to be an RP as an "Environmental Justice Impact Mitigation Resources Plan."</p>
BOEM-2024-0001-0470-0019	<p>[Italics: a) Environmental Justice analyses fail to consider electricity supply cost and reliability as Impact Producing Factors (IPFs) Issues or Indicators]The PEIS indicates both New York and New Jersey have identified environmental justice (EJ) communities at the U.S. Census block-level affected by the Proposed Actions including seven counties that exceed thresholds for environmental justice in New Jersey Atlantic County Camden County Cumberland County Essex County Hudson County Middlesex County and Union County and</p>	<p>Thank you for your comment. The price of the power generated by the projects will be determined by offtake agreements, also known as power purchase agreements, negotiated between the offshore wind companies and electric distribution companies, subject to each state's offshore wind procurement laws and regulations. Refer to response to comment BOEM-2024-0001-0357-0059.</p>

Comment No.	Comment	Response
	three counties that exceed thresholds for environmental justice in the State of New York Kings County New York County and Queens County based on their minority populations. Table 3.6.4-3 on page 3.6.4-16 of the PEIS describes "Issues and indicators to assess impacts on environmental justice. While effective describing many of the EJ issues created by major actions the analysis fails to include the impacts stemming from the most basic Impact Producing Factors (IPF) associated with energy infrastructure recapitalization: supply reliability and price of electricity. EJ Communities disproportionately rely on electricity especially in the urban setting. They use electrified mass transit walk streets that must be lit attend school day and night require sanitation medical and safety services need access to secure (refrigerated) food use myriad other public and private services and want warm lit homes. EJ communities also need jobs in commercial and industrial enterprises that require reliable affordable electricity and many of the services described. The PEIS must evaluate electricity supply reliability and price as Impact Producing Factors for this PEIS and other analyses addressing plans and approvals for these projects.	The proposed projects would supply electric power to the grid. The grid operators will review each proposed offshore wind farm to ensure that the electric grid will continue to perform reliably with the addition of each project.
BOEM-2024-0001-0474-0008	Among other reasons the action is Arbitrary because while purporting to reflect environmental Justice the proposed action decimates and impoverishes other communities.	Thank you for your comment. The PEIS evaluates the effects of development of the NY Bight projects and identifies and analyzes AMMM measure to avoid, minimize, and mitigate those effects. Please see other sections that describe impacts beyond those on communities with environmental justice concerns. BOEM acknowledges that both potential benefits and burdens to communities should be analyzed at a more granular level; the PEIS does not contain the specificity required to make determinations regarding disproportionate and adverse impacts on communities with environmental justice concerns, but location-specific impacts will be assessed by the COP-specific NEPA documents. These NEPA documents will also be available for public comment.
BOEM-2024-0001-0522-0002	Environmental Justice I support offshore wind development because the transition to clean energy is key to combating the systemic racism that has forced low-income communities and families of color to disproportionately bear the brunt of pollution for generations. Communities of color and	Thank you for your comment, the topics you describe are included in the environmental justice analysis.

Comment No.	Comment	Response
	low-wealth communities suffer higher rates of asthma heart disease and cancer because they are located close to power plants that burn dirty fossil fuels. Investing in offshore wind won't just fight climate change it will also help people of color and urban residents breathe easier. I call on BOEM to do whatever it can to accelerate our transition to a clean energy future to protect the health and welfare of New Jersey's most vulnerable communities.	
BOEM-2024-0001-0522-0004	This project will lead to beneficial health outcomes while reducing air pollution especially in communities of color that bear the brunt of emissions from fossil-fuel-burning power plants and suffer disproportionate health impacts like asthma.	Thank you for your comment, the topics you describe are included in the environmental justice analysis.
BOEM-2024-0001-0529d	<p>But I also want to emphasize the efficacy of accountability for the ensuring of equity for front line, overburdened communities who normally bear more of a brunt of pollution than other communities here in New Jersey and other places.</p> <p>And I would like for offshore wind to ensure that these green jobs will help to support these urban front line communities, and that some of the subsidies could be definitely set aside and allotted to reduce the energy cost for low and moderate-income individuals in New Jersey, and also New York, since this seems like a pretty much joint geographic project.</p>	<p>Thank you for your comment. COP NEPA documents will provide site-specific analysis, which will include community characteristics at a more granular level. These NEPA documents will also be available for public comment. The COP-specific NEPA documents will assess potential benefits and impacts on communities with environmental justice concerns.</p> <p>In AMMM measure EJ-1 (now EJ-1a in the Final PEIS), lessees must provide an Environmental Justice Communications Plan that includes when, how, and to whom employment opportunities are advertised and how the lessee plans to maximize access to those opportunities for low-income and minority populations; this would include the communication and advertising for training programs and hiring processes.</p>

## P.5.17 Land Use and Coastal Infrastructure

**Table P.5-17. Responses to Comments on Land Use and Coastal Infrastructure**

Comment No.	Comment	Response
BOEM-2024-0001-0063-0007	Infrastructure Challenges: The construction and maintenance of offshore wind farms require significant infrastructure and critics express concerns about the feasibility of developing and sustaining this infrastructure particularly in challenging marine conditions.	Comment noted.
BOEM-2024-0001-0313-0053	<p>Affected Environment and Environmental Consequences 3.6.5-11 and 3.6.5-9</p> <p>The PEIS states "Traffic: Road traffic associated with one NY Bight project is not anticipated to noticeably add to traffic on the local road system and is therefore anticipated to have the same negligible impact as under the No Action Alternative." And "Traffic: Offshore wind projects could result in increased road traffic and congestion that may affect land use and coastal infrastructure because traffic volumes may dictate where residents and businesses choose to locate. Onshore construction of cables for offshore wind projects would likely disrupt road traffic for a short period of time. The exact extent of impacts would depend on the locations of landfall and onshore transmission cable routes for offshore wind energy projects and traffic management plans developed with local governments. Traffic impacts on land use and coastal infrastructure are anticipated to be negligible." Comment Amazingly this appears to be the only analysis and conclusion on vehicular traffic associated with the PEIS. There are numerous emissions associated with construction truck trip traffic construction personnel driving to work sites transportation associated with manufacturing and processing and those people commuting and transporting materials. It is only fair that since the PEIS calculates the purported economic benefit from all the construction jobs created that it also utilize the same metrics to calculate the emissions estimated from all of these jobs and people as not to inadvertently present only one side of the impacts. Many times in the PEIS the analysis starts from the ports but there is a significant amount of work involved that should be analyzed as part of these projects prior to that starting point which is omitted in the environmental impacts analysis. Further DER is unaware of the</p>	<p>Construction emissions and the impact on air quality are discussed in Section 3.4.1.4.1 of the PEIS. Construction emissions are typically further discussed at the COP-specific NEPA stage. The statement regarding negligible traffic means that there will be a negligible effect on the local land use and coastal infrastructure. Traffic may occur, but it is not anticipated to have a significant impact. Traffic management plans may be developed in coordination with local governments to mitigate potential traffic-related impacts on the local roadway system.</p>

Comment No.	Comment	Response
	mechanism or precedent for the referenced traffic management plan cited above and the logistics for review concurrence and implementation to minimize impacts to local roadways. It also seems inconsistent with the PEIS whereby there is negligible traffic but then there is a statement indicating that there will be associated traffic.	
BOEM-2024-0001-0313-0054	<p>Affected Environment and Environmental Consequences 3.6.5-8</p> <p>The PEIS states "Presence of structures: Planned and ongoing offshore wind projects would add onshore substations O&amp;M facilities and overhead or underground transmission connections to the regional power grid. Improvements to coastal infrastructure such as bulkheads or marinas could also be made to support offshore wind activities. BOEM expects that onshore export cables would generally be buried and would not introduce aboveground structures to the geographic analysis area for land use and coastal infrastructure. Onshore substations O&amp;M facilities and overhead electric power transmission lines would be sited consistent with local zoning regulations and ordinances or would be required to obtain a zoning change or other relief. Given the existing level of development in the geographic analysis area and that facilities would be sited consistent with local zoning regulations BOEM anticipates the addition of onshore infrastructure for offshore wind would have negligible impacts on land use. Improvements made to coastal infrastructure such as bulkheads or marinas to support offshore wind activities would have beneficial impacts on land use and coastal infrastructure. As described in Section 3.6.9 Scenic and Visual Resources visibility of offshore WTGs would vary with distance from shore topography and atmospheric conditions. The presence of WTGs would have negligible impacts on land use because while WTGs could be visible from some shoreline locations in the geographic analysis area the presence of WTGs would not be expected to change existing land use patterns." Comment There appears to be a fundamental disconnect and misunderstanding about Town zoning and land development regulations. It is presumptive and dismissive of the local importance of planned redevelopment consistent with community character and the great efforts the town takes to maintain the suburban quality of life enjoyed by our residents to imply that there will be no impacts without analysis and worse to indicate if the structure is non-</p>	<p>Because specific onshore project component locations are unknown at this time, local and location-specific land use plans, and land use and zoning regulations, are not analyzed in the PEIS. Such plans and regulations will be incorporated and analyzed in the analysis at the COP-specific NEPA stage when specific component locations are known. Also at this COP-specific NEPA stage, there will be additional opportunities for cities and towns to express their concerns to BOEM in an effort to mitigate potential concerns. Additionally, as the referenced analysis states, onshore components would be developed within the regulations of each town's or city's local regulations to avoid adverse impacts on the community.</p>

Comment No.	Comment	Response
	compliant then the developer will simply seek a variance (which by very definition would mean that the project is inconsistent with the standards and requirements of standard as of right development in the Town) and somehow makes the logical leap to declare that this will have no impact. There are a number of concerning and incompatible sentiments in this statement for which the town takes issue. In summation the PEIS conclusion is not supported by the conclusion or substantiated by the weak "analysis" in the PEIS.	
BOEM-2024-0001-0355-0006	Compromise of infrastructure sinkholes/shifting soil around buildings which could also cause buildings to shift or potentially be condemned. (This will be super important to the condo buildings and will be incredibly costly when lawsuits ensue)	Comment noted.
BOEM-2024-0001-0355-0015	Sounds that can be heard from miles away that cause sleep and health disturbances.	Comment noted.
BOEM-2024-0001-0355-0019	Compromising infrastructure that can cause properties to potentially shift and sink this would cause many homeowners to be displaced? Who is paying for their displacement and repair of their properties? The EMFs and subsequent health consequences from the xs.	Homeowners and businesses are not anticipated to be displaced from offshore wind projects. If necessary, property within an easement/ROW will be acquired from the landowner (e.g., utility company). At this stage, the specific locations of onshore facilities are not known, and they will be determined at the COP-specific NEPA stage. BOEM has added a discussion of potential health effects from EMF from onshore cables in Section 3.6.5.3.2 under the EMF IPF.
BOEM-2024-0001-0355-0021	Removal of trees that won't be replaced.	Comment noted.
BOEM-2024-0001-0355-0045	A case and point to consider. Recently in Margate a sewer line needed to be replaced. The project affected the water table and 7 houses along the two blocks where the work was conducted on Amherst Avenue. When the pumping of the water started for the trench the homes started shifting and had severe damage to their homes. Huge lawsuits followed. The homeowners had to wait with their sinking unsafe homes while decisions were made about assistance and insurance money to fix their homes. What happens if buildings (especially large ones like the Ocean Club) start shifting due	Please refer to response to comment BOEM-2024-0001-0355-0019. Burying electric cables according to industry standards should not produce shifting effects.

Comment No.	Comment	Response
	to this trenching and digging to put LARGE underground cable from these wind turbines to the substations.	
BOEM-2024-0001-0355-0046	Other questions to be answered BEFORE this project is approved:- Will there be a risk of sinkholes or soil movement in streets or under properties as a result of running these cables underground?- Who will be responsible for all the displaced residents and repairs if things start to shift with this trenching to pull these underground cables through?- What are the health effects of the high level of EMFs that will be emitted from these underground cables? Have studies been done? If not we should wait until more data is available. This is a barrier island with lots of underground water tables. Disrupting the water tables could lead to unforeseen problems that could be devastating.	Please refer to responses to comments BOEM-2024-0001-0355-0019 and BOEM-2024-0001-0355-0045.
BOEM-2024-0001-0355-0047	Environmental issues are much higher with underground cables as the ground is excavated at approximately 6-7 feet deep and 4 feet wide and splicing vaults at around every 3000 feet. The issue of cancers and other health issues are much higher with the proposed high voltage direct current converter to alternating current station is an issue along with noise and radio frequencies. Is there a peer-reviewed health study of this type of onshore wind project in the United States and if not why not?	BOEM has added a discussion of EMF impacts from onshore cables in Section 3.6.5.3.2 under the EMF IPF. As described in the analysis, maximum emissions directly above the onshore export cable are not anticipated to exceed the reported human health reference levels of 2,000 milliGauss for the general population, and impacts would be long-term but negligible.
BOEM-2024-0001-0355-0050	Placing buried onshore wind turbine high-voltage direct current cables through well-established residentially zoned neighborhoods with this high of voltage is new in the United States. Generally high-voltage direct current cables operate through commercial zones transportation and electric rights of way or between countries. As such more studies need to be done before this is approved. The Federal Housing Authority and Veterans Administration have home loan restrictions on properties located near high-voltage lines. This will certainly be the case for the high voltage underground lines.	Comment noted.
BOEM-2024-0001-0474-0010	Among other reasons the action is Arbitrary because the proposed action fails to recognize evaluate assess and mitigate the secondary impact of the proposed offshore wind development and the resulting destruction of the ocean on the land and the coastal communities. Among other reasons the action is Arbitrary because the proposed action is tantamount to a taking of property in that the the value of the ocean is usurped from the citizens members of the public for the	In this PEIS, BOEM has prepared Appendix G, <i>Mitigation and Monitoring</i> , which lists all the AMMM measures. The AMMM measures are also listed and discussed in each individual resource section that applies. At the COP-specific NEPA stage, both the developer and BOEM will have additional measures in place to

Comment No.	Comment	Response
	enrichment of the offshore wind developers to the detriment of the public good.	prevent negative adverse impacts on the ocean, land, and coastal communities.

## P.5.18 Navigation and Vessel Traffic

**Table P.5-18. Responses to Comments on Navigation and Vessel Traffic**

Comment No.	Comment	Response
BOEM-2024-0001-0063-0004	Shipping Conflicts: The placement of turbines will pose challenges for shipping lanes and navigation routes leading to logistical issues and safety concerns for maritime activities in the region.	Section 3.6.6 analyzes the effects of the six NY Bight lease areas on navigation, including shipping lanes and safety. BOEM has identified AMMM measures and RPs in Appendix G that would minimize effects on navigation. In addition, BOEM may identify additional measures during project-specific NEPA review to further mitigate impacts on navigation.
BOEM-2024-0001-0122-0007	Navigation Challenges: Fishing vessels and maritime activities will face challenges navigating around wind farm structures potentially creating hazards and disrupting established navigation routes. Intermittency and Reliability: Wind energy is intermittent and depends on wind availability. This intermittency will pose challenges to the reliability of the power supply requiring additional infrastructure for backup sources or energy storage solutions	Section 3.6.6 analyzes the effects of the six NY Bight lease areas on navigation, including shipping lanes and safety. BOEM has identified AMMM measures and RPs in Appendix G that would minimize effects on navigation. In addition, BOEM may identify additional measures during project-specific NEPA review to further mitigate impacts on navigation.  Reliability of the electrical grid is the responsibility of the grid operator, which must take into account all forms of electrical generation that feed into the grid. In COPs received to date on the Atlantic OCS, offshore wind developers have not proposed backup sources of power or battery energy storage systems. It is possible that other development companies may independently develop these systems to support offshore wind, which would be subject to their own environmental review and permitting outside of BOEM's jurisdiction.
BOEM-2024-0001-0313-0055	Figure 3.6.6-2. TSS separation zones precautionary areas and USCG proposed fairways anchorages and precautionary areas in the geographic analysis area. Page 3.6.6-6. Comment There is no discussion regarding the "ocean disposal sites" in the PEIS which raises concerns. What will be the visual impact to the community regarding the vessels and dumping how many vessel trips what measures are included to mitigate turbidity what is the ecosystem impact of adding dredging material to these locations. How were	There are no existing ocean disposal sites within the NY Bight lease areas (refer to Figure 3.6.7-3). Dredged material generated during development of any of the NY Bight projects may be sidecast in the vicinity of the dredging operation or be disposed of off site at existing permitted disposal sites. If additional disposal areas are required, they would be required to be permitted by USACE, and the impacts of the new disposal sites would be evaluated in a project-specific NEPA document that

Comment No.	Comment	Response
	they selected were the impacts regarding littoral drift and sedimentation and will there any impacts to canals beaches estuaries tidal wetlands etc. There is also no discussion regarding the sediment testing prior to dumping it close to the shoreline to make sure that previously undisturbed contaminated sediments are not brought to the beach or impacting water quality.	would include the analysis of impacts related to sedimentation, visual resources, and navigation.
BOEM-2024-0001-0322-0001	In our previous comments to BOEM AWO has evaluated the environmental impact of the proposed placement of Wind Energy Areas based on two primary criteria: whether vessel operators will have the space to navigate safely along traditional towing vessel transit lanes and whether mariners will have options to adjust their course if circumstances demand. Ensuring that these two criteria are met will reduce the likelihood of collisions and allisions with wind farms and improve the ability of vessel operators to right a vessel in the event of an emergency; these protective measures will in turn reduce the chance of an environmental incident. We appreciate that BOEM has taken steps to avoid these conflicts with the New York Bight leases.	Comment noted.
BOEM-2024-0001-0331-0044	<p>The PEIS Does Not Address the Cumulative Impact of Vessel Traffic for Atlantic Coast Projects</p> <p>The PEIS disconcertingly states that that a single project in the NY Bight lease areas would generate a small increase in vessel traffic and that cumulative vessel traffic in the NY Bight would only increase from minor to moderate impacts. What this ignores is the total number of vessels in the ocean during the construction of the 6 projects as well as vessels traveling in the ocean in nearby projects located in leases numbers 049905490532and 0512. According to tables 3.6.6-8 9 cable trenching vessels turbine foundations vessels survey vessels operation and maintenance vessels will be in the ocean off the NJ coast for 12 leases off the NY coast during the years of 2024- 2035. Just off the coast of New York there will be 1218 vessel round trips for construction and 2188 round trips for operation and maintenance. This is in addition to the vessel traffic for the projects off the coast of New Jersey in lease area numbers 0499 0549. 0532 0512 which the document preparers fail to include.</p>	Section 3.6.6 evaluates the impacts on navigation and vessel traffic from the NY Bight projects alone and from the NY Bight projects in combination with ongoing and planned activities. Existing vessel traffic in the region is characterized using Automatic Identification System (AIS) data in Table 3.6.6-2 and Figure 3.6.6-3. The cumulative impacts of the six NY Bight projects in combination with ongoing and planned activities, including other offshore wind projects, are analyzed in Section 3.6.6.4.3. The section describes how the NY Bight projects would contribute to increases in vessel traffic in combination with other projects in the region. The section cites a New York State Energy Research and Development Authority (NYSERDA) modeling study that shows that the relative increases in vessel traffic in New York State waters resulting from offshore wind projects in the region are small compared with the total volume of vessel traffic anticipated over time. No similar studies were conducted for New Jersey. For each COP submitted by lessees for the NY Bight leases, a separate NSRA and COP-specific NEPA analysis will be conducted that will further evaluate impacts on vessel traffic.

Comment No.	Comment	Response
BOEM-2024-0001-0357-0006	Neither this draft program EIS or any project specific EIS provides a cumulative assessment of the increased safety risk to commercial and military vessel traffic along the East Coast due to the likely channeling of all that traffic into narrow corridors in between the wind energy lease areas or the need if the vessels are allowed into the lease areas for them to meander their way through those areas (See Enclosure III). No AMMM measures are presented to mitigate this cumulative risk.	Section 3.6.6 describes the effects on safety from the NY Bight projects alone and in combination with other ongoing and planned activities, including offshore wind. Under the Presence of Structures IPF in Section 3.6.6.4.1 and Section 3.6.6.4.2, BOEM described the potential for increases in vessel incidents associated with the presence of wind turbines and vessel traffic in the area in and around the lease areas. The percentage increase in allision and collision risk cited in these sections is based on NSRAs from nearby lease areas, which take into account existing and future vessel traffic in the region. The USCG has already established standards and guidelines for offshore wind farms to minimize the risk of vessel incidents. In addition, BOEM has identified an RP in Appendix G (MUL-25) that would encourage lessees to establish turbine grid layouts, spacing, markings, and lighting among lease areas to minimize navigational hazards. For each COP submitted by lessees for the NY Bight leases, a separate NSRA and COP-specific NEPA analysis will be conducted that will further evaluate impacts on safety and may require additional mitigation measures.
BOEM-2024-0001-0357-0046	Commercial and military vessel safety-Cumulative Impacts. Navigation Safety for Vessels. Notwithstanding a general and conclusory presentation in the Atlantic Shores South draft EIS Section 3.6.6 to the contrary the impacts on vessel traffic navigation safety and on the North Atlantic right whale from the navigation aspects of the project will be quite significant. Buried in one sentence on page 3.6.6.3 is the reason for that. That page expresses BOEM support for the US Coast Guard creation of a deep draft vessel lane just east of the lease area. Other parts of the discussion refer to the assumptions made in the DEIS regarding collision and allision risk that vessel traffic will be rerouted around the project area-but it does not say to where. What the DEIS failed to mention is that with turbines planned to be placed in the farther -out Hudson South area as well, all that rerouting will have to go in between the Atlantic Shores lease area in the Hudson south area in an 11-mile wide (potentially 6.6 miles) deep draft vessel corridor.	While the comment appears to be referring to the Atlantic Shores South Draft EIS and not the NY Bight PEIS, BOEM notes that the NY Bight PEIS analyzes the cumulative effects of the placement of structures in the NY Bight lease areas and Atlantic Shores South lease area (in addition to other ongoing and planned projects) on navigation and vessel traffic. As shown in Figure 3.6.6-2, there is a proposed St. Lucie to New York Fairway in between the Atlantic Shores South lease area (OCS-A 0499) and OCS-A 0541, where vessel traffic could pass and avoid transiting through either lease area.

Comment No.	Comment	Response
BOEM-2024-0001-0357-0047	<p>The definition of a shipping lane is "an official route that ships must follow when they sail from one place to another". Changing the name to "vessel corridor" does not give BOEM or the Coast Guard the authority to change the historic safety regulation and rules associated with shipping lanes. The United States standard requirements of fixed structure in and around shipping lanes in the Gulf of Mexico should be consistent with the Atlantic. "No structure may be placed within two Nautical miles of any shipping lane". That goes for transit lanes also. The developer wanting to maximize the development site for electric generation should not be at the cost of life and property. The standards for placement of structures to the proximity of shipping lanes should be consistent in all waters. Applying that restriction here narrows the shipping corridor width to 6.6 miles. The implications of that to navigation safety and the North Atlantic right whale migration could be enormous.</p>	<p>As described in Section 3.6.6.1.1, the USCG published the Consolidated Port Approaches Port Access Route Studies (CPAPARS) in 2023, which provides recommendations for a system of shipping safety fairways and routing measures along the Atlantic Coast, taking into consideration planned offshore wind lease areas. Comments on the establishment of the fairways between the lease areas is out of scope of this PEIS, which presents a programmatic analysis of the six NY Bight lease areas to characterize the types of impacts that could occur and mitigation measures that could minimize those effects. USCG is a cooperating agency for the PEIS and was involved in reviewing and providing input on the document. All offshore wind projects are required to follow current guidance and regulations, as authorized by BOEM and other regulatory agencies.</p>
BOEM-2024-0001-0357-0048	<p>Regarding navigation safety the Atlantic Shores South draft EIS on page 3.6.614 acknowledges the marine radar degradation that can occur from the wind turbines but defers a real analysis to the "site specific". But the site-specific cannot address the restrictions form all projects together. The NY Bight program EIS should have provided a radar interference study showing the effect on marine radars for both civilian and military vessel traffic in this deep draft lane and other possible routes from large rotating blade wind turbines on both sides of those paths. That Atlantic Shores South draft EIS presents an accident analysis on page 3.6.618 but the assumptions made for it are no longer valid in two respects. First it did not acknowledge the concentration of vessel traffic described just above and the cumulative impact of projects and second the analysis assumes that there would be "little impact" on radar capability from the wind turbines which we know today based on the NAS Report and others is no longer the case. Therefore its low-risk results are invalid. The NY Bight EIS needs to provide an updated vessel risk analysis considering the vessel traffic concentration into specific narrow paths the cumulative impact of wind projects on either side of those paths and the expected radar interference.</p>	<p>Sections 3.6.6.3 and 3.6.6.4 describe the potential effects on marine vessel radar from the presence of offshore wind structures. The PEIS acknowledges that marine vessel radars are not optimized to operate in a WTG environment and that marine radar on vessels near or within a NY Bight lease area would likely be affected during the O&amp;M period. BOEM expects the maritime industry to implement both technological and non-technology-based measures to reduce impacts on marine radar, including using AIS and electronic charting systems more, embracing new technologies like LiDAR, employing more watchstanders, and simply avoiding wind farms altogether. Regarding the vessel risk analysis, NSRAs will be developed for each COP produced for the NY Bight leases, which will inform the COP-specific NEPA analysis.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0426-0009	How will turbines sited in major shipping corridors in the New York Bight affect the movement and cost of goods and services?	The NY Bight lease areas are not sited within current or proposed traffic routing measures, such as Traffic Separation Schemes and Fairways.
BOEM-2024-0001-0447-0007	<p>Transit Safety Concerns</p> <p>The GSSA has always supported the need for transit lanes proposed in the lease area. Based on our experience transit corridors of a minimum of 2nm are necessary in order to keep our state's fishermen safe at sea and to lessen the economic impact. It is also worth noting that without transit corridors there is a significant impact to fishermen who operate under a day at sea quota. Specifically in the case of Scallop fishery identified a lack of a transit corridor would have direct impact on the time constrained permit of the industry with a limited number of days at sea and running 24-hour clocks. However this PEIS is proposing turbines spaced 0.6x 0.6 nm apart and proposes no transit lanes.</p>	The minimum spacing of the RPDE is 0.6 nautical mile x 0.6 nautical mile, but the actual proposed spacing for each COP may be wider. During the lease sale process, BOEM sited the NY Bight lease areas to provide adequate spacing between lease areas for navigation purposes, and the lease areas avoid existing and proposed Fairways and Traffic Separation Schemes.

#### P.5.19 Other Uses (Marine Minerals, Military Use, Aviation, and Scientific Research and Surveys)

**Table P.5-19. Responses to Comments on Other Uses**

Comment No.	Comment	Response
BOEM-2024-0001-0314-0002	<p>The relatively short lifespan of offshore wind turbines approximately 20-25 years raises concerns about the long-term viability and cost-effectiveness of these projects. The contracts for this project are for a period of 20 years which does not inspire confidence in the final outcome since it aligns so closely with the end of life of the turbines.<a href="https://www.twi-global.com/technical-knowledge/faqs/how-long-do-wind-turbines-last">https://www.twi-global.com/technical-knowledge/faqs/how-long-do-wind-turbines-last</a><a href="https://www.wind-watch.org/news/2019/08/07/wind-turbine-blades-being-disposed-of-in-casper-landfill/">https://www.wind-watch.org/news/2019/08/07/wind-turbine-blades-being-disposed-of-in-casper-landfill/</a></p> <p>Cybersecurity concerns cannot be overlooked. The energy sector is increasingly becoming a target for cyberattacks and offshore wind farms are no exception. Securing the operational technology that controls wind turbines from cyber threats is critical to ensuring the reliable supply of electricity and protecting sensitive data. The electric grid we have in place needs to be fortified and protected from cyber attacks before we can throw billions at new</p>	<p>Each lease area will undergo project-specific environmental analyses through the development and submittal of a SAP and a COP. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include detailed evaluation of impacts and will consider the best available data and information that reflect the state of the science at the time of publication.</p> <p>In the unlikely event of a cybersecurity attack, coordination with the USCG would provide clear instructions regarding procedures to be followed during emergency incident scenarios. The effects of a cybersecurity attack would depend on the magnitude and location of the attack. Given the dispersed nature of the potential offshore facilities, it is unlikely that an attack would affect all offshore structures. Specific responses to such incidents will be discussed at the COP NEPA stage.</p> <p>Appendix C, <i>Tiering Guidance</i>, summarizes the affected environment, impact analysis, and AMMM measures discussed in</p>

Comment No.	Comment	Response
	<p>technology.<a href="https://www.cfact.org/2021/04/05/cybersecurity-of-wind-power-a-growing-concern/">https://www.cfact.org/2021/04/05/cybersecurity-of-wind-power-a-growing-concern/</a><a href="https://www.techtimes.com/articles/272624/20220305/europe-cyberattack-results-massive-internet-outage-5-800-wind-turbines.htm">https://www.techtimes.com/articles/272624/20220305/europe-cyberattack-results-massive-internet-outage-5-800-wind-turbines.htm</a><a href="https://securityboulevard.com/2022/03/why-the-cyber-incident-at-a-large-wind-turbine-manufacturer-is-bad-news/">https://securityboulevard.com/2022/03/why-the-cyber-incident-at-a-large-wind-turbine-manufacturer-is-bad-news/</a><a href="https://www.pv-magazine.com/2022/03/01/satellite-cyber-attack-paralyzes-11gw-of-german-wind-turbines/">https://www.pv-magazine.com/2022/03/01/satellite-cyber-attack-paralyzes-11gw-of-german-wind-turbines/</a><a href="https://www.sciencedaily.com/releases/2024/01/240124132757.htm">https://www.sciencedaily.com/releases/2024/01/240124132757.htm</a><a href="https://energycentral.com/news/grid-reliability-hot-seat-again-house-energy-subcommittee-hears-grid-operators">https://energycentral.com/news/grid-reliability-hot-seat-again-house-energy-subcommittee-hears-grid-operators</a><a href="https://www.rechargenews.com/wind/most-tech-savvy-teenagers-could-shut-down-a-wind-farm/2-1-536155">https://www.rechargenews.com/wind/most-tech-savvy-teenagers-could-shut-down-a-wind-farm/2-1-536155</a></p> <p>The security of undersea cables essential for transmitting electricity from offshore wind farms to the shore is a significant concern. These cables are susceptible to damage from weather and as well as sabotage. Repairing or replacing damaged cables is a costly and complex process that could lead to substantial downtime and further increase the operational costs of wind farms.<a href="https://www.energylivenews.com/2023/09/22/subsea-cable-failures-pose-global-threat-to-offshore-wind/">https://www.energylivenews.com/2023/09/22/subsea-cable-failures-pose-global-threat-to-offshore-wind/</a></p>	<p>this PEIS and identifies additional analysis that will be included in the COP NEPA analysis for each resource area, including Other Uses.</p>
BOEM-2024-0001-0324-0001	<p>We submit these comments on behalf of the North American Submarine Cable Association ("NASCA") in connection with the above-referenced Notice of Availability of a Draft Programmatic Environmental Impact Statement ("PEIS") for Expected Wind Energy Development in the New York Bight ("Notice") [Footnote 1: Notice of Availability of a Draft Programmatic Environmental Impact Statement for Expected Wind Energy Development in the New York Bight 89 Fed Reg. 2251 (Jan. 12 2024) ("Notice").] to urge BOEM to recognize expressly the importance of submarine cable infrastructure and the need to coordinate with the owners and operators of such infrastructure throughout all stages of leasing activity including the preparation of a PEIS to ensure that siting coordination is a priority. While NASCA appreciates that BOEM has made some efforts to recognize submarine cable owners and operators as stakeholders with infrastructure deployed on the Outer Continental Shelf ("OCS") it has yet to take more concrete steps to</p>	<p>BOEM COP guidelines outline steps lessees should take to coordinate with existing seabed users, including submarine cables, according to International Cable Protection Committee recommendations. BOEM has required lessees to provide cable crossing agreements, or evidence of attempts to reach cable crossing agreements, as part of COP T&amp;Cs.</p>

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	facilitate early-stage coordination. The extensive leasing activity planned for the New York Bight area including the vast number of export and inter-array cables that will be deployed outside specific lease areas underscore the need for early coordination.	
BOEM-2024-0001-0324-0002	<p>The submarine cable industry is a key stakeholder with respect to proposed uses of the Outer Continental Shelf ("OCS") as its members have dozens of submarine cables deployed on the OCS on both coasts including some that transit through the New York Bight. Submarine telecommunications cables form the backbone of our modern digital infrastructure. Submarine cables not satellites continue to carry approximately 99 percent of the world's Internet voice and data traffic. [Footnote 3: Doug Brake Submarine Cables: Critical Infrastructure for Global Communications Info. Tech. &amp; Innovation Found. at 1 (Apr. 2019) <a href="https://www2.itif.org/2019-submarine-cables.pdf">https://www2.itif.org/2019-submarine-cables.pdf</a>.] Activities that rely upon submarine cables span the full range of economic and social activities: submarine telecommunications cable enable Internet connectivity and electronic commerce global payment networks mobile wireless backhaul government and military communications telemedicine research remote work and video conferencing and communications with friends and family.[Footnote 4: See International Cable Protection Committee ICPC Calls on Governments and Industry to Facilitate and Expedite Submarine Cable Installation and Repair During the COVID-19 Pandemic in Order to Protect Internet Connectivity and Critical Communications 1 (Apr. 3 2020) <a href="https://www.iscpc.org/documents/?id=3299">https://www.iscpc.org/documents/?id=3299</a>.] The global nature of the Internet and the networks that operate over it mean that even communications within a domestic or local area (such as communications up and down the Eastern seaboard) rely on submarine cable infrastructure to deliver communications and services. This reliance is growing with more cables planned as our cultural social economic and national security institutions and activities increasingly depend on digital cloud-based platforms. It is imperative that the protection of submarine cable infrastructure be a key priority for BOEM as well as for existing and potential lease holders including all those involved in planning development</p>	<p>Each lease area will undergo project-specific environmental analyses through the development and submittal of a SAP and a COP. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include detailed evaluation of impacts and will consider the best available data and information that reflect the state of the science at the time of publication. Cable activities will be discussed at the COP NEPA stage, and further coordination opportunities will be discussed then. Appendix C, <i>Tiering Guidance</i>, summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that will be included in the COP NEPA analysis for each resource area, including existing submarine cable infrastructure.</p>

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	installation and maintenance of the power transmission lines that will link renewable energy platforms to the coast.	
BOEM-2024-0001-0324-0003	As an interested stakeholder NASCA filed comments on BOEM's initial proposed sale notice for the New York Bight area in 2021[Footnote 5: Comments of NASCA Docket No. BOEM-2021-0033 (filed Aug. 13 2021) ("NASCA NY Bight Comments"). See also Comments of NASCA Docket No. BOEM-2018-0004 (filed Jul. 30 2018) ("NASCA 2018 Comments").] to stress the importance of incorporating cable awareness and spatial separation standards in BOEM's leasing program to ensure that potential lease holders take into account existing and planned infrastructure transiting in or near the proposed lease areas. NASCA submits these comments to restate its position and to emphasize the importance of developing a comprehensive approach to coordination and mitigation between offshore wind and submarine cable infrastructure an approach that is even more vital given the extensive transmission line infrastructure that is anticipated to be deployed both within and outside the proposed lease areas.	Each lease area will undergo project-specific environmental analyses through the development and submittal of a SAP and a COP. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include detailed evaluation of impacts and will consider the best available data and information that reflect the state of the science at the time of publication. Additional coordination with interested stakeholders and existing and planned cable infrastructure will be discussed at the COP NEPA stage.
BOEM-2024-0001-0324-0005	NASCA recognizes that the BOEM's COP Guidelines expressly recommend that potential lessees identify submarine telecommunications cables in the area and coordinate as early as practicable with owners and operators of that infrastructure. [Footnote 10: See BOEM Information Guidelines for a Renewable Energy Construction and Operations Plan (COP) Attach. G at 61 (May 27 2020) <a href="https://www.boem.gov/sites/default/files/documents/about-boem/COP%20Guidelines.pdf">https://www.boem.gov/sites/default/files/documents/about-boem/COP%20Guidelines.pdf</a> ("COP Guidelines").] However NASCA believes that lessees should be apprised of the need to coordinate with submarine telecommunications cable owners and operators well before they prepare a COP with ready access to key recommendations and guidelines that underpin such coordination. This need is more acute when the planning entails energy transmission line deployment extending beyond the lease areas.	Each lease area will undergo project-specific environmental analyses through the development and submittal of a SAP and a COP. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include detailed evaluation of impacts and will consider the best available data and information that reflect the state of the science at the time of publication. Future COP NEPA documents will consider impacts on existing submarine cable infrastructure.

Comment No.	Comment	Response
<b>Marine Minerals</b>		
BOEM-2024-0001-0313-0057	3.6.7.1.2 National Security and Military Use The PEIS states "Offshore sand and gravel resources are managed by federal and state agencies and used for coastal protection and restoration beach nourishment and habitat reconstruction purposes. Within or adjacent to the geographic analysis area BOEM USACE New York Department of State Office of Planning and Development NJDEP and New Jersey Geological and Water Survey coordinate the management of areas of potential and confirmed sand resources for these coastal management and restoration activities." Comment - It appears that there are some integral agencies that are omitted from the list of permits and approvals. For example numerous NYSDEC Divisions would be involved in aspects of the proposed action including but not limited to the tidal wetlands permitting perhaps beneficial reuse determination (BUD) processes etc. The extent and involvement of this agency should be explored and discussed in the final PEIS. Further based on DER past experience and comments from NYSDEC and responses from AECOM (source: Response to Comments Letter Dated: March 4 2022 Technical Comment Letter South Brooklyn Marine Terminal Port Infrastructure Improvements Project DEC ID: 2-6102-00120).	Thank you for the comment. The applicant is responsible for obtaining all necessary permits prior to construction and operations of the project and will do so during the COP NEPA stage.
<b>Military</b>		
BOEM-2024-0001-0071-0003	Putting foreign trash in OUR ocean backed by big oil companies will endanger coastal security and hinder search and rescue missions from our coast guard.	BOEM is continuing to work with the U.S. Department of Defense (DoD) and the Military Aviation and Installation Assurance Siting Clearinghouse to determine potential conflicts with DoD activities from the impacts on military uses. Coordination with the USCG is ongoing and will be continued at the COP NEPA stage.
BOEM-2024-0001-0334-0011	RADAR: The impact to radar in my opinion has been severely underplayed. The impact of not impairing local air and sea navigation and Coast Guard search and rescue cannot be overstated. You should be required to coordinate with the US military on the national security risks to coastal threat detection AS WELL AS the functioning of RADAR GUIDED MISSILE DEFENSE SYSTEMS that may be required along the coast in war. Offshore Wind Farms Can Interfere with Ship Radar and Navigation Says New Report "The report concludes wind turbine generators have significant electromagnetic reflectivity and	BOEM is continuing to work with the DoD and the Military Aviation and Installation Assurance Siting Clearinghouse to determine potential conflicts with DoD activities from the impacts on military uses. Coordination with the USCG is ongoing and will be continued at the COP NEPA stage. The PEIS addresses the adverse impacts of WTG structures on radar systems in Section 3.6.7.4.1, <i>Radar Systems</i> . Please refer to OU-1 and OU-3 in Table 3.6.7-6 for radar mitigation measures.

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	therefore can interfere with radar systems operating nearby. The rotating blades can also create reflections in Doppler radar systems. In particular these forms of interference could obfuscate smaller vessels and stationary objects such as buoys on radar complicating navigation decisions and increasing the risk of collision with larger vessels. Maritime search and rescue teams also rely on radar to find smaller boats their primary targets and interference could therefore also complicate rescue operations near wind farms. The report recommends the Bureau of Ocean Energy Management and other relevant agencies pursue practicable options to mitigate the interference of wind farms such as by implementing enhanced training and using reference buoys among other options. The agency should also pursue further research to fill remaining gaps in understanding how offshore wind farms affect radar used for navigation. Additionally the risk of the rigs and substations being used for foreign surveillance has not even been broached! These are foreign companies in charge of these operations some with part foreign state ownership that can also have alliances with enemies of the US. This alone should make prevent projects from being approved.	
BOEM-2024-0001-0344-0003	This experiment will interfere with homelands security destorting radar and other defensive equipment.	BOEM is continuing to work with the DoD and the Military Aviation and Installation Assurance Siting Clearinghouse to determine potential conflicts with DoD activities from the impacts on military uses. Coordination with the USCG is ongoing and will be continued at the COP NEPA stage. The PEIS addresses the adverse impacts of WTG structures on radar systems in Section 3.6.7.4.1, <i>Radar Systems</i> . Please refer to OU-3 in Table 3.6.7-6 for radar mitigation measures.
BOEM-2024-0001-0355-0011	National security issues due to interference with satellites and radar detection of enemy ships and also inhibiting defense planes from flying overhead.	BOEM is continuing to work with the DoD and the Military Aviation and Installation Assurance Siting Clearinghouse to determine potential conflicts with DoD activities from the impacts on military uses. Coordination with the USCG is ongoing and will be continued at the COP NEPA stage. The PEIS addresses the adverse impacts of WTG structures on radar systems in Section 3.6.7.4.1, <i>Radar Systems</i> . Please refer to OU-3 in Table 3.6.7-6 for radar mitigation measures.

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BOEM-2024-0001-0357-0037	With the close-in Atlantic Shores project we significantly degrade our military air radars in Gibbsboro NJ. Father out we do not have that.	BOEM is continuing to work with the DoD and the Military Aviation and Installation Assurance Siting Clearinghouse to determine potential conflicts with DoD activities from the impacts on military uses. Coordination with the USCG is ongoing and will be continued at the COP NEPA stage. The PEIS addresses the adverse impacts of WTG structures on radar systems in Section 3.6.7.4.1, <i>Radar Systems</i> . Please refer to OU-3 in Table 3.6.7-6 for radar mitigation measures.
BOEM-2024-0001-0310c	The Synthesis of the Science report also mentions that NOAA is going to have problems doing stock assessments around these turbines because they need to go out and drag to take samples to know how many fish there are. Synthesis of the Science NOAA Fisheries also acknowledge that any impacts that are stock assessment surveys will lead to greater management with caution, meaning lower fisheries quotas and lost revenue for the recreational commercial industry. We've been trying to get this information out to the public but the mainstream media just wants to paint us as deniers and oil industry shields.	Thank you for your comment. The potential disruption of NMFS marine resource survey operations is noted within the Presence of Structures IPF in Section 3.6.7 of the Final PEIS. BOEM acknowledges that potential impacts associated with this interruption could be increased uncertainty in stock assessments and changes in the fishery quotas based on existing fishery management council rules.
BOEM-2024-0001-0310c	However, if NOAA can't do stock assessments it's going to lead to greater precautions. The more fish we catch the lower our quotas are the following year.	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0310c for more information on potential impacts on stock assessments.
BOEM-2024-0001-0310d	For BOEM to keep in mind the recent Concordia University study of January 2024 on offshore wind farms. The study took an intensive look at the site work infrastructure of offshore wind farms and I'm quoting the study. "Complex hybrid communication architecture presents multiple access points of cyberattacks." This concerns BCS, VSC-HVDC connections. In short, to BOEM, not the U.S. Department of Defense nor you, BOEM, have a handle on cyber vulnerability. The ultimate defense of this country and its power grid come first, and currently offshore wind farms do not assist that. They are most vulnerable. Probably of all the energy renewable sources, offshore wind farms will be the most vulnerable should they occur.	Thank you for your comment. BOEM is continuing to work with DoD and the Military Aviation and Installation Assurance Siting Clearinghouse to determine potential conflicts with DoD activities from the impacts on military uses. Impacts on military uses are evaluated in Section 3.6.7.5, <i>Impacts of the Proposed Action on Other Uses (Marine Minerals, Military Use, Aviation, and Scientific Research and Surveys)</i> .

## P.5.20 Recreation and Tourism

**Table P.5-20. Responses to Comments on Recreation and Tourism**

Comment No.	Comment	Response
BOEM-2024-0001-0063-0003	Visual Impact and Tourism Concerns: Large wind turbines in the scenic New York Bight will negatively impact the visual appeal of the area deterring tourists and affecting the local economy.	Thank you for the comment. BOEM expects that due to distance from shore (the closest NY Bight lease area is 20 nautical miles [37 kilometers] from the nearest shoreline), visual impacts are not expected to negatively impact tourism. See also response to comment BOEM-2024-0001-0313-0061.
BOEM-2024-0001-0255-0002	BOEM's 50 meter buffer zone is grossly inadequate because the barges and other construction vessels may be over 300 feet long with limited maneuverability and anchoring issues. The avoidance zone should be a minimum of 100 meters and even that may be inadequate. Furthermore our organization was warned by Lamont Labs at Columbia University to stay 3.2 miles away from survey vessels using powerful and dangerous sidescan sonar associated with preliminary survey work for these wind farms and export cables. Problem is we don't know when and where these surveys will take place and which ones are dangerous. Most sport diving off the Jersey and NY coast is done within 20 miles of the shoreline during the summer and early fall in water less than 130 feet so most of these 6 windfarms are further offshore. However the export cables must come ashore and therefore powerful survey work threatens sport divers and	Thank you for the comment. The closest to shore that construction may occur is 19 nautical miles. This will not affect most sport diving that occurs within 20 nautical miles of the shoreline. BOEM expects that diving operations in the area are already aware of how to take precautions because of the significant amount of shipping traffic that currently exists. Surveys have already occurred in these areas without injury or incident to divers. When COPs are submitted to BOEM, cable routes must be clearly delineated. Those areas can be avoided during construction.
BOEM-2024-0001-0313-0043	The Town prides itself on commitment to water quality and access to clean safe beaches and the recreational resources and enjoyment of our pristine waterfront including swimming and utilization of a clean waterbody.	Thank you for your comment.
BOEM-2024-0001-0313-0061	Affected Environment and Environmental Consequences 3.6.8-4 The PEIS states "Beaches are valuable assets for recreation and tourism. Those beaches regarded as undeveloped are important tourist destinations and are often valued for their remoteness (Peregrine Energy Group 2008) and as such may be sensitive to the visual impacts of offshore wind facilities. The National Park Service Atlantic and Gulf Coast Recreation Area Survey reported that in 2007 there were only two undeveloped beaches in the geographic analysis area of New Jersey: Brigantine Inlet North and Absecon Inlet which are	Thank you for your comment. BOEM has revised the language in Section 3.6.8.1.2 to the following: "In the geographic analysis area the relatively few remaining undeveloped beaches combined with a predominantly developed coast indicates a tolerance or acceptance of coastal development in most coastal communities. Where measures for preservation of open space wetlands plantings to improve environmental quality and rigorous local review and controls are in place, project specific

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	<p>both in Atlantic County (NPS 2007). Of the three New York State Park Beaches (Hoboken Wildwood and Jones Beach) only Jones Beach State Park has a direct line of sight to the NY Bight lease areas (NYSERDA 2021). Further within the last 10 years storms have ravaged areas in and outside of the geographic analysis area where coastal restoration is ongoing (NY DEC 2022; NJ DEP 2022). Coastal ecosystem and habitat restoration activity including beach and dune nourishment projects support recreational opportunities along the New Jersey and New York coastline. In the geographic analysis area the lack of undeveloped beaches combined with coastal construction activities currently underway indicates a tolerance or acceptance of coastal development in these coastal communities." Comment While TOBAY is not a State Park it does have a direct line of sight to the NY Bight Lease area and should be acknowledged as a significant resource along with the other beaches; also as Robert Moses is included in the visual impact analysis it appears that this beach also frequented by residents is a State Park Beach with direct line of site. It is important to note that the DER does not necessarily agree with the opinion and inferred presupposition stated above that coastal communities accept all types of development. In fact more in line with the first and second sentences of the paragraph (which appears to directly contradict the conclusion of the paragraph) preservation of open space wetlands plantings to improve environmental quality and rigorous local review and controls are in place to minimize the potential for overdevelopment especially in ecologically sensitive and floodprone coastal communities and coastal erosion hazard areas.</p>	<p>analyses will address potential impacts, likely by avoiding disturbances in those areas."</p>
BOEM-2024-0001-0313-0062	<p>Affected Environment and Environmental Consequences 3.6.8-11 The PEIS States "Noise: Noise during construction (e.g. from pile-driving) or vehicle/vessel traffic could result in adverse impacts on recreation and tourism. Onshore construction noise near beaches parkland recreation areas or other areas of public interest would temporarily disturb the public's quiet enjoyment. Offshore construction noise could cause boaters to avoid construction areas although safety zones that USCG may establish for construction areas would be off-limits to boaters. Noise from operational WTGs would be expected to have little effect on finfish invertebrates and</p>	<p>Thank you for the comment. RPs MUL-5, MUL-6, and MUL-7 address noise. They focus on reducing the spatio-temporal overlap of noise, call for use of non-pile-driving foundation types, and require continued noise monitoring of all activities during all phases of construction and operations for the protection of marine life. The distance from shore for any of the proposed activities (&gt;20 nautical miles from shore) provides that pile-driving activities would not be heard on the shore. While BOEM is not able to specifically assess the placement of cable landings and other onshore activities in this document,</p>

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	<p>marine mammals and consequently little effect on recreational fishing or sightseeing. Adverse impacts of noise especially from pile-driving would also affect recreation and tourism due to impacts on species important to recreational fishing and sightseeing. Using information from the Ocean Wind 1 COP noise from pile-driving the noisiest aspect of WTG installation is estimated to be 101 A-weighted decibels (dBA) at 50 feet (COP Volume III Appendix R-1 Section 2.5; Ocean Wind 2022). Most recreational fishing takes place closer to shore so construction of WTGs or OSSs would affect only a small proportion of recreational fishing. Temporary impacts from offshore construction noise will more likely affect recreational fishing for offshore species (e.g. tuna shark and marlin). Offshore construction noise also could contribute to temporary impacts on marine mammals with resulting impacts on chartered tours for whale watching or other wildlife viewing. BOEM qualitatively analyzed impacts on recreational fisheries in the Atlantic OCS region during the offshore construction phase and found slightly negative to neutral impacts on recreational fisheries from both direct exclusion of fishing activities and displacement of mobile target species by construction noise (Tougaard 2008)." The PEIS goes on to state regarding the potential mitigation for this impact producing factor as "REC-1 would reduce impacts on recreational activities or tourism-based businesses by scheduling onshore and nearshore construction outside of the busy summer tourist season. Increased vehicle traffic, road closures and potential limitations on recreational access would still occur but they would affect fewer visitors and summertime recreational activities; impacts from land disturbance would remain minor. Using equipment and technology to limit noise levels (MUL-5) could reduce impacts on recreational activity near onshore construction sites. Because the NY Bight project would have to comply with applicable state or local noise regulations regardless of alternative and because the specific types of equipment and reductions in noise levels are not known at this time, BOEM anticipates any change in impacts realized by this measure would likely be small." (page 3.6.8-20) Comment Despite DER concerns and comments regarding segmentation the PEIS has made it clear that the Points of Interconnection (POIs) and onshore activities are not</p>	<p>BOEM does expect that COPs will address seasonal schedules to avoid disruption of access and enjoyment of coastal recreational resources, as identified by RP REC-1.</p> <p>Odors are a function of air quality. Implementation of RPs AQ-2 through AQ-7 will result in fewer emissions in the offshore and onshore areas affected by the wind projects.</p>

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	<p>included in this environmental review so it is disingenuous to say that onshore construction and nearshore construction won't be scheduled in summer months because those aspects are not considered part of this project (though they should be). While all activities that would adversely impacts our residents should be avoided when they are most included to utilized Town beaches and enjoy their shoreline communities this statement is not reflective of the real- world situation when other providers are actively working in the summer months but it was not considered or an agreement they made to the public. Additionally the noise impacts above lack meaningful analysis of the disruptive nature of the noise and vibration impacts particularly from the pile driving to the local community. There should be a comparison chart or a representative comparative analysis for the noise impacts to a beach goer. Again this analysis should consider not just one NY Bight project but the impacts from cumulative and synergists pile driving of various planned projects and what that will mean to the community. Noise impacts should also be analyzed for the decommissioning process which would likely require heavy construction equipment and machinery for dismantling. The is also a lack of discussion regarding potential odors from all of this heavy equipment and vessel traffic there should be a discussion regarding same to ensure that people going to the beach and enjoying their community are not adversely impacted by any odors that mask the natural nautical smell of the beach and adversely impact their quality of life.</p>	
BOEM-2024-0001-0331-0046	<p>What about airborne noise to us? what will we hear? The turbine manufacturer gives a source level for airborne noise of 118 dB which is loud and noise travels much better over water than over land. We found that the noise at the shore would exceed ambient background levels and therefore be heard. It may also exceed the New Jersey residential night time standard. So here again we have asked our acoustics company to look at this. If we are right let's look at what we are facing here. Hundreds of 1000 foot-tall clearly visible wind turbines the difficulty of watching the blades rotate (I have to turn away) audible noise at the shore reduced wind and waves because the turbines are extracting wind energy we normally get and with that higher local air temperature and humidity. I would suggest that</p>	<p>Thank you for the comment. BOEM expects that—due to distance from shore (closest NY Bight lease area is 20 nautical miles [37 kilometers] from the nearest shoreline)—noise from construction and installation, O&amp;M, and conceptual decommissioning of the WTGs/OSSs could not be heard onshore as sound intensity decreases the further away it gets from the source.</p>

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	this is not just some mild change in the shore going experience but rather its destruction.	
BOEM-2024-0001-0333-0003	We disagree with those who claim that there has been insufficient research on the effects of wind turbines on wildlife, tourism, property values, and human health. Data exists from the decades of wind farm operations in Europe and voluminous data and scientific modeling exists for the Mid-Atlantic marine environment.	Thank you for the comment. Research from all wind development, including European projects, has been considered in this evaluation. In some cases, however, the characteristics of the studied site or the technology were not applicable to the NY Bight environment or the planned projects. Regarding property values, BOEM has added to the Final PEIS Section 3.6.3.4.1 an analysis of the impacts of the NY Bight projects on property values, citing recent studies. BOEM has not found any evidence that offshore wind projects located as far offshore as the NY Bight projects would have any impact on property values.
BOEM-2024-0001-0355-0016	Loss of jobs due to decrease in tourism.	Refer to response to comment BOEM-2024-0001-0355-0020.
BOEM-2024-0001-0355-0020	Destroying our tourism business and a crash of property values. The destruction of tourism would mean many many job losses and businesses closing.	Thank you for the comment. A study conducted to determine the impact of the first offshore wind project off the US coast (3 miles off Block Island) analyzed impacts on tourism through literature reviews and focus groups. The Block Island project is closer to shore and more visible than the projects in NY Bight Area. In general, tourism and recreation were not affected by the construction of the project. Additionally, Airbnb rentals were reviewed to assess impacts on rentals. No noticeable effect on the demand for rentals was found other than an increase during two summer months (BOEM 2018-068).
BOEM-2024-0001-0357-0017	Closer to shore we have the visible impact of the turbines on the prized New Jersey shoreline the disturbing effect of rotating blades that will prevent shore goers from looking out to sea low frequency audible and inaudible noise from turbine operation to humans at the shore which easily penetrates homes causing annoyance and sleep disturbance reduced shore breeze lesser waves and higher air temperature and humidity. Collectively that destroys the shore experience and our cost benefit work indicates that just the visible effect of stationary turbines results in a \$6.5 billion loss in tourism revenues over the project lifetime. It also causes a property value (and tax ratable) loss just for shoreline properties of at least \$1.3	Refer to response to comment BOEM-2024-0001-0331-0046. Regarding impacts on property values from the visible presence of turbines, BOEM has added to the Final PEIS Section 3.6.3.4.1 an analysis of the impacts of the NY Bight projects on property values, citing recent studies. BOEM has not found any evidence that offshore wind projects located as far offshore as the NY Bight projects would have any impact on property values.

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	billion with implications for other properties. Farther out we do not have this problem.2	
BOEM-2024-0001-0426-0004	Will the siting of turbines ten miles off our coast have an adverse effect on the important tourism industry?	Refer to response to comment BOEM-2024-0001-0355-0020
BOEM-2024-0001-0547-0009	<p>The Project as proposed and situated would turn an essentially quiet recreational community of the New Jersey Shore with areas of pristine shoreline fully protected both by state and federal laws into a fully industrialized area both onshore and off destroying the beauty of the New Jersey Shore's environmentally protected coastline and seriously impair and hamper any viable use for commercial fishing, recreational boating, and water access, destroy all the gains that have been made in preserving and advancing endangered species such as the Right Whale not to mention the dangerous known effects of the operation of the wind turbines on human marine mammal [Footnote 29: "Four whales die in 4 days: Wind farms creating 'death zone' at sea says ex-Greenpeace boss" May 8 2023 (<a href="https://nypost.com/2023/05/08/not-unreasonable-to-link-whale-deaths-offshore-wind-farm-work-ex-greenpeace-chief-says/">https://nypost.com/2023/05/08/not-unreasonable-to-link-whale-deaths-offshore-wind-farm-work-ex-greenpeace-chief-says/</a>.) and avian and other habitat. This destruction will fully occur by the proposed drilling staging and operation - and cumulative effects as this Project more than doubles the size of the previous project [Footnote 30: Compare BOEM PEIS Docket No. 2023-0030 at 3.6.4-26 (700 turbines less than one and a half times the number of turbines proposed less than one year ago).] - now revealed less than a year later over 1800 skyscraper-size wind turbines by BOEM's own count [Footnote 31: See PEIS at D2-3 D2-4 (number of New Jersey turbines only now totals 1816 more than one and a half times the amount than that proposed a scant nine months ago).]with blades the size of a football field in length - taking together "as many as three offshore wind projects (Atlantic Shores North Ocean Wind 1 and Ocean Wind 2) that could be under construction simultaneously in the New Jersey lease areas" and adding to these the additional six NY Bight projects to give full measure in plain terms of the full impact my fellow Brigantine residents can fully appreciate and that leave us in despair.</p>	<p>Thank you for your comment. Please see responses to comments BOEM-2024-0001-0345-0015 and BOEM-2024-0001-0176-0003 concerning impacts on marine mammals.</p> <p>Cumulative impacts of the three existing projects and the six areas covered by this PEIS will be assessed in the project-specific NEPA documents when project size and location can be more definitively defined and evaluated.</p>

## P.5.21 Scenic and Visual Resources

**Table P.5-21. Responses to Comments on Scenic and Visual Resources**

Comment No.	Comment	Response
BOEM-2024-0001-0122-0006	Visual and Noise Impact: The visual intrusion of large wind turbines and the noise generated by rotating blades is a great concern for residents living near offshore wind farms. These aesthetic and noise considerations will influence the decline of tourism. Impact on Property Values: Studies suggest that the proximity of wind turbines to residential areas will have a negative impact on property values.	Please refer to Section 3.6.9.5, <i>Impacts of Alternative C (Proposed Action) - Identification of AMMM Measures at the Programmatic Stage</i> . This section describes changes in seascape, open ocean, and landscape character areas because of visual impacts from WTGs. It also describes which KOPs are anticipated to have visual impacts as a result of the Proposed Action. The NY Bight leases are far from shore (the closest distance is 20 nautical miles [37 kilometers], and the average distance is 32 nautical miles [59 kilometers]), and their individual and collective visibility is greatly reduced (see Table 3.6.9-16, <i>Magnitude of View Summary</i> ). Section 3.6.8, <i>Recreation and Tourism</i> , discusses several recent studies on recreation and tourism benefits and recreation fishing impacts based on the presence of operational WTGs. Section 3.6.3, <i>Demographics, Employment, and Economics</i> , discusses potential impacts on demographics, economics, and employment from noise, and information on potential impacts on property values has been added to Section 3.6.3.
BOEM-2024-0001-0224-0003	Visual Impact: The installation of wind turbines in the NY Bight will have a substantial visual impact on the scenic beauty of the region potentially affecting tourism and the overall aesthetic appeal of the area.	Thank you for your comment. The NY Bight leases are far from shore (the closest distance is 20 nautical miles [37 kilometers], and the average distance is 32 nautical miles [59 kilometers]), and their individual and collective visibility is greatly reduced (see Table 3.6.9-16, <i>Magnitude of View Summary</i> ). The visibility of the WTGs would be variable, depending on current meteorological, moonlight, and sunlight conditions. In views seaward, there would be periods of high, moderate, low, and no visibility. As described in Section 3.6.8.3.2, <i>Recreation and Tourism – Cumulative Impacts of the No Action Alternative</i> , and Section 3.6.8.4, <i>Impacts of Alternative B – Identification of AMMM Measures at the Programmatic Stage</i> , impacts are anticipated to be minor to minor beneficial. Cumulative impacts of one project or six projects in combination with ongoing and planned activities are expected to be minor to moderate adverse with minor beneficial impacts. Consistent with the impact rating guidance

Comment No.	Comment	Response
		included in Table 3.6.8-2, the main factors informing this impact rating are the expected extent of visual impacts associated with the presence of structures and lighting; impacts on fishing and other recreational activity from noise, vessel traffic, and cable emplacement during construction; and beneficial impacts on fishing from the reef effect.
BOEM-2024-0001-0313-0064	<p>Affected Environment and Environmental Consequences 3.6.9-8 Table 3.6.9-2. Open ocean seascape and landscape conditions category on Designated National State and Local Parks Preserves and Parkways.</p> <p>Comment The table referenced above omits a number of critical Town resources that should be included in the list namely TOBAY Beach (which is only referenced once in the entire document which is concerning in of itself) and TOBAY Sanctuary which is a designated NYS Department of State significant coastal fish wildlife habitat as is South Oyster Bay. Any impacts to same should be evaluated and addressed in the comprehensive environmental analysis for the proposed action inclusive of potential cumulative impacts.</p>	<p>Thank you for your comment. Tobay Beach is approximately 7 miles from KOP-28 Jones Beach (30 miles from OCS-A 0544). Although Tobay Beach is approximately 28 miles from this lease area, it will have similar viewing conditions. KOP-38 Robert Moses Field 5 is another KOP that can be used as a reference condition and is 24 miles from OCS-A 0544. Both KOP-28 Jones Beach and KOP-38 Robert Moses Field 5 are also used in the cumulative analysis. For the COP-level NEPA stage, additional analysis and KOPs will be considered. Impacts on coastal resources are discussed in Section 3.5.4, <i>Coastal Habitat and Fauna</i>.</p>
BOEM-2024-0001-0334-0009	<p>VISUALS: Your visual simulations continue to downplay the appearance of the wind farms from the shore. With Ocean Wind you failed to show the appearance from the prime beaches. For Atlantic Shores you show mostly views of seascapes as if shot with a very wide perspective as if shot by a camera with a very wide-angle lens. Though lovely images they hide the reality of the imposing appearance of the turbines by pushing the turbines out far on the horizon. In some cases I understand you have errors in the simulated heights of the turbines. Errors like this are unacceptable. All visuals should honestly show the view of properly sized 1000'+ turbines from the perspective with absolutely correct metrics. You have relied on old opinion surveys to judge the public's reaction to the visual impacts of the wind farms. These surveys were based on old visuals when the turbine sizes were smaller and there were attempts to scale their responses to simulate closer and larger turbines. But this is a poor showing. The visuals that were actually shown to the people are difficult to find. New surveys should be done to accurately capture peoples reaction to updated for people's opinions of the views from images corrected as above. SEE ORIGINAL</p>	<p>Thank you for your comment. The simulations referenced in the comment are from Atlantic Shores Offshore Wind South. Please refer to the simulations created for the NY Bight. Individual lease areas and cumulative simulations are available on the BOEM website: <a href="https://www.boem.gov/renewable-energy/state-activities/new-york-bight">https://www.boem.gov/renewable-energy/state-activities/new-york-bight</a>. Each simulation includes instructions for accurately viewing both printed and digital representations, a panoramic image, and 50-milimeter cropped segments of the overall view for predicted and maximum visibility of both the 850-foot and 1,312-foot WTG heights.</p>

Comment No.	Comment	Response
	COMMENT FOR IMAGE COMPARISSON OF Atlantic City and Brigantine with and without windmills.	
BOEM-2024-0001-0334-0010	<p>This is evidence of the REAL look of 1000' turbines. SEE ORIGINAL COMMENT FOR MAP OF Turbines Wind turbines from Atlantic Shores will be as close as 8.7 miles. ocean Wind 2 as close as 10 miles. How can we know for sure how tall 1000ft turbines will look 10 miles out? Here's how: Here is the view from 5th Street and the Boardwalk in ocean City NJ looking north. ocean casino in Atlantic City is the tallest building on the horizon and is about 10 miles away. The distance is verified approximately on the Google map with the distance at 10 scale increments. The casino's height is known 710' tall from documentation available. A wind turbine is superimposed on the photograph at approximately 1000ft tall gauged by the fact that the turbine should be another have as tall as the Ocean casino. The result is how tall a 1000 ft windmill will look from 10 miles away. The red block represents the size of substation superimposed at a size of approximately 300' across and 200' tall relative to the turbine. renditions show the substations much smaller) You can then use your thumb to gauge the height that 1000ft represents at 10 miles anywhere on the horizon as with an adult stretched out arm about the height of the thumbnail is the relative visual height of the turbines. And the math works out too the field of angle of the 1000ft turbine is about" at 2ft from your eye shown in the spreadsheet included. come to ocean City on a clear day and see the scene for yourself and get a good idea how big the turbines will look to YOUR eye.</p>	<p>Thank you for your comment. The simulations referenced in the comment are from Atlantic Shores Offshore Wind South. Please refer to the visual analysis in the PEIS for the NY Bight lease areas and simulations created for the NY Bight. Photo simulations for individual lease areas and cumulative projects in the viewshed are available at BOEM's website: <a href="https://www.boem.gov/renewable-energy/state-activities/new-york-bight">https://www.boem.gov/renewable-energy/state-activities/new-york-bight</a>.</p> <p>Please see the response to this comment for Atlantic Shores Offshore Wind South and the its visual simulation at BOEM's project website: <a href="https://www.boem.gov/renewable-energy/state-activities/atlantic-shores-south">https://www.boem.gov/renewable-energy/state-activities/atlantic-shores-south</a>.</p>
lea	<p>Visual Impacts All energy infrastructure has a visual impact. The choice is between seeing wind turbines miles offshore or continuing to see fossil-fuel fired power plants in the middle of our neighbors. On Long Island our power plants are not only visible but also negatively impact air quality and public health in the community. CCE was very impressed by the visual representations of the individual and cumulative impacts on viewsheds that were displayed at the in-person meetings for the PEIS. They are helpful to understand the realistic visual minimal impacts that are expected. CCE asks that BOEM also compare these visual impacts to the visual impacts from power plants in communities particularly coastal and environmental</p>	<p>Thank you for your comment. Although both the Port Jefferson Barrett and Northport Power stations may be visible from Long Island Sound, they would not be visible from coastal areas with views to the east and southeast. The purpose of the PEIS is to evaluate the potential impacts of proposed offshore energy infrastructure, not existing power plants. Visual impacts would be assessed again as part of the project-specific COP NEPA review for each lease area.</p>

Comment No.	Comment	Response
	justice communities as part of the "No Action" alternative. We can SEE Port Jefferson Barrett and Northport Power stations. We see them from land we them from our boats in the harbors and we see them from the beach. Those that worry that their trip to the beach will somehow be diminished because they see a wind turbine on the horizon need to be reminded they see a power plant on shore on a routine bases.	
BOEM-2024-0001-0355-0010	Views that will be ruined - no longer a beautiful horizon but hundreds of turbines that are 300 feet taller than Ocean Casino.	Thank you for your comment. Please refer to Section 3.6.9.5, <i>Impacts of Alternative C (Proposed Action) - Identification of AMMM Measures at the Programmatic Stage</i> . This section describes changes in seascape, open ocean, and landscape character areas as a result of visual impacts from WTGs and which KOPs are anticipated to have visual impacts as a result of the Proposed Action. The NY Bight leases are far from shore (the closest distance is 20 nautical miles [37 kilometers], and the average distance is 32 nautical miles [59 kilometers]), and their individual and collective visibility is greatly reduced (see Table 3.6.9-16, Magnitude of View Summary). With this increased distance and the effects of earth's curvature, the visibility of the WTGs would be 0.12° - 0.28° (0.2-0.5%) vertical field of view at the closest shoreline location in New Jersey for the two WTGs analyzed and 0.27° – 0.48° (0.4-0.8%) vertical field of view at the closest shoreline location in New York. Please see Tables H-3 and H-6. WTG visibility would be variable, depending on current meteorological, moonlight, and sunlight conditions. In views seaward, there would be periods of high, moderate, low, and no visibility.
BOEM-2024-0001-0355-0049	Studies show properties near elevated high voltage power lines sell for up to 44 percent less and within 1000 feet sell for less than 17 percent. This effect can be much more dramatic and destroy property values of homes currently with beach views that will also be ruined by the visual impairment of the wind turbines and the noises they make.	See response to comment BOEM-2024-0001-0122-0006.
BOEM-2024-0001-0357-0044	With respect to the project's impact on the State's coastal zone and its conflicts with the visual resource protection elements of the States coastal zone management rules 1. Limits on the total project nameplate capacity to allow flexibility in turbine size and number 2.	Thank you for your comment. The six leases analyzed in the PEIS are between 20 nautical miles (37 kilometers) and 41 nautical miles (76 kilometers) offshore. Two wind turbine heights are analyzed: 1,312 feet (400 meters) and 853 feet (260 meters) to

Comment No.	Comment	Response
	A turbine exclusion zone from all beach points on Long Beach Island of 17.2 miles consistent with what the BOEM has agreed to provide for New York State 3. The use of smaller turbines for those closer to shore to reduce visible impact and 4. Spacing turbines at least two nautical miles apart to reduce visible impact.	rotor blade tip above High Astronomical Tide. The visual simulations used to support the visual analysis assessed WTGs based on grid spacing of 0.6 by 0.6 nautical miles (1.1 by 1.1 kilometer) for purposes of a maximum case analysis, which exceeds the 1,103 WTGs allowed in the RPDE. Therefore, the potential number of WTGs visible from any KOP as reported in this analysis likely overestimates impacts. Consistency with state coastal zone management rules will be evaluated on a project-specific basis following the lessee's submittal of its COP.
BOEM-2024-0001-0310m	Just stop making wide angle panoramic views that pushes the horizon out so that the turbines get reduced to tiny little things. The human eye they're big. We know they're big because the turbines that will be ten miles away, which there are several sites of that, they are taller than what we see Ocean Casino from Ocean City and it's quite prominent on our shore on our visual thing. So these will be a third taller than Ocean Wind and Ocean Wind itself is already pretty big. So you fail that. Maybe you can do a better job.	Thank you for your comment. The NY Bight leases are far from shore (the closest distance is 20 nautical miles [23.6 miles], and the average distance is 32 nautical miles [36.4 miles]), reducing their individual and collective visibility. See Table 3.6.9-16, <i>Magnitude of View Summary</i> . With this increased distance and the effects of earth's curvature, the visibility of the WTGs would be 0.12°–0.28° (0.2%–0.5%) vertical field of view at the closest shoreline location in New Jersey for the two WTGs analyzed and 0.27°–0.48° (0.4%–0.8%) vertical field of view at the closest shoreline location in New York. Please see Tables H-3 and H-6. WTG visibility would be variable, depending on current meteorological, moonlight, and sunlight conditions. In views seaward, there would be periods of high, moderate, low, and no visibility. Please also refer to the simulations created for the NY Bight. Individual lease areas and cumulative simulations are available on the BOEM website: <a href="https://www.boem.gov/renewable-energy/state-activities/new-york-bight">https://www.boem.gov/renewable-energy/state-activities/new-york-bight</a> . Each simulation includes instructions for accurately viewing both printed and digital representations, a panoramic image, and 50-millimeter cropped segments of the overall view for predicted and maximum visibility of both the 850-foot and 1,312-foot WTG heights.
BOEM-2024-0001-0529gg	Also, some people complaining about the viewership. Well, I think we should again just suppose, in the PEIS, the view of the power plants we can see. We can see our fossil fuel power plants, they're not invisible. And yes, we may be able to see one or two of the turbines offshore, but that's nothing compared to the power plants	Thank you for your comment. The purpose of the PEIS is to evaluate the potential impacts of proposed offshore energy infrastructure, not existing power plants. Visual impacts would be

Comment No.	Comment	Response
	that not only we can see but are spewing out nitroxide, sulfur dioxide, into the air around our communities.	assessed again as part of the project-specific COP NEPA review for each lease area.

## P.5.22 Project Design Envelope

**Table P.5-22. Responses to Comments on Project Design Envelope**

Comment No.	Comment	Response
BOEM-2024-0001-0181-0004	Ecological design elements should be incorporated into the offshore wind infrastructure where benthic habitat could be maximized. Using nature-based design elements significantly increases species settlement richness and abundance. Nature-based design elements and nature-based features allow structures to actively provide carbon sequestration while decreasing the magnitude and frequency of maintenance and increasing structural lifespan. Specifically using ecological concrete as a mitigation measure and design alternative supports compliance with strict environmental regulations. The term "ecological concrete" refers to an alternative to traditional concrete where material composition enhances or encourages the growth of flora or fauna when placed in the marine environment. Ecological concrete may include recycled materials such as recycled or reclaimed concrete resulting in reduced greenhouse gas emissions as compared to traditional concrete.	Thank you for your comment. BOEM included RP MUL-12 (refer to Appendix G) in the Final PEIS, which encourages lessees to use nature-inclusive design products in their projects.
BOEM-2024-0001-0181-0006	Given the aforementioned details above all concrete materials including all cable and scour protection utilized in the wind energy development of the six New York Bight projects should solely be fabricated from ecological concrete. Ecological concrete can meet project goals by minimizing negligible impacts creating marine habitat opportunities and providing a bioprotection layer that hardens and reinforces the structure through species settlement. Moreover to mitigate the impacts of habitat conversion from scour and cable protection the NY Bight projects should utilize natural or engineered rounded stone with a consistent grain size thus mirroring natural seafloor substrates. Any exposed surface layer should also be meticulously designed and selected to promote three-dimensional structural complexity creating a diversity of crevice sizes (e.g. mixed	Thank you for your comment. BOEM included RP MUL-12 (refer to Appendix G) in the Final PEIS, which encourages lessees to use nature-inclusive design products in their projects.

Comment No.	Comment	Response
	stone sizes) and rounded edges (e.g. tumbled stone). Such characteristics should be sloped such that the outer edges match the natural grade of the seafloor. When using concrete mattresses and scour protection bioactive concrete (i.e. with bio-enhancing admixtures) should be used as the primary scour protection or veneer to support biotic growth	
BOEM-2024-0001-0313-0009	Chapter 2 Alternatives 2.1.2.1 One Project SEE ORIGINAL COMMENT FOR TABLE 2-2. RPDE parameters for one representative NY Bight project Comment - It is unclear from the table above and the discussion in the PEIS if the layout and grid spacing will be different based on the various scenarios for turbine height (721-11312 ft.) and turbine rotator diameter (721-1214 ft.). It would be helpful if there was a representative diagram of the layout and spacing proposed to give a visual representation of the anticipated WTGs and OSSs. There is also a significant difference in the WTG seabed footprint proposed for monopile (0.24 acres) as compared to 2.88 acres which would appear to necessitate a commensurate environmental impact analysis associated with these disparities which must be addressed in greater detail. Similar concerns exist regarding the offshore substations (OSSs) export cables barrier depth and other project elements continued on the next page in this chart. It is impossible to provide meaningful comments on the wide-ranging potential impacts with such wildly ranging parameters per project design element. SEE ORIGINAL COMMENT FOR TABLE of Element Project Design Element Typical Range	The RPDE for the PEIS includes a range of representative parameters of offshore wind development in the NY Bight, as described in Section 2.1.2.1. The RPDE is not prescriptive; therefore, BOEM does not stipulate which combination of parameters would likely be developed but rather analyzes the maximum effects for the range of parameters given, including the spacing and height of turbines. Each COP submitted within the NY Bight will be required to identify the proposed spacing, turbine height, rotor diameter, and other parameters of the project. Regarding the wide range of parameters, the RPDE was developed with input from the six NY Bight lessees, American Clean Power, National Renewable Energy Laboratory, and the States of New York and New Jersey. Because the RPDE covers six lease areas of differing sizes and was developed before lessees submitted their COPs, a wide range of potential parameters was used to ensure the maximum potential impacts from development in the NY Bight could be assessed.
BOEM-2024-0001-0313-0013	2.1.2.1.1 Construction and Installation Page 2-5 states "Proposed onshore elements of one NY Bight project include export cable landfall sites sea-to-shore transition onshore export cable routes onshore substation or converter station and connection to a point of interconnection (POI) (Figure 2-1). Because the analysis in this Draft PEIS was prepared before any of the NY Bight COPs were submitted by lessees actual locations of landfall locations and onshore facilities are unknown at this time. Because the location of landfalls and onshore facilities are unknown this Draft PEIS describes the types of impacts from construction and operation of onshore components generally and largely defers the analysis of	As described in Section 1.1, <i>Overview</i> , BOEM regulations 30 CFR 585.620 require that lessees submit a COP for proposed projects. The requirement for a COP is not derived from the PEIS, and COPs must be submitted regardless of BOEM's decision relative to the PEIS. The COPs are required to comprehensively describe construction and installation, O&M, and conceptual decommissioning of the project offshore and onshore. Following receipt and acceptance of a COP, BOEM will conduct a NEPA review on that COP.

Comment No.	Comment	Response
	<p>onshore components to the COP-specific NEPA documents. It should also be noted that onshore elements are included in BOEM's analysis in the Draft PEIS to support the evaluation of a complete project and for future tiering; however BOEM's authority under OCSLA extends only to the activities on the OCS." Comment - Since local impacts are contingent on project specifics that are purportedly unknown at this time according to the above paragraph the Town respectfully requests that a site-specific COP is prepared for all 6 projects. As points of interconnection may have the potential to impact the Town of Oyster Bay especially in terms of larger plan of scale (substations and associated infrastructure for example) this information is crucial for analysis. It would appear that OCS-A-0544 would have the greatest potential to impact the Town as it is in the closest in proximity to the Town shoreline; however it is possible that infrastructure may be shared not only as it pertains to the NY Bight projects but also with other planned offshore developments; thus the information should be provided and evaluated in the final PEIS as part of the cumulative impact analysis. It is unclear from the PEIS what the decision matrix and parameters are for requiring a COP only that it is under the authority of BOEM. In an abundance of transparency this process should also be disclosed during the environmental review process for determining which projects will be evaluated.</p>	
BOEM-2024-0001-0313-0017	<p>Page 2-6 States "From the landfall location onshore export cables would carry the electricity to the onshore substations or converter stations (Figure 2-1). Onshore export cables are typically buried in a trench and would typically follow existing rights-of-way where possible. The onshore substations transform and prepare the power received from the export cables to be connected into the existing grid at the POI. Projects with large nameplate capacity or that include long transmission lines carrying very large power capacities may choose to use HVDC instead of HVAC. If HVDC is used an onshore HVDC converter station would be necessary to convert power from the onshore export cables to HVAC to allow interconnection to the existing transmission infrastructure. Typically either an overhead connection or an underground transmission line with an overhead tie-line may be used from the onshore</p>	<p>The RPDE in the PEIS was developed before lessees submitted COPs for BOEM review; therefore, the POIs listed in Section 2.1.2.1.1, <i>Construction and Installation</i>, are included only as examples of locations where lessees may choose to interconnect and develop onshore infrastructure. The locations of POIs proposed for each NY Bight project must be identified in the COP, which BOEM will then analyze in a project-specific NEPA document.</p>

Comment No.	Comment	Response
	<p>substation/converter station to a POI at a nearby facility. The transmission POI is the location where the power generated by the offshore wind project is connected into the existing electrical grid. This can be done at new facilities constructed for the project or at existing facilities that have been modified to accommodate the interconnection of the offshore wind project. Examples of potential POIs in New York and New Jersey that could be used by the NY Bight projects are listed below. Other POIs may ultimately be chosen by the NY Bight lessees. Potential configurations of transmission grid interconnections between the NY Bight projects and the POIs are described in the Transmission Interconnection Configurations subsection. Examples of potential POIs for the NY Bight projects: New York - Rainey Ruland Road Gowanus East Garden City Freshkills Port Jefferson Farragut Shore Road Newbridge Road Syosset North<sup>Port</sup> West 49th Street Mott Haven Brookhaven"</p> <p>Comment There is no additional information on the potential points of interconnection in the PEIS; as a number of the identified locations are within the Town of Oyster Bay specific details of these POIs must be disclosed and be available for public review and comment. Furthermore it would be reasonable to assume that even if the POIs are not in Oyster Bay there is associated infrastructure to storage and distribution facilities that is part of a larger plan of scale that is of significant concern to the Town. It is also unclear why this information is not known at this time. When reviewing the order of operations on the critical path towards construction for the Empire Wind project for example siting and construction of the onshore substations is one of the first items on the sequence schedule. Therefore it would stand to reason that this information is readily available or at least available for disclosure and review in the PEIS. For reference this is the schedule in the COP for Empire Wind: SEE ORIGINAL COMMENT FOR TABLE Empire Offshore Wind Empire Wind Project (EW1 and EW2)</p>	
BOEM-2024-0001-0313-0025	<p>2.1.2.1.3 Conceptual Decommissioning</p> <p>Page 2-15 states "Conceptual decommissioning of a NY Bight project would be required in accordance with 30 CFR 285. Under 30 CFR 285 NY Bight lessees would be required to remove or decommission all facilities projects cables pipelines and obstructions and clear the</p>	<p>Section 2.1.2.1.3, <i>Conceptual Decommissioning</i>, summarizes the requirements (defined in 30 CFR 285) and typical process for decommissioning an offshore wind farm, and each Chapter 3 resource section describes the general impacts that could occur from decommissioning activity. Further detail on</p>

Comment No.	Comment	Response
	<p>seabed of all obstructions created. Absent permission from the Bureau of Safety and Environmental Enforcement (BSEE) all projects would have to achieve complete decommissioning within 2 years of termination of the lease and either reuse recycle or responsibly dispose of all materials removed."</p> <p>Comment The information on decommissioning seems very superficial and triggers concerns that should be addressed. Is there a bond/escrow account required if the company defaults on lease obligations not just during decommissioning but if there are issues during construction and operation. Two years does not seem like enough time before the expiration of the lease especially when plans need to be reviewed and there are multiple approvals and considerations. There should be meaningful technical analysis in the environmental review process of considerations and alternatives such as abandoning some structures in place the impacts of the disturbance of removing not just the WTGs OSSs and infrastructure. All construction impacts should also be provided in the analysis such as the air quality impacts. GHG emissions from decommissioning transportation impacts to recycling disposal facilities and the number of trips the emissions associated with reprocessing/disposal upon expiration of the useful life of these structures all of the construction equipment and vessel emissions as well as the impacts to air land and water quality of the disposal sites which are not discussed in any detailed way in the PEIS. Where will these materials be disposed or recycled? What are those impacts. These are all integral components of the whole action and also do not seem to be considerations when calculating net emissions. ("Conceptual decommissioning would involve vessels and equipment similar to those used for construction and impacts of conceptual decommissioning are expected to be similar to the impacts of construction." Page 3.4.1-9) The reverse engineering seems like an oversimplification without any substantiation and therefore may not be providing accurate analysis of associated impacts when comparing construction and the decommissioning processes. The PEIS simply assumes the process for dismantling and decommissions will be the reverse of installation but this again requires in depth analysis and discussions regarding where will dismantling take place what are the noise impacts what are the</p>	<p>decommissioning would be described in the COP and will be analyzed in each COP-specific NEPA analysis. As required by 30 CFR 285, a decommissioning application would be required prior to decommissioning activity taking place, which would include additional information on the decommissioning process for each NY Bight project. If a COP is approved, each applicant would have to submit a bond (or another form of financial assurance) prior to installation that would be held by the U.S. government to cover the cost of decommissioning the entire facility in the event that the applicant would not be able to decommission the facility.</p>

Comment No.	Comment	Response
	protections in place for turbidity control and mitigation what are the water quality impacts what facilities are planned for accepting debris of this nature how will the materials be transported will new structures for replacements be transported to a storage/staging area how will this logistically occur? How will this impact local communities to be in a state of revolving and construction?	
BOEM-2024-0001-0313-0041	<p>3.5.2.1 Description of the Affected Environment and Future Baseline Conditions</p> <p>The PEIS states "The NY Bight is an offshore area extending from Montauk Point on the eastern side of Long Island New York southwest to Cape May New Jersey. Because the potential cable routes are unknown at this time the benthic resources affected environment characterization covers inshore resources up to the shoreline within the NY Bight."</p> <p>Comment It would appear that due to the expedited timelines and rush towards construction that more information is known about cable routes than is being disclosed and analyzed in the environmental review documents. The PEIS should be updated with information on interconnection point and cables routes and onshore substations. Further if this information is deferred to the COP again DER would request that a COP be prepared for OCS-A 0544s specifically and any other projects in the NY Bight that share infrastructure that would connect and traverse Town lands and potentially impact the Town.</p>	<p>The RPDE in the PEIS was developed before lessees submitted COPs for BOEM review; therefore, the POIs (and potential cable routes to those POIs) listed in Section 2.1.2.1.1, <i>Construction and Installation</i>, are included only as examples of locations where lessees may choose to interconnect, route cables, and develop onshore infrastructure. The locations of POIs proposed for each NY Bight project must be identified in the COP, which BOEM will then analyze in a project-specific NEPA document. BOEM regulations 30 CFR 585.620 require lessees submit COPs for each proposed project.</p>
BOEM-2024-0001-0313-0060	<p>3.6.7.1.4 Cables and Pipelines</p> <p>The "EIS states "There are 27 cables (18 active and 9 out of service) offshore within the NY Bight geographic analysis area (Figure 3.6.7-5) (NASCA 2020). The potential for overlap of submarine cables in the geographic analysis area will be evaluated during the future COP NEPA stage. The NYSERDA developed an Offshore Wind Cable Corridor Constraints Assessment to identify the constraints of developing future offshore wind cables in New York State Waters at landfall and along overland routes to existing POIs (NYSERDA 2023). NYSERDA identified POIs for offshore wind projects to interconnect to the existing New York State transmission grid. Table 3.6.7-1 lists the potential POIs in New York identified in the Offshore Wind Cable Corridor Constraints Assessment. No comparable study has been</p>	<p>As described in Chapter 1, the PEIS presents a programmatic analysis of development of the six NY Bight lease areas and mitigation measures to mitigate those impacts; it will not result in the approval of activities. Each lessee is required to submit a COP that will include project-specific information that will be analyzed in detail in a separate, COP-specific NEPA document. Potential POIs in both New York and New Jersey are identified in Section 2.1.2.1.1, but the specific locations of each POI to be used by the NY Bight projects is not known. Therefore, the analysis of the offshore export cables and onshore infrastructure in the PEIS is regional in nature; site-specific analysis is deferred to the COP-specific NEPA analysis. When BOEM analyzes the COPs, it will</p>

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	<p>conducted by the State of New Jersey." SEE ORIGINAL COMMENT FOR TABLE 3.6.7-1 Onshore POIs</p> <p>Comment Although DER believes this constitutes an impermissibly segmented environmental review all information regarding points of interconnection in the Town of Oyster Bay and potential impacts must be disclosed and analyzed at the earliest possible stages. Where information is not speculative and is readily available all sections of the PEIS should be updated for consistency and accuracy regarding the full range of potential impacts on the larger plan of scale pertaining to provide the requisite environmental review of the whole action.</p>	<p>analyze them separately, as each project has independent utility (i.e., one project does not require another project to operate).</p>
BOEM-2024-0001-0322-0003	<p>However we have concerns about offshore export cable burial depth. The PEIS says that these cables will be buried a minimum of 3 feet deep where technically feasible. Regulations require that undersea cables must be buried at least 15 feet when crossing navigation channels. This requirement should extend to navigation safety fairways as they will be the most highly concentrated traffic areas along our coasts. If a vessel must drop anchor in an emergency situation vessel operators want to eliminate the likelihood of damaging a power cable. Burying the cables at least 15 feet deep is the best practice to avoid such a scenario. BOEM should require the project developers to bury the offshore export cables 15 feet where they cross the navigation safety fairway.</p>	<p>As described in Section 2.1.2.1, <i>One Project</i>, the RPDE provides a range of parameters for analysis, including cable burial depth. The parameters are not prescriptive. Table 2-2 notes that cable burial depth may vary based on site-specific factors, including navigation channels, and federal civil work channels. Because offshore export cables routes are not known for each NY Bight project at this programmatic stage, the impacts of cable crossings of specific features, such as navigation safety fairway, cannot be analyzed at this time. During the COP-specific NEPA analysis, there will be an opportunity for BOEM to consider additional alternatives and mitigation measures to minimize impacts related to cable burial depth.</p>
BOEM-2024-0001-0331-0031	<p>Again going back to the purpose of the project which is to produce electric power not to just install structures the PEIS must present operational data. Offshore wind is an intermittent energy source. With typically reported capacity factors of about 40 percent a wind turbine only operates for an equivalent 146 days a year so an understanding of the "downtime" needed for maintenance and repairs is needed to determine the benefit of the project and contrast that with its environmental impact. Therefore the PEIS should have included an analysis of failure modes their frequency repair methods and time needed and the expected environmental impacts of doing those repairs. The companies must have this information and it should be disclosed. The overall loss of operating time on the wind complex should be stated. In addition it should say what will be done with a turbine that cannot be repaired. Will it</p>	<p>Section 2.1.2.1.2, <i>Operations and Maintenance</i>, describes typical O&amp;M activities that would occur during the operation of an offshore wind farm. Section 2.3, <i>Non-Routine Activities and Events</i>, describes events that may occur but are not possible to predict with any degree of certainty, including corrective maintenance activity in the event of damage or failure of a wind farm component. These maintenance actions are considered in the analysis of impacts in Chapter 3. Additional detail on the anticipated timing and frequency of maintenance and repair work would be provided in each COP, but estimates of how "downtime" would affect the power output of a project compared to its environmental impacts is beyond the scope of BOEM's NEPA review. NEPA does not require a cost-benefit analysis, and BOEM's NEPA analysis appropriately considers and</p>

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	remain there for the duration of the lease or will it be decommissioned early? The failure rates for smaller turbines2 to 4-megawatt show that 50 percent of those turbines undergo a major repair or replacement each year. That could involve a substantial downtime to diagnose the problem secure parts and make the repair which could significantly affect the capacity factor and the power production. The nature of the repair could also be important in terms of environmental impact in terms of additional vessel traffic and failures involving oil leakage so the nature and environmental impact of such repairs needs to be presented. Such an analysis and mitigation measures should be presented for both the turbines and the transmission cables. It is our understanding that the project will use new very high voltage lines not previously tested under actual conditions. A failure of an export cable could have a dramatic impact on annual power production. The PEIS should present the expected failure modes and explain how the problem will be isolated and repaired along with the expected downtime.	quantifies the benefits from offshore wind projects, such as avoided emissions, and adverse impacts, such as air emissions during construction. Section 2.1.2.1.3, <i>Conceptual Decommissioning</i> , summarizes the requirements and typical process for decommissioning an offshore wind farm. As noted, all facilities would need to be removed within 2 years of the termination of the lease.
BOEM-2024-0001-0333-0001	The New Jersey Environmental Lobby believes that this PEIS is an acceptable framework for the projects in the lease areas. One suggestion that NJEL would offer is in reference to decommissioning. Since experience with windfarms shows that turbine foundations become reefs for fish populations we suggest that there is flexibility in requirements for removal of infrastructure so that decades hence alternatives are evaluated for their impact on wildlife in the surrounding environment and for stakeholders in the fishing sector.	Section 2.1.2.1.3, <i>Conceptual Decommissioning</i> , summarizes the regulatory requirements and typical process for decommissioning an offshore wind farm.
BOEM-2024-0001-0334-0012	DECOMMISSIONING: The public would be best served by BOEM insuring that decommissioning is assumed to be a full removal of the installed wind farm. And it should be mandatory that a project bond/escrow the full estimated cost of removal before building the project is approved.	Section 2.1.2.1.3, <i>Conceptual Decommissioning</i> , summarizes the regulatory requirements and typical process for decommissioning an offshore wind farm.
BOEM-2024-0001-0352-0004	We appreciate that the draft PEIS notes which AMMM measures have been previously applied as Constructions and Operations Plan (COP) terms and conditions. The final PEIS should be updated to reflect all COPs that have been approved up until that point and should list the relevant COPs. Also we understand that BOEM is not accepting COPs for projects in these lease areas while the PEIS is under development. Any adopted programmatic AMMM measures	Attachment D1 in Appendix D, <i>Planned Activities Scenario</i> , lists all ongoing and planned offshore wind activities on the Atlantic coast that are considered in the PEIS and the status of those projects, including whether a COP has been submitted or approved for a particular lease area. The appendix has been revised for the Final PEIS with updated status of projects.

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	should be described in the COPs as actions that will be taken. Additional measures that are not programmatic AMMM measures should be presented separately in the COPs and project specific NEPA documents.	It should be noted that BOEM is accepting COPs for projects in the NY Bight lease areas but does not expect to start NEPA analysis on those COPs until the PEIS is complete, if the lessee indicates it would like to rely on the PEIS. Additional mitigation measures can be proposed by the lessee or by BOEM at the COP-specific NEPA stage for each individual project.
BOEM-2024-0001-0354-0011	The currently proposed de-commissioning plan is deficient in its lack of lasting safeguards monitoring procedures bonding requirements or the required posting of monies/guarantees or relevant safeguards to provide environmental protections in perpetuity as to such massive industrial construction proposed to be placed in a prime hurricane/northeast storm zone. Based upon my understanding of conversations I had with BOEM officials at the Toms River New Jersey February 8 2024 informational meeting I learned that BOEM usually does not devote any comprehensive focus upon de-commissioning issues during the draft Environmental Impact Statement stage of review. I also learned BOEM has experience in reviewing procedures and the implementation of safeguards and monitoring techniques as to de-commissioning _issues associated with land based (emphasis added) wind turbine projects. With respect to. ocean based (emphasis added) proposals BOEM is essentially learning as it goes along as to such ocean projects with what might be labeled to be good faith trial and error process. BOEM officials might be quick to criticize any such characterization as being over simplistic. Nevertheless it is clear that there is no base line of studies in existence or of a comprehensive record of a decision making process with appropriate monitoring techniques and safeguards concerning any significant ocean wind turbine project. The basis of such an uncontroverted fact concerns the lack of history of any such projects being in existence as to the ocean for any significant time frame for study. Additionally European models of wind turbines not located in a prime North_ Atlantic hurricane and northeast storm zones do not provide a transferrable applicable body of knowledge and history. Further the actual shelf life of wind turbines with their non-biodegradable blades supports a conclusion that de-commissioning would be necessary as early as 10 to 20 years after construction even assuming that a particular wind turbine was	Section 2.1.2.1.3, <i>Conceptual Decommissioning</i> , summarizes the regulatory requirements and typical process for decommissioning an offshore wind farm. Further detail on decommissioning would be described in the COP and will be analyzed in each COP-specific NEPA analysis. As required by 30 CFR 285, a decommissioning application would be required prior to decommissioning activity taking place, which would include additional information on the decommissioning process for each NY Bight project. If a COP is approved, each applicant would have to submit a bond (or another form of financial assurance) prior to installation that would be held by the U.S. government to cover the cost of decommissioning the entire facility in the event that the applicant would not be able to decommission the facility.

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	not rendered irretrievable or destroyed by storm events. Simply put it is imperative to create an enforceable realistic determination of safeguards and monitoring techniques at the onset of the wind turbine project approval process.	
BOEM-2024-0001-0354-0012	Related to the above arguments I would hereby respectfully note that once a bureaucracy and its officials and employees have all become invested into a process and concept such a commitment becomes a self-fulfilling prophecy. As such it would be exceedingly difficult if not virtually impossible to support or to stop any approval process of such massive wind turbine projects if decommissioning issues are left to be addressed in the end stages of the approval process or even at a midway point. Related critical concerns as to decommissioning if indeed the process is even possible must be addressed now. Simple approvals before local planning boards invariably require an applicant/developer to post a bond as a safeguard to make sure a project is completed in a safe and final manner as per approvals. Such a concept should be applied to the industrialization of the ocean through wind turbine construction as contemplated. This assumes for the sake of argument BOEM proceeds down a path which many commentators have described as being purposely too fast and far too much as to the numbers of approvals sought.	Refer to response to comment BOEM-2024-0001-0354-0011.
BOEM-2024-0001-0354-0013	Consideration should also be given that potentially all of the wind turbine project applicants to date have been partially or totally owned by foreign corporate entities. Risks associated with bankruptcy abandonment of the project during construction or preconstruction stage and related financial issues have already occurred with respect to wind turbine projects already approved. At the very least if BOEM considers moving forward with the current NY Bight project requirement for a nonrefundable posting of funds or nonredeemable insurance coverage must be enacted even at the draft EIS stage of the process. It is fundamentally unfair for citizens environmental groups fishing interests or interested concerned citizens to have to consider filing their own enforcement actions related to de-commissioning. It is highly doubtful that foreign jurisdictions or even the International Court at the Hague would entertain any such filings or claims for relief in a timely and realistic	Refer to response to comment BOEM-2024-0001-0354-0011 regarding the requirements for decommissioning and bonds. NEPA does not require a cost-benefit analysis, and BOEM's NEPA analysis appropriately considers and quantifies the benefits from offshore wind projects, such as avoided emissions, as well as adverse impacts, such as air emissions during construction.

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	<p>manner. A final related issue concerns unaddressed needs for a realistic cost benefit analysis and a computation of ascertainable losses or damages all of which must be included as a safeguard in the de-commissioning process. Clearly similar insurance requirements or other monitoring techniques applied to United States Courts jurisdictions for land-based wind turbine projects in all likelihood serve as a very limited if not useless model to be applied to the de-commissioning international process at hand. The record is entirely deficient to date as realistic enforceable adequate (if indeed achieving "adequacy" with an appropriate level of damages is even possible) safeguards have not been addressed.</p>	
<p>BOEM-2024-0001-0357-0055</p>	<p>Decommissioning- Cumulative and Long-Term The removal of the wind turbines at the end of their useful life is by no means assured. Current decommissioning rules allow the federal agency the Bureau of Ocean Energy Management (BOEM) to leave them in place or have then toppled them in place. Collection of funding during turbine operation can be deferred based on a company's financial strength. The technical feasibility of cutting and removing these huge turbines and a section of the 50-foot diameter monopile foundation with a 6 inch thick steel shell has not been presented. Beyond that step the logistics involved are staggering. The availability of the limited number of wind turbine installation vessels used to install turbines to be detoured here and remain on site for long periods while foundations and towers are cut and to remove them is highly doubtful. So is the availability of onshore facilities to cut and disassemble them into manageable sections. The mass of steel to be cut in say 15 turbine towers and foundation sections is comparable to that of a Navy aircraft carrier which can take over a year to disassemble. Cutting and disposal sites for the blades have not been identified. Finally unlike a turbine operational setting where a cease operations order would cause a financial penalty no such incentive exists here for the company to do the work since the turbines have already been shut down. Also the BOEM does not have a stellar track record with regard to other decommissioning efforts. A General Accountability Office report found that it collected only eight percent of the revenues needed to do the necessary decommissioning of oil and gas facilities in the Gulf of Mexico. It also found that ninety-</p>	<p>Refer to response to comment BOEM-2024-0001-0354-0011.</p>

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	seven percent of the seabed pipelines have been left in place. This begins to look like an enormous undertaking that the country is not prepared for. Its more likely that the turbines will not be removed but rather left in place with the blades removed or toppled in place and left on the seabed. This raises the spectre of prolonged and perhaps permanent navigation hazards visual degradation of the seascape and loss of hundreds of thousands of acres of productive marine territory that should be considered now in this program EIS and measures to avoid that presented. Alternatively the states and/or the federal government may have to arrange for and pay for the removals and processing at substantial detriment to other services they provide.	
BOEM-2024-0001-0368-0002	The most shocking fact that I learned at the public meeting was that of the turbines themselves. I've read that in some countries diesel engines are added to the turbines to keep them from icing in extreme cold. I don't know that this is a fact so I made a point to inquire about the offshore turbines that may be installed off our coast. Amazingly I learned that BOEM does NOT CONCERN itself of the actual turbines! To me this is absolutely insane for an environmental impact study to not consider the actual objects involved in the wind projects. What is inside these mammoth machines? Obviously as they are mechanical they will be lubricated. How much lubricant? One gallon? A hundred gallons? How will spills be contained when they happen? Is there other environmental impacts? Vibrations in the water or the sea floor? Bird strikes? Fuel and fuel spills? Your ignorance of the design and construction of the wind turbines to be installed is simply pathetic and appalling. The public needs to be informed of this immediately. It is only reasonable to assume that there will be a thorough examination of these machines and an assessment of their impact to the ocean and marine life not to mention the effects of debris and chemicals that may ultimately wash up on shore and come into contact with people either externally or internally.	The PEIS, as well as other offshore wind NEPA documents being prepared by BOEM, analyzes the anticipated effects of the construction, operation, maintenance, and decommissioning of offshore wind projects, including impacts from the turbines themselves. For example, Section 3.4.2, <i>Water Quality</i> , analyzes the effects from accidental releases of oils, lubricants, and other fluids from the turbines, and Appendix D, <i>Planned Activities Scenario</i> , estimates how much of these fluids are installed in WTGs in the geographic analysis area (refer to Table D2-3). Impacts on biological resources from sound and vibration of an operating WTG are analyzed in Sections 3.5.5, 3.5.6, and 3.5.7. Impacts on birds from operating WTGs are analyzed in Section 3.5.3.
BOEM-2024-0001-0383-0002	PDE: The Project Design Element ranges in the Draft PEIS are so ridiculously broad that they prohibit any meaningful assessment or analysis. How can BOEM analyze a range of 50-280 turbines? It cannot. The impact of 50 turbines is certainly not the same as the	As described in Section 2.1.2.1, the RPDE in the PEIS was developed with input from the six NY Bight lessees, American Clean Power, National Renewable Energy Laboratory, and the States of New York and New Jersey, and it was prepared before

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	<p>impact of over 5.5 times that many turbines. One OSS is not the same as 5 OSS; depending on the type used the scour protection can be 0.51 acres for one monopile OSS to over 40 acres of scour protection for 5 jacket foundation OSS. This is not comparable enough to include in a single PDE. An interarray cable length of 33 miles is not remotely close to an interarray cable length of 550 miles. A range of 1-9 export cables with an estimated cable export length of 30 or 929 miles is not the same- 929 miles of cables is over 30 times more cable than 30 miles of cable! BOEM cannot have a PDE that encompasses impacts from one element that vary by 30 times in intensity. These huge ranges presented by the PDE deliberately leave all analysis or comparisons meaningless.</p> <p>What is truly remarkable is that these ranges apply to only one "representative" project! [Footnote 5: PEIS at <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/_NY%20Bight_DraftPEIS_Vol1_Chapters1-4_January2024_508.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/_NY%20Bight_DraftPEIS_Vol1_Chapters1-4_January2024_508.pdf</a> p. ES-6 7.] When multiplied by 6 the range of impacts becomes even more ridiculously broad and meaningless. Due to such meaningless comparisons owing from the huge ranges of single project size included in the PEIS never mind the extrapolation of these ranges to multiple projects BOEM should either refine the PEIS to include a much narrower PDE or throw out the entire PEIS altogether.</p> <p>However, BOEM subsequently states "For the analysis of six NY Bight projects BOEM anticipates development of 1103 wind turbine generators (WTGs) 22 offshore substations (OSSs) 44 offshore export cables totaling 1772 miles (2852 kilometers) and 1582 miles (2546 kilometers) of interarray cables across the six NY Bight lease areas." [Footnote 6: Ibid p. ES-7.] If BOEM's PDE for one project estimates up to 929 miles of export cables for a single project it is unclear how it can expect to have 44 offshore export cables totaling 1772 miles for six projects unless BOEM already has COPs in hand that it has not made publicly available which makes the PEIS itself a useless document. If this is the case BOEM should cease work on the PEIS and make the COPs public working from genuine documents in a transparent manner rather than waste the public's time with obsolete initiatives. BOEM cannot require public comment on</p>	<p>lessees submitted COPs for BOEM review. The RPDE includes a range of representative parameters of offshore wind development in the NY Bight. The RPDE contains a minimum and maximum value for most parameters or multiple options that could be selected to provide bounds for the analysis. Because the RPDE covers six lease areas of differing sizes and was developed before lessees submitted their COPs, a wide range of potential parameters was used to ensure the maximum potential impacts from development in the NY Bight could be assessed. Regarding the parameters for six NY Bight lease areas, as noted in Section 2.1.2.2, the values for these parameters were provided by the NY Bight lessees or were calculated by BOEM based upon information provided by the lessees and represent the maximum number/length of WTGs, OSSs, and cables that would be developed for the six NY Bight projects. The six project parameter values were not calculated by multiplying the one project RPDE by six because this method would have significantly overestimated number/size of project features, as the one project RPDE is based on the maximum value for all six of the NY Bight lease areas (i.e., largest project, largest lease area).</p>

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	something it knows is inaccurate or non-representative of projects under consideration.	
BOEM-2024-0001-0383-0013	<p>High resolution geophysical surveys: The PEIS discusses under its description of one representative project that "Prior to installation pre-construction surveys such as geophysical and geotechnical (G&amp;G) or high-resolution geophysical (HRG) surveys may be needed to refine the design." [Footnote 33: See PEIS at <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/_NY%20Bight_DraftPEIS_Vol1_Chapters1-4_January2024_508.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/_NY%20Bight_DraftPEIS_Vol1_Chapters1-4_January2024_508.pdf</a> p. 2-9.] However these types surveys are already ongoing approved by the EA for the New York Bight leases. [Footnote 34: See Commercial and Research Wind Lease and Grant Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf of the New York Bight Draft Environmental Assessment (boem.gov) and Commercial and Research Wind Lease and Grant Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf of the New York Bight (boem.gov)] BOEM issued a Finding of no Significant Impact for this EA and the related approved survey activities. [Footnote 35: See BOEM Completes Environmental Review of Offshore Wind Leasing in the New York Bight   Bureau of Ocean Energy Management and Commercial and Research Wind Lease and Grant Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf of the New York Bight (boem.gov) .]But it does not appear that BOEM is applying the federal standards to these surveys equally across related industries.</p>	<p>Thank you for your comment. Renewable energy is bound by regulations in 30 CFR 585, which are different than the regulations for oil and gas. Regulations for renewable energy require SAPs to guide survey and site assessment activities. BOEM has issued guidelines for these activities: <a href="https://www.boem.gov/sites/default/files/renewable-energy-program/BOEM-Renewable-SAP-Guidelines.pdf">https://www.boem.gov/sites/default/files/renewable-energy-program/BOEM-Renewable-SAP-Guidelines.pdf</a>. BOEM's Final EA for the NY Bight leases, <i>Commercial and Research Wind Lease and Grant Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf of the New York Bight</i>, was published in December 2021 and evaluated geotechnical studies that were used to support each lessee's SAP. Site assessment activities are necessary to determine the suitability of leases for commercial offshore wind, and that information is also used to support BOEM's COP-specific NEPA review. Additional geotechnical studies may be required for projects leading up to construction to obtain additional site-specific information to support final design and construction activities, which are analyzed in the PEIS and will be further analyzed in COP-specific NEPA documents.</p>
BOEM-2024-0001-0383-0014	<p>When high resolution seismic survey activities to identify shallow hazards archaeological resources or site evaluations and general shallow exploration purposes such as those being currently conducted by offshore wind developers in the New York Bight and which the PEIS proposes to further analyze and sanction are necessary for the oil and gas industry in the Gulf of Mexico for evaluating pipeline placement routes or site suitability for drilling rig placement BOEM requires that the developer submit an actual plan to BOEM for the activity. BOEM identifies these shallow hazard surveys for site evaluation/archeological resource identification/pipeline placement as "ancillary activities" that require plans for these activities to be submitted to BOEM per BOEM's NTL</p>	<p>Refer to response to comment BOEM-2024-0001-0383-0013.</p>

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	No. 2009-G34:"Frequently Asked Questions for Ancillary Activities 1. Which type of ancillary activities will have their notifications converted into plans?...In addition to activities involving explosives and/or airguns the following types of activities also involve similar equipment that can produce noise at levels that can impact endangered threatened and/or protected species and will require their notifications to be converted into plans:... High-resolution seismic surveys use acoustic sources to penetrate the sea floor from the sediment near-surface to several kilometers or more below the surface. These surveys are commonly used for identifying shallow hazards benthic biological communities archaeological resources site evaluation for drilling rig or pipeline emplacement sand resources and general shallow exploration purposes." [Footnote 36: See Microsoft Word - Ancillary-Activities-FAQ_TJB1__2_.rtf (boem.gov) and Microsoft Word - NTL2006-G12.doc (boem.gov). Emphasis in original.]	
BOEM-2024-0001-0383-0015	To reiterate these are shallow hazard seismic surveys designed for assessing site suitability for things like pipeline placement- similar to offshore wind export cable placement- and identifying archeological resources that could be impacted -the same as offshore wind developers are conducting- not the deep penetration seismic surveys used for exploration of oil reserves which are much stronger in power and deeper in scope. Yet even for the shallow hazard surveys in the Gulf of Mexico BOEM requires a plan as well as reports from the survey including information such as:"6. Vessel Information:a. Vessel types.b. Duration of the Activity (number of survey days).c. Survey location and configuration (including line kilometers).d. Number of vessels involved.e. Location of support bases transit routes and ports of call as well as vessel log information on number of port of call trips.f. Separation distance from other surveys.	Refer to response to comment BOEM-2024-0001-0383-0013.
BOEM-2024-0001-0383-0016	To our knowledge BOEM does not require the same information or plans to be submitted to BOEM regarding offshore wind shallow hazard surveys even those using the same equipment. Please explain. This is critical for several reasons. For example the requirements above to notify BOEM of all survey activity location data and separation distance from other surveys is important when assessing impacts to marine mammals. In the New York Bight lease	Refer to response to comment BOEM-2024-0001-0383-0013.

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	<p>area and surrounding area high resolution seismic shallow hazard surveys are ongoing simultaneously by many developers with surveys overlapping in time and space. We have attached various developer notices to mariners as part of this comment to illustrate this point as well as a USCG District 1 Local Notice to Mariners which also shows all the New York Bight overlapping surveys in just one week's time. By not requiring the same survey plans and associated information that BOEM requires of offshore oil and gas developers in the Gulf of Mexico data on exactly where surveys were when distance from other survey vessels and other information that would be pertinent to the marine mammal investigations discussed below is unavailable. The same standards should be applied to all offshore energy development under BOEM's purview; there should not be differing standards for the same offshore energy activities. To illustrate this point we point to the Notice to Mariners issued by an offshore wind developer holding a lease in the New York Bight which states "The M/V SANCO SWIFT continues to collect bathymetric and ultra-high resolution seismic data within the lease area using a towed array of acoustic sources and receivers. Data collection will occur through mid-June 2024." [Footnote 38: See COSW-Fisheries-Notice_2024-02_final.pdf (communityoffshorewind.com) and attached.] Clearly the offshore wind survey is using ultra high-resolution seismic equipment to collect this data. This is the same equipment that if used in oil and gas shallow hazard surveys is required to comply with the BOEM requirements for submission of a plan detailed survey data etc. discussed above. This particular offshore wind developer's high resolution seismic survey is using the Geo-Source 200-400 marine multi-tip sparker system as a seismic source according to its 2023 NOAA Incidental Take Authorization application. [Footnote 39: See <a href="https://www.fisheries.noaa.gov/s3/2023-04/COSWHRG-2023IHA-App-OPR1.pdf">https://www.fisheries.noaa.gov/s3/2023-04/COSWHRG-2023IHA-App-OPR1.pdf</a> p. 12.] The 2023 Federal Register Notice authorizing the developer's Incidental Harassment Authorization notes "The only acoustic sources planned for use during COSW's HRG survey activities with the potential to cause incidental take of marine mammals are the sparkers There are two sparker systems planned for use: Applied Acoustics Dura-Spark UHD 400+400 Seismic Sound</p>	

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	Source (400 tip/3001000 joules (J)) and the Geo- Source 200400 Marine Multi-Tip Sparker System (400 tip/3001000 J) [Footnote 40: See <a href="https://www.federalregister.gov/documents/2023/06/30/2023-13990/takes-of-marine-mammals- incidental-to-specified-activities-taking-marine-mammals-incidental-to.">https://www.federalregister.gov/documents/2023/06/30/2023-13990/takes-of-marine-mammals- incidental-to-specified-activities-taking-marine-mammals-incidental-to.</a> ]	
BOEM-2024-0001-0383-0017	<p>However a simultaneous 2023 Federal Register notice authorizing an offshore oil and gas developer's Incidental Take Authorization in the Gulf of Mexico states that the sparkers used in this survey is the same brand and model as that used in the offshore wind survey: "Depending on the survey objective source vessels will tow. sparker system ( e.g. Geo-Source 200400). During survey effort using non-airgun sources only the sparker source has the potential to cause incidental take of marine mammals." [Footnote 41: See <a href="https://www.federalregister.gov/documents/2023/08/24/2023-18220/taking-and-importing-marine- mammals-taking-marine-mammals-incidental-to-geophysical-surveys-related.">https://www.federalregister.gov/documents/2023/08/24/2023-18220/taking-and-importing-marine- mammals-taking-marine-mammals-incidental-to-geophysical-surveys-related.</a>] Another similarity between the two surveys is that both the oil and gas survey and the offshore wind survey are both authorized by NOAA only for Level B Harassments pursuant to the Marine Mammal Protection Act. [Footnote 42: For the oil and gas authorization documents see <a href="https://www.federalregister.gov/documents/2023/08/24/2023-18220/taking-and-importing-marine-mammals- taking-marine-mammals-incidental-to-geophysical-surveys-related">https://www.federalregister.gov/documents/2023/08/24/2023-18220/taking-and-importing-marine-mammals- taking-marine-mammals-incidental-to-geophysical-surveys-related</a> and <a href="https://www.fisheries.noaa.gov/s3/2023- 08/ExxonMobil-GOMLOA-LOA-OPR1.pdf">https://www.fisheries.noaa.gov/s3/2023- 08/ExxonMobil-GOMLOA-LOA-OPR1.pdf</a>. For the offshore wind documents see <a href="https://www.fisheries.noaa.gov/s3/2023-06/COSW-2023IHA-FIHA-508-OPR1.pdf">https://www.fisheries.noaa.gov/s3/2023-06/COSW-2023IHA-FIHA-508-OPR1.pdf</a>.] However there are major differences between both the numbers and types of mammals impacted. The Gulf of Mexico survey authorizes 6584 Level B Harassments of marine mammals; none of them are endangered species. The New York Bight offshore wind survey on the other hand is authorized for 14193 Level B Harassments of marine mammals including several endangered species. The offshore wind survey is authorized for 24 Level B Harassments of critically endangered North Atlantic Right Whales (which is "one of the world's most endangered large whale species" according to NOAA with only 360 individuals remaining) [Footnote 43: See <a href="https://www.fisheries.noaa.gov/species/north-atlantic-right-">https://www.fisheries.noaa.gov/species/north-atlantic-right-</a></p>	Refer to response to comment BOEM-2024-0001-0383-0013.

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	whale.] 76 Level B Harassments of endangered fin whales and 24 Level B Harassments of endangered sei whales and 10 Level B Harassments of endangered sperm whales. [Footnote 44: See <a href="https://www.fisheries.noaa.gov/s3/2023-06/COSW-2023IHA-FIHA-508-OPR1.pdf">https://www.fisheries.noaa.gov/s3/2023-06/COSW-2023IHA-FIHA-508-OPR1.pdf</a> . See <a href="https://www.fisheries.noaa.gov/species/sperm-whale">https://www.fisheries.noaa.gov/species/sperm-whale</a> ]	
BOEM-2024-0001-0383-0018	<p>Therefore both the Atlantic offshore wind shallow hazard seismic survey and the Gulf of Mexico offshore oil and gas shallow hazard seismic survey are deploying Geo-Source 200-400 sparkers as a seismic source. Both authorizations from NOAA note that the sparkers have the potential to cause incidental take of marine mammals. Both surveys are only authorized by NOAA for Level B Harassments of marine mammals pursuant to the Marine Mammal Protection Act. [Footnote 45: The offshore wind survey off NJ and NY plans to use Geo Source 200-400 sparkers an acoustic source. (<a href="https://www.fisheries.noaa.gov/s3/2023-04/COSWHRG-2023IHA-App-OPR1.pdf">https://www.fisheries.noaa.gov/s3/2023-04/COSWHRG-2023IHA-App-OPR1.pdf</a> p. 12). Using this equipment as the acoustic source it is only authorized for MMPA Level B Harassments (<a href="https://www.fisheries.noaa.gov/s3/2023-06/COSW-2023IHA-FIHA-508-OPR1.pdf">https://www.fisheries.noaa.gov/s3/2023-06/COSW-2023IHA-FIHA-508-OPR1.pdf</a> p. 1). The corresponding oil and gas survey in the Gulf of Mexico also uses the Geo-Source 200-400 sparker system as an acoustic source capable of incidental takes of marine mammals ( <a href="https://www.federalregister.gov/documents/2023/08/24/2023-18220/taking-and-importing-marine-mammals-taking-marine-mammals-incidental-to-geophysical-surveys-related">https://www.federalregister.gov/documents/2023/08/24/2023-18220/taking-and-importing-marine-mammals-taking-marine-mammals-incidental-to-geophysical-surveys-related</a>). That survey is also only authorized for MMPA Level B Harassments. ( <a href="https://www.fisheries.noaa.gov/s3/2023-08/ExxonMobil-GOMLOA-LOA-OPR1.pdf">https://www.fisheries.noaa.gov/s3/2023-08/ExxonMobil-GOMLOA-LOA-OPR1.pdf</a>).] This is the same equipment doing the same job with the same potential impacts to marine mammals authorized for the same MMPA Level B Harassment incidental takes. Yet the offshore wind survey is not required to comply with the same BOEM regulations as the offshore oil and gas survey. BOEM's requirements for a plan and associated information for high resolution seismic surveys by the oil and gas industry in the Gulf of Mexico are due to the surveys' potential to "impact endangered threatened and/or protected species and will require their notifications to be converted into plans." [Footnote 46: See Microsoft Word - Ancillary-Activities-</p>	Refer to response to comment BOEM-2024-0001-0383-0013.

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	FAQ_TJB1_2.rtf (boem.gov). In conjunction with Microsoft Word - NTL2006-G12.doc (boem.gov).] Yet the offshore wind surveys are expected to impact endangered species while the oil and gas surveys are not. If the same equipment is being used for the same purposes with the same MMPA Level B Harassments via Incidental Take Authorizations requested of NOAA is being used by the offshore wind industry in the Atlantic why doesn't BOEM require the same plan and associated information for the same reasons in the Atlantic?	
BOEM-2024-0001-0383-0019	<p>And in the Atlantic even more so as the number of marine mammal species impacted is greater than in the Gulf of Mexico and those species in the Atlantic include both endangered and critically endangered species while the Gulf of Mexico surveys do not. The impacts are especially important considering the number of large baleen whale species that migrate though and live year-round in many of the offshore wind leases and cable corridor areas where these high-resolution seismic surveys are ongoing. This includes the critically endangered North Atlantic Right Whale [Footnote 47: See <a href="https://www.fisheries.noaa.gov/species/north-atlantic-right-whale">https://www.fisheries.noaa.gov/species/north-atlantic-right-whale</a>.] the endangered fin whale [Footnote 48: See <a href="https://www.fisheries.noaa.gov/species/fin-whale">https://www.fisheries.noaa.gov/species/fin-whale</a>.] the endangered sei whale [Footnote 49: See <a href="https://www.fisheries.noaa.gov/species/sei-whale">https://www.fisheries.noaa.gov/species/sei-whale</a>.] the Atlantic humpback whale which began experiencing an unusual mortality event when offshore wind surveys began off the Atlantic coast in 2016-2024 [Footnote 50: See 20162024 Humpback Whale Unusual Mortality Event Along the Atlantic Coast   NOAA Fisheries and Incidental Take Authorizations for Other Energy Activities (Renewable/LNG)   NOAA Fisheries. Smaller surveys/projects of Cape Wind and Block Island Wind Farm began in 2014-2015 but DONG Energy began its larger scale geophysical and geotechnical surveys offshore Massachusetts beginning in 2016; with other developers Ocean Wind and Deepwater Wind following suit beginning in 2017; with developers Statoil and Garden State Offshore Energy and Deepwater Wind New England and Bay State Wind and Dominion Energy Virginia following suit beginning in 2018; with developers Equinor and Avangrid Renewables and Orsted and</p>	Refer to response to comment BOEM-2024-0001-0383-0013.

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	<p>Skipjack Offshore Energy following suit in 2019; with developers Vineyard Wind and Atlantic Shores Offshore Wind and Dominion Energy Virginia and Mayflower Wind Energy and Equinor Wind and Orsted Wind Power North America following suit in 2020; with Dominion Energy Virginia and Kitty Hawk Wind and Skipjack Offshore Energy and Atlantic Shores Offshore Wind and Ocean Wind and Garden State Offshore Energy and Vineyard Wind Mayflower Wind Energy and Vineyard Wind 1 following suit in 2021; with Orsted Wind Power North America and Atlantic Shores Offshore Wind and Ocean Wind II and Orsted Wind Power North America and Ocean Wind and Dominion Energy and NextEra Energy Transmission Mid Atlantic Holdings and Vineyard Wind 1 and Kitty Hawk Wind and Atlantic Shores Offshore Wind Bight and Park City Wind and Attentive Energy and Orsted Wind Power North America and South Fork Wind following suit in 2022; with Bluepoint Wind and Vineyard Wind and Orsted Wind Power North America and SouthCoast Wind Energy and TerraSond Limited and Atlantic Shores Offshore Wind and Attentive Energy and Community Offshore Wind and Invenergy Wind Offshore and Ocean Wind II and Vineyard Northeast and Atlantic Shores Offshore Wind Bight and Ocean Wind and Orsted North America and Revolution Wind and Park City Wind and Dominion Energy Virginia and Empire Offshore Wind following suit in 2023-24.] and the minke whale which has experienced an unusual mortality event from 2017-2014 during this same timeframe of offshore wind surveys. [Footnote 51: See 20172024 Minke Whale Unusual Mortality Event along the Atlantic Coast   NOAA Fisheries.]</p>	
BOEM-2024-0001-0383-0020	<p>Furthermore the NOAA Incidental Take Authorizations for offshore wind shallow hazard surveys compared to offshore oil and gas shallow hazard surveys also contain different requirements. In addition to the BOEM plan requirements described above NOAA authorizations for the Gulf of Mexico survey require survey shutdowns in the event of a live stranding or near shore atypical milling of marine mammals within 50 km of the survey operations and potential investigations if "NMFS determines that the circumstances of any marine mammal stranding found in the vicinity of the activity suggest investigation of the association with survey activities is warranted". [Footnote 52: See</p>	Refer to response to comment BOEM-2024-0001-0383-0013.

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	<p><a href="https://www.fisheries.noaa.gov/s3/2023-08/ExxonMobil-GOMLOA-LOA-OPR1.pdf">https://www.fisheries.noaa.gov/s3/2023-08/ExxonMobil-GOMLOA-LOA-OPR1.pdf</a> p. 12 of 14.] No such provisions are required for the aforementioned offshore wind survey activity despite the fact that the equipment and MMPA Harassment levels requested are the same. [Footnote 53: See Incidental Take Authorization: Community Offshore Wind LLC Marine Site Characterization Surveys off New Jersey and New York   NOAA Fisheries and Federal Register :: Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Site Characterization Surveys in the New York Bight.] NOAA's own documents state that offshore wind surveys are expected to cause temporary deafness of marine mammals which can lead to "serious" effects that repeated exposure to temporary deafness can lead to permanent deafness but that there is no data on noise induced hearing loss for baleen whales- exactly the species that are both endangered and experiencing unusual mortality events on the Atlantic Coast in the very areas being surveyed for offshore wind development. [Footnote 54: See Federal Register notice for Atlantic Shores Incidental Take Authorization at <a href="https://www.federalregister.gov/documents/2020/04/16/2020-07969/takes-of-marine-mammals-incidental-to-specified-activities-taking-marine-mammals-incidental-to">https://www.federalregister.gov/documents/2020/04/16/2020-07969/takes-of-marine-mammals-incidental-to-specified-activities-taking-marine-mammals-incidental-to</a> and Federal Register notice for the Sunrise Wind Incidental Take Authorization at <a href="https://www.federalregister.gov/documents/2023/02/10/2023-02497/takes-of-marine-mammals-incidental-to-specified-activities-taking-marine-mammals-incidental-to-the">https://www.federalregister.gov/documents/2023/02/10/2023-02497/takes-of-marine-mammals-incidental-to-specified-activities-taking-marine-mammals-incidental-to-the</a>.] Therefore we request that BOEM ask NOAA a cooperating agency regarding offshore wind actions to explain the discrepancy between these two approaches to offshore energy development with attention to the exact same equipment being used for each.</p>	
BOEM-2024-0001-0383-0021	<p>We also request that BOEM explain its rationale for having one approach for shallow hazard surveys in the Gulf of Mexico and another for shallow hazard surveys in the NY Bight Atlantic region of this PEIS. Considering the scores of large baleen whale deaths on the US East Coast over the past 18 months which led to calls by 30 coastal NJ mayors as well as three US Congressmen for a pause on further offshore wind surveying until an investigation of any link</p>	<p>Refer to response to comment BOEM-2024-0001-0383-0013.</p>

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	<p>between the surveys and whale deaths could be completed [Footnote 55: See CONGRESSMEN HARRIS AND VAN DREW RENEW CALLS FOR WINDMILL MORATORIUM AMIDST WHALE DEATHS   Congressman Andy Harris (house.gov) Smith renews call to pause offshore wind projects after ninth dead whale in two months washes ashore in Manasquan   U.S. Representative (house.gov) and see attached press release.] it is unclear how BOEM and NOAA can require via regulation both a pause and an investigation of mammal strandings as well as detailed survey plans for assessment of impacts in this situation when coinciding with shallow hazard surveys in the Gulf of Mexico but not for shallow hazard surveys in the Atlantic which are using the same equipment. Please explain.</p>	
BOEM-2024-0001-0423-0031	<p>Representative Project Design Envelope</p> <p>The seabed footprint in the representative PDE is unrealistically small. The RPDE WTG seabed footprint with scour protection is 0.24 acres per monopole foundations. Ocean Winds suggests BOEM use 0.95 acres per monopole foundation. This footprint would be in line with the footprints in Empire Wind's and Coastal Virginia Offshore Wind's PDE (0.91 acres and 0.95 acres respectively). The RPDE footprint for offshore substations is 8.05 acres. Ocean Winds suggests up to 9 acres which would be less than that proposed in SouthCoast Wind's COP. Lastly the RPDE export cable size is 16 inches in diameter. Ocean Winds suggests a cable diameter of 19 inches be used.</p> <p>The Draft PEIS provides examples of points of interconnection (POIs) in New York and New Jersey (Volume 1 page 2-6) but does not include the possibility of a POI at the Deans substation in New Jersey which is likely to be a requirement of New Jersey's 2024 solicitation. While every possible POI cannot and should not be included in the PEIS this is one that could be used by multiple lessees and is appropriate to add.</p>	<p>As described in Section 2.1.2.1, the RPDE in the PEIS was developed with input from the six NY Bight lessees, American Clean Power, National Renewable Energy Laboratory, and the States of New York and New Jersey, and it was prepared before lessees submitted COPs for BOEM review. The RPDE includes a range of representative parameters of offshore wind development in the NY Bight. The RPDE is not meant to be prescriptive and includes a range of parameters that is representative of development that could occur associated with any of the six NY Bight lease areas. Based on this, BOEM believes the RPDE is appropriate and sufficiently broad for purposes of the PEIS. Regarding the POIs, PEIS Section 2.1.2.1.1 identifies examples of potential POIs in both New York and New Jersey. Because there are several possible locations for POIs and because the exact cable routing and other onshore infrastructure are not known, the analysis of the offshore export cables and onshore infrastructure in the PEIS is regional in nature; site-specific analysis is deferred to the COP-specific NEPA analysis.</p>
BOEM-2024-0001-0425-0004	<p>The currently proposed de-commissioning plan is deficient in its lack of lasting safeguards monitoring procedures bonding requirements or the required posting of monies/guarantees or relevant safeguards to provide environmental protections in perpetuity as to such massive industrial construction proposed to be placed in a prime hurricane/northeast storm zone.</p>	<p>Refer to responses to comments BOEM-2024-0001-0354-0011 and BOEM-2024-0001-0354-0013.</p>

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	<p>Based upon my understanding of conversations I had with BOEM officials at the Toms River New Jersey February 8 2024 informational meeting I learned that BOEM usually does not devote any comprehensive focus upon de-commissioning issues during the draft Environmental Impact Statement stage of review. I also learned BOEM has experience in reviewing procedures and the implementation of safeguards and monitoring techniques as to de-commissioning issues associated with [underlined: land based] (emphasis added) wind turbine projects. With respect to [underlined: ocean based] (emphasis added) proposals BOEM is essentially learning as it goes along as to such ocean projects with what might be labeled to be good faith trial and error process. BOEM officials might be quick to criticize any such characterization as being over simplistic. Nevertheless it is clear that there is no base line of studies in existence or of a comprehensive record of a decision making process with appropriate monitoring techniques and safeguards concerning any significant ocean wind turbine project. The basis of such an uncontroverted fact concerns the lack of history of any such projects being in existence as to the ocean for any significant time frame for study. Additionally European models of wind turbines not located in a prime North Atlantic hurricane and northeast storm zones do not provide a transferrable applicable body of knowledge and history.</p> <p>Further the actual shelf life of wind turbines with their non-biodegradable blades supports a conclusion that de-commissioning would be necessary as early as 10 to 20 years after construction even assuming that a particular wind turbine was not rendered irretrievable or destroyed by storm events. Simply put it is imperative to create an enforceable realistic determination of safeguards and monitoring techniques at the onset of the wind turbine project approval process. Related to the above arguments I would hereby respectfully note that once a bureaucracy and its officials and employees have all become invested into a process and concept such a commitment becomes a self-fulfilling prophecy. As such it would be exceedingly difficult if not virtually impossible to support or to stop any approval process of such massive wind turbine projects if de-commissioning issues are left to be addressed</p>	

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	<p>in the end stages of the approval process or even at a midway point. Related critical concerns as to de-commissioning if indeed the process is even possible must be addressed now. Simple approvals before local planning boards invariably require an applicant/developer to post a bond as a safeguard to make sure a project is completed in a safe and final manner as per approvals. Such a concept should be applied to the industrialization of the ocean through wind turbine construction as contemplated. This assumes for the sake of argument BOEM proceeds down a path which many commentators have described as being purposely too fast and far too much as to the numbers of approvals sought. Consideration should also be given that potentially all of the wind turbine project applicants to date have been partially or totally owned by foreign corporate entities. Risks associated with bankruptcy abandonment of the project during construction or preconstruction stage and related financial issues have already occurred with respect to wind turbine projects already approved. At the very least if BOEM considers moving forward with the current NY Bight project requirement for a nonrefundable posting of funds or nonredeemable insurance coverage must be enacted even at the draft EIS stage of the process. It is fundamentally unfair for citizens environmental groups fishing interests or interested concerned citizens to have to consider filing their own enforcement actions related to de-commissioning. It is highly doubtful that foreign jurisdictions or even the International Court at the Hague would entertain any such filings or claims for relief in a timely and realistic manner. A final related issue concerns unaddressed needs for a realistic cost benefit analysis and a computation of ascertainable losses or damages all of which must be included as a safeguard in the de-commissioning process. Clearly similar insurance requirements or other monitoring techniques applied to United States Courts jurisdictions for land based wind turbine projects in all likelihood serve as a very limited if not useless model to be applied to the de-commissioning international process at hand. The record is entirely deficient to date as realistic enforceable adequate (if indeed achieving "adequacy" with an appropriate level of damages is even possible) safeguards have not been addressed.</p>	

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BOEM-2024-0001-0438-0001	<p>PSEG supports the goals of the PEIS to increase efficiencies in future offshore wind generation project-specific NEPA analysis and support timely decisions on project-specific construction and operation plans (COPs). PSEG appreciates the comprehensive nature of the New York Bight Draft PEIS and the robust involvement from cooperating agencies stakeholders and the public in its development. As discussed in these comments however the PEIS as currently drafted does not appear to fully consider the States of New Jersey and New York's public policies and offshore wind goals. These include for example the ongoing State Agreement Approach process (SAA 2.0) led by PJM Interconnection LLC (PJM) and the New Jersey Board of Public Utilities (BPU) and the ongoing Public Policy Transmission Need (New York City PPTN) process led by the New York Public Service Commission (NYPSC) and the New York Independent System Operator (NYISO) each of which contemplate transmission alternatives including shared corridors and offshore Points of Interconnection (POIs) and the potential for different ownership of transmission and generation facilities. [Footnote 2: The New England states and ISO have also contemplated offshore transmission solution that contemplates networked or "meshed" multi-terminal high voltage direct current (MTDC) system as that technology becomes available. A solicitation for that type of solution will likely be issued within the next two years. See New England Energy Vision New England States Transmission Initiative <a href="https://newenglandenergyvision.com/new-england-states-transmission-initiative/">https://newenglandenergyvision.com/new-england-states-transmission-initiative/</a>; Letter from NYISO PJM and ISO NE to Dep't of Energy (June 27 2023) <a href="https://www.iso-ne.com/static-assets/documents/2023/06/northeast_collaborative_doe_june_letters_combined.pdf">https://www.iso-ne.com/static-assets/documents/2023/06/northeast_collaborative_doe_june_letters_combined.pdf</a>.] As outlined in our comments below PSEG therefore strongly encourages BOEM to closely coordinate with the states as they finalize these transmission solicitations and as BOEM develops the final PEIS and any programmatic avoidance minimization mitigation and monitoring (AMMM) measures that BOEM may require as conditions of approval for activities proposed by lessees in COPs submitted for the New York Bight. Aligning the analyses undertaken in the PEIS with State transmission solicitations and planning for regional transmissional solutions by BOEM and the</p>	<p>Section 2.1.2.1.1 of the Final PEIS states that in New York and New Jersey, efforts are underway to develop transmission infrastructure that would allow multiple offshore wind projects to interconnect at an offshore (New York City Public Policy Transmission Need [NYC PPTN]) and nearshore (New Jersey Board of Public Utilities Prebuild Infrastructure) POI. Appendix B, <i>Supplemental Information and Additional Figures and Tables</i>, provides additional detail regarding the transmission infrastructure development efforts in New York and New Jersey. Appendix D, <i>Planned Activities Scenario</i>, has also been updated to describe the States of New Jersey and New York's public policies and offshore wind goals.</p>

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	Department of Energy in their Offshore Wind Transmission Action Plan for the U.S. Atlantic Region [Footnote 2: See BOEM Dep't of Energy Offshore Wind Transmission Development in the U.S. Atlantic Region <a href="https://www.energy.gov/sites/default/files/2023-10/Atlantic-Offshore-Wind-Transmission-Plan-Report_October-2023.pdf">https://www.energy.gov/sites/default/files/2023-10/Atlantic-Offshore-Wind-Transmission-Plan-Report_October-2023.pdf</a> . This Action Plan was informed by the forthcoming Atlantic Offshore Wind Transmission Study from the National Renewable Energy Laboratory (NREL). See NREL Atlantic Offshore Wind Transmission Study <a href="https://www.nrel.gov/wind/atlantic-offshore-wind-transmission-study.html">https://www.nrel.gov/wind/atlantic-offshore-wind-transmission-study.html</a> ] will ensure that federal and state decision-makers are undertaking a consistent approach to build out necessary transmission to support Atlantic Coast offshore wind development. This in turn will deliver certainty for the industry and advance both the Biden Administration's and the States' offshore wind generation goals.	
BOEM-2024-0001-0438-0007	Specific Comments PSEG's specific comments below highlight the need for federal-state collaboration and coordination in development of the final PEIS and any AMMMs. Aligning the analyses undertaken in the PEIS with state transmission solicitations and state transmission planning ensures a consistent approach to transmission buildout. This in turn supports offshore wind development in the New York Bight and delivers certainty for both offshore wind generation and transmission developers which improves economic outcomes for supporting industries and ratepayers.	Comment noted. Please see responses to individual comments for submission BOEM-2024-0001-0438 below.
BOEM-2024-0001-0438-0008	1. The PEIS should be consistent with the New Jersey and New York OREC and transmission solicitations. As described in detail above in addition to their solicitations for offshore wind generation[Footnote 7: New York has issued awards for three OREC solicitations in support of its goal to reach 9000 GW of offshore wind by 2035. See <a href="https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Offshore-Wind-Solicitations">https://www.nyserda.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Offshore-Wind-Solicitations</a> . It expects to issue an award for the fourth OREC solicitation in February 2024. New Jersey has issued three awards for OREC solicitations and anticipates announcing a fourth OREC solicitation in the spring of 2024 in support of its goal of 11000 MW by 2040. An award for that solicitation is expected in Q1 2025.] both New Jersey	Section 2.1.2.1.1 of the Final PEIS states that in New York and New Jersey, efforts are underway to develop transmission infrastructure that would allow multiple offshore wind projects to interconnect at an offshore (NYC PPTN) and nearshore (NJBPUI POI). Appendix B, <i>Supplemental Information and Additional Figures and Tables</i> , provides additional detail regarding the transmission infrastructure development efforts in New York and New Jersey. Appendix D, <i>Planned Activities Scenario</i> , has also been updated to describe the States of New Jersey and New York's public policies and offshore wind goals.

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	<p>and New York are in the process of developing transmission solicitations to deliver power necessary to meet each of their ambitious offshore wind goals. Those transmission solicitations which assume delivery of offshore wind power from the New York Bight and potentially other lease areas will address transmission configurations locations for POIs and routing and set forth certain requirements including environmental compliance and mitigation measures. Although the draft PEIS references the "New Jersey State Agreement approach" and "future procurements" in the AMMMs it does not specifically point to the NY PPTN and SAA 2.0 both of which will be released in 2024 and play a key role in delivering power from the New York Bight projects analyzed in the PEIS once the awards for those solicitations are made in 2025. As BOEM will be finalizing the PEIS concurrently with the states' development and issuance of the solicitations PSEG strongly encourages BOEM to collaborate closely both with New Jersey and New York. Any analysis in the PEIS related to transmission configurations and routing options and any proposed AMMMs that impact transmission facilities including export cables OSSs and other platforms should be consistent with the directives in those solicitations.</p>	
BOEM-2024-0001-0438-0011	<p>Similarly PSEG recommends that BOEM expand its discussion of the multiple transmission configuration options that the New York Bight lessees may use. BOEM explains that these options could include radial configurations (generation lead and shared line (platform) topology and networked configurations (backbone and meshed grid topologies) and notes that they will require "different levels of coordination between transmission and wind project operators." [Footnote 8: See Draft PEIS Volume I page 2-13] The draft PEIS and proposed AMMMs do not make clear however that these options could include transmission infrastructure (e.g. OSSs and export cables) for which a transmission developer rather than a lessee might be responsible (e.g. pursuant a state solicitation). PSEG therefore encourages BOEM to more clearly describe these options including ownership operation and potential location of the transmission facilities and to align those descriptions with the New York and New Jersey solicitations.</p>	<p>Chapter 2 of the PEIS provides a discussion of transmission configuration options and notes that transmission infrastructure may be developed, owned, and operated by either a transmission developer or a lessee.</p>

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BOEM-2024-0001-0438-0009	<p>2. The PEIS should recognize that development of shared transmission infrastructure or corridors should be guided by the states in collaboration with BOEM; this burden should not be shifted to the lessee.</p> <p>Although BOEM acknowledges that "state power solicitations may dictate routing measures for export cables and associated substations" to maximize the utility of POIs" [Footnote 9: See Draft PEIS Volume I page 2-20] it nonetheless appears to be directing lessees toward co-locating transmission infrastructure and shared infrastructure. For example AMMM measure MUL-18 which applies to multiple resource areas states that: "Lessees should coordinate transmission infrastructure among projects. Where practicable transmission infrastructure should use shared intra- and interregional connections have requirements for meshed infrastructure apply parallel routing with existing and proposed linear infrastructure (including export cables and other existing infrastructure such as power and telecommunication cables pipelines) and limit the combined footprint to minimize impacts and maximize potential capacity." [Footnote 10: See Draft PEIS Volume II pages G-20 G-21. BOEM considers the adoption of MUL-18 and the impacts of shared transmission infrastructure at multiple points in the PEIS. See e.g. 3.6.6-32 (considering impacts on navigation and vessel traffic) and 3.5.2-37 (considering impacts on benthic resources).] While MUL-18 does recommend that "[l]essees considering landfall in New Jersey should also comply with the results of the state agreement approach (SAA) and any other future procurements resulting from similar initiatives" it does not reference the NY PPTN which calls out the need for shared corridors. Footnote 11: See Draft PEIS Volume II page G-20 G-21] Moreover the analysis in the draft PEIS and AMMM MUL-18 clearly would place the burden on the New York Bight lessees to coordinate the routing of their transmission infrastructure. [Footnote 12: See id.] Doing so is overly burdensome and infeasible. There are technological and regulatory challenges that cannot be resolved by the lessee alone. Rather than placing the burden on the lessee coordination of transmission infrastructure should be guided by the soliciting state agencies in collaboration with BOEM. PSEG again encourages BOEM to work</p>	<p>Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have and have not been previously applied; BOEM believes these are all feasible. In addition, several AMMM measures were reclassified as RPs in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impact. These RPs are also not part of the Proposed Action. MUL-18 is an RP.</p> <p>Section 2.1.2.1.1 of the Final PEIS states that in New York and New Jersey, efforts are underway to develop transmission infrastructure that would allow multiple offshore wind projects to interconnect at an offshore (NYC PPTN) and nearshore (NJBPU PBI) POI. Appendix B, <i>Supplemental Information and Additional Figures and Tables</i>, provides additional detail regarding the transmission infrastructure development efforts in New York and New Jersey.</p> <p>Appendix D, <i>Planned Activities Scenario</i>, has also been updated to describe the States of New Jersey and New York's public policies and offshore wind goals.</p> <p>Additional analyses will be conducted at the subsequent project-specific stage for each lease area. Although BOEM's authority under the OCSLA only extends to the activities on the OCS, alternatives related to addressing nearshore and onshore elements as well as offshore elements of the Proposed Action would be analyzed in the COP-specific NEPA stage. BOEM's regulations (30 CFR 585.620) require that the COP describes all planned facilities that the lessee would construct and use for a project, including onshore and support facilities and all anticipated project easements. As a result, those federal, state, and local agencies with jurisdiction over nearshore and onshore impacts are able to implement, at their discretion, those portions of BOEM's COP-specific NEPA document that support their own permitting decisions.</p>

Comment No.	Comment	Response
	closely with New Jersey and New York to ensure that its analysis defers to the existing and upcoming state solicitations.	
BOEM-2024-0001-0438-0010	<p>3. In assessing transmission interconnection options within the PEIS BOEM should consider state solicitations that require offshore POIs. Within the draft PEIS BOEM only considers locating POIs onshore and lists several examples of potential onshore POIs. [Footnote 13: See Draft PEIS Volume I at pg. 2-6.] This is at odds with state solicitations in New Jersey and New York that contemplate issuing transmission solution awards for projects with offshore POIs. In the draft PEIS BOEM inconsistently recognized state solicitations; in one instance BOEM noted that New Jersey required that bidders for the third OREC solicitation use the onshore Larrabee Tri-Collector Solution transmission solution as the POI [Footnote 14: See id. at n.1.]but BOEM failed to consider that the NY PPTN requires solutions that will interconnect at offshore POIs and that SAA 2.0 in New Jersey also considers offshore POIs.</p> <p>In assessing transmission interconnection options BOEM should consider all state solicitations including those that require offshore POIs. This is particularly important as the separation of transmission and generation by locating the POI offshore is essential to enable coordination of transmission infrastructure. ISOs and RTOs should be coordinating with the states to issue solicitations seeking coordinated transmission solutions. BOEM should therefore consider state solicitations that require offshore POIs in assessing transmission interconnection options.</p>	<p>Section 2.1.2.1.1 of the Final PEIS states that in New York and New Jersey, efforts are underway to develop transmission infrastructure that would allow multiple offshore wind projects to interconnect at an offshore (NYC PPTN) and nearshore (NJBPU PBI) POI. Appendix B, <i>Supplemental Information and Additional Figures and Tables</i>, provides additional detail regarding the transmission infrastructure development efforts in New York and New Jersey.</p>
BOEM-2024-0001-0439-0023	<p>The PEIS is overly conservative resulting in unrealistic assessments. While the OSW industry strongly supports BOEM's use of a representative project design envelope the PEIS assesses construction timelines that are unrealistic and overly conservative. For example the PEIS unrealistically assumes that all 6 NY Bight projects will be built the same year and in the same year as other NY/NJ offshore wind projects. According to Table D-2 (Appendix D of the PEIS) the analysis assumes that all 1125 NY Bight foundations will be constructed in 2026 with a total of 1601 foundations in 2026 when combined with other NY/NJ projects. This approach exacerbates and overestimates air quality impacts and almost all other impacts in the "6 NY Bight Project" and "Cumulative Project"</p>	<p>Because the PEIS was developed before COPs were issued and the specific schedule for NY Bight project development is not known, the PEIS uses conservative assumptions for analysis. Table D-2 in Appendix D shows that construction of the NY Bight projects could start in 2026 and extend to 2030 and beyond. Consistent with other projects in the table, BOEM displays all foundations being installed in the first year of construction in the absence of information from developers on timing of foundation installation. This provides a more conservative assumption for analysis and means that impacts would likely be less because foundation construction would be spread out over a longer period of time. The analysis in Chapter 3 considers the potential</p>

Comment No.	Comment	Response
	assessments. Such an analysis also overstates the benefits of mitigation measures as the benefits are greater when applied to many projects being constructed at once. BOEM should develop a reasonable buildout of the NY Bight leases based on timing for power delivery to meet state procurements and discussion with industry.	for all six NY Bight projects to be constructed simultaneously and staggered. For example, Section 3.5.7.4.2, <i>Sea Turtles</i> , explains that if all six NY Bight projects are constructed simultaneously, the ensonified region where noise impacts on sea turtles could occur would be much greater than if project construction was staggered.
BOEM-2024-0001-0439-0024	<p>VII. It is unclear how the Draft PEIS calculates energy production when describing benefits of the projects.</p> <p>The PEIS notes that "[b]ased on a conservatively estimated power ratio of 3 megawatts per square kilometer BOEM estimates that full development of leases in this area has the potential to create up to 5.6 to 7 GW of offshore wind energy." [Footnote 48: Draft PEIS at ES.] It is unclear what energy production value BOEM relies on to analyze the reductions in greenhouse gas emissions and to calculate impacts of reduced air emissions from the projects and the resulting human health benefits using USEPA's Co-Benefits Riks Assessment (COBRA). [Footnote 49: Draft PEIS 3.4.1-10.] It appears that BOEM uses the 280 WTG single project scenario however no GW value is provided. The OSW industry recommends that BOEM provide the GW value used for this analysis as well as details on how that GW number was calculated (e.g. number of WTGs multiplied by MW capacity of a WTG). In contrast to the benefits it is very clear how adverse impacts from the project are measured as BOEM utilizes a scenario of up to 280 WTGs for a single project and up to 1103 WTGs for all six projects. For calculating air emissions related to construction of the projects BOEM estimates a total of 1680 WTGs across all six projects. Conservatively assuming that each project uses 15 MW WTGs this would result in over 16.5 GW (if 1103 WTGs is used) or approximately 25 GW of energy production (if 1680 WTGs) is used for the six lease areas. The result of this is an extreme discrepancy between the 5.6 to 7 GW assumption for energy production from the NY Bight leases and the scenario used for maximum-case adverse impacts from offshore wind development in the NY Bight. If BOEM is assuming adverse impacts from such a build out BOEM must also calculate the benefits of generating that much clean energy. If BOEM is using the 280 WTG single project scenario and the 1130 WTG six project scenario to calculate avoided</p>	<p>The estimated power ratio of 3 MW per square kilometer and an estimate of 5.6 to 7 GW for total generating capacity of the NY Bight leases presented in Section 1.3 of the PEIS are derived from the BOEM December 2021 Final Sale Notice for the NY Bight leases. BOEM has added a footnote to this statement in Section 1.3 clarifying the source of this information. The power-generating capacity from the Final Sale Notice is provided for informational purposes and is not used in the analysis of the alternatives; the analysis of the alternatives is based on the parameters of the RPDE described in Section 2.1.2 of Chapter 2. BOEM recognizes that as technology advances and as projects are designed to maximize power output, the actual generation capacity of the NY Bight lease areas could be greater. Refined estimates of the anticipated generation capacity of each project proposed in the NY Bight lease areas will be described in each COP and its project-level NEPA analysis.</p> <p>In regard to the analysis of adverse and beneficial air quality impacts in Section 3.4.1, <i>Air Quality and Greenhouse Gas Emissions</i>, BOEM based its analysis for a single representative project on development of 280 WTGs consistent with the RPDE, as defined in Section 2.1.2.1. For purposes of estimating avoided emissions, BOEM assumed a generation rating per WTG of 12 MW, which BOEM anticipates is a conservative estimate of the generation capacity of turbines that could be used for the NY Bight projects; if the turbines selected for each NY Bight project have a larger generation capacity, the avoided emissions would be greater. For the analysis of six projects, BOEM assumed the construction and O&amp;M emissions and avoided emissions from one NY Bight project would be multiplied by as much as six. As noted in a footnote in Section 3.4.1.4.2, the number of WTGs in the six NY Bight lease areas is expected to be less than 1,680 (280</p>

Comment No.	Comment	Response
	emissions the statement that the NY Bight leases producing 5.6 to 7 GW of offshore wind energy should be revised to reflect the actual energy production being used to calculate impacts in the analysis. Not doing so creates a discrepancy in the PEIS and could lead to confusion among stakeholders and an inaccurate characterization of adverse and beneficial impacts. For purposes of evaluating the projects' projected reduction in emissions we recommend that BOEM make it clear that the NY Bight offshore wind projects are expected to result in the delivery of at least 16.5 GW of clean renewable energy to the grid.	WTGs multiplied by 6 projects). However, in the interests of capturing the highest amount of potential emissions, this section describes emission estimates as being as much as six times greater than a single NY Bight project. Therefore, this analysis likely overstates total emissions and impacts for six NY Bight projects.
BOEM-2024-0001-0440-0004	<p>IV. Other Areas of Concern</p> <p>In addition to the conceptual concerns raised above Shell has identified a number of other specific issues in the draft PEIS for BOEM's consideration.</p> <p>a. Representative Project Design Envelope</p> <p>With respect to the "representative project design envelope" (RPDE) used for the analysis, Shell is concerned that some of the assumptions may not be realistic. First the RPDE assumes turbine rotor diameters up to 370 meters which appears to be high relative to the rotor diameters expected to be available during the buildout of the Bight lease areas. Shell recommends that BOEM use a 220m-300m range which would account for turbines up to approximately 22MW. Second the RPDE considers up to five offshore substations (OSSs) for each project. However most Bight projects are expected to use high-voltage direct current (HVDC) transmission with each OSS having at least 1 GW capacity meaning no more than two to three OSSs per lease area is expected. The overestimation of the number OSSs may skew the assessment of impacts. With the reduction in OSSs a similar reduction in number of export cables could be considered. Finally the RPDE's assumed seabed footprint for monopiles is 0.24 acre (ac) for a WTG and 0.51 ac for an OSS. However the area of the scour protection could be larger depending on the current and seabed characteristics. Shell recommends that BOEM revisit this assumption to minimize as much as possible the need for additional analysis of seabed footprint in the project-specific environmental reviews.</p>	As described in Section 2.1.2.1, the RPDE in the PEIS was developed with input from the six NY Bight lessees, American Clean Power, National Renewable Energy Laboratory, and the States of New York and New Jersey. The RPDE is not meant to be prescriptive and includes a range of parameters that is representative of development that could occur associated with any of the six NY Bight lease areas. Based on this, BOEM believes the RPDE is appropriate and sufficiently broad for purposes of the PEIS.

Comment No.	Comment	Response
BOEM-2024-0001-0440-0006	c. Conceptual Decommissioning Shell recommends that the final PEIS include a section that details the type and scope of activities BOEM envisions occurring during "conceptual decommissioning." While certain aspects and potential impacts of "conceptual decommissioning" are discussed throughout the draft PEIS the final PEIS should include a single overview discussion of decommissioning that would help to ensure that the analysis of decommissioning is robust across all impacted resources.	Section 2.1.2.1.3, <i>Conceptual Decommissioning</i> , describes the basic element of conceptual decommissioning that BOEM would expect to occur for the six lease areas. Each Chapter 3 section analyzes the potential impacts from conceptual decommissioning. Additional details on decommissioning will be described and analyzed in each COP-specific NEPA document based on the decommissioning activities proposed by each lessee in its COP.
BOEM-2024-0001-0447-0009	Geo Physical Survey The PEIS discusses under its description of one representative project that prior to installation pre-construction surveys such as geophysical and geotechnical or high-resolution geophysical surveys may be needed to refine the design. However these types of surveys are already ongoing approved by the EA for the NY Bight leases. BOEM issued a Finding of No Significant Impact for this EA and the related approved survey activities. But it does not appear that BOEM is applying the federal standards to these surveys equally across related industries. When high resolution seismic survey activities to identify shallow hazards archaeological resources or site evaluations and general shallow exploration purposes such as those being currently conducted by offshore wind developers in the New York Bight and which the PEIS proposes to further analyze and sanction are necessary for the oil and gas industry in the Gulf of Mexico for evaluating pipeline placement routes or site suitability for drilling rig placement BOEM requires that the developer submit an actual plan to BOEM for the activity. To our knowledge BOEM does not require the same information or plans to be submitted to BOEM regarding offshore wind shallow hazard surveys even those using the same equipment. We point to the Notice to Mariners issued by offshore-wind-developers holding a lease in the NY Bight which states The M/V SANCO SWIFT continues to collect bathymetric and ultra-high resolution seismic data within the lease area using a towed array of acoustic sources and receivers. Data collection will occur through mid-June 2024. Clearly the offshore wind survey is using ultra high-resolution seismic equipment to collect this data. This is the same equipment that if used in oil and gas shallow hazard surveys is	Renewable energy is bound by regulations in 30 CFR 585, which are different than the regulations for oil and gas. Regulations for renewable energy require SAP to guide survey and site assessment activities. BOEM has issued guidelines for these activities: <a href="https://www.boem.gov/sites/default/files/renewable-energy-program/BOEM-Renewable-SAP-Guidelines.pdf">https://www.boem.gov/sites/default/files/renewable-energy-program/BOEM-Renewable-SAP-Guidelines.pdf</a> . BOEM's Final EA for the NY Bight leases, <i>Commercial and Research Wind Lease and Grant Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf of the New York Bight</i> , was published in December 2021 and evaluated geotechnical studies that were used to support each lessee's SAP. Site assessment activities are necessary to determine the suitability of leases for commercial offshore wind, and that information is also used to support BOEM's COP-specific NEPA review. Additional geotechnical studies may be required for projects leading up to construction to obtain additional site specific information to support final design and construction activities, which are analyzed in the PEIS and will be further analyzed in COP-specific NEPA documents.

Comment No.	Comment	Response
	required to comply with the BOEM requirements for submission of a plan detailed survey data etc. discussed above.	
BOEM-2024-0001-0447-0010	We also request that BOEM explain its rationale for having one approach for shallow hazard surveys in the Gulf of Mexico and another for shallow hazard surveys in the NY Bight Atlantic region of this PEIS. Considering the scores of large baleen whale deaths on the US East Coast over the past 18 months which led to calls by 30 coastal NJ mayors as well as three US Congressmen for a pause on further offshore wind surveying until an investigation of any link between the surveys and whale deaths could be completed it is unclear how BOEM and NOAA can require via regulation both a pause and an investigation of mammal strandings as well as detailed survey plans for assessment of impacts in this situation when coinciding with shallow hazard surveys in the Gulf of Mexico but not for shallow hazard surveys in the Atlantic which are using the same equipment.	Refer to response to comment BOEM-2024-0001-0447-0009.
BOEM-2024-0001-0450-0012	<p>E. Quiet Foundations</p> <p>The Representative Project Design Envelope (RPDE) was created by compiling a range of technical parameters that describe the various conditions of the New York Bight leases in order to create a representative project for analysis. These conditions include a typical range for number of wind turbine generators turbine rotor diameter turbine height and foundation type among other design elements. We strongly advocate for the prioritization of quiet foundation technologies to mitigate the significant noise impacts associated with pile driving. With respect to foundation types within the RPDE we support the inclusion of measure MUL-6 in which BOEM encourages use of non-pile driving foundations [Footnote 32: Draft PEIS at G-19.] and ask that BOEM collaborate with developers in the NY Bight to support the efficient integration of quiet technologies in their projects. We also encourage BOEM to actively promote the adoption of quiet foundation technologies in the United States more broadly including through providing comprehensive guidance acknowledging their potential to provide developers with greater flexibility such as extended construction schedules and the possibility of night-time installations. [Footnote 33: Given detectability concerns and noise impacts from pile driving our groups do not support pile driving at</p>	BOEM acknowledges the commenter’s support for “quiet foundations.” BOEM has added additional analysis to the Final PEIS regarding the differences in impacts between the foundation types in the RPDE, including within Section 3.5.2, <i>Benthic Resources</i> ; Section 3.5.5, <i>Finfish, Invertebrates, and EFH</i> ; Section 3.5.6, <i>Marine Mammals</i> ; and 3.5.7, <i>Sea Turtles</i> .

Comment No.	Comment	Response
	<p>night. The use of quiet foundation technologies however may allow for construction at night as the use of pile driving would be eliminated.] This shift would be game-changing in reducing the acoustic footprint of construction activities. In the Draft PEIS BOEM writes that "Monopiles or piled jackets are most likely" to be used while additional options include quiet foundations like "suction mono-bucket suction bucket jacket tri- suction pile caisson and gravity-based structures." [Footnote 34: Draft PEIS at 2-3] As we have urged BOEM in prior comments there remains a need for a more detailed analysis to justify the preference for piled foundations over the consideration of quiet foundation technologies in project planning. The analysis presented in the Draft PEIS also appears imbalanced stating that "If suction bucket or gravity- based foundations are used the footprint of these structures would likely be larger than monopile or piled jacket resulting in greater benthic mortality." [Footnote 35: Draft PEIS at 3.5.2-28] Here BOEM does not mention that this impact may not be permanent and the larger areas provided by these foundation types would provide hard substrate for benthic colonization which may increase local biodiversity. In the PEIS BOEM should fully acknowledge and incorporate the potential for all types of ecological effects associated with the use of suction bucket or gravity-based foundations. In general BOEM's review and approval process should accurately evaluate the environmental impacts of project-related actions thereby providing a clear view of the full range of effects of environmentally responsible design alternatives such as quiet foundations without inadvertently precluding or discouraging their adoption.</p>	
BOEM-2024-0001-0451-0002	<p>While we support the continued use of a PDE in formulating alternatives we encourage BOEM to broaden its parameters in the PDE and avoid coupling specific AMMMs to specific PDE parameters. Both of these exercises will work towards making the PEIS a useful tool for the NYB leases and establishing a standard practice for developing offshore wind lease PEISs going forward.</p>	<p>As described in Section 2.1.2.1, the RPDE in the PEIS was developed with input from the six NY Bight lessees, American Clean Power, National Renewable Energy Laboratory, and the States of New York and New Jersey. The RPDE is not meant to be prescriptive and includes a range of parameters that is representative of development that could occur associated with any of the six NY Bight lease areas. Based on this, BOEM believes the RPDE is appropriate and sufficiently broad for purposes of the PEIS. Regarding coupling AMMM measures to specific RPDE parameters, BOEM developed the AMMM measures to be</p>

Comment No.	Comment	Response
		<p>programmatic so that they could be applied to any of the six NY Bight lease areas. Generally speaking, AMMM measures are not tied to any specific RPDE parameter. BOEM has considered all comments received on AMMM measures and has made several changes to the AMMM measures as presented in the Final PEIS Appendix G.</p>
<p>BOEM-2024-0001-0452-0003</p>	<p>III. Scope of RPDE and Six Project Analyses</p> <p>The Representative Project Design Element (RPDE) used in the PEIS assesses a broad range of project components; a range of 50-280 turbines seabed footprint with associated scour protection of 0.24-2.88 acres 1-5 offshore substations interarray cabling of 33-550 miles and 1-9 export cables. These wide ranges of project elements for a single lease frustrate any nuanced analyses and comparison between Alternative B - Defer Adoption of AMMM measures and Alternative C - Proposed Action Adoption of AMMM Measures.</p> <p>The PEIS uses "scaled" parameters for analysis of the 6 projects (leases) in the NY Bight which are "up to 1103 WTGs 22 OSSs 44 offshore export cables totaling 1772 miles (2852 kilometers) and 1582 miles (2546 kilometers) of interarray cables. The values for these parameters were provided by the NY Bight lessees or were calculated by BOEM based upon information provided by the lessees and represent the maximum number/length of WTGs OSSs and cables that would be developed for the six NY Bight projects." [Footnote 12: Draft PEIS p. 2-16.] It is unclear how BOEM landed on these scaled parameters because they are not based on extrapolation of the RPDE; the agency must clarify how these assumptions were made. If external factors such as power contracts or return on investments for developers are the base case for the draft PEIS then BOEM has failed to provide neutral environmental review which is the clear goal of an PEIS.</p>	<p>As described in Section 2.1.2.1, the RPDE in the PEIS was developed with input from the six NY Bight lessees, American Clean Power, National Renewable Energy Laboratory, and the States of New York and New Jersey, and it was prepared before lessees submitted COPs for BOEM review. The RPDE includes a range of representative parameters of offshore wind development in the NY Bight. The RPDE contains a minimum and maximum value for most parameters or multiple options that could be selected to provide bounds for the analysis. Because the RPDE covers six lease areas of differing sizes and was developed before lessees submitted their COPs, a wide range of potential parameters was used to ensure the maximum potential impacts from development in the NY Bight could be assessed.</p> <p>Regarding the parameters for six NY Bight lease areas, as noted in Section 2.1.2.2, the values for these parameters were provided by the NY Bight lessees or were calculated by BOEM based upon information provided by the lessees, and they represent the maximum number/length of WTGs, OSSs, and cables that would be developed for the six NY Bight projects. The six project parameter values were not calculated by multiplying the one project RPDE by six because this method would have significantly overestimated number/size of project features as the one project RPDE is based on the maximum value for all six of the NY Bight lease areas (i.e., largest project, largest lease area). Instead, lessees informed BOEM about the maximum potential buildout that could occur across the six lease areas, which BOEM then evaluated as part of the RPDE for six projects. Using information provided by lessees to inform the RPDE is the same way BOEM receives and analyzes information for individual COPs—lessees design their project and BOEM analyzes the projects as proposed.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0470-0009	<p>[Italics: b) The Disclosed/Analyzed Buildout Capacity is Completely Insufficient for Known Service Obligations]</p> <p>The New York Independent System Operator Inc. ("NYISO") presents load and capacity data for 2023 and future years in its annual "Gold Book." The [Underline: 2023 Gold Book] includes forecasts through to 2053 for electricity demand throughout the state known the New York Control Area or "NYCA." As summarized by the NYISO on page 22 of the Gold Book and shown in Table 2 the annualized forecast for demand growth in the NYCA [Bold: will grow by 55% from the current 150000 GWh to 235020 GWh between 2023 and 2053.] Notably Table 2 indicates that after 2030 the greatest growth in demand for end-use electric energy in the NYCA will be building electrification and electric vehicles (EVs). An additional 49260 GWh will be needed to power EVs a factor of ten over the established rail electric transportation systems operating in the northeast corridor operation of which currently uses more than half of the existing wind production in those same states (Table 3).[Table 3: Wind Output and Mass Transit Electricity Requirements - Northeast Corridor]NE Corridor State: MA; Wind Output (GWh): 0.215; Mass Transit System: MBTA; GWh Used: 0.422NE Corridor State: RI; Wind Output (GWh): 0.209; Mass Transit System: Blank; GWh Used: BlankNE Corridor State: CT; Wind Output (GWh): 0.013; Mass Transit System: CTrail; GWh Used: U/ANE Corridor State: NY; Wind Output (GWh): 4.567; Mass Transit System: NYMTA; GWh Used: 2.800NE Corridor State: NJ; Wind Output (GWh): 0.022; Mass Transit System: NJT; GWh Used: 0.300NE Corridor State: PA; Wind Output (GWh): 3.572; Mass Transit System: SEPTA; GWh Used: 0.386NE Corridor State: MD; Wind Output (GWh): 0.497; Mass Transit System: MARC; GWh Used: U/ANE Corridor State: DE; Wind Output (GWh): 0.004; Mass Transit System: Blank; GWh Used: BlankNE Corridor State: DC; Wind Output (GWh): 0; Mass Transit System: WMATA; GWh Used: 0.500NE Corridor State: Interstate; Wind Output (GWh): Blank; Mass Transit System: AMTRAK; GWh Used: 0.636NE Corridor State: Total; Wind Output (GWh): 9.099; Mass Transit System: Blank; GWh Used: 5.044[Table End][Bold: Source: US EIA]</p>	<p>The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i>, is to identify AMMM measures that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. The PEIS does not approve any projects.</p> <p>The purpose and need further states the PEIS supports federal goals of 30 GW and state goals, but it is not intended to meet state obligations. BOEM's leasing process for offshore wind is entirely independent of state goals and solicitations. BOEM is required to assess COPs as submitted by developers; its role is not to design projects to meet state goals.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0528h	I will also note that BOEM's PEIS design envelope is completely ridiculous. You know, 50 turbines to 200 something turbines is not a project design envelope. That's that precludes any meaningful analysis. And from what I can see so far, the PEIS does preclude any meaningful analysis. And that is a huge problem. You can't conduct a NEPA analysis on something that's 50 or 250. That's not realistic.	The RPDE for the PEIS includes a range of representative parameters of offshore wind development in the NY Bight, as described in Section 2.1.2.1. Each COP submitted within the NY Bight will be required to identify the proposed spacing, turbine height, rotor diameter, and other parameters of the project. Regarding the wide range of parameters, the RPDE was developed with input from the six NY Bight lessees, American Clean Power, National Renewable Energy Laboratory, and the States of New York and New Jersey. Because the RPDE covers six lease areas of differing sizes and was developed before lessees submitted their COPs, a wide range of potential parameters was used to ensure the maximum potential impacts from development in the NY Bight could be assessed.

## P.5.23 Mitigation and Monitoring

**Table P.5.23-1. Responses to Substantive Comments on Mitigation and Monitoring—General AMMM Comments**

Comment No.	Comment	Response
BOEM-2024-0001-0331-0012	Regarding mitigation measures included in the PEIS we question how they are barely adequate given that the document ignores the cumulative impact of all offshore wind projects in the NJ/NY area as well as all the projects off the east coast. We also question how the monitoring will be handled the cost of the monitoring the labor involved in the monitor and how the monitoring processes will be evaluated. Not all mitigation measures are effective for all species. How does mitigation work when a number of suggested activities are voluntary? Lastly how can mitigation measures be implemented if data is not available to show what the impacts area?	BOEM has updated the alternatives analysis and not all AMMM measures are being recommended as T&Cs; many are staying RPs. BOEM revised Alternative C to distinguish between AMMM measures that have been previously applied and those that have not been previously applied. The RPs are not analyzed within the alternatives analysis. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information. Revised, additional, or different mitigation measures can also be considered at the project-specific COP NEPA review stage when project details are known.
BOEM-2024-0001-0342-0001	The Commission would first like to commend BOEM on the thoroughness and succinctness of the draft AMMM measures for marine mammals. The proposed incorporation of the AMMM measures into the required terms and conditions for approval of future wind energy development projects in the New York Bight lease areas will help to ensure consistency in implementation as these projects move forward. They also will serve as a basis to harmonize with mitigation monitoring and reporting measures that would be required by the National Marine Fisheries Service (NMFS) in its authorizations governing the taking of marine mammals incidental to conducting wind energy construction operation and decommissioning activities in the New York Bight as required under the Marine Mammal Protection Act.	Thank you for your comment.
BOEM-2024-0001-0347-0005	Thank you for your consideration of these comments. ASGA's support for the aforementioned AMMMs does not necessarily indicate our approval of this industry but rather seeks to improve the development of OSW as it relates to marine ecosystems and fishing communities. ASGA looks forward to following the application of the programmatic approach in this region and hopes that assessing and mitigating cumulative impacts in the NY Bight will be a priority of BOEM and OSW developers. If we can be helpful or answer additional questions please do not hesitate to reach out.	Thank you for your comment.

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BOEM-2024-0001-0352-0002	General comments on the draft PEIS. We generally support the concepts of programmatic analysis and adoption of programmatic AMMM measures. Requiring the same AMMM measures across all six New York Bight projects might create efficiencies in the subsequent stages of the environmental review process including EFH consultations for both reviewing agencies and the public. However for the reasons described below we are uncertain as to the usefulness of the PEIS as a decision support tool. Given that this PEIS is intended to support BOEM's decision making regarding adoption of programmatic AMMM measures it is not clear why the document lists and considers the impacts of several AMMM measures which BOEM does not have the authority to implement or which are described as voluntary. For example the draft PEIS states "not all of these AMMM measures are within BOEM's statutory and regulatory authority; those that are not may still be adopted and imposed by other governmental agencies" (page G-1). We appreciate that the action/enforcing agency is identified for each AMMM measure; however it is not clear why measures that cannot be adopted by BOEM are included in the draft PEIS at all. This should be clarified in the final PEIS.	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012. Many of the measures are now identified as RPs.
BOEM-2024-0001-0352-0003	It can be assumed that several AMMM measures listed in Appendix G will be implemented for each of these projects based on BOEM guidance or regulations interagency agreements (e.g. the NOAA and BOEM fisheries survey mitigation agreement) or requirements that have been implemented for previously approved projects. This includes but is not limited to COMFIS-1 (compensation for gear loss and damage) COMFIS-5 (fishery survey guidelines) COMFIS-6 (fisheries compensatory mitigation) MUL-14 (UXO avoidance) and most aspects of MUL-25 (consistent turbine layout markings and lighting). Other listed AMMM measures are novel or are not presumed to the same extent including COMFIS-3 (scallop monitoring plan) many components of COMFIS-4 (fisheries mitigation) and notably MUL-18 (shared transmission corridor). We recommend that the final PEIS more clearly distinguish AMMM measures that must or are assumed to be implemented to meet existing requirements and agreements from additional measures that could be adopted but are not required. The draft PEIS attempts	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012. The RPDE is a range of technical parameters that describe a wind energy project that could occur in any of the six NY Bight lease areas. Most parameters contain a minimum and maximum value or multiple options that could be selected to provide bounds for the analysis. In general, the maximum values in the RPDE represent the maximum scenario of development that could occur in any of the six NY Bight lease areas, and are what the analysis in the PEIS is based on. Additionally, the RPDE is not meant to be prescriptive or to establish limits for future development, as new and emerging offshore wind technologies that have not yet been proposed in existing COPs or analyzed in the RPDE may be part of the development scenario for the NY Bight lease areas. The PEIS can be used for tiering for project-specific COP NEPA reviews.

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	<p>to evaluate a vast matrix of interactions and issues. Given the very long list of AMMM measures the large number of impacted resources and the complexity of the potential project design envelopes (PDEs) across a range of projects this is an inherently challenging exercise to execute effectively. Refinement of the list of AMMM measures considered in the final PEIS could help to improve the utility of the document. Limiting the number of AMMM measures considered in the final PEIS to those that are not already very likely to be required by regulation or guidance and are within BOEM's purview would make it easier to evaluate the incremental benefits of each AMMM measure on individual impacted resources. As it stands now the very general impacts discussion and long list of AMMM measures makes it hard to assess the benefits of any individual measure. This undermines the usefulness of the PEIS as a decision-making tool for selecting the best and most impactful AMMM measures. We appreciate that the purpose and need section does not state that programmatic AMMM measures will only be adopted if wind projects in these lease areas are still capable of producing a certain amount of electricity. In previous comments on draft EIS documents for other wind projects we opposed closely tying state and federal goals to the purpose and need statements as this restricted consideration of modifications to avoid and minimize negative impacts to the environment and human communities. Clearly defined project parameters in the PEIS could help provide efficiencies for subsequent reviews. However as we have noted in previous project-specific comments broad project design envelopes pose a challenge for stakeholder and agency consultation and comments. We are concerned that is the case here; for example while the PEIS focuses on two foundation types all foundation types are within the range of the PDE and different installation methods indicate different mitigation requirements are needed to avoid impacts. If any of the range of values in the PDE are outside those likely to be recommended for projects in these lease areas we recommend narrowing the PDE. We recognize this may not be feasible. If certain design choices have a large effect on anticipated impacts we suggest highlighting these features in the impacts analysis.</p>	

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BOEM-2024-0001-0406-0001	1. BOEM's Proposed AMMM Measures Extend Beyond What is Generally Accepted. Instead of focusing on a core set of generally applicable "tried and true" mitigation measures BOEM is using the Draft PEIS to solicit comments on a wide spectrum of novel and untested measures contained in Appendix G many of which are commercially technically and legally problematic.	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012.
BOEM-2024-0001-0406-0014	IV. BOEM Must Reconsider Its Approach to the List of Proposed AMMM Measures BOEM's proposed list of AMMM measures the heart of the Draft PEIS is flawed in its volume scope and substance. The Draft PEIS includes in Appendix G a 36-page table with 119 AMMM measures 71 of which BOEM acknowledges have not been implemented in the proposed form in any of the previously approved COPs. A programmatic EIS is not the proper venue to test novel impact mitigation concepts let alone such an extensive array of them. Moreover as set forth in more detail below many of these AMMM measures are technically infeasible or would impose financial burdens on projects that are both substantial and disproportionate to the benefits provided by the implementation of these AMMMs both individually and cumulatively. For reasons set forth in Sections II and III above BOEM should refrain from "adopting" any of the AMMM measures in the Final PEIS and instead commit to "considering" them in the PEIS or at the COP stage of review as appropriate in accordance with the revised alternatives described in those sections. Further we urge BOEM to reconsider its approach to the evaluation of AMMM measures to (i) focus on those that are most proven feasible and effective (ii) consider those that may be warranted but have not previously been proven feasible or effective and (iii) exclude those that are infeasible not practicable overly vague or difficult to enforce outside of BOEM's jurisdiction or otherwise inappropriate. The PEIS should focus its analysis of AMMM measures on a subset of those listed in the Draft PEIS that have been previously used in other COP approvals and which are widely acknowledged by agencies and industry as proven feasible effective and appropriate for all projects. These "Core AMMM measures" should be considered for all NYB projects that seek to tier off of the Final PEIS. On the other hand a number of the AMMM measures should be dropped from further consideration because	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012.

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	<p>they simply are not viable (the "Non-viable AMMM measures"). This includes any measures that fall into one or more of the categories described in Section IV.b of this letter below and may include others based on experience and input provided by the regulated community. The remaining AMMM measures those that are neither Core nor Non-viable should be treated as a "Menu" of measures that the lessee may consider including in their individual COPs. BOEM would incorporate by reference into its COP NEPA reviews the analysis from the PEIS of those measures or any measures from the Menu of AMMMs that it determined to be necessary and appropriate conditions for approval of a specific COP. As the effort to finalize the PEIS continues we are committed to meeting and working with BOEM as well as other lessees to identify which measure are appropriate for inclusion in each of the three categories identified here.</p>	
<p>BOEM-2024-0001-0406-0015</p>	<p>a. The Volume of AMMMs Presents a Cumulative Burden on COSW and Other Developers As a threshold matter the sheer number of AMMM measures included in the Draft PEIS presents an unwarranted and unnecessary burden for the NYB projects. We appreciate that a rigorous NEPA analysis should take a hard look at the environmental consequences of the proposed action. However it is not necessary to evaluate an exhaustive list of all conceivable options particularly before any COP has been submitted. NEPA compels only "a reasonably complete discussion of possible mitigation measures." Methow Valley Citizens Council 490 U.S. at 352. CEQ guidance urges agencies to "apply professional judgment and the rule of reason" when determining mitigation and monitoring measures." CEQ Mitigation and Monitoring Guidance 10 (Jan. 2011). We urge BOEM to review the expansive range of AMMM measures that it proposes to "adopt"[Footnote 5: Please see our discussion in section II.a above of this comment letter regarding the legal infirmities of any "adoption" of AMMMs in the PEIS.] in the PEIS and evaluate the necessity and practicability of each measure individually as well as consider whether the aggregate burden that would result is commensurate with the overall level of anticipated impacts that the measures are intended to reduce. We are concerned that the</p>	<p>Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012.</p>

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	implementation of all of these measure could place an undue burden for a diminished result and potentially impact project viability.	
BOEM-2024-0001-0406-0016	b. Many of BOEM's Proposed AMMM Measures Are Infeasible Inappropriate Unenforceable and/or Duplicative A significant number of the individual AMMM measures proposed in Appendix G are fatally flawed. For ease of discussion most of these objections can be sorted into the following non-exclusive and often overlapping categories of concerns. The measures listed below are all Non-viable AMMM measures. This list however is intended to be representative and not exclusive. As noted throughout these comments COSW is committed to working with BOEM and others to focus and identify the list of technically and commercially feasible AMMM measures which we propose be carried forward in the PEIS. The experience of those who have developed and operated offshore wind projects and implemented different measures in particular will be instructive in identifying which proposed measures are Non-viable.	Thank you for your comment.
BOEM-2024-0001-0406-0030	c. Revised List of AMMM Measures Based on the concerns raised in Section IV above BOEM should reduce the final list of AMMM measures in Appendix G to the Core AMMM measures plus a Menu of additional AMMM measures that have been determined to be potentially viable based on BOEM's own analysis and critically input received from the NYB lessees. The experience of those who have developed and operated offshore wind projects and implemented different measures in particular will be instructive in identifying which proposed measures are non-viable. This approach of focusing the list of AMMM measures by removing those that are Non-viable and then identifying Core and Menu measures will avoid introducing unvetted and untenable concepts into the potential terms and conditions for COP approvals without barring BOEM from considering additional viable measures beyond the Core measures in individual COP reviews where necessary and appropriate. This approach also would avoid creating a presumption that BOEM will incorporate the full list of AMMM measures wholesale into each NYB COP approval. Ultimately a more carefully selected list of AMMM measures will both support and ensure responsible development and operation of offshore wind in the NYB. COSW is committed to meeting and working with BOEM as well as other lessees to	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012.

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	efficiently revise the list of AMMM measures and identify those appropriate for including in three categories identified in these comments.	
BOEM-2024-0001-0406-0004	3. BOEM's Proposed Action Illegally Changes the Standard of Review for NYB Projects. By proposing to "adopt" its list of AMMM measures as "require[d] conditions of approval" before receiving any NYB COPs BOEM illegally converts NEPA from a procedural statute into a substantive one. The proposed action would also de facto modify BOEM's own regulations by shifting the burden to lessees to demonstrate in their COPs that a pre-determined set of AMMM measures is not "warranted or effective."	The Proposed Action in the Final PEIS is the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts. BOEM may require some or all of these measures as conditions of approval for activities proposed by lessees in COPs submitted for the six NY Bight lease areas. BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs. BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations. The purpose of the Proposed Action is to describe issues, analyze degree of potential impacts, and identify, as appropriate, AMMM measures. This PEIS does not, by itself, impose any mitigation measures on future COPs. This PEIS is therefore not the consummation of the agency's decision-making for these measures as applied to specific COPs. BOEM intends to use AMMM measures identified at the programmatic stage to inform the selection of appropriate AMMM measures at the COP decision stage.
BOEM-2024-0001-0406-0006	3. Modifying the proposed action to eliminate the "adoption" of AMMM measures and instead reframing the action as analysis of the RPDE with implementation of the core measures. This change would avert legal exposure for BOEM and the NYB lessees while still resulting in a document that facilitates tiering of the NEPA analysis. With these essential modifications the Final PEIS can achieve BOEM's objectives without crippling the technical and commercial viability of offshore wind development in the NYB or jeopardizing progress toward national and state offshore wind targets. In the sections that follow we provide more detail on each of these key issues and our proposed resolution.	Refer to responses to comments BOEM-2024-0001-0317-0016, BOEM-2024-0001-0406-0004, and BOEM-2024-0001-0331-0012.

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BOEM-2024-0001-0406-0007	BOEM can readily resolve these flaws by making the following changes in the Final PEIS: 1. Working with the NYB lessees to focus the list of AMMM measures in Appendix G and eliminate those that are technically or economically infeasible outside of BOEM's jurisdiction overly vague or difficult to enforce or otherwise inappropriate for inclusion or consideration in the PEIS. The remaining AMMM measures should be divided into two separate categories respectively consisting of (i) "Core" measures that have been vetted with the input of industry and are deemed warranted for all leases and (ii) measures that are potentially viable but that may not be warranted or commercially or economically feasible in all cases. Collectively the AMMM measures in this second category should be placed aside as a "Menu" of additional measures that BOEM or project proponents may consider adopting at the COP NEPA review stage. The remaining measures included in the Draft PEIS ("Non-viable" measures) should be excluded from Appendix G in the Final PEIS and dropped from further consideration.	Refer to responses to comments BOEM-2024-0001-0317-0016, BOEM-2024-0001-0406-0004, and BOEM-2024-0001-0331-0012.
BOEM-2024-0001-0422-0002	Feasibility As indicated in Attentive Energy's comments below regarding specific AMMMs there are multiple instances where the proposed AMMM is unclear and/or infeasible to implement. Attentive Energy identifies where there are concerns regarding the feasibility of implementation per the analysis of each AMMM and attempts to clarify its concerns and questions.	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012. The difference between AMMM measures and RPs has been clarified in the Final PEIS.
BOEM-2024-0001-0423-0002	Turning our attention to the substance of the Draft PEIS Ocean Winds expresses two fundamental areas of concern. The first is that the process through which the Draft PEIS was developed was imprecise in that the range of impact determinations per resource was often so broad that it left the ensuing analysis and mitigation measures without clear scientific basis. The second is that many specific Avoidance Minimization Mitigation and Monitoring measures (AMMMs) proposed in the PEIS are beyond the jurisdiction of BOEM are duplicative of mitigations already required by other agency approvals are technically infeasible or are overly broad and will inappropriately delay and hinder offshore wind development. As discussed further below Ocean Winds believes our concerns can be met by the following actions: 1. Limiting AMMMs in the Final PEIS to those that are	Refer to responses to comments BOEM-2024-0001-0317-0016, BOEM-2024-0001-0406-0004, BOEM-2024-0001-0352-0003, and BOEM-2024-0001-0331-0012. BOEM analyzed potential climate change impacts on each resource as a part of the ongoing and future conditions under the No Action Alternative.

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	<p>(a) within BOEM's jurisdiction</p> <p>(b) are demonstrated by the PEIS to mitigate known impacts of all covered six projects in the New York Bight</p> <p>(c) do not add additional reports during the COP review stage as changes to the COP requirements should be done via updates to COP guidance or regulations and</p> <p>(d) do not add new plans and reports that duplicate mitigations that would already be required by other federal approvals or state approvals;</p> <p>2. Including thorough analyses in the Final PEIS that demonstrates the need for and benefits of "new" AMMMs over those included in prior Records of Decision (RODs)/ Environmental Impact Statements for COPs of prior approved projects by adding an Alternative that applies the 48 AMMMs included in prior RODs;</p> <p>3. Ensuring that all AMMMs are proportionate to the demonstrated impacts in the PEIS;</p> <p>4. Clearly noting where additional information from COP-specific analysis is necessary to determine impacts and waiting for individual project COPs to consider AMMMs (rather than pre-proposing AMMMs that may not be applicable to individual projects or may not fit the level of impact determined); and lastly</p> <p>5. Considering any possible impacts in the context of ocean waters warming due to climate change and the ways in which the deployment of significant quantities of offshore wind generation will help mitigate such impacts.</p>	
BOEM-2024-0001-0423-0003	<p>A. Broad Concerns</p> <p>1) The purpose of the Proposed Action as described in Draft PEIS Section 1.3 is the[italicized: "adoption of programmatic AMMM measures that BOEM would require as conditions of approval for activities proposed by the lessees in COPs submitted for the NY Bight lease areas unless future COP-specific NEPA analysis shows that implementation of such measures is not warranted or effective." ]Ocean Winds agrees with the fundamental principle described in the American Clean Power comment letter which specifies that the adoption of AMMMs through the PEIS is an improper use of NEPA. NEPA can only analyze impacts of adopting or not adopting measures and BOEM's proposed action to "adopt"</p>	<p>1) Refer to response to comment BOEM-2024-0001-0406-0004.</p> <p>2) Refer to response to comment BOEM-2024-0001-0317-0016</p> <p>3) Refer to response to comment BOEM-2024-0001-0331-0012.</p> <p>4) Refer to response to comment BOEM-2024-0001-0352-0003.</p> <p>Project-specific details will be analyzed at the COP-specific NEPA stage. The PEIS is a conservative approach to identifying potential impacts. The intent of Alternative B has been clarified in the Final PEIS.</p>

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	<p>AMMMs through the PEIS process is contrary to BOEM's authority under the Outer Continental Shelf Lands Act and to NEPA. The purpose and need section of the PEIS states an unfounded presumption that all AMMMs are warranted across all projects and thus would be adopted in their RODs. It thus puts the burden on the developer and BOEM to demonstrate that they are not warranted. In this way the Draft PEIS would place significant new burdens on offshore wind without having demonstrated that the measures required for prior projects which were put forward after years of analysis and consideration are in any way inadequate.</p> <p>2) Of the 113 AMMMs proposed in the Draft PEIS BOEM identified 65 of the AMMMs that have never been applied in prior projects RODs. In addition the science and data driving many of the new AMMMs is not clearly outlined in the Draft PEIS. Including these inadequately supported AMMMs in the PEIS creates a vague expectation that they will be applied to all developers as it is impossible to say they are inapplicable given the lack of justification for them in the documentation provided with the Draft PEIS (some examples of which are discussed in the next two sections). Further the extensive list of new AMMMs could encourage the filing of unfounded legal challenges by creating the impression that such measures are needed despite the lack of evidence for such a need. The bottom line is that the additional AMMMs included in the Draft PEIS should not be applied to all projects pre-COP submittal but rather should be assessed in project-specific NEPA reviews which consider why the existing suite of AMMMs issued in past RODs are insufficient.</p> <p>3) There is a lack of clarity in the process of how the AMMMs would be applied. For example there are a large number of AMMMs that increase reports needed during the COP review stage. Creating a requirement for projects to provide additional reports cannot and should not be done through AMMMs in a NEPA PEIS. There is no indication how these requirements would be applied to lessees currently preparing COPs. This mirrors the lack of clarity regarding how a lessee would demonstrate that AMMMs are inapplicable and how BOEM would make a determination if they were. It is unclear how these AMMMs could or would be able to be changed post-PEIS</p>	

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	<p>ROD if they are unsuitable for a project. There are also a number of AMMMs labelled as "voluntary" but give no indication of when and how they should be included in the project-specific COPs</p> <p>4) A number of assumptions in the PEIS are unrealistic. For example BOEM assumes all six projects would be constructed at once. This is impossible given any number of factors including the availability of vessels the constraints of the supply chain and the fact that projects have already specified different completion dates through various offtake awards issued in NY and NJ. Thus impacts connected to an "all at once" scenario are unrealistic. An additional flawed assumption is that Alternative B appears to assume the six projects will be constructed without mitigation. Ocean Winds believes this was done to create a comparison between that circumstance and Alternative C however a more realistic Alternative should be added which assumes that the NY Bight projects would be built with the mitigation measures applicable to each site in-line with AMMMs already applied in other COPs. Further the range of impact determinations per resource is so broad that it would be difficult to measure the effect of the AMMMs proposed. For example commercial recreational fishing impact ranges from negligible to major for Alternative B and negligible to moderate for Alternative C. BOEM must narrow those impact ranges or if a clear impact determination cannot be made defer the application of AMMMs to a COP-specific EIS. The AMMMs applied and their level of severity need to match the impact determinations. If there isn't enough information to make a clear and scientifically based determination regarding an issue or concern then it is inappropriate to craft an AMMM to address that issue or concern.</p> <p>Lastly alternations to project design such as removal of wind turbine generators is proposed in several AMMMs. This is not an appropriate use of a programmatic document and should only be applied as a last resort on a COP-specific basis where no other mitigation measure will work. Overall we see more risk of this PEIS lengthening the overall timeline because of the need to clarify the process and the need to cross check the COPs with the PEIS.</p>	

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BOEM-2024-0001-0436-0010	V. AMMMs Invenergy appreciates BOEM's desire to demonstrate innovation in pursuit of more effective and efficient AMMMs. Unfortunately the PEIS includes many new AMMMs and modifications to past measures that have not been discussed with industry experts or developed through an agency consultation process as part of a COP assessment. This failure to confer with project sponsors in the development of AMMMs is inconsistent with the purpose and need for the PEIS and the Fiscal Responsibility Act amendments to NEPA providing for project sponsor involvement in the environmental review process. Although not binding the Draft PEIS as written puts developers in a difficult position to walk back adoption of the AMMMs.	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012. The difference between AMMM measures and RPs has been clarified in the Final PEIS.
BOEM-2024-0001-0436-0013	c. COP Guidance Some of the new AMMMs are not appropriate for the PEIS since they dictate how a COP should be developed and therefore by their very nature could not be implemented through terms and conditions of COP approval. By requiring that a measure be demonstrated through initial COP submission BOEM is in effect creating COP guidance. The New York Bight PEIS is not the proper venue for BOEM and cooperating agencies to develop COP guidance because general COP guidance development is outside of the scope of the Notice of Intent for the New York Bight PEIS. Instead of using this area specific PEIS as the basis for revision of general COP guidance BOEM should follow its regular processes to develop COP guidance to ensure that all stakeholders have the opportunity to weigh in on items that will impact development beyond the New York Bight. Further the timeline for the New York Bight PEIS ROD will not allow industry to adequately implement such AMMMs without significant project delays for COP revisions (again counter to the purpose and need for the PEIS). Consistent with the purpose and need of providing AMMMs for incorporation into New York Bight COPs Invenergy recommends that all measures that constitute COP guidance be categorized as such in the Final PEIS and given further consideration by BOEM through a separate public review and stakeholder outreach process outside of the PEIS.	AMMM measures in the Final PEIS have been updated to remove requirements associated with COP submissions. Mitigation will still need to be included as part of the COP-specific NEPA analysis.
BOEM-2024-0001-0436-0016	f. AMMM Treatment in the Final PEIS Invenergy agrees that those AMMMs that have been previously applied as a COP term and condition or otherwise been tested to confirm technical and	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012. The difference between AMMM measures and RPs has been clarified in the Final PEIS.

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	<p>economic feasibility warrant adoption in the Final PEIS and can be applied to future projects in the New York Bight. Importantly however the Final PEIS should outline a reasonable process for project-specific deviations to adopted AMMMs that could result from circumstances such as technological improvements and site-specific conditions. Overly prescriptive programmatic AMMMs that lack procedural flexibility could serve to disincentivize innovation that is necessary for an effective program for reducing project-related environmental impacts. The Final PEIS should allow lessees to propose alternative AMMMs in their COPs that achieve the same or better resource outcomes. Invenergy acknowledges that the new AMMMs presented in the Draft PEIS were likely recommended by cooperating agencies stakeholders and the public. We believe that most of these new measures have an appropriate place in the Final PEIS but that treatment must be something other than firm requirements for all future New York Bight projects. We urge BOEM to work with the six New York Bight lessees to implement the recommended clarification and classification of new AMMMs in the Final PEIS described below.</p>	
BOEM-2024-0001-0436-0017	<p>As stated previously Invenergy recommends BOEM set aside those new AMMMs that constitute COP guidance and address them through a separate process outside of the PEIS. Invenergy also recommends that AMMMs that fall under the authority of another agency be classified as such and deferred to the appropriate permit or consultation process rather than duplicated via the PEIS. Invenergy further recommends that all remaining new AMMMs identified in the Draft PEIS inclusive of those measures that have been adopted in recent COPs but not tested be presented in the Final PEIS as a menu of pre-reviewed options with standard language for incorporation into COP-specific NEPA reviews. Application of these new AMMMs may be warranted based on project-specific circumstances that are revealed through project reviews (rather than assumed to apply at the programmatic level shifting the burden to prove otherwise to the lessee). This pick list of measures will be pre-vetted by BOEM and cooperating agencies and analyzed as part of Alternative C making adoption in future COP-specific NEPA reviews more efficient. Further evaluation at the COP-specific level will</p>	<p>Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012. AMMM measures in the Final PEIS have been updated to remove requirements associated with COP submissions. Mitigation will still need to be included as part of the project-specific COP NEPA analysis.</p>

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	ensure that each measure has an appropriate and necessary nexus to an identified and reasonably anticipated effect that warrants mitigation and that the measure is proportional to the identified effect as well as feasible in implementation. This will also allow BOEM to adequately balance the environmental benefits and risks based on project-specific factors.	
BOEM-2024-0001-0436-0020	Appendix C is less helpful with regards to the AMMMs which are drafted with inconsistent phrasing that confuses how they should be applied (e.g. "must" "should" "encourage"). Invenenergy encourages BOEM to implement consistent phrasing for the AMMMs that provides clarity on how they will be applied in accordance with our recommendations above. The Appendix C description of AMMMs also does not provide a process for project-specific deviations. The revised treatment of AMMMs as recommended in Section V of this letter should be fully integrated into Appendix C in the Final PEIS including identification of which AMMMs are required how deviations in both AMMMs and the PDE will be addressed and how new AMMMs can be applied to COP-specific NEPA reviews when warranted.	Refer to responses to comments BOEM-2024-0001-0317-0016, BOEM-2024-0001-0406-0004, and BOEM-2024-0001-0331-0012.
BOEM-2024-0001-0439-0019	b. BOEM should remove AMMMs that would be more appropriately proposed as COP development guidance. Several AMMMs would in effect establish new COP development guidance. The inclusion of these measures is counter to the proposed action which states that "BOEM would require as conditions of approval for activities proposed by lessees in COPs submitted for the NY Bight lease areas unless future COP-specific NEPA analysis shows that implementation of such measures is not warranted or effective." [Footnote 43: Draft PEIS ES-3.] These measures dictate how a COP should be developed and therefore by their very nature could not be implemented through terms and conditions of COP approval as at that time the COP is already fully developed and analyzed under NEPA and other environmental laws and consultations. For example MUL-23 which states that "Lessees must consider how to avoid or reduce potential impacts on important environmental resources including sensitive habitats (e.g. Mid-Shelf Scarp NJDEP-designated prime fishing grounds hardbottom SAV ledges) by adjusting project design. Lessees must demonstrate this consideration through their initial COP	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012. AMMM measures in the Final PEIS have been updated to remove requirements associated with COP submissions. Mitigation will still need to be included as part of the project-specific COP NEPA analysis.

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	submission or subsequent updated versions." Requiring that a measure be demonstrated through initial COP submission is COP guidance and as stated above could not be implemented through terms and conditions of plan approval and is therefore in direct conflict with the proposed action. This measure and all AMMMs that constitute COP guidance should be removed and not included in the Final PEIS. Instead BOEM can include these measures in a narrative that discusses items that should be studied separately through the development of future guidance what feedback was provided on these items and how BOEM would seek further input on them through a formal guidance public review process. If BOEM would like these measures to be included in the COP development process then BOEM must go through the proper guidance development process. To do so BOEM would need to amend the current COP guidance to include these measures and go through a public review and stakeholder outreach process. A NEPA document that focuses on specific leases should not be the venue for BOEM (and cooperating agencies) to receive stakeholder feedback on COP guidance. It is important that BOEM utilize the correct processes to ensure consistency with the purpose of the PEIS and give proper notice to all stakeholders given that these proposed measures are highly likely to impact development beyond the NY Bight.	
BOEM-2024-0001-0439-0002	BOEM should reframe the PEIS as an analysis of AMMMs rather than as a vehicle for mandating AMMMs.	Thank you for your comment.
BOEM-2024-0001-0439-0021	d. BOEM should remove AMMMs that are voluntary. In Appendix G BOEM lists numerous AMMMs as "voluntary." In addition to any other reason these measures are otherwise inappropriate (as set forth in Attachment A) BOEM should not analyze any of these measures as potential terms and conditions of plan approval. Doing so would undermine the voluntary nature of the measures.	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012.
BOEM-2024-0001-0439-0022	e. Any AMMMs That End Up In the Preferred Alternative Should Be Backed By Evidence of their Effectiveness. The final PEIS should demonstrate that each AMMM ultimately included in the preferred alternative results in avoidance or substantial reduction of impacts and is based on science. Indeed BOEM notes in the PEIS that "There should also be evidence that each alternative would avoid or	Refer to responses to comments BOEM-2024-0001-0317-0016, BOEM-2024-0001-0352-0003, and BOEM-2024-0001-0331-0012.

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	<p>substantially lessen one or more potential specific and significant socioeconomic or environmental effects."[Footnote 46: Draft EIS 2-1.] BOEM should demonstrate this reduction in impacts before considering an AMMM in its preferred alternative. However as drafted the PEIS does not appear to show an appreciable difference in impacts between Alternative B and Alternative C for many of the resource areas (Table ES-2 and Table 2-4). Moreover for many AMMMs BOEM fails to demonstrate that proposed mitigations would result in change in impact from the application of the AMMM stating that impacts of Alternative C are anticipated to be the same or similar to Alternative B. In fact the PEIS only has five resource areas that show appreciable reduction in impacts between Alternatives B and C. Even for those five areas several only show reductions if the 6 NY Bight projects are built in the same year- a highly unlikely outcome as discussed below. In addition as discussed previously Alternatives B and C are not reasonable as one drastically overestimates impacts while the other considers technically and economically infeasible mitigation measures. A true comparison among reasonable alternatives is key to determining the effectiveness and appropriateness of mitigation measures. Finally the PEIS fails to analyze or demonstrate specific impacts of offshore wind development in the NY Bight on resources for which it proposed mitigation measures. Mitigation measures should avoid minimize or compensate for effects caused by a proposed action or alternatives as described in an environmental document or record of decision and that have a nexus to those effects.[Footnote 47: 40 CFR 1508.1(s)] For many AMMMs the PEIS fails the very basics of applying mitigation measures as there is no demonstrated effect caused by the proposed action or alternatives it is not specifically described in the document and no clear nexus between the mitigation measure and those effects is demonstrated. Attachment A contains more detailed comments on these and other measures that fail to demonstrate impacts on resources and effectiveness of AMMMs.</p>	

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BOEM-2024-0001-0439-0006	<p>BOEM should remove from consideration certain listed AMMMs including:</p> <ul style="list-style-type: none"> <li>• AMMMs that are not true mitigation measures but instead augment existing COP guidance or substitute for new regulations. If BOEM believes these measures merit further consideration the agency should do so by seeking full public input through revisions to COP guidance or a rulemaking.</li> <li>• AMMMs that are technically or economically infeasible.</li> <li>• AMMMs that are outside BOEM's jurisdiction and</li> <li>• AMMMs that are voluntary.</li> </ul>	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012.
BOEM-2024-0001-0440-0001	<p>A programmatic EIS for the Bight area leases presents an opportunity to improve the federal permitting process for Bight projects by establishing a baseline environmental analysis that can be relied upon to expedite project-specific environmental analyses. Unfortunately for the reasons detailed below as well as the reasons detailed in the comment letter submitted by the American Clean Power Association (ACP) [Footnote 3: Shell is a member of ACP. Shell generally supports the comments filed by ACP on the Bight PEIS and adopts them to the extent they are not inconsistent with the sentiments expressed by Shell in this letter.] the Bight PEIS does not seize this opportunity. Instead the Bight PEIS appears poised to make the federal permitting process more uncertain and burdensome for developers as it purports to facilitate BOEM's adoption of numerous untested infeasible and unnecessary avoidance minimization mitigation and monitoring (AMMM) measures. In this letter Shell outlines a recommended course correction that will help to ensure that the final Bight PEIS provides a sound basis for expeditious project-specific environmental reviews.</p>	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012.
BOEM-2024-0001-0440-0005	<p>b. Clarity on Data Sources In the draft PEIS BOEM notes many of the AMMM measures were developed using input from scoping letters coordination with Tribes local state and federal agencies and available COPs. [Footnote 19: Bight Draft PEIS at 3.21.] It would be helpful if the final PEIS contains additional clarity or documentation of the data information and agencies that contributed to the development of the AMMM measures. Specifically this would help lessees understand the bases for the recommended AMMMs and</p>	<p>The scoping report is in Appendix O of the PEIS, which includes a section that describes comments received on proposed AMMM measures, as well as who submitted those comments. The PEIS analyzed the potential range of impacts of an RPDE developed with input from the six NY Bight lessees, the states of New York and New Jersey, and the National Renewable Energy Laboratory (refer to response to comment BOEM-2024-0001-0352-0003).</p>

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	what information would be needed to support appropriate deviations from the AMMMs in COP approvals. More generally Shell recommends that the final PEIS provide clarity on the databases data sets and projects that contributed to the PEIS and how that information translated to the analysis. For example did BOEM select the minimum maximum or a range of impacts across the individual projects evaluated did BOEM focus on the project(s) with the greatest impact on each category considered or was there some other method of incorporating the past projects? Clarity on the information underpinning the analysis in the PEIS will help lessees in developing the information necessary to support their COPs.	
BOEM-2024-0001-0440-0007	d. Conservative Assumptions Throughout the draft PEIS BOEM notes that various impact considerations may be overestimated due to conservative assumptions. While such a conservative approach is not inherently problematic the final PEIS should be clear about the extent to which the analysis may have exaggerated the likely impact on the NY Bight region and relatedly the extent to which the proposed AMMMs may be more stringent than necessary and therefore could be relaxed while still mitigating project specific impacts.	The project-specific COP NEPA analysis may incorporate the PEIS analysis by reference and refine the impact level determinations based on the project-specific details outlined in the COP.
BOEM-2024-0001-0446-0010	3) Missing monitoring requirements a. Hydrodynamic Conditions The dPEIS should incorporate monitoring requirements for assessing effects on hydrodynamic conditions in the NY Bight. These data points will inform our collective understanding and shared learning about whether there are impacts of large offshore wind clusters on marine primary production sediment storage of carbon and dissolved oxygen. b. Decommissioning Even though decommissioning is decades away uncertainty concerning decommissioning requirements influences project-design and material selection decisions being made today. The dPEIS can eliminate some of this uncertainty and incentivize greater interest in using marine-life friendly foundation types and incorporating intentional habitat creation into scour protection and foundations early-on. Appendix G mitigation requirements will influence decisions that developers make concerning investments in voluntarily incorporating Nature-Based Design into scour protection as well as foundation selections because different foundation types	BOEM is currently funding two hydrodynamic impact models for the NY Bight and working with the National Academies of Sciences, Engineering, and Medicine to better develop monitoring and modeling needs. The results of these efforts will inform what project-specific physical oceanographic monitoring may be necessary at a project scale. Project-specific details, such as construction materials and methods, will be revisited at the COP-specific NEPA stage when details are known. Lessees are required to remove all human-made structures from the seafloor unless otherwise determined during the lessees decommissioning application review. Lessees can request that facilities remain in place in the decommissioning application submitted to BSEE (30 CFR 285.909), but BOEM approves or does not approve the request (30 CFR 585.434). Further, decommissioning is covered by BSEE under 30 CFR 285.902 which details the decommissioning application review and approval

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	<p>will require different amounts of scour protection. As written Appendix G only addresses decommissioning mitigation at BB-2 COMFIS-6 EJ-1 MUL-1 and MUL-2 OU-4 and all of these mitigation requirements are designed to avoid or minimize impacts upon decommissioning. None are designed to inform material selection and project design in conjunction with BEN-2 COMFIS-2 or COMFIS-4. The Rigs-to-Reef program is a functional example of human-made structures being left in situ to continue providing complex habitat for marine life. Upon decommissioning of oil and gas platforms in the Gulf of Mexico and California developers apply to leave a portion of each structure in place to continue functioning as an artificial reef (Fortune and Paterson 2021). California guidelines even call for enhancement of human-made habitat upon decommissioning (Schroeder and Love 2004)4. Part of the costs saved by not removing the entire structure is put towards management of the artificial reef (Fortune and Paterson 2021). Monitoring studies that have been sponsored by the federal government include addressing habitat value fish recruitment and attraction and impacts to species upon platform removal (BSEE 2021) [Footnote 5: The dPEIS does not focus on floating wind alternatives but there are unique potential impacts associated with alternative mooring solutions and therefore potentially different respective mitigation requirements that should be similarly addressed in future PEIS where floating wind will be the predominant choice of technology (such as west coast and Gulf of Maine).]. Additional considerations concerning decommissioning include the network of federally approved artificial reef areas in the vicinity of proposed offshore wind farms and/or the potential to create new reefs by accepting suitable materials that become available upon decommissioning. For example New York State Department of Environmental Conservation has federal permits for 9 artificial reef sites. These 9 sites total more than 10 square miles in the New York Bight including the newly established 16 Fathom Reef which is near the Empire Wind site. The New Jersey Department of Environmental Protection holds permits for 17 artificial reefs encompassing a total of 25 square miles. These sites have the potential to serve as recipients of artificial reef-appropriate materials upon decommissioning. The population-level effects of offshore</p>	<p>process, while 30 CFR 285.910 details removal of facilities. Additionally, 30 CFR 285.909 details the authorization to have facilities remain in place, and, specifically, 30 CFR 285.909.909(c) speaks to facilities that will be toppled in place or converted to artificial reef purposes (<a href="https://www.ecfr.gov/current/title-30/chapter-II/subchapter-B/part-285/subpart-I/subject-group-ECFR73f535d05e8b5d9/section-285.909">https://www.ecfr.gov/current/title-30/chapter-II/subchapter-B/part-285/subpart-I/subject-group-ECFR73f535d05e8b5d9/section-285.909</a>).</p>

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	wind structures in the US Atlantic are not yet understood. Between construction and decommissioning in the New York Bight and beyond an analysis should be performed to better characterize the potential effects of leaving infrastructure in the water. Habitat-limited and recruitment-limited fish species stand to experience the greatest benefit from implementing a "turbines-to-reefs" style program.	
BOEM-2024-0001-0446-0011	By way of providing an example of what could be included in the final PEIS TNC slightly modified Table ES-1 from the above-referenced 2021 white paper to include a column for potential impacts and a column for required mitigation per foundation type. [Footnote 3: This chart was copied from Comparison of Environmental Effects from Different Offshore Wind Turbine Foundations OCS Study BOEM 2021-053. The columns labeled Maximum Water Depths and Preferred Geologic Conditions are intentionally left blank.] The required mitigation corresponds with the proposed mitigation in Appendix G of the dPEIS and is sorted by AMMM measures that are clearly included to address impacts associated with vibratory or impact pile- driving from AMMM measures designed to apply to the protection of marine mammals regardless of foundation type.	Thank you for your comment. The AMMM measures in the PEIS are sorted by resource instead of IPF. BOEM is taking this into consideration for future NEPA documents.
BOEM-2024-0001-0446-0008	a. Link related AMMM measures. The dPEIS provides an opportunity to not only apply mitigation measures across the six adjacent lease areas but to also make the correlation between proposed AMMM measures clearer and therefore make collective monitoring and adaptive management strategies possible and more effective. The dPEIS groups AMMM measures which could potentially be applied across more than two resource areas under the multiple (MUL) category but it does not throughout Appendix G cross-reference AMMM measures that would benefit from alignment with each other. For example BEN-2 Foundation Scour Protection Monitoring does not make any reference to COMFIS-4 but clearly these measures should be cross-referenced. In particular the scour protection monitoring required in BEN-2 should be linked to nature-inclusive design monitoring where facility planning and project design utilizes nature-inclusive designs. Scour protection monitoring should be designed to evaluate the effectiveness of design materials	BOEM has deconflicted BEN-2 and COMFIS-4 in the Final PEIS.

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	to maximize available habitat for fish according to the criteria for study development set out in BOEM's Environmental Studies Program's 2022-23 Studies Development Plan. [Footnote 7: <a href="https://www.boem.gov/sites/default/files/documents/environment/environmental-studies/SDP_2022-2023.pdf">https://www.boem.gov/sites/default/files/documents/environment/environmental-studies/SDP_2022-2023.pdf</a> ] COMFIS-2 Scour and Cable Protection allows for the use of natural and engineered stone in areas not heavily trawled and addresses the complexity required for materials and design of scour and cable protection but again this AMMM measure is not cross-referenced with BEN-2 or COMFIS-4. Nature-based design of scour protection and cable mattresses might provide benthic/fishery habitat mitigation and enhancement opportunities necessary mitigation for marine mammals marine life and benthic habitat and inform other COP terms and conditions. The dPEIS also does not require the same minimum monitoring requirements from resource to resource which results in inconsistent monitoring requirements attached to different AMMM measures for different species and resources.	
BOEM-2024-0001-0450-0001	Impact Analysis: BOEM should address the lack of explanation for Impact differences between alternatives revising Impact terminology to better reflect potential reductions in impacts with AMMM measures.	Refer to responses to comments BOEM-2024-0001-0317-0016, BOEM-2024-0001-0352-0003, and BOEM-2024-0001-0331-0012. Impact levels would be refined at the project-specific COP NEPA stage.
BOEM-2024-0001-0452-0004	IV. Analysis of AMMM Measures Each avoidance minimization mitigation and monitoring (AMMM) measure should have been analyzed separately as individually defined alternatives or sub-alternatives as well as cumulatively. As presented in the draft PEIS the binary option to adopt all or no measures makes it impossible to understand how beneficial any proposed measure will be to offset the impacts of development. Analysis of the impact of each measure on mitigation particularly if individual projects propose using only a subset of the measures in a COP would allow the public to better understand how resources would be best directed to inform a specific project and to inform public comment. AMMM measures should be evaluated as NEPA alternatives in downstream project-specific analyses in the event any measures are not proposed as a mitigation measure in a developer's project-specific COP. In the Proposed Action unmitigated impacts should be highlighted so the public can also compare analysis conducted in the PEIS and future	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012.

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	EISs where project specific measures can be included. BOEM should seize and expand upon this opportunity to increase transparency and the inclusion of impacted parties which has been insufficient in many actions to date.	
BOEM-2024-0001-0469-0022	VII. Monitoring & Enforcement Though BOEM lists the agencies that will be responsible for enforcing some of the AMMM measures the agency does not list the authorities that allow them to do so[Footnote 77: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 appx. G.] or indicate any standards for enforcement or monitoring compliance with AMMM measures. Further although BOEM staff repeatedly stated that research will be ongoing and AMMM measures will be refined as OSW develops there are no standards for evaluating the AMMM measures or for determining how to proceed if a project causes more severe environmental impacts than anticipated; for example when and how to adapt mitigation measures or stop work altogether. Frequent monitoring would be required to know when severe environmental impacts occurred. OSW developers are required to submit monitoring reports periodically; these reports should be made publicly available. BOEM should create standards for evaluating the efficacy of AMMM measures and make all monitoring plans and reports accessible to the public. Public transparency is essential and systems to ensure public access at many levels of OSW development are severely lacking; for example there is no way for the public to monitor when where and under what permit surveying and/or construction activities are taking place.	Refer to responses to comments BOEM-2024-0001-0317-0016 and BOEM-2024-0001-0331-0012. Adaptive management will be considered on a case-by-case basis.

**Table P.5.23-2. Responses to Substantive Comments on Mitigation and Monitoring—Marine Minerals**

Comment No.	Comment	Response
BOEM-2024-0001-0439-0087	<p>Measure ID:OU-4Measure Name: Decommissioning in marine minerals resource areas. Description: Infrastructure emplaced in marine minerals resource areas must be removed from the marine mineral resource area during decommissioning. In addition any request to decommission in place in such areas through a departure request must demonstrate no significant impacts to marine minerals resources. Previously Applied as a COP T&amp;C: Category: D</p> <p>ACP Comment: Removal of facilities is already covered by BSEE's regulations at 30 CFR 285.910 (a) which states that " You must remove all facilities to a depth of 15 feet below the mudline unless otherwise authorized by BSEE". Significant impacts to marine minerals resources have not been demonstrated to occur from offshore wind development therefore it is inappropriate to require developers to demonstrate that no significant impacts will occur when these impacts have not been demonstrated by BOEM's environmental analysis. In addition there is already a regulatory process for requesting decommissioning in place which requires that it be captured in the decommissioning plan for which BOEM reviews and conducts a separate environmental review (including NEPA analysis) and consultations. This review would further analyze and determine any significant impacts from decommissioning (as outlined in the project specific decommissioning plan) that may require mitigation. It would be appropriate for project specific decommissioning conditions to be analyzed and applied during that review and not 30 plus years before any decommissioning plan is submitted.</p>	<p>While 30 CFR 285.910 states that facilities to a depth of 15 feet below the mud line must be removed, there is a caveat that states "unless otherwise authorized by BSEE." The procedure for requesting this exception is further explained in 30 CFR 285.909(a), which states, "In your decommissioning application, you may request that certain facilities authorized in your lease or grant remain in place for other activities authorized in this part, elsewhere in this subchapter, or by other applicable Federal law." The intent of this AMMM measure is to specify that this request to decommission infrastructure in place may not be made if the infrastructure occurs within a marine minerals resource area. The NEPA analysis and impact conclusion for marine minerals is dependent on the eventual decommissioning of any infrastructure within a marine minerals resource area. The area may be affected now but the consideration that the area will be available for future use (in 30+ years) following decommissioning leads to a decreased significance level in our NEPA analysis. In some areas, where resources are limited (such as the New Jersey coast), the "reservation" of sand within the cable corridor may be an important consideration in BOEM's impacts analysis.</p>
BOEM-2024-0001-0446-0010	<p>3) Missing monitoring requirements</p> <p>a. Hydrodynamic Conditions. The dPEIS should incorporate monitoring requirements for assessing effects on hydrodynamic conditions in the NY Bight. These data points will inform our collective understanding and shared learning about whether there are impacts of large offshore wind clusters on marine primary production sediment storage of carbon and dissolved oxygen.</p> <p>b. Decommissioning. Even though decommissioning is decades away uncertainty concerning decommissioning requirements influences</p>	<p>Lessees are required to remove all human-made structures from the seafloor unless otherwise determined during the lessees decommissioning application review. Lessees can request that facilities remain in place in the decommissioning application submitted to BSEE, but BOEM approves or does not approve the request (30 CFR 585.434). BSEE federal regulations (30 CFR 285.900-285.913) detail decommissioning obligations and requirements, decommissioning applications, and facility</p>

Comment No.	Comment	Response
	<p>project-design and material selection decisions being made today. The dPEIS can eliminate some of this uncertainty and incentivize greater interest in using marine-life friendly foundation types and incorporating intentional habitat creation into scour protection and foundations early-on. Appendix G mitigation requirements will influence decisions that developers make concerning investments in voluntarily incorporating Nature-Based Design into scour protection as well as foundation selections because different foundation types will require different amounts of scour protection. As written Appendix G only addresses decommissioning mitigation at BB-2 COMFIS-6 EJ-1 MUL-1 and MUL-2 OU-4 and all of these mitigation requirements are designed to avoid or minimize impacts upon decommissioning. None are designed to inform material selection and project design in conjunction with BEN-2 COMFIS-2 or COMFIS-4. The Rigs-to-Reef program is a functional example of human-made structures being left in situ to continue providing complex habitat for marine life. Upon decommissioning of oil and gas platforms in the Gulf of Mexico and California developers apply to leave a portion of each structure in place to continue functioning as an artificial reef (Fortune and Paterson 2021). California guidelines even call for enhancement of human-made habitat upon decommissioning (Schroeder and Love 2004)4. Part of the costs saved by not removing the entire structure is put towards management of the artificial reef (Fortune and Paterson 2021). Monitoring studies that have been sponsored by the federal government include addressing habitat value fish recruitment and attraction and impacts to species upon platform removal (BSEE 2021) [Footnote 5: The dPEIS does not focus on floating wind alternatives but there are unique potential impacts associated with alternative mooring solutions and therefore potentially different respective mitigation requirements that should be similarly addressed in future PEIS where floating wind will be the predominant choice of technology (such as west coast and Gulf of Maine).]. Additional considerations concerning decommissioning include the network of federally approved artificial reef areas in the vicinity of proposed offshore wind farms and/or the potential to create new reefs by accepting suitable materials that become available upon decommissioning. For example New York State</p>	<p>removal.</p> <p>Specifically, 30 CFR 285.909 details the authorization to have facilities remain in place, and 30 CFR 285.909 (c) speaks to facilities that will be toppled in place or converted to artificial reef purposes. BSEE federal regulations related to decommissioning renewable energy facilities can be found at: <a href="https://www.ecfr.gov/current/title-30/chapter-II/subchapter-B/part-285/subpart-I">https://www.ecfr.gov/current/title-30/chapter-II/subchapter-B/part-285/subpart-I</a>.</p> <p>Project-specific details, such as construction materials and methods, will be revisited at the COP-specific NEPA stage when details are known.</p> <p>Regarding hydrodynamic conditions and monitoring requirements, BOEM may require additional or different measures based on future, site-specific NEPA analysis or the parameters of specific COPs (when more project-specific details are known). BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations.</p>

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	Department of Environmental Conservation has federal permits for 9 artificial reef sites. These 9 sites total more than 10 square miles in the New York Bight including the newly established 16 Fathom Reef which is near the Empire Wind site. The New Jersey Department of Environmental Protection holds permits for 17 artificial reefs encompassing a total of 25 square miles. These sites have the potential to serve as recipients of artificial reef-appropriate materials upon decommissioning. The population-level effects of offshore wind structures in the US Atlantic are not yet understood. Between construction and decommissioning in the New York Bight and beyond an analysis should be performed to better characterize the potential effects of leaving infrastructure in the water. Habitat-limited and recruitment-limited fish species stand to experience the greatest benefit from implementing a "turbines-to-reefs" style program.	
BOEM-2024-0001-0439-0089	Measure ID:OU-6 Measure Name: Marine minerals resource area avoidance Description: Lessees must coordinate with the BOEM Marine Minerals Program (MMP) USACE and state resource agencies (e.g. NJDEP NYSDEC NYSDOS) on cable corridor placement with any preliminary design or design changes and prior to final cable placement. Lessees must ensure that bottom-disturbing activities avoid to the maximum extent practicable nearshore borrow areas and OCS sediment resources. Any activity that lasts more than 180 days and is located within 500 lateral meters of any marine minerals resource areas or limits the long-term use of the resource is considered bottom disturbing. Lessees must use their geophysical and geological information collected in/along proposed corridors to demonstrate and verify the existence of sand resource or dearth of sand resource and estimate (via range) the possible implication of cable crossing on volume access. The Lessee is responsible for responding to any request from these agencies in writing and to show good faith efforts to avoid sand resources to the maximum extent practicable or explain why another alternative is not technically or economically feasible. Previously Applied as a COP T&C: Category: G T/EACP Comment: This measure should refer to the avoidance of active designated USACE sand resources and not more generally to "nearshore borrow areas" "OCS sediment	<p>OU-6 was divided into OU-6 and OU-8. OU-8 is an RP to ensure bottom-disturbing activities avoid nearshore borrow areas to the maximum extent practicable.</p> <p>The commenter's statement, "This measure should refer to the avoidance of active designated USACE sand resources and not more generally to 'nearshore borrow areas' 'OCS sediment resources' and 'any marine minerals resource areas,'" is incorrect. More than active USACE sand resources are considered in the impact analysis and all the listed resources should be considered in any future tiered NEPA analyses.</p> <p>The commenter's statement, "It is not technically or economically viable for the lessee to 'demonstrate and verify the existence of sand resource or dearth of sand resource and estimate (via range) the possible implication of cable crossing on volume access,'" is not accurate. Many lessees have demonstrated and verified sand resources in collaboration with BOEM and USACE and collect ample G&amp;G data needed to generate volume estimates of potential sand resource areas in the proposed export cable corridors.</p> <p>The commenter states, "This measure is a project design measure that would be assessed during COP development the subsequent</p>

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	resources" and "any marine minerals resource areas." It is not technically or economically viable for the lessee to "demonstrate and verify the existence of sand resource or dearth of sand resource and estimate (via range) the possible implication of cable crossing on volume access". This measure is a project design measure that would be assessed during COP development the subsequent individual project NEPA process and the USACE Section 408 process. The PEIS intends to analyze measures that can be approved as terms and conditions of plan approval for individual project specific COPs. Since this measure dictates how a COP should be developed by its very nature it could not be implemented through terms and conditions of COP approval and therefore is not appropriate to be included as an AMMM.	individual project NEPA process and the USACE Section 408 process. The PEIS intends to analyze measures that can be approved as terms and conditions of plan approval for individual project specific COPs. Since this measure dictates how a COP should be developed by its very nature it could not be implemented through terms and conditions of COP approval and therefore is not appropriate to be included as an AMMM." This AMMM measure considers submission of data for post-lease monitoring and any potential changes to the export cable placement and is not exclusive to pre-COP submissions.
BOEM-2024-0001-0439-0094	Measure ID:STF-5 Measure Name: Trailing suction hopper dredge mitigation Description: If a trailing suction hopper dredge is used offshore operators must disengage dredge pumps when the dragheads are not actively dredging and therefore working to keep the draghead firmly on the bottom in order to prevent impingement or entrainment of ESA-listed fish and sea turtle species. Pumps must be disengaged when lowering dragheads to the bottom to start dredging turning or lifting dragheads off the bottom at the completion of dredging. Previously Applied as a COP T&C: Category: ACP Comment: The definition of "firmly" requires clarification. Drag arms have jets that mobilize the soil which is then pumped into the dredge hopper. The drag arm is never fully resting on the bottom because of this.	STF-5 has been revised to include, "A state-of-the-art-faced deflector that is attached to the draghead must be used on all hopper dredges at all times." This specification is important because the intent of keeping dragheads "firmly" on the bottom is to ensure that the turtle-deflecting draghead is effectively "plowing" to push a sand wave and reduce risk. The <i>firmly</i> term comes directly from the South Atlantic Regional Biological Opinion mitigation measures.

**Table P.5.23-3. Responses to Substantive Comments on Mitigation and Monitoring—Acoustics**

Comment No.	Comment	Response
BOEM-2024-0001-0406-0022	<p>v. Measures that Undermine Certainty of COP Approval Through Additional Plan Requirements BOEM's recent COP approvals already impose requirements for reporting monitoring and post-approval plan submittals far beyond what BOEM and other federal agencies require for other types of energy infrastructure projects. The proposed AMMM measures in the Draft PEIS increase even further the number of post-ROD plan submittals that would be required collectively eroding the certainty that a COP approval and ROD should provide and compromising developers' ability to adhere to a planned construction schedule which can have significant adverse commercial and economic consequences for a project. By way of example we highlight the following post-COP approval requirements for additional plans and approvals: COMFIS-3 which would impose a new Scallop Monitoring Plan to be coordinated with NMFS; [Footnote 10: This measure also appears to be redundant of and potentially out of date with existing shellfish monitoring requirements.] MM-5 which would add a new North Atlantic Right Whale Strike Management Plan; MMST-1 which would codify the submittal to NOAA BSEE and BOEM of an Alternative Monitoring Plan for low-visibility and nighttime pile-driving; MMST-2 which would require the submittal of a separate Pile-Driving Monitoring Plan; MUL-2 which would require the submittal of an anchoring plan detailing where anchoring will be used during construction operations and decommissioning; MUL-3 which would require a Berm Remediation Plan to restore berms created during cable laying activities; and MUL-24 which (as noted above) would require the submittal of an adaptive management plan with legally deficient components; and MUL-29 which would require submitting a separate Sound Field Verification Plan before commencing pile driving activities. These additional plans are not only costly and time-consuming to prepare and implement but they defer critical approvals that have material impacts on construction timelines and delay pivotal procurement decisions. The requirement for multiple plans rather than fewer comprehensive ones also increases the potential for introduction of conflicting measures and creates a</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p> <p>Measures that have been required in previous COP approvals include MM-5, MMST-1, MMST-2, MUL-2, MUL-3, MUL-29, and COMFIS-3. Therefore, these are measures that the offshore wind industry is familiar with for projects on the Atlantic OCS. MUL-24 was deleted. Additionally, lessees have the option to submit their plans separately or all in one document.</p>

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	significant challenge for tracking compliance. Further BOEM should be mindful of the impact on its own workload and resources and those of the consulting agencies that the sheer volume of required plans would present. Before the final NYB PEIS and in advance of any project-specific approvals BOEM should conduct a comprehensive review of the cumulative effects of these plan requirements on project timelines and economics eliminate the ones that are not necessary and commit to fold the remaining ones into the COP approval and ROD wherever feasible.	
BOEM-2024-0001-0352-0008-a	MUL-3: Berm survey and report We generally support this AMMM measure; however as written it provides lessees too much flexibility and it essentially requires just a plan without associated action.	Thank you for your comment. MUL-3 requires lessees to develop and implement a Berm Remediation Plan to restore created berms to match adjacent natural bathymetric contours (isobaths), as technically and economically practical or feasible.
BOEM-2024-0001-0439-0018	<p>V. BOEM should remove certain AMMMs from consideration. Even assuming BOEM reframes the PEIS and acknowledges that the agency is considering AMMM measures that it [italicized: may] require as conditions of approval it should remove from consideration certain inappropriate AMMMs. Attachment A provides the OSW industry's detailed comments on specific AMMMs. As demonstrated by those comments many of the AMMMs proposed by BOEM are inappropriate because to varying degrees they are outside of BOEM's statutory authority and are duplicative are more suitably proposed as COP guidance will be technically or economically infeasible will create untenable safety issues or undue burden on industry and/or are voluntary</p> <p>a. BOEM should remove AMMMs that are outside their statutory authority and duplicative. An agency "may not exercise its authority in a manner that is inconsistent with the administrative structure that Congress enacted into law." [Footnote 38: Food and Drug Admin. v. Brown &amp; Williamson Tobacco Corp. 529 U.S. 120 125 120 S.Ct. 1291 146 L.Ed.2d 121 (2000) (quoting ETSI Pipeline Project v. Missouri 484 U.S. 495 517 108 S.Ct. 805 98 L.Ed.2d 898 (1988)).] As such BOEM cannot implement AMMMs that are outside of its authority. While a NEPA analysis can review mitigation measures that are not within an agency's authority the agency cannot impose these measures on the lessee or adopt them in a ROD but can only cross-reference those measures to provide for interagency</p>	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs. BOEM's review and revision of AMMM measures has resulted in EJ-1 from the Draft PEIS being split into a not previously applied AMMM measure (EJ-1a) and an RP (EJ-1b); these AMMM measures have been revised to further reduce potential duplication with existing state and local requirements and describe how lessees may refer to other requirements to satisfy the AMMM measure. AQ-1 through AQ-5 and MUL-7 have become RPs and MMST-13 was incorporated into MMST-14.

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	<p>coordination. In fact "Agencies should not commit to mitigation however unless they have sufficient legal authorities and expect there will be necessary resources available to perform or ensure the performance of the mitigation."[Footnote 39: Final Guidance for Federal Departments and Agencies on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact 76 FR 3843 (Jan. 2011)] Indeed BOEM itself notes that not all "AMMM measures are within BOEM's statutory and regulatory authority; those that are not may still be adopted and imposed by other governmental agencies."[Footnote 40: DPEIS Appendix G.] As such BOEM should not develop duplicative or additive AMMM[Footnote 41: As discussed below the AMMM implies it is within BOEM's authority to issue. Instead BOEM should simply analyze the environmental effects of air permits that would be required by EPA.] or impose any requirements for measures that fall outside of their statutory authority. Instead BOEM should defer to cooperating agencies with regulatory authority to impose certain mitigation measures.[Footnote 42: See Wyoming v. U.S. Dep't of the Interior 493 F. Supp. 3d 1046 (D. Wyo. 2020) (BLM rule referencing EPA regulations "usurps the authority to regulate air emissions Congress expressly delegated to the EPA").] For example AQ-1 through AQ-5 would impose air quality requirements; however emissions in the NY Bight lease area are regulated by the Environmental Protection Agency ("EPA") under its Clean Air Act regulations at 40 C.F.R. Part 55. AQ-1through AQ-5 are duplicative of EPA's air permit process and create the potential for conflicting requirements and confusion. Through the OCS Air Permit process applicants will perform a Best Available Control Technology (BACT) and/or Lowest Achievable Emission Rate (LAER) analysis for each emission source and New Source Review (NSR) air pollutant that is emitted in excess of thresholds set forth in the Prevention of Significant Deterioration (PSD) regulations and/or the regulations of the Corresponding Onshore Area. For example with respect to AMMM AQ-4 as part of the BACT/LAER analysis applicants will assess the feasibility of add-on pollution controls (e.g. Selective Catalytic Reduction Selective non-Catalytic Reduction NOx Adsorber/Scrubber Lean NOx Catalysts</p>	

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	<p>SOx Scrubber Diesel Particulate Filter Diesel Oxidation Catalyst etc.) on vessels and engines on the WTGs and ESPs. EPA is responsible for reviewing and concurring with an applicant's justification for why these add-on pollution controls are technically and/or economically infeasible through the BACT/LAER process not BOEM and BSEE. BOEM should not use its AMMMs to reinforce existing standards or legal requirements over which it has no authority itself. Similarly MMST-13 attempts to characterize existing vessel speed rules but may ultimately create conflict if those regulations are modified. EJ-1 would require lessees to develop an Environmental Justice Communications Plan but an Environmental Justice Plan is already required by both the states of New York and New Jersey. AMMMs that are duplicative of (and potentially in conflict with) existing state or Federal requirements should be removed from BOEM's proposed AMMMs. Finally with AMMM MUL-7 BOEM attempts to meet International Maritime Organization ("IMO") standards. These standards are outside of BOEM's jurisdiction and authority and BOEM may not use AMMMs developed through NEPA to enforce compliance with those standards (see Attachment A for additional examples).</p>	
BOEM-2024-0001-0446-0004	<p>Including a breakdown of required mitigation associated with different foundation types will allow developers to frontload their respective project analyses and prioritize the least impactful and most cost-effective project designs and realistic construction schedules at an earlier point. But including this breakdown of respective mitigation requirements means that BOEM also must evaluate potential impacts associated with testing quiet foundations as part of the initial environmental assessment of site assessment and site characterization activities authorized in site assessment plans (SAP). [Footnote 6: TNC submitted comments on this issue in its December 7 2023 comment letter on BOEM's Notice of Intent To Prepare an Environmental Assessment for Additional Site Assessment Activities on Beacon Wind LLC's Renewable Energy Lease OCS-A 0520 [Docket No. BOEM-2023-062] and in its February 12 2024 comment letter on the Draft Environmental Assessment for Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Delaware Maryland</p>	<p>Thank you for the recommendation; however, BOEM has determined that it is out of scope for this PEIS. BOEM will take this recommendation into consideration for the future.</p>

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	and Virginia (Central Atlantic) [Docket No. BOEM2024 0004].] If the SAPs do not allow for the testing of quiet foundations during the site assessment phase for projects developers will not be able to do the necessary testing and analyses to inform their technology and design decisions and their COPs.	
BOEM-2024-0001-0357-0057	Enclosure VII Vessel surveys Cumulative Impact. This map shows the survey area for just one vessel survey effort for the Atlantic Shores South project. The purpose of this survey is stated at the top of the map to characterize the lease area in purple go and its export cable routes whose landfalls are shown by an X. But the whole area purple green and pink goes far beyond that all the way up the New Jersey coast and out to Long Island. Similar area extensions exist for the other lease areas in the New York Bight. The survey areas also overlap each other. The end result is a huge area surveyed in many places repeatedly by different companies. This results in a very large total number of noise disturbances to the animals and likely repeated disturbances to the same animal. It is not clear why such large survey areas are being approved unless they are actually looking for new turbine locations. If so then one AMMM measure should be to cut back on the vessel survey area. Marine mammal exposes should be limited only to those essential for the current projects. Furthermore the selection of any future turbine locations should not be prejudiced by these surveys but should be done through an open process with the appropriate environmental reviews. SEE ORIGINAL COMMENT FOR MAP: Atlantic Shores Survey Area States Purpose Site Characterization for turbines substations cables "within the lease area and along export cable routes."	Thank you for your comment. At this programmatic review stage, without knowing survey areas for specific projects, it is not practical to place limitations. Project details would be revisited during the project-specific COP NEPA review.
BOEM-2024-0001-0357-0060	Enclosure IX Exaggerated Effects of AMMM measures and Missing Measures. It is extremely difficult to follow the BOEM program EIS and find what the AMMM measures are with respect to marine mammal protection. However having brought the subject up the BOEM and the NMFS should address their over reliance on visual spotters. Visual Spotters: As discussed in the cover letter the monitoring zones being presented by the BOEM and Marine Fisheries are too small to mitigate both level A and level B takes. Given these larger monitoring zones the emphasis on visual observation is entirely misplaced. The limitations on visual detection	BOEM appreciates your comment. Appendix G provides a table containing all AMMM measures and a column within this table indicates which resource area(s) are mitigated by each measure. Both visual and acoustic monitoring have advantages and disadvantages under various conditions; using a suite of tools including visual and acoustic monitoring is necessary in the AMMM measures. BOEM is using the best available science to determine appropriate AMMM measures, but is conducting ongoing

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	<p>of marine mammals have been well documented e.g. see the World Wildlife Federation Report Titled Reducing Impacts of Noise from Human Activities on Cetaceans 2014 Section 5. Visual monitoring would seem especially unreliable for vessel survey activities that continue year-round and at night and now that the need for monitoring zones much greater than 500 meters has been identified. A two-year comparison of visual and acoustic detection in the study titled A Comparison of Visual and Acoustic Autonomous Monitoring Methods for Investigating Temporal Variation in Occurrence of Southern Right Whales dated November 2017 showed that a PAM system was six times more effective in identifying whale presence than visual methods. A study done by Kimura et al. Kimura S T Akamatsu K Wang D Wang S Li S Dong and N Arai. 2009. "Comparison of stationary acoustic monitoring and visual observation of finless porpoises." The Journal of the Acoustical Society of America 125(1):547553 compared visual and acoustic monitoring of the Yangtze finless porpoise. Acoustically the porpoise was detected approximately 82% of the observation times versus visual detection of about 13% of the observation times as shown in the results below. The PAM underestimated group size due to limited resolution of bearing angles yet was more accurate than visual especially with low-density populations which is particularly relevant to detecting right whales. SEE ORIGINAL COMMENT FOR GRAPH: Average number of porpoises detected</p>	<p>conversations with agencies and the regulatory and scientific communities on what other methods can be used.</p>
BOEM-2024-0001-0357-0062	<p>Pile Driving-Unjustified Noise Source Attenuation Assumptions The BOEM program AMMM EIS is extremely difficult to follow and it is unclear what the AMMM measures actually being proposed are. But having brought the issue up regarding pile driving the BOEM and NMFS should address their use of a 10 dB noise source noise attenuation in their project conclusions which as shown below is not justified. There appears to be no basis for assuming any significant noise source attenuation in the hearing frequency ranges of the right whale and other low frequency cetaceans (LFC's). Therefore absent any evidence to the contrary the NMFS should cease using this assumption in its MMPA rulemaking and revise its biological opinion for the project. Similarly the BOEM should cease using it in its EIS.</p>	<p>Using quieting technology (e.g., noise attenuation systems [NAS]) reduces the risk of noise impacts on marine mammals by reducing the sound levels that propagate from the pile source. Available studies suggest that when a single or combined NAS is applied to monopile installation, noise reductions ranging from 3 to 17 dB can be achieved depending on the NAS combination, with some frequency-dependent reductions of more than 20 dB (Bellmann et al. 2020).</p>

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BOEM-2024-0001-0439-0050	<p>Measure ID: MM-2 Measure Name: Real-time PAM monitoring and alert system for baleen whales Description: Implementation of a near real-time passive acoustic monitoring (PAM) system for the detection of baleen whales in the NY Bight during offshore wind development activities will be required with an alert system/notice to mariners/construction operators. This could be achieved through the deployment of several ocean gliders or fixed PAM systems in the broader NY Bight area. The equipment could be deployed anywhere there is offshore wind development activities including on the leases but may be particularly useful between leases where the placement of other real-time PAM systems is not already directed or near transit or cable-laying corridors or other locations where real-time alerting of marine mammal presence would be beneficial to the offshore wind-related activities occurring in one or more lease areas. Every effort should be made to deploy equipment in advance of any on-water activity including site characterization work construction work etc. for use in mitigating against potential vessel strike risk. Each system will be equipped with reliable PAM technology and marine mammal detection and classification software. Detections will be transmittable to a PAM analyst for verification. The systems will be capable of alerting offshore wind developers that a baleen whale has been detected in the general area of offshore wind development-related activity through methods such as Whale Alert or an offshore wind-specific notification system. This could also be achieved through partnership with other industries academia NGOs and federal agencies in a regional effort. This real-time PAM alert system will increase the opportunity to detect marine mammals in the greater NY Bight area providing the opportunity for increased situational awareness (for vessel strike avoidance) to PSOs and others of marine mammal presence in the area. The submission of raw data or data products associated with real-time PAM will be required. The real-time PAM data will be saved and stored for archiving as soon as practicable after instrument recovery through the National Centers for Environmental Information or a similar entity determined by BOEM. The archived data will be integrated into community PAM efforts in the broader region such as through the Regional Wildlife Science Collaborative to understand marine</p>	<p>Thank you for your comment; BOEM will take it into consideration. MM-2 is an RP in the Final PEIS and lessees are encouraged to analyze and consider implementing these RPs, as they may further reduce potential impacts.</p>

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	<p>mammal distribution/occurrence in the area which can then be used to inform future predictions of potential impacts to marine mammals. Category: BACP Comment: This measure is born out of voluntary commitments made by offshore wind developers to advance detection technology and improve situational awareness of NARWs. The intent of advancing this technology was to seek relief from speed constraints that exceeded the vessel speed rule. Industry supports this measure if it allows relief from speed constraints that exceed the vessel speed rule and BOEM should specify how this measure would provide relief from vessel speed constraints. However as written this measure creates an undue burden on lessees and similar requirements do not exist for any other marine industry. BOEM should remove this measure and all other vessel speed related measures and reference the vessel speed rule solely or at minimum all measures should be phrased such that the measures do not conflict with or exceed the revised speed rule. If BOEM decides to require measures that exceed the vessel speed rule there must be justification as to how the mitigation measures reduce the risk to whales considering the NY Bight lease activities (and offshore wind related vessel traffic in general) make up a very small percentage of the total vessel traffic in the region. In addition BOEM should consider how implementation of these measures would increase risk to whales as more vessels would be required to deploy and maintain equipment. Alternatively BOEM could tie this measure specifically to any speed constraints they chose to adopt that exceeds the vessel speed rule as an alternative option in lieu of speed constraints. BOEM should very clearly link all vessel speed and situational awareness measures to the vessel speed rule and planned updates to it. See also response to MM-3 below.</p>	
BOEM-2024-0001-0450-0058	<p>Measure ID and Name: MM-2: Real-time PAM monitoring and alert system for baleen whales Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): "Each system will be equipped with reliable PAM technology and marine mammal detection and classification software....This could also be achieved through partnership with other industries academia NGOs and federal agencies in a regional effort. [Underline: Each PAM system will be set up so that it is</p>	<p>Thank you for the suggestions. The RP language was updated for MM-2; however, additional or different measures can be considered at the project stage and include more detail.</p>

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	<p>capable of localizing vocalizing whales. A plan detailing any proposed localization system and analysis methods should be submitted to BOEM and other relevant permitting agencies in advance of deployment. The system should meet the following criteria:</p> <ol style="list-style-type: none"> <li>1. Stationary systems must have a minimum of three hydrophones (accuracy can be greatly improved by using four hydrophones) and mobile systems (e.g. towed arrays) must have a minimum of two hydrophones.</li> <li>2. Simulations should be conducted prior to selecting the number and location of receivers to maximize accuracy (i.e. reduce confidence intervals) in the final configuration.</li> <li>3. Systems should be calibrated before deployment to ensure accurate detection capability.</li> <li>4. For time-of-arrival based systems synchronization of data streams from the multiple receivers is necessary for accurate calculations.</li> <li>5. Irrespective of the system used careful testing and documentation of localization errors should be undertaken.] This real-time PAM alert system will increase the opportunity to detect marine mammals in the greater NY Bight area..." Notes: We support measure MM-2 which requires that a near real-time passive acoustic monitoring (PAM) system be required for the detection of baleen whales during development activities. We recommend that BOEM require PAM systems to be set up so that they can localize whale vocalizations. Localization capability will assist project proponents in determining whether baleen whales are within the relevant clearance or exclusion zone during offshore wind activities. We recommend that BOEM include five criteria for PAM systems. If localization is not feasible BOEM should require that development activities with the potential to harm North Atlantic right whales are not commenced or shut down if already started upon detection of a vocalization of a North Atlantic right whale at any distance from the acoustic recorder.</li> </ol>	
BOEM-2024-0001-0357-0061	<p>A study titled Pam Guard Quality Assurance Module for Marine Mammal Detection using Passive Acoustic Monitoring (PAM) dated August 2020 found that (its Figure 10) the mean probability of right whale detection with a PAM system varied from 0.9 to 0.5 at 500 meters for low and high background noise conditions respectively. At</p>	<p>Thank you for your comment. BOEM carefully reviews PAM plans for each project.</p>

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	1500 meters those probabilities drop to from 0.5 to 0.03 and are subject to wide statistical variation. Since visual detection is 6 times less effective it is clear that the probability of detection at larger distances is very low regardless of how many spotters you put on deck. Therefore for these larger pile driving monitoring zones a very robust PAM system consisting of a many monitors would be needed to have even a modest chance of detection. For vessel surveys a number of additional vessels removed from the geophysical survey source vessel to avoid masking would be needed and/or a large number of mono-buoys that can operate in near real time placed strategically. Without such robust PAM systems the AMMM measures offered will not be effective in detecting low frequency marine mammals in the area. Therefore [Bold: such robust PAM systems should have been outlined in the program EIS.]	
BOEM-2024-0001-0406-0019	iii. Measures That Are Disproportionate to Anticipated Impacts Certain AMMM measures would create post-approval regulatory burdens that are out of proportion to the impacts estimated by BOEM in the Draft PEIS. CEQ regulations direct that "[e]nvironmental impact statements shall discuss impacts in proportion to their significance." 40 CFR 1502.2(b). Similarly CEQ's 2011 mitigation guidance cautions that "[i]n cases that are less important the agency should exercise its discretion to determine what level of monitoring if any is appropriate." Id. In determining the importance of a measure CEQ urges agencies to consider inter alia the presence of "legal requirements of statutes regulations or permits"; "[h]uman health and safety"; and [l]evel of intensity of projected impacts." Id. Examples of AMMM measures that would impose disproportionately high burdens on the NYB projects include: MM2 and MM3 requiring the implementation of real-time and long-term passive acoustic monitoring. While these measures may be technically possible the extraordinary cost of implementation is not commensurate with the anticipated negligible increase in species protection.	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs. BOEM's review and revision of AMMM measures has resulted in MM-2 becoming an RP. MM-3 has been revised with additional details about long-term PAM monitoring. BOEM considers MM-3 to be necessary and warranted, providing information about spatio-temporal changes in animal presence. Developers have an option to pay into a fund that takes care of all of the logistics and reduces the burden on industry.
BOEM-2024-0001-0423-0020	Marine Mammals [bold: MM-2 and MM-3] would require deployment of a real-time or near real-time passive acoustic monitoring (PAM) system for the detection of baleen whales for construction and at least 10 years of operation respectively. MM-2 states that each PAM system would be equipped with [italicized:	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs,

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	<p>"marine mammal detection and classification software."] Based on current industry best practices classification software for whale calls still requires [bold: manual] QA/QC to determine actual species classification and distinguishing marine mammal calls from ocean noise the hydrophone has picked up and flagged. This manual classification would be a significant additional staffing cost to running these systems for 10 years without sufficient justification for that long duration. While PAM systems will be an appropriate element in marine mammal monitoring and mitigation the different nature of each project site and the evolving nature of such technologies mean that a prescriptive approach that imposes such requirements on a "one size fits all" basis needs to be thoroughly considered before implementation. As a reminder no mortality or serious injury to a marine mammal has resulted from the offshore wind industry in the U.S. to date. Rather the vast majority of marine mammal injuries or fatalities that have been evaluated have been tied to non-wind vessel strikes or entanglement with fishing gear. Ocean Winds notes that neither the commercial fishing nor the commercial shipping industries are subject to the anywhere near the level of restrictions that are imposed on offshore wind in spite of their documented impacts to marine mammals. Given that offshore wind vessel traffic even during the construction of an offshore wind farm would represent a small fraction of the vessel traffic in the NY Bight basic principles of fairness would dictate that the cost of an expansive PAM system if implemented should be borne by the entire maritime industry including industries like commercial shipping and fishing given their documented impact to marine mammals.</p>	<p>and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs. BOEM's review and revision of AMMM measures has resulted in MM-2 becoming an RP. MM-3 has been revised with additional details about long-term PAM monitoring.</p> <p>Thank you for your comment; BOEM will take it into consideration. A regional PAM network is being developed and will include PAM contributions from industry, researchers, and state and federal stakeholders. At least 3 but not more than 10 years of monitoring is justified based, in part, on the life history of the whales being monitored and of concern.</p>
BOEM-2024-0001-0436-0011	<p>a. Increased Regulatory Burden and Associated Costs The new AMMMs presented in the Draft PEIS will substantially increase the regulatory burden and associated costs to individual projects particularly those measures that call for additional plans reporting requirements data collection and compensatory mitigation. For example MM-2 (Real-time PAM monitoring and alert system) requires lessees to conduct real-time PAM for the detection of baleen whales in the New York Bight during offshore wind development activities with an alert system/notice to mariners/construction operators. This measure is in addition to and</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not</p>

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	not in lieu of vessel speed constraints which have served as acceptable mitigation in previous COPs. BOEM should consider the regulatory burden and cumulative cost of AMMMs to ensure the overall cost-effectiveness of its preferred alternative. AMMMs that are unduly expensive in terms of investment time required for analysis or significantly depreciate project performance will raise power offtake costs thereby affecting ratepayers. BOEM should balance the identified environmental gains of new AMMMs with the potential risk that increased regulatory burden and associated costs create particularly given the tremendous climate benefits that development of offshore wind is intended to provide.	previously applied as T&Cs. BOEM's review and revision of AMMM measures has resulted in MM-2 becoming an RP.
BOEM-2024-0001-0422-0016	MM-3 Long-term PAM Monitoring Comment #14 on MM-3 By proposing MM-3 the agencies (BOEM the Bureau of Safety and Environmental Enforcement ("BSEE") and the National Marine Fisheries Service ("NMFS")) would commit themselves and the developer community to an expansive and long-term PAM program for which the ultimate efficacy remains unknown. A requirement to deploy this PAM network 1 year before construction has the potential to cause disruptive delays to projects as COPs may be approved less than 1 year before construction activities commence. This measure increases what had been a requirement of 3 years of operational monitoring to at least 10 years. BOEM should demonstrate why 7 years of additional monitoring is needed and what impact this would mitigate. A long-term archival PAM network for at least 10 years would be costly and it is unclear to what extent it would enhance environmental protections. It is also unclear how this measure and the optionality to pay into BOEM's Environmental Studies Fund would either compliment or conflict with BOEM's proposed POWERON network participation by developers.	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs. MM-3 has been revised with additional details about long-term PAM monitoring. Thank you for your comment; BOEM will take it into consideration. If this AMMM measure is made a T&C at the COP-approval level, developers can anticipate the 1-year pre-construction requirement well in advance of construction. A regional PAM network is being developed and will include PAM contributions from industry, researchers, and state and federal stakeholders. At least 3 but not more than 10 years of monitoring is justified based, in part, on the life history of the whales being monitored and of concern.
BOEM-2024-0001-0439-0051	Measure ID: MM-3 Measure Name: Long-term PAM monitoring Description: The Lessee must conduct archival continuous and long-term PAM to develop baselines and monitor changes in the presence of marine species as well as changes in ambient noise for 1 year before construction through at least 10 years of operations. The	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs,

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	<p>exact number of instruments per lease area will vary but will be configured to identify and localize the calls of vocalizing NARWs within the lease area. Throughout deployments and data analysis the Lessee will be expected to follow the best practices outlined in the Regional Wildlife Science Collaborative (RWSC) Best Practices. The Lessee must also process the data to document at the very least the locations of baleen whale vocalizations (with confidence intervals) and metrics of ambient noise. The Lessee will be expected to archive the full acoustic record at National Centers for Ecological Information and to submit baleen whale detections to BOEM BSEE and NMFS at least twice a year. Category: B GACP Comment: This measure would siphon finite resources from conservation efforts that may offer more protection or potential benefit to marine mammals. This measure increases what had been a requirement of 3 years of operational monitoring (up to 10 if there was a demonstrated need) to at least 10 years. BOEM should demonstrate why additional monitoring is needed and what impact this would mitigate. A long-term archival passive acoustic monitoring (PAM) network (now proposed as at least 10 years) would be very costly and it is unclear to what extent it would enhance environmental protections. A requirement to deploy this PAM network 1 year before construction has the potential to cause extremely disruptive delays to projects as COPs may be approved less than 1 year before construction activities commence. If BOEM wishes to establish such a requirement that's applicable to a class of projects (e.g. offshore wind farms) it should be proposed through a legally required process that should provide opportunity for outreach to industry and public review and comment.</p>	<p>and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs. MM-3 has been revised with additional details about long-term PAM monitoring. A regional PAM network is being developed and will include PAM contributions from industry, researchers, and state and federal stakeholders. At least 3 but not more than 10 years of monitoring is justified based, in part, on the life history of the whales being monitored and of concern.</p> <p>Opportunities have been provided to discuss the long-term PAM network with industry and the idea behind the PAM network is to monitor for changes in marine mammal presence (using vocalizations as a proxy for presence); therefore, pre-construction monitoring is necessary to determine if there are any changes. This information can inform mitigation with the best available knowledge, in particular spatio-temporal measures. Furthermore, if this AMMM measure is made a T&amp;C at the COP-approval level, developers can anticipate the 1-year pre-construction requirement well in advance of construction.</p>
BOEM-2024-0001-0450-0059	<p>Measure ID and Name: MM-3: Long-term PAM monitoring Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): "The Lessee must conduct archival continuous and long-term PAM to develop baselines and monitor changes in the presence of marine species as well as changes in ambient noise for 1 year before construction through at least 10 years of operations As an alternative to conducting PAM in its project area the Lessee may opt to pay into BOEM's Environmental Studies Fund on an annual basis to support long-term</p>	<p>Thank you for your comment.</p>

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	<p>monitoring (equipment deployment data processing and archiving)all done in a pooled approach with the RWSC in lieu of doing it themselves.</p> <p>Notes: We support measure MM-3 which provides for either long-term PAM monitoring of the lease area or contributions to BOEM's Environmental Studies Fund to support long-term PAM monitoring. We do not recommend any changes to MM-3.</p>	
BOEM-2024-0001-0469-0020	<p>AMMM measure MM-3 states that lessees must conduct baseline archival long-term and continuous passive acoustic monitoring ("PAM") for one (1) year before beginning construction. When COA staff asked why the pre-construction monitoring requirement was not longer BOEM representatives cited the expeditious timeline of wind projects and indicated that from a scientific perspective it would be ideal if there was twenty (20) years of baseline monitoring available. Comparing the actual requirement and the ideal it appears that development timelines were much more heavily favored than robust scientific study. Without a sufficient baseline it will be difficult for BOEM to determine the true effects of OSW development on marine mammals as the baseline could be significantly skewed depending on annual variabilities. This is especially concerning given that BOEM plans to rely on monitoring the effects of early OSW projects to refine the required mitigation and impacts analysis for later ones. BOEM should extend the requirement for pre-construction baseline PAM.</p>	<p>BOEM believes that 1-year baseline is sufficient for the NY Bight region because there are ongoing PAM efforts already underway in NY Bight, which could provide more than a year of baseline data.</p>

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BOEM-2024-0001-0450-0024	<p>D. MM-3 Long-Term PAM Monitoring1. Support for Ten Years Post-Construction Passive Acoustic Monitoring BOEM is proposing that the lessee must conduct archival continuous and long-term passive acoustic monitoring (PAM) to develop baselines and monitor changes in the presence of marine species as well as to changes in ambient noise for one year before construction and through at least ten years of operations (MM-3). To meet this requirement BOEM provides two options for the Lessee: 1) deploy passive acoustic monitoring platforms and collect and analyze data in concordance with the best practices outlined in the Regional Wildlife Science Collaborative (RWSC) Science Plan; or 2) pay into BOEM's Environmental Studies Fund on an annual basis to support long-term monitoring carried out in concordance with RWSC best practices (developers would not be required to submit a Long-Term PAM Plan if they choose this option).A regulatory requirement in support of establishing a robust and long-term acoustic monitoring program is timely and of significant import. For highly mobile species with long generation times such as large whales regional and multi-year passive acoustic monitoring studies have been essential in improving understanding of species' long-term distributional shifts largely occurring because of climate change impacts on the distribution of preferred prey species. [Footnote 123: E.g. Davis G. E. Baumgartner M. F. Bonnell J. M. Bell J. Berchok C. Bort Thornton J. ... &amp; Van Parijs S. M. (2017). Long-term passive acoustic recordings track the changing distribution of North Atlantic right whales (<i>Eubalaena glacialis</i>) from 2004 to 2014. Scientific reports 7(1) 13460; Davis G. E. Baumgartner M. F. Corkeron P. J. Bell J. Berchok C. Bonnell J. M. ... &amp; Van Parijs S. M. (2020). Exploring movement patterns and changing distributions of baleen whales in the western North Atlantic using a decade of passive acoustic data. Global Change Biology 26(9) 4812-4840.] The continuation of long-term passive acoustic monitoring studies and their expansion specifically within offshore wind lease areas will be critical to monitor any effects of offshore wind development on these species and perhaps more importantly the ability to discriminate the effects of offshore wind development relative to those of climate change effects or natural variation. The establishment of an acoustic baseline for offshore wind development</p>	Thank you for your comment.

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	<p>areas and the monitoring of changes to that baseline over time is also critical to the effective adaptive management of the offshore wind industry. While pile driving noise during construction remains the primary acoustic impact of concern low frequency continuous noise generated during turbine operations and project-associated vessels also has the potential to affect marine life. Offshore wind projects are expected to be developed simultaneously and consecutively in the New York Bight and other regions of the U.S. East Coast for at least the next decade. Understanding the relative contribution of noise from different offshore wind- related sources to the overall soundscape will better inform our understanding of impacts and advise adaptive management. For example such information could inform construction schedules to reduce cumulative acoustic impacts or be used to identify times and/or areas that may benefit from reduced levels of vessel traffic as well as providing clarity on the acoustic footprint resulting from operational turbine arrays (see also the adaptive management plan proposed for operational noise in Section V.C.1).In light of the above considerations we stand in strong support of BOEM's proposed long-term PAM monitoring requirement as written in the Draft PEIS (MM-3).</p>	
BOEM-2024-0001-0532-0005	<p>Marine Mammal Recommendations - Need for Universal Vessel Speed Restrictions: The proposed use of NARW Strike Management Plans in the Draft PEIS fails to sufficiently address the risk of vessel strikes particularly for North Atlantic right whales (NARWs). Given the critical vulnerability of NARWs to vessel collisions and the inadequacy of the proposed speed limit measures BOEM should mandate a more comprehensive approach to vessel strike reduction including more expansive speed restrictions and enhanced monitoring measures.- Mitigation of Noise from Impact Pile Driving: Establishing limits to the noise produced by turbine installation is essential to protect marine mammals from auditory injury and other impacts and reduce harm to other marine species. BOEM should adopt the sound level limits for impact pile driving as proposed in the Draft PEIS.- Need for Comprehensive Vessel Noise Mitigation: To effectively reduce underwater noise levels BOEM should encourage the acquisition of quiet ship notations for all project-associated</p>	Thank you for your comment.

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	vessels and require lessees to create underwater vessel noise management plans with measures that will minimize vessel noise.- Long-Term Passive Acoustic Monitoring (PAM): The requirement for long-term PAM monitoring outlined in the Draft PEIS is crucial for establishing baselines and monitoring changes in marine species presence and ambient noise. BOEM should maintain the proposed ten-year post- construction PAM monitoring requirement to ensure effective assessment of offshore wind development's impact on marine life and inform adaptive management strategies.- Improved Sound Field Verification Process: BOEM's proposed improvements to the sound field verification (SFV) process for impact pile driving will significantly enhance oversight of adherence to regulatory thresholds to protect marine mammals from noise generated during pile driving. Clear communication channels immediate reporting of deviations from regulatory thresholds and public transparency of SFV monitoring reports would further help ensure regulatory compliance and foster public trust in offshore wind development practices.	
BOEM-2024-0001-0423-0021	[bold: MM-5] would require all offshore wind-related vessels to travel at 10 knots or less while transiting from US ports to lease areas and within lease areas unless a NARW Strike Management Plan is submitted to BOEM BSEE and NMFS.[bold: MMST-13] requires that from Nov 1 - May 14 all vessels must travel at 10 knots or less when transiting to/from or within the wind development area with the exception of CTVs if there is at least one visual observer on duty at all times aboard the vessel to visually monitor for large whales and real-time PAM is conducted.MM-5 and MMST-13 would impose vessel speed restrictions of 10 knots that no other marine traffic is required to meet. NOAA has regulations requiring most vessels 65 feet or longer to travel at 10 knots or less in Seasonal Management Areas along the U.S. East Coast at certain times of the year and is in the process of expanding applicability and duration of those regulations. MM-5 and MMST-13 appear to be an incredibly broad expansion to the geographic management areas the subject vessels and the seasonal time restrictions without any robust regulatory process and exclusively towards the activities of the offshore wind industry. If these measures are in fact needed to reduce impacts from vessels they should be promulgated for all vessels through the	MM-5 and MMST-12 have been previously applied and remain in the document as AMMM measures for consideration. MMST-12 language is an updated version of PDC-4 language from BOEM's Project Design Criteria and Best Management Practices for Protected Species Associated with Offshore Wind Data Collection ( <a href="https://www.boem.gov/sites/default/files/documents//PDCs%20and%20BMPs%20for%20Atlantic%20Data%20Collection%2011222021.pdf">https://www.boem.gov/sites/default/files/documents//PDCs%20and%20BMPs%20for%20Atlantic%20Data%20Collection%2011222021.pdf</a> ). MMST-13 has been removed and incorporated into MMST-14.

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	regulatory process. [bold: MMST-12] sets marine mammal and sea turtle geophysical survey clearance and shutdown zones during use of certain sound-producing equipment. This restriction is in direct contradiction to both past precedent as well as BOEM's very recent publication on [italicized: "Categorizing active marine acoustic sources based on their potential to affect marine animals"] (Ruppel C.D. et al. 2022 Journal of Marine Science and Engineering. 10:1278). BOEM's own analysis in that publication was that most high resolution geophysical sources are unlikely to result in harassment and should be treated as de minimis. If a geophysical survey includes no impactful equipment as determined by [italicize: Ruppel] such a survey should be exempted from this requirement.	
BOEM-2024-0001-0342-0002	The Commission offers the following comments regarding specific AMMM measures Alternative Monitoring Plan (MMST1) The measure states that the alternative monitoring plan shall have two parts one for foundation pile driving during low-visibility conditions and one for nighttime and that each part must demonstrate the effective use of technologies that the Lessee is proposing to use. The specific requirements for the "Nighttime Pile-Driving Monitoring" part of the plan include demonstrating "the capability of the proposed monitoring methodology to detect marine mammals and sea turtles within the full extent of the established clearance and shutdown zones with the same effectiveness as daytime visual monitoring" and discussing "the efficacy (range and accuracy) of each device proposed for nighttime monitoring as demonstrated by field trials". However similar requirements are missing from the "Low-Visibility Pile-Driving Monitoring" part of the plan. The final PEIS should require lessees to demonstrate the efficacy of monitoring methods for both low- visibility and nighttime pile driving.	Thank you for your comment. MMST-1 has been revised and updated to address these recommendations. BOEM reviews plans to make sure monitoring plans are effective.
BOEM-2024-0001-0342-0003	Foundation pile-driving measures (MMST4) The measure states that monitoring must be conducted from 30 minutes immediately prior to initiation of foundation pile-driving activities through 30 minutes post-completion of foundation pile-driving activities. However a 60-minute pre-installation clearance time for both visual observations and passive acoustic monitoring (PAM) has been included in recent final rules issued by NMFS for the	Thank you for your comment. MMST-4 has been revised and updated to address these recommendations. BOEM is taking the recommendations into consideration for any additional potential changes in the future.

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	taking of marine mammals incidental to other wind turbine construction projects in the Atlantic [Footnote 1: e.g. Dominion Energy Virginia (89 Fed. Reg. 4370; 23 January 2024) and Empire Wind (89 Fed. Reg. 11342; 14 February 2024).] and should be included in the final PEIS. In addition the measure should require that PAM be conducted for at least 24 hours prior to pile driving and PAM data from the previous 24 hours be reviewed prior to initiation of foundation pile driving consistent with NMFS's requirements for the same final rules.	
BOEM-2024-0001-0422-0018	MMST-13 Vessel speed requirements November 1 through May 14 Comment #16 on MMST-13 The specificity in this AMMM is premature given the ongoing finalization of NMFS's Amendments to the North Atlantic Right Whale Vessel Strike Reduction Rule. Attentive Energy urges BOEM to defer to or reference the final vessel speed rule in this AMMM rather than create requirements that potentially may not comport with the finalized rule.	Thank you for your comment. BOEM is monitoring the final rule and will revisit it at the project-specific stage. MMST-13 was removed and incorporated into MMST-14.
BOEM-2024-0001-0347-0004-a	MUL-20: ASGA has been concerned about the impacts on marine species and fisheries due to construction activities. Utilizing a soft start for impact pile-driving could allow sensitive marine species time to vacate the installation area before intense pile-driving begins.	Thank you for your comment. MUL-20 has been revised to clarify use of a soft-start protocol in the PEIS.
BOEM-2024-0001-0342-0004	Metrics for Received Sound Level Limit (RSL) [Footnote 2: The RSL cannot be exceeded beyond (a) 1500 m from the foundation as of 1 May 2026 (b) 1000 m from the foundation as of 1 May 2028 and (c) 750 m from the foundation as of 1 May 2030.]; MUL22)The measure states that "sound fields generated during impact pile driving must not exceed NMFS's Level A permanent threshold shift limits for low-frequency cetaceans (LFC)" and that "every attempt must be made to reach the RSL at 100 percent of foundations." However the measure does not indicate what metric RSL would be based on peak or cumulative sound exposure level (SELcum). The measure should stipulate that the RSL should be based on the SELcum threshold for LFC during installation of each foundation pile in the final PEIS.	Thank you for your comment. MUL-22 has been revised for clarification in the PEIS.
BOEM-2024-0001-0422-0007	MUL-22 Received Sound Level Limit ("RSL") Comment #5 on MUL-22	Thank you for your comment. MUL-22 has been revised for clarification in the PEIS. BOEM is taking the recommendations

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	<p>Attentive Energy has conducted a feasibility analysis on achieving these proposed underwater noise standards. There are several limiting factors to achievability including site-specific conditions such as sediment substrate and water depths greater than 40 meters. Currently achievability of these standards would only be feasible with pile diameters between 1 meter and 2 meters. For a low attenuation environment as soon as the diameter of the piles is 4 meters or more the efficiencies of the noise abatement systems must be greater than 20 dB which is not guaranteed. Current monopile diameters based on latest turbine sizes and water depths in the New York Bight are approaching 12 meters. Attentive Energy understands that BOEM is attempting to motivate the offshore wind industry to further reduce sound propagation levels. However Attentive Energy does not believe that these proposed levels are reasonably achievable and it is unclear analysis BOEM used to determine feasibility. Alternatively BOEM should revise this AMMM to be based upon a standard of reasonable practicability. Reasonably practicable means practicable having regard to (a) the severity and scope of the hazard or risk concerned; (b) the state of knowledge reasonably available concerning that hazard or risk and of any means of removing or mitigating that hazard or risk; (c) the availability and suitability of means to remove or mitigate that hazard or risk; and (d) the costs and the benefits of removing or mitigating that hazard or risk. Prior to proposing this AMMM has BOEM conducted a risk assessment / risk management process that addresses the following:</p> <p>What is the actual quantitative level of risk?</p> <p>Are risk reduction measures warranted?</p> <p>What are the incremental efficacies of individual risk management/reduction measures?</p> <p>Do unacceptable levels of risk reduction persist after the employment of other measures?</p> <p>Does the inclusion of near real-time PAM effectively contribute to residual risk reduction?</p> <p>Do existing mitigation measures individually or in combination sufficiently limit any remaining residual risk? In its General Comments section of this letter Attentive Energy recommends an additional alternative be included in the Final PEIS that allows for the</p>	<p>into consideration for any additional potential changes in the future.</p>

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	assessment of how well newly proposed AMMMs perform versus the existing AMMMs. If such an alternative is included it would allow for the assessment of the performance of this RSL AMMM as just suggested.	
BOEM-2024-0001-0423-0006	<p>[bold: MUL-22] would set sound fields generated during impact pile driving at levels that cannot be met by any existing technology. The stiff soils found in the NY Bight area[Footnote 1: "Glaucinite sands could potentially be present within the six NY Bight lease areas . . ." Draft PEIS at 3.5.2-6.] combined with the known size and characteristics of the jacket and monopile foundations that could be required to develop offshore wind in the NY Bight mean that significant energy will be needed to drive each pile (i.e. a large number of blows at medium to high hammer energies). This necessarily means that a large amount of underwater sound will be emitted. Even with optimized installation techniques and use of a double bubble curtain (the most effective attenuation that BOEM and NOAA Fisheries have accepted in modelling to date) the Received Sound Level Limit expected from any project is least an order of magnitude farther out than the 750-meter distance that would be required as of May 1 2030. This requirement in the Draft PEIS is an impossible condition that no project in the region could meet. As sound levels are partially dependent on soil conditions any mitigations for sound level issues should be evaluated through the COP specific NEPA process when site-specific soil data is available for the analysis. It appears that BOEM may be using this condition to encourage the development of new technology to mitigate these impacts however the lessees are not manufacturers and do not have the capability to create new installation technologies that would meet this standard. BOEM must consider the state of existing technologies and site-specific conditions in its application of AMMMs. Sound sensitive species can be protected from any harm through a thoughtful and project-specific program that will draw upon best practices and available technologies (some of which may not even exist at this time but may be available at the time of project construction) that are species-specific site- specific and time-of-year specific. A carefully tailored program that hews to the NEPA principles of avoidance first minimization second and mitigation as a</p>	<p>Thank you for your comment. MUL-22 has been revised for clarification in the PEIS. BOEM is taking the recommendations into consideration for any additional potential changes in the future.</p>

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	fall- back is greatly preferable to a cookie-cutter approach of grossly unreasonable pre-determined sound fields established many years prior to construction.	
BOEM-2024-0001-0439-0069	<p>Measure ID: MUL-22 Measure Name: Received Sound Level Limit (RSL) Description: Sound fields generated during impact pile-driving must not exceed NOAA Fisheries' Level A permanent threshold shift (PTS) limits for low frequency cetaceans (LFC) by the specified date and at the distances below. Every attempt must be made to reach the Received Sound Level Limit (RSL) at 100% of foundations.</p> <p>Voluntary: May 1 2025: After the first three foundations no exceedance of RSL beyond 4921 feet (1500 meters) from the foundation for 90% of remaining piles. Required: May 1 2026: After the first three foundations no exceedance of RSL beyond 4921 feet (1500 meters) from the foundation for 90% of remaining piles. May 1 2028: After the first three foundations no exceedance of RSL beyond 3280 feet (1000 meters) from the foundation for 90% of remaining piles. May 1 2030: After the first three foundations no exceedance of RSL beyond 2460 feet (750 meters) from the foundation for 90% of remaining piles. On a case-by-case basis BOEM may consider an exception to the RSL if the Lessee provides sufficient written justification as determined by BOEM of why meeting the RSL is not technically and commercially practicable. In these cases compensatory mitigation (or similar) may be considered such as operator contributions to research and monitoring or similar that reduce noise or contribute to a better understanding of noise reduction. Previously Applied as a COP T&amp;C: Category: G T/E BACP</p> <p>Comment: This AMMM is problematic for the following reasons: It is premature to implement new requirements on sound mitigation prior to a thorough and complete analysis of learnings from the construction of the South Fork Wind Farm and Vineyard Wind 1 projects including measured sound fields sound abatement techniques relative effectiveness of mitigation and monitoring measures and documented exposures above relevant thresholds. Ignoring this experience robs BOEM and the industry of the opportunity to learn and improve based on the most recent science and practical considerations. It remains unclear how and to what extent the proposed thresholds will reduce the amount of acoustic</p>	<p>Thank you for your comment. MUL-22 has been revised for clarification in the PEIS. BOEM's development of the AMMM measures was performed in coordination with NMFS, and BOEM has provided opportunities for industry to offer comments and feedback as measures have been developed.</p>

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	<p>exposure and whether these reductions meaningfully increase protection of marine wildlife. Empirical data compiled from projects in construction should be presented and discussed at the joint forums. This discussion could also help inform level B harassment numbers that are based on older science and that merit further validation. This measure fails to account for trends in offshore wind technology particularly the use of larger wind turbines and associated larger foundations and piles. Large turbines are essential to make efficient use of the nation's offshore wind resource and to meet President Biden's offshore wind and climate goals myriad State goals and individual projects' offtake agreements. The proposed guidance is based on experience with the 6- megawatt (MW) turbines used at the CVOW research project which are substantially smaller than the utility-scale projects currently in construction at South Fork Wind Farm (11 MW) and Vineyard Wind 1 (13 MW). In addition NY Bight leases have bid on state offshore wind procurements using 18 MW WTGs to calculate their power production and bid prices. Moreover manufacturers are already developing new larger turbines and foundations and will likely stop producing smaller turbines and foundations in the future. Any new measures should reflect both the experience of current construction projects and the anticipated industry standard turbines sizes over the next decade. Failure to do so will stunt the development and use of commercially available technologies in the United States hampering project viability and putting the country at a competitive disadvantage against the rest of the world. This measure is another example of BOEM shifting the burden to prove infeasibility to industry rather than BOEM ensuring that mitigation measures being applied are reasonable. BOEM had recently proposed reducing the threshold to 1500m for near term projects the agency is apparently now implementing the sound standard at 1km starting in May 2026 in regulatory documents. Supply chain and domestic offshore wind industry investments for projects are made well before a project is built. Prior to the implementation of such a standard there needs to be robust evidence that any applicable limit would be technically and economically feasible. This is a prime example of why these guidelines must be developed collaboratively with industry so that</p>	

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	<p>unintended consequences are avoided before they become barriers to development. This measure also creates a potential regulatory roadblock as it would establish limits that are inconsistent with current National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) practice. In particular standard practice in Marine Mammal Protection Act (MMPA) incidental take authorizations is currently for NOAA NMFS to establish marine mammal harassment zone sizes based on a modeled 10 dB reduction in pile driving sound. If BOEM were to implement its proposed 1km Level A harassment threshold limit for its Endangered Species Act (ESA) Section 7 consultations it would create a discrepancy between the proposed actions by NOAA NMFS (via proposed MMPA incidental take authorization) and BOEM (via ESA Section 7 Biological Assessment). This would in turn create a significant challenge during the ESA Section 7 consultation process. The ESA requires that NOAA NMFS limit the exemption of take to that which is reasonably certain to occur; dual proposed actions that are inconsistent with one another would create confusion as to what outcome is reasonably certain to occur. .- These concerns highlight why BOEM must go through a robust guidance development process before imposing these measures on projects. A NEPA document focused on specific lease areas is not the appropriate venue for seeking feedback on such measures. This measure must be removed from consideration in the FEIS and instead if BOEM decides to propose such a measure despite the justifications for its removal listed above BOEM should engage in a robust public guidance development process that includes a public comment period workshops and outreach to industry stakeholders.</p>	
BOEM-2024-0001-0450-0069	<p>Measure ID and Name: MUL-22: Received Sound Level Limit (RSLL)  Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): "Sound fields generated during impact pile-driving must not exceed NOAA Fisheries' Level A permanent threshold shift (PTS) limits for low frequency cetaceans (LFC) by the specified date and at the distances below. Notes: We support BOEM's establishment of received sound level limits for impact pile-driving to avoid Level A PTS. We do not recommend any changes to MUL-22.</p>	Thank you for your comment.

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BOEM-2024-0001-0439-0020	<p>c. BOEM should remove AMMMs that are technically and economically infeasible. As stated above NEPA requires agencies to "study develop and describe technically and economically feasible alternatives" [Footnote 44: 43 U.S.C. 4331.] A number of the newly proposed AMMMs are technically and economically infeasible will create unsafe conditions and/or impose undue burden on developers (see Attachment A for additional examples).MUL-22 - Received Sound Level Limit: It is premature to implement new requirements on sound mitigation prior to a thorough and complete analysis of learnings from the construction of the South Fork Wind Farm and Vineyard Wind 1 projects including measured sound fields sound abatement techniques relative effectiveness of mitigation and monitoring measures and documented exposures above relevant thresholds. Ignoring this experience robs BOEM and the industry of the opportunity to learn and improve based on the most recent science and practical considerations. It remains unclear how and to what extent the proposed thresholds will reduce the amount of acoustic exposure and whether these reductions meaningfully increase protection of marine wildlife. Empirical data compiled from projects in construction should be presented and discussed at the joint forums. This measure fails to account for trends in offshore wind technology particularly the use of larger wind turbines and associated larger foundations and piles. Large turbines are essential to make efficient use of the nation's offshore wind resource and to meet President Biden's offshore wind and climate goals myriad State goals and individual projects' offtake agreements. Finally mitigation measures for marine wildlife fall under NOAA's authority under the MMPA.MUL-29 - Sound Field Verification (SFV) Process Plan and Reporting: This process will result in significant construction delays to projects and is not economically or technically feasible. Requiring SFV at every turbine location would be unnecessary and cost prohibitive. A standardized target sub-sample of turbine locations would be more than sufficient to determine the effectiveness of sound reduction mitigation measures. Empirical data compiled from the projects currently conducting SFV could be discussed at our proposed BOEM-industry forum and would inform a broader discussion on how best to incorporate lessons learned from early</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p> <p>MUL-22 and MUL-29 have been revised for clarification in the PEIS. AQ-1 through AQ-3 are RPs.</p>

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	<p>projects. This measure could also unintentionally exacerbate stressors on marine mammals. For example construction time could be extended unnecessarily to accommodate repeated attempts to reduce sound to a specific level (e.g. start-up test fail sound limit shut down add bubble curtain start-up fail by lesser degree shutdown and so on). Also more extensive sound field verification requires additional vessels and equipment which counterproductively adds to the ambient sound level. AMMMs AQ-2 and AQ-3 require lessees to replace diesel fuel and marine fuel oil with alternative fuels such as natural gas propane or hydrogen for vessels and require the replacement of combustion engines with zero-emissions technology (fuel cell-electric or battery- electric) for vessels. Requiring developers to use alternative fuels or zero-emissions technology would severely limit project feasibility since the supply chain for vessels both current and new builds would be constrained to very few vessels globally. Considering the benefits of GHG reductions from deployment of offshore wind power the burden of this mitigation measure is disproportionate given the magnitude of GHG emissions during the relatively brief construction period. AMMMs AQ-2 encourages lessees to replace diesel fuel and marine fuel oil with alternative fuels. Requiring a technical and/or economic feasibility analysis for not using these vessels places an undue burden on developers because of the lack of these vessels in the market both now and in future construction trends. While there are over 25 different types of vessels needed to construct and maintain an offshore wind project[Footnote 45: See <a href="https://cleanpower.org/resources/offshore-wind-vessel-needs/">https://cleanpower.org/resources/offshore-wind-vessel-needs/</a>.] ACP did an analysis of 5 vessel types that provide a good representation of the vessel size and work scope across the industry including Crew Transfer Vessels Heavy Lift Vessels Rock Installation vessels Service Operation Vessels and Survey Vessels. ACP evaluated how many vessels with alternative fuels exist and how many global vessels are planned for construction or modification from 2024-2027 excluding China. ACP found that of the current fleet only 2% of these five vessel types have alternative fuels. Of these five vessel types under construction between 2024-2027 33% will be fueled by alternative fuels. And 7% of these vessels under modification will</p>	

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	<p>have the capacity to use alternative fuels. In total that means only 5% of the global market (excluding China) of these five vessel types will be fueled by alternative fuels. As offshore wind ambitions grow in both Europe the U.S. and other markets these vessels will be in short supply. With vessel availability already a challenge for U.S. projects pushing developers to only hire 5% of available vessels places undue burden on projects and is infeasible.[See original attachment for table titled Alternate Fuel Available by Supply Type]AMMMs AQ-2 encourages lessees to replace combustion engines with zero-emissions technology (fuel cell-electric or battery-electric) if feasible for vessels equipment and vehicles engaged in activities on the OCS. Similar to AQ-1 requiring a technical and/or economic feasibility analysis for not using these vessels places an undue burden on developers because of the lack of these vessels in the market both now and in future construction trends. ACP did a similar analysis for the availability of ESS and Shore Power capability of the same 5 representative vessel types in the current market and under construction and modification between 2024-2027. In the current market 5% of vessels have ESS capability 21% of those under construction and 10% of those under modification excluding China. In total looking at current supply and vessels under construction and modification 5% of vessels will have ESS capability.[See original attachment for table titled ESS]Shore power capacity is even less common. Current vessel availability with shore power is 1% of the global market. 4% of vessels under construction 2024-2027 will have shore power and 7% of vessels under modification. In total in 2027 only 2% of these 5 representative vessels will have shore power capacity.[See original attachment for table titled Shore Power]A programmatic NEPA review focused on a specific region is not the appropriate vehicle to test out new measures and receive feedback from stakeholders on feasibility. As demonstrated above these measures are infeasible unreasonable and requiring each lessee to prove their infeasibility during the project specific COP review places an undue burden on the industry. The onus should not be on the industry to justify why a measure is infeasible but instead the agency should demonstrate that the AMMMs result in reduced impacts.</p>	

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	These measures should be removed prior to the publication of the Final PEIS.	
BOEM-2024-0001-0342-0005	<p>Abbreviated Sound Field Verification (SFV) Checks (MUL29)</p> <p>The measure states that an Abbreviated SFV Check must be conducted for every pile at 750 m (1) to verify that the RSLl has been met and (2) to document that the measured sound levels do not exceed the injury and behavior thresholds. However the measure does not indicate what metric the Abbreviated SFV Check should be based on a single-strike SEL (SELs-s) [Footnote 3: In Europe the threshold is based on a SELs-s sound level at 750 m. If SELs-s is the intended metric BOEM must specify whether the mean or maximum SELs-s should be used for each pile.] or SELcum nor does it specify what method should be used to extrapolate that metric to distances of 1000 and 1500 m to confirm the RSLl has been met from 1 May 2026 to 30 April 2030 and various other distances for the Level A and B harassment zones. If BOEM intends to use the Abbreviated SFV Check to verify that the RSLl has been met then the SFV Check should be based on the SELcum metric and a second hydrophone should be placed (1) 1500 m from the foundation from 1 May 2026 to 30 April 2028 and (2) 1000 m from the foundation from 1 May 2028 to 30 April 2030. The measure also must stipulate how the operators should extrapolate the measured sound levels to the various Level A and B harassment zones [Footnote 4: e.g. by using the measured sound propagation loss from the most recent and/or applicable Thorough SFV Monitoring by comparing to the maximum measured sound level at 750 m from the most recent and/or applicable Thorough SFV and assuming sound propagation conditions are similar by comparing to the modeled sound level at 750 m etc.] when conducting Abbreviated SFV Checks in the final PEIS. The Commission recommends that BOEM incorporate all aforementioned changes into the final PEIS for New York Bight wind energy construction operation and decommissioning activities.</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p> <p>MUL-29 has been revised for clarification in the PEIS.</p>
BOEM-2024-0001-0422-0012	<p>MUL-29 Sound Field Verification ("SFV") Process Plan and Reporting Comment #10 on MUL-29</p> <p>Requiring sound field verification at every turbine location is unnecessary and cost prohibitive. This process will result in significant construction delays to projects and is not economically or</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs,</p>

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	<p>technically viable. A standardized sub-sample of turbine locations would be sufficient to determine the effectiveness of sound reduction mitigation measures and should be the approach described in this AMMM. Additionally BOEM should clarify that a single Monitoring Report would be required per this AMMM after all foundation installations are complete and not after each individual foundation installation. It will be extremely difficult to produce a single report with 48 hours of completion of all foundation installation and it is unclear why such a report is needed within such a short timeframe. Can BOEM explain the value of having the report so expeditiously? Attentive Energy recommends providing some flexibility in report timing (e.g. within 10 days) to make this AMMM more feasible. Attentive Energy also feels this measure could unintentionally increase exposure to stressors to marine mammals by unnecessarily extending construction time to accommodate repeated attempts to reduce sound to a specific level and because more extensive sound field verification requires additional vessels and equipment. Additional vessels in the field results in additional increased risk of collision with marine mammals and sea turtles as well as health safety and environmental risk exposure to vessel personnel a higher risk associated with operating multiple vessels in close proximity and higher emissions during construction. BOEM should weigh these factors against any additional protection that may result from stricter sound thresholds and SFV at each turbine location.</p>	<p>and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p> <p>MUL-29 has been revised for clarification in the PEIS.</p>
BOEM-2024-0001-0423-0007	<p>[bold: MUL-29] would require sound field verification (SFV) at every single pile during construction. This is a new and significantly costly requirement that would greatly increase construction times and the cost of the project. Where SFV is shown to be in line with modelled sound projections at the first few piles there is insufficient justification to requiring SVF at every other pile as its significant cost would yield very marginal benefits.</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p> <p>MUL-29 has been revised for clarification in the PEIS.</p>

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BOEM-2024-0001-0439-0076	<p>Measure ID: MUL-29 Measure Name: Sound Field Verification (SFV) Process Plan and Reporting Description: The purpose of the SFV Process is to (1) verify the RSLI has been reached and (2) document sound propagation from foundation installation for estimating distances to isopleths of potential injury and harassment to verify that the modeled acoustic fields were conservative enough to not underestimate the number of exposures of protected marine life to sounds over regulatory thresholds. Process SFV must be conducted at every pile at 2460 feet (750 meters) (Abbreviated SFV Check). Thorough SFV Monitoring (defined as recording along a minimum of two radials with at least one radial containing three or more recorders) must be conducted for the first three foundations of a project and when a foundation is to be installed with a substantially different set of values for key parameters including foundation type pile size installation method hammer energy rating water depth seabed composition and season. Further if levels measured in any SFV (Thorough or Abbreviated) imply the exceedance of authorized ranges to regulatory thresholds (specified by either the RSLI or approvals documents) Thorough SFV Monitoring must be conducted until SFVs from three consecutive foundations demonstrate adherence to the authorized levels following a foundation that exceeds said limit. Further the Lessee must comply with other Terms and Conditions directing action should SFV-measured ranges exceed those authorized. See Chapter 3 of BOEM's Nationwide Recommendations for Impact Pile Driving Sound Exposure Modeling and Sound Field Measurement for Offshore Wind Construction and Operations Plans for more information. SFV Plan The Lessee must submit an SFV Plan for review and written approval by BOEM and BSEE (TIMS) in consultation with NMFS and USACE (when applicable) 120 days before the planned commencement of field activities for pile-driving. The SFV Plan must be sufficient to assess sound propagation from the foundation and the distances to isopleths for potential injury and harassment as well as the RSLI when applicable. The measurements must be compared to the modeled Level A and Level B harassment zones for marine mammals (and the injury and behavioral disturbance zones for sea turtles and Atlantic sturgeon) and the plan should include the target modeled sound levels that</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p> <p>MUL-29 has been revised for clarification in the PEIS.</p>

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	<p>each monitored installation is expected to stay below. The SFV Plan should include approximations of the expected variation of the key parameters across the project and an estimate of how many Thorough SFV Monitoring locations will be required to cover this variation. The plan must describe how the Lessee will ensure that the locations selected for Thorough SFV Monitoring are representative of the rest of the foundations of that type to be installed. The plan must include an Abbreviated SFV check where at minimum a single recorder is placed 2460 feet (750 meters) from the installation of any foundation not requiring Thorough SFV Monitoring to ensure that inherent variability does not result in received levels above what was analyzed within the permitting/authorization/assessment/NEPA process or the RSL which is smaller. The plan must include measurement procedures and results reporting that meet ISO standard 18406:2017 (Underwater acoustics Measurement of radiated underwater sound from percussive pile-driving). The plan must include an example reporting template for both Thorough SFV Monitoring and Abbreviated SFV Check. All comments on the SFV Plan must be addressed to BOEM/BSEE's satisfaction before any pile-driving activities can commence. A copy of the approved SFV Plan must be in the possession of and followed by any Lessee designees operating under the authority of the approved COP and carrying out the requirements on site. The submission of raw acoustic data or data products associated with SFV to BOEM may be required. SFV Reporting Thorough SFV Monitoring reports must be submitted to BOEM BSEE (TIMS) NMFS and USACE (when applicable) within 48 hours of completion of foundation installation. Abbreviated SFV Check reports must also be submitted to BOEM BSEE (TIMS) NMFS and USACE (when applicable) but may be submitted in weekly batch reports as long as Abbreviated SFV Check measurements are in compliance with all applicable regulatory thresholds (RSL and/or harassment injury and behavior thresholds). Reports must include modeled and measured distances to isopleths for potential injury and harassment to marine mammals sea turtles and sturgeon. The Lessee is referred to the BOEM Nationwide Recommendations for Impact Pile- Driving Sound Exposure Modeling and Sound Field Measurement for Offshore Wind Construction and Operations Plans</p>	

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	<p>for other recommendations on what should be contained in the report. Previously Applied as a COP T&amp;C: Category:G T/EACP</p> <p>Comment: This process will result in significant construction delays to projects and is not economically or technically viable. See also comments above on MUL 22 and MMST-3 Requiring sound field verification (SFV) at every turbine location would be unnecessary and cost prohibitive. A standardized target sub-sample of turbine locations would be more than sufficient to determine the effectiveness of sound reduction mitigation measures. Empirical data compiled from the projects currently conducting SFV could be discussed at our proposed BOEM-industry forum and would inform a broader discussion on how best to incorporate lessons learned from early projects. This measure could also unintentionally exacerbate stressors on marine mammals. For example construction time could be extended unnecessarily to accommodate repeated attempts to reduce sound to a specific level (e.g. start-up test fail sound limit shut down add bubble curtain start-up fail by lesser degree shutdown and so on). Also more extensive sound field verification requires additional vessels and equipment. Additional vessels in the field results in additional Health Safety Security &amp; Environment (HSSE) exposure to personnel a higher risk associated with operating multiple vessels in close proximity increased risk of collision with marine mammals and sea turtles and higher emissions during construction. BOEM should weigh these factors against any minor additional protection if any that may result from stricter sound thresholds and SFV at each turbine location. SFV is also problematic because it doesn't take into account background anthropogenic sources that are picked up during the noise monitoring. The 48-hour reporting timeframe is also unreasonably short. These concerns highlight why BOEM must go through a robust guidance development process before imposing these measures on projects. A NEPA document focused on specific lease areas is not the appropriate venue for seeking feedback on such measures. This measure must be removed from consideration in the FEIS and instead BOEM should engage in a robust public guidance development process that includes a public comment period workshops and outreach to industry stakeholders.</p>	

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BOEM-2024-0001-0450-0071	<p>Measure ID and Name: MUL-29: Sound Field Verification (SFV) Process Plan and Reporting Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): "SFV Reporting Thorough SFV Monitoring reports must be submitted to BOEM BSEE (TIMS) NMFS [Underline: the Marine Mammal Commission (MMC)] and USACE (when applicable) within 48 hours of completion of foundation installation. Abbreviated SFV Check reports must also be submitted to BOEM BSEE (TIMS) NMFS and USACE (when applicable) but may be submitted in weekly batch reports as long as Abbreviated SFV Check measurements are in compliance with all applicable regulatory thresholds (RSL and/or harassment injury and behavior thresholds). Reports must include modeled and measured distances to isopleths for potential injury and harassment to marine mammals sea turtles and sturgeon. [Underline: Thorough SFV Monitoring reports and Abbreviated SFV Check reports must also be made publicly available within one month after their submission to BOEM and other relevant agencies]. The Lessee is referred to the BOEM Nationwide Recommendations for Impact Pile-Driving Sound Exposure Modeling and Sound Field Measurement for Offshore Wind Construction and Operations Plans for other recommendations on what should be contained in the report." Notes: We support measure MUL-29 which sets out sound field verification procedures for pile driving. We recommend that BOEM require submission of SFV reports to the Marine Mammal Commission (MMC) in addition to BOEM BSEE NMFS and USACE. We also recommend that BOEM add a requirement that lessees make SFV reports publicly available within one month of their submission to BOEM and other relevant agencies.</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p> <p>MUL-29 has been revised for clarification in the PEIS. BOEM is taking the recommendations into consideration for any additional potential changes in the future.</p>
BOEM-2024-0001-0439-0079	<p>Measure ID: MUL-38 Measure Name: Noise mitigation plan Description: Lessees must create a noise mitigation plan to reduce project noise that could potentially constitute a take as defined in the ESA or the MMPA of an endangered or threatened species or marine mammal. The intent of the noise mitigation plan is to ensure Lessees thoroughly assess and minimize potential impactful noise to the maximum extent practicable and that any government-established noise reduction targets (e.g. MUL- 22) are met. The noise mitigation plan may be submitted through the Lessee's initial COP</p>	<p>Thank you for your comment. After additional consideration, BOEM has removed MUL-38.</p>

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	<p>submission or subsequent updated versions but must be finalized prior to initiating construction activities. BOEM and BSEE will review the plan for sufficiency and acceptability. Any outstanding comments must be addressed by the Lessee before the plan is considered final. At a minimum the noise mitigation plan must include: (1) baseline sound characterization (predicted or measured) of their project area; (2) the types duration and levels of unmitigated noise the project will produce; (3) identification of any applicable government-established noise reduction targets; and (4) the operational measures noise abatement technologies and contingency plans (in the case of foreseeable issues) or similar that will be used to meet any existing established noise reduction targets or reduce the overall impact of any noise introduced into the marine environment. On a case-by-case basis BOEM may consider accepting a plan that does not meet established noise reduction targets or where such targets do not exist does not demonstrate reduction of impactful noise to the maximum extent practicable if the plan includes sufficient justification for why this is not possible. In these cases a requirement for compensatory mitigation may be considered. Previously Applied as a COP T&amp;C: Category: D T/EACP Comment: See also comments on MUL-22.This measure is duplicative of the required COP noise assessment and the MMPA LOA process in place to assess mitigation measures to reduce take and therefore should be removed. The PEIS intends to analyze measures that can be approved as terms and conditions of plan approval for individual project specific COPs. Since this measure dictates how a COP should be developed by its very nature it could not be implemented through terms and conditions of COP approval. Requirements for baseline conditions are concerning. Against what baseline would this be measured? The ocean is a noisy place that changes from day-to-day. In addition this measure could result in regulating DP vessel noise. IF DP vessels are determined to exceed noise reduction targets project installation could become technically and economically infeasible as DP vessels are essential for the construction of offshore wind projects.</p>	
BOEM-2024-0001-0450-0073	<p>Measure ID and Name: MUL-38: Noise mitigation plan Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion):"Lessees must create a noise</p>	<p>Thank you for your comment. After additional consideration, BOEM has removed MUL-38. Should BOEM reconsider this at a later date, it will consider your recommendations.</p>

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	<p>mitigation plan to reduce project noise that could potentially constitute a take as defined in the ESA or the MMPA of an endangered or threatened species or marine mammal. The intent of the noise mitigation plan is to ensure Lessees thoroughly assess and minimize potential impactful noise to the maximum extent practicable and that any government-established noise reduction targets (e.g. MUL-22) are met... At a minimum the noise mitigation plan must include: (1) baseline sound characterization (predicted or measured) of their project area; (2) the types duration and levels of unmitigated noise the project will produce; (3) identification of any applicable government established noise reduction targets; and (4) the operational measures noise abatement technologies and contingency plans (in the case of foreseeable issues) or similar that will be used to meet any existing established noise reduction targets or reduce the overall impact of any noise introduced into the marine environment. [Underline: The noise mitigation plan must consider items (1)-(4) for noise generated by construction activities including vessel noise and for noise generated during wind turbine operations including vessel noise] Notes: We support MUL-38 which requires lessees to create a noise mitigation plan to reduce project noise. We recommend that BOEM require lessees to consider in the noise mitigation plan noise generated during both the construction phase and the operations phase of offshore wind development including vessel noise at both phases.</p>	
BOEM-2024-0001-0422-0005	<p>MUL-4 Final cable protection in hardbottom Comment #3 on MUL-4 The wording of this AMMM is unclear. Per this AMMM does BOEM intend to make recommendations on the cable protection measures pre- or post-COP approval? A developer will seek to source cable protections measures before the COP is approved and understanding this recommendation as early as possible ideally prior to COP approval is important. Significant deviations from project design assumptions taken before COP approval about cable protection measures will impact project schedule and cost.' BOEM should also confirm the developer's role in determining the final cable protection measures. Finally BOEM should clarify when the "finalized benthic monitoring plan" is required to be completed. Is it post-COP approval?</p>	<p>Thank you for your comment. The AMMM measures identified in the Final PEIS may be required as conditions of approval for activities proposed by NY Bight lessees in their COPs through the COP review and approval process. For example, a finalized Fisheries &amp; Benthic Habitat Monitoring Plan (COMFIS-3) is a condition of COP approval and is driven by the EFH consultation process at the project-specific level. Cable-protection measures are also included in COMFIS-4, which is now identified as an RP that lessees are encouraged to follow. Note MUL-4 has been updated to clarify the language.</p>

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BOEM-2024-0001-0439-0059	<p>Measure ID: MUL-5 Measure Name: Low noise best practices</p> <p>Description: For onshore and offshore project activities and across all phases of construction and operations operators should use equipment technology and best practices that produce the least amount of noise practicable to avoid and minimize noise impacts on the environment. See the following as examples: low noise foundation (MUL-6) vessel noise reduction BMP (MUL-7) and the received sound level limit (MUL-22). Previously Applied as a COP T&amp;C: Category: VACP Comment: The PEIS indicates that this measure is voluntary. Voluntary measures should not be included in AMMMs. As Alternative C assumes adoption of all AMMMs as terms and conditions of plan approval for the purposes of the analysis these AMMMs are not in fact voluntary. Adoption of voluntary AMMMs through terms and conditions undermines the very voluntary nature of those measures. Onshore activities are regulated by state and local noise control requirements. This measure should be eliminated as it is too vague. See also comments on MUL-6 7 22.</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p> <p>MUL-5 is being analyzed as an RP within the PEIS.</p>
BOEM-2024-0001-0450-0018	<p>F. MUL-5 Low Noise Best Practices The NY Bight PEIS for offshore marine birds can be informed by several different avian mapping data products e.g. the Marine-life Data and Analysis Team (MDAT) marine bird relative density and distribution models [Footnote 70: Curtice C Cleary J Shumchenia E Halpin PN. 2019. Marine-life Data and Analysis Team (MDAT) technical report on the methods and development of marine-life data to support regional ocean planning and management. Prepared on behalf of the Marine-life Data and Analysis Team (MDAT).] the Northwest Atlantic Seabird Catalog the Manomet Bird Observatory (MBO) Seabird and Cetacean Assessment Program (CSAP) database [Footnote 71: Menza C Kinland BP Dorfman DS Poti M Caldow C (eds.). 2012. A Biogeographic Assessment of Seabirds Deep Sea Corals and Ocean Habitats of the New York Bight: Science to Support Offshore Spatial Planning. NOAA Technical Memorandum NOS NCCOS 141. Silver Spring MD. 224 pp.] and incidental records from eBird among various other sources. In combination these data reveal that the NY Bight and adjacent wind energy lease areas host a diverse assemblage of diving marine birds including sea ducks alcids and loons some or all of which occur primarily during the fall winter or spring months. Although sound</p>	<p>Thank you for your comment.</p> <p>Because seabirds have a similar hearing range as some marine mammal species, the mitigations targeting marine mammals necessarily afford some protection to seabirds, as well. As more information becomes available on noise impacts on seabirds, additional mitigations explicitly for impacts on seabirds will be considered.</p>

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	<p>mitigation measures during offshore wind activities are usually aimed at impacts on marine mammals sea turtles fishes and invertebrates the underwater hearing abilities for diving bird taxa are found to possess hearing thresholds in the frequency band 14 kHz (comparable to seals and toothed whales). [Footnote 72: Hansen KA Maxwell A Siebert U Larsen ON Wahlberg M. 2017. Great cormorants (<i>Phalacrocorax carbo</i>) can detect auditory cues while diving. <i>Science of Nature</i> 104:17; McGrew KA Crowell SE Fiely JL Berlin AM Olsen GH James J Hopkins H Williams CK. 2022. Underwater hearing in sea ducks with applications for reducing gillnet bycatch through acoustic deterrence. <i>Journal of Experimental Biology</i> 225:jeb243953.] Diving marine birds foraging &lt;100 km away from seismic operations change their foraging direction during acoustic disturbances and increase the distance between their feeding areas and the sound source. [Footnote 73: Pichegru L Nyengera R McInnes AM Pistorius P. 2017. Avoidance of seismic survey activities by penguins. <i>Scientific Reports</i> 7:18.] Indeed avoidance distances by diving seabirds to sounds generated from anthropogenic activities manifest at spatial scales up to tens of kilometers very similar to displacement distances reported in cetaceans during seismic surveys. [Footnote 74: Gordon J Gillespie D Potter J Frantz A Simmonds MP Swift R Thompson D. 2003. A review of the effects of seismic surveys on marine mammals. <i>Marine Technology Society Journal</i> 37:1634.] The existing monitoring framework for the NY Bight PEIS ignores potential adverse injuries from acoustic disturbances to diving birds that might arise from project construction and/or operations. [Footnote 75: Monitoring and mitigation for diving birds is nowhere mentioned in conjunction with underwater acoustic disturbances during project construction activities in the NY Bight PEIS e.g. BOEM 2024 p. G-13.] We refer to lethal or sublethal injury from underwater sound pressure waves caused by high intensity acoustic pulses not to avoidance or temporary displacements that arise solely from avian changes in behavior. Because seabird taxa sensitive to this impact are more prevalent during winter minimization activities like seasonal curtailment may be justified to abate harm. Capable of diving to 140 m depths [Footnote 76: Wanless S Harris JA Morris MP. 1988. Diving</p>	

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	<p>behaviour of guillemot <i>Uria aalge</i> puffin <i>Fratercula arctica</i> and razorbill <i>Alca torda</i> as shown by radio-telemetry. Journal of the Zoological Society of London 216:7381.] Razorbills especially are known to flush readily from loud noises [Footnote 77: Lavers J Hipfner JM Chapdelaine G. 2020. Razorbill (<i>Alca torda</i>). In: Birds of the World v.2. Billerman SM (ed) Cornell Lab of Ornithology Ithaca NY USA. <a href="https://doi.org/10.2173/bow.razorb.01">https://doi.org/10.2173/bow.razorb.01</a>] they can occur during winter in the waters of the NY Bight region [Footnote 78: Williams KA Stenhouse IJ Adams EM Connelly EE Gilbert AT Duron M. 2015. Integrating novel and historical survey methods: a comparison of standardized boat-based and digital video aerial surveys for marine wildlife in the United States chapter 12 p. 7. <a href="https://briwildlife.org/wp-content/uploads/2021/08/MABS-Project-Chapter-13-Williams-et-al-2015.pdf">https://briwildlife.org/wp-content/uploads/2021/08/MABS-Project-Chapter-13-Williams-et-al-2015.pdf</a>] and like other alcids they are vulnerable to both displacement and macro- avoidance. [Footnote 79: Robinson Willmott JC Forcey G Kent A. 2013. The Relative Vulnerability of Migratory Bird Species to Offshore Wind Energy Projects on the Atlantic Outer Continental Shelf: An Assessment Method and Database. Final Report to the U.S. Department of the Interior Bureau of Ocean Energy Management Office of Renewable Energy Programs. OCS Study BOEM 2013-207. 275 pp. ]Densities of diving birds peak during winter on inner and middle shelf habitats [Footnote 80: Figure 42 in Robinson Willmott J Forcey G Vukovich M McGovern S Clerc J Carter J. 2020. Ecological Baseline Studies of the US Outer Continental Shelf: Final Report. Gainesville FL. OCS Study BOEM 2021079 p. 39.] at least in this portion of the Atlantic OCS. Thus seasonal shifting of noisy operations may eliminate acoustic risks to diving birds. Other methods for sound abatement include: (1) establishing safety zones monitored by visual observers[Footnote 81: E.g. the scope of responsibilities for Protected Species Observers (PSOs) could be extended to cover marine birds. PSOs are already required in adjacent projects; see for example Ocean Wind 1 Offshore Wind Farm. 2023. Final Environmental Impact Statement Appendix H Mitigation and Monitoring pp. H-6 H-12.] or passive acoustics and that trigger shut-down or low-power operations if large diving marine bird flocks enter these zones (2) using noise reduction gear like bubble curtains around pile driving and (3)</p>	

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	deploying other noise-source modifications or changes to operational parameters such as soft starts. [Footnote 82: Erbe C Dunlop R Dolman S. 2018. Effects of noise on marine mammals. Pp. 277309 in Effects of anthropogenic noise on animals. Springer New York NY.]	
BOEM-2024-0001-0450-0066	Measure ID and Name: MUL-5: Low noise best practices Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): "For onshore and offshore project activities and across all phases of construction and operations operators should use equipment technology and best practices that produce the least amount of noise practicable to avoid and minimize noise impacts on the environment. See the following as examples: low noise foundation (MUL-6) vessel noise reduction [Strikethrough: BMP] (MUL-7) and the received sound level limit (MUL-22)." Notes: We support the recommendation that operators use low noise best practices for all project activities and across all phases of construction and operations. We recommend deleting the word "BMP" (best management practices) in referring to MUL-7. MUL-7 refers to IMO Guidelines which are not intended to function as technical "best management practices." The IMO Guidelines identify underwater radiated noise reduction approaches and provide a description of underwater noise management planning. Moreover if BOEM adopts the proposed changes to MUL-7 (see below) BOEM should reflect the new title for MUL-7 "underwater vessel noise management plans" in MUL-5 where it currently reads "vessel noise reduction."	Thank you for your comment. MUL-5 has been revised as an RP and BOEM will continue to monitor the state of the International Maritime Organization (IMO) guidelines.
BOEM-2024-0001-0450-0023	C. MUL-5 Low Noise Best Practices; MUL-24 Adaptive management for NMFS Trust Resources; MUL-38 Noise Mitigation Plan1. Mitigation of Noise from Operating Turbines The mitigation proposed by BOEM in its Draft PEIS does not contain measures specific to the reduction of noise from operating turbines. This omission is significant and should be remedied. Operational noise represents one of the principal sources of uncertainty in BOEM's environmental impact analysis. The agency while finding that turbine operations "would result in long-term low-level continuous noise in the project area" concludes that underwater noise would produce only negligible to minor impacts within "a	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs.

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	<p>relatively small radius" around the foundations. [Footnote 115: Draft PEIS at 3.5.6-66 to 3.5.6-67.] But BOEM provides only summary support for its conclusion and the available scientific literature is equivocal. Although Betke and Bellman (2023) in examining turbines up to 8 MW did not find that underwater noise trended upward with rated power (a proxy for turbine size) both Tougaard et al. (2020) and Stber and F. Thomsen (2021) looking at piles up to 6 MW did find a clear statistically significant relationship. [Footnote 116: Compare K. Betke and M.A. Bellman Operational underwater noise from offshore wind farms in A.N. Popper J. Sisneros A.D. Hawkins and F. Thomsen eds. The Effects of Noise on Aquatic Life (2023) with J. Tougaard L. Hermannsen and P.T. Madsen How loud is the underwater noise from operating offshore wind turbines? Journal of the Acoustical Society of America 148: 2855-93 (2020) and U. Stber and F. Thomsen How could operational underwater sound from future offshore wind turbines impact marine life? Journal of the Acoustical Society of America 149: 1791-95 (2021).] And while Holme et al. (2023) determined that background acoustic conditions such as from wind and shipping dominated variability in underwater noise at the wind farms they examined they also found that noise levels were higher within the wind farms' perimeter than outside it for uncertain reasons; and they did not perform a soundscape analysis which would more accurately have represented the additive effect of the turbines' noise across the time domain. [Footnote 117:C.T. Holme M. Simurda S. Gerlach and M.A. Bellman Relation between underwater noise and operating offshore wind turbines in Popper et al. eds. The Effects of Noise on Aquatic Life supra.]The fact remains that the European turbines examined in these papers and others are substantially smaller and produce less nominal power than the new generation of 10 MW-plus turbines intended for the New York Bight. Furthermore these European turbines were built in the habitat of coastal odontocetes specifically harbor porpoises and bottlenose dolphins rather than in that of the low- frequency cetaceans that are of greatest concern for East Coast wind development severely limiting the value of what few studies of post-installation impacts are available. It may be that turbine operation will have little effect on baleen whales fish and sea turtles; on the other hand operational</p>	<p>MUL-5 is an RP and, upon further consideration, MUL-24 and MUL-38 have been removed.</p> <p>References cited in this comment have been incorporated into the PEIS. Specific technology will be considered and analyzed at the COP-specific NEPA stage.</p>

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	<p>noise could displace prey degrade foraging or reduce habitat use to some degree over a wind farm's expected 50- year lifetime (with repowering).BOEM requires that lessees use "best practices that produce the least amount of noise practicable" across "all phases of construction and operations" (MUL-5) and prepare a noise mitigation plan "to reduce project noise that could potentially constitute a take" of an endangered species or marine mammal (MUL-38). [Footnote 118: Draft PEIS at G-19 G-29 to G-30.] While we strongly support this approach we recommend that BOEM provide additional clarity for mitigating and managing operating turbine noise consistent with existing knowledge. First we recommend that BOEM require use of direct-drive motors. Stber and Thomsen (2021) in examining acoustic data from some 16 studies of operating wind farms found that direct-drive motors are highly likely to generate less underwater noise than the gear boxes found in earlier generations of turbines. [Footnote 119: Stber and Thomsen How could operational underwater sound supra.] The magnitude of the noise reduction could be significant: A turbine used in Vineyard's Block Island Wind Farm off Rhode Island produced broadband pressure levels that were some 10 dB below those produced by similarly sized geared turbines at the C-Power site in Europe. [Footnote 120: Id. The relative benefit of direct-drive motors is corroborated by Betke and Bellman (2023) supra albeit at lower levels of noise abatement.] Direct-drive motors are now generally employed by offshore wind developers as BOEM recognizes in its Draft PEIS. [Footnote 121: Draft PEIS at 3.5.7-24.] The agency should clarify that they are required. For proposed new measure MUL-40 addressing operational noise see Attachment 2 table 2. Second we recommend that BOEM require lessees to consider engineering solutions that acoustically decouple the turbine from the mast and platform as part of their obligations under MUL-5 and MUL-38. Such an addition would ensure consideration of a problem that until recently has largely been overlooked and would signal to potentially interested engineering companies (including some that our groups have spoken with) that BOEM is interested in the development of such measures. A precautionary approach is necessary here for it is surely far easier to mitigate potential acoustic impacts through</p>	

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	<p>turbine design and engineering than through adaptive management. For proposed new measure MUL-40 addressing operational noise see Attachment 2 table 2. Third and finally we recommend that BOEM as part of its adaptive management plan commit to periodic independent analysis of the data produced through the post-installation monitoring requirements and one or more expert workshops to provide additional review and reflection. Independent analysis and review are not required under the proposed adaptive management measure (MUL-24) which places full responsibility for defining management thresholds integrating new information and taking appropriate action with the lessee. [Footnote 122: Draft PEIS at G-22.] The same commitments would also improve management of other stressors with uncertain long-term consequences such as physical disturbance and down-current hydrological effects. For proposed changes to measure MUL-24 see Attachment 2 table 1.</p>	
BOEM-2024-0001-0450-0026	<p>F. MUL-5 Low Noise Best Practices; MUL-7 Vessel Noise Reduction Guidelines</p> <p>The International Maritime Organization issued Revised Guidelines for the reduction of underwater radiated noise from shipping to address adverse impacts on marine life (MEPC.1/Circ.833) that went into effect on October 1 2023 (hereafter "Revised Guidelines"). The Revised Guidelines are applicable to any ship and provide guidance on underwater radiated noise reduction approaches as well as on the development of underwater radiated noise management plans for ships. The purpose of the underwater noise management plans is to achieve quieter vessels (in design and/or operation) by encouraging the development of vessel noise targets the identification of design or operational measures that can achieve those targets and the routine monitoring of ship operations to ensure ongoing alignment or improvement of the targets. MUL-7 currently asks lessees on a voluntary basis to follow the most current IMO Guidelines on noise; however the lack of specificity here casts doubt that any real mitigation would be achieved through its application and even if it were it would be difficult to track. MUL-7 should be strengthened to [Bold: require] lessees to create an underwater vessel noise management plan for each vessel used in construction operations and maintenance. The Revised Guidelines</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p> <p>MUL-5 and MUL-7 are being analyzed as RPs within the PEIS rather than T&amp;Cs. MUL-5 has been updated to remove RP from the language as requested and MUL-7 has been updated for clarification. Regarding a noise management plan, BOEM is taking this into consideration.</p>

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	<p>thoroughly describe and provide templates for such plans which are not meant to be onerous but rather to create the opportunity for vessel owners and operators to critically evaluate their vessel design (if relevant) and operations for quieting opportunities. Having such plans in place could also streamline future developments (e.g. by the IMO) to develop regulatory guidance on vessel noise. To be effective and to ensure alignment with international guidance to minimize vessel noise MUL-7 must reflect the intent of the IMO to encourage the adoption of underwater noise management planning for all vessels. For proposed changes to measure MUL-7 see Attachment 2 table 1. With regard to MUL-5 we support the recommendation that operators use low noise best practices for all project activities and across all phases and appreciate the direct reference to vessel noise reduction. However we find it problematic that MUL-5 references MUL-7 (the IMO Revised Guidelines) as "best management practices." The Revised Guidelines do not identify one or more "best management practices" in the usual sense of that term e.g. an explicit set of proven technologies or measures that has been tested and determined to meet defined standards or criteria. Rather they identify various approaches to reduce underwater vessel noise and provide a description of underwater noise management planning. For this reason we urge BOEM to delete reference to the term "BMP" in MUL-5 ("vessel noise reduction BMP"). Additionally it would be appropriate to add reference to the new Mitigation Measure we propose above to MUL-5. For proposed changes to measure MUL-5 see Attachment 2 table 1.</p>	
BOEM-2024-0001-0352-0008-b	<p>MUL-6: Low noise foundations We generally support this AMMM measure; however careful consideration should be given to the greater amount of impacted habitat with some foundation types that do not require pile driving. This may be more appropriate as a project-specific consideration rather than a programmatic measure.</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p>

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		MUL-6 is being analyzed as an RP within the PEIS rather than an AMMM measure.
BOEM-2024-0001-0439-0060	<p>Measure ID: MUL-6 Measure Name: Low noise foundations</p> <p>Description: BOEM encourages the use of low noise practices in foundation installation. The use of non-pile-driving foundation types should be considered first. If not practicable then the use of the best available quieting technology should be applied to reach the received sound level limit (MUL-22). Previously Applied as a COP T&amp;C: Category: G D VACP Comment: The PEIS indicates that this measure is voluntary. Voluntary measures should not be included in AMMMs. As Alternative C assumes adoption of all AMMMs as terms and conditions of plan approval for the purposes of the analysis these AMMMs are not in fact voluntary. Adoption of voluntary AMMMs through terms and conditions undermines the very voluntary nature of those measures. This measure also constitutes COP guidance and it is unclear where BOEM has regulatory authority to determine which foundation type a lessee should select prior to any environmental review. This is also duplicative of BOEM regulations at 30 CFR 585.621 (e) which requires that an applicant demonstrate that the COP uses the best available and safest technology. Best available and safest technology is defined in 30 CFR 585.113 as the "best available and safest technologies that BOEM determines to be economically feasible wherever failure of equipment would have a significant effect on safety health or the environment." This measure therefore duplicates the existing regulatory requirement without the regulatory safeguard of economic feasibility and without needing to demonstrate that failure of equipment would have a significant effect on safety health or the environment. In addition this measure is duplicative of the alternatives development process in which the technical and economic feasibility of alternatives are measured using the criteria established in the "Process for Identifying Alternatives for Environmental Reviews of Offshore Wind Construction and Operations Plans pursuant to the National Environmental Policy Act". This measure serves to circumvent the process established to identify alternatives and creates a separate process without a public process. BOEM should eliminate this measure and should instead rely on its established processes for alternatives identification and</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p> <p>MUL-6 is being analyzed as an RP within the PEIS rather than an AMMM measure.</p>

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	environmental review. If BOEM wishes to create new guidance for COP development it would need to go through a public process to revise current COP guidance.	
BOEM-2024-0001-0450-0067	<p>Measure ID and Name: MUL-6: Low noise foundations Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): "BOEM encourages the use of low noise practices in foundation installation. The use of non-pile-driving foundation types should be considered first. If not practicable then the use of the best available quieting technology should be applied to reach the received sound level limit (MUL-22).[Underline: Lessees who choose not to use quiet foundation types for any project turbines must submit a report to BOEM providing a detailed rationale for this choice including a description of any physical engineering environmental economic or supply chain barriers to using quiet foundation types within the project area. Such report excluding any proprietary material must be made publicly available.]"Notes: We support measure MUL-6 which encourages the use of non-pile-driving foundation types. We recommend that BOEM add a requirement that lessees who do not use any quiet foundations for project turbines (i.e. those who use pile driving for all project turbines) submit a report providing a rationale. This reporting requirement will encourage lessees to fully consider use of quiet foundations and will provide BOEM and the public with information about any obstacles to use of quiet foundations.</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p> <p>MUL-6 is being analyzed as an RP within the PEIS rather than an AMMM measure. Foundations proposed are project specific and will be analyzed in COP-specific NEPA analysis. This RP has been updated to include submission of a report providing rationale for why non-pile-driving foundations are not possible, if non-pile-driving foundations are not used.</p>
BOEM-2024-0001-0450-0022	<p>B. MUL-6 Low Noise Foundations; MUL-22 Received Sound Level Limit (RSL); MUL-29 Sound Field Verification (SFV) Process Plan and Reporting</p> <p>1. Mitigation of Noise from Impact Pile Driving BOEM proposes to establish reasonable limits to the noise produced by turbine installation. Developers are directed to consider using alternative foundation types such as suction buckets and gravity-based foundations; and where such foundations are not practicable to employ "best available quieting technology" sufficient to achieve a sound level limit set forth by the agency. [Footnote 100: Draft PEIS at G-19 (MUL-6).] Those limits are progressive: voluntary from May 2025 mandatory from May 2026 and requiring continued improvement such that from May 2030 sound levels are not to</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs. MUL-6 is being analyzed as an RP within the PEIS rather than an AMMM measure. MUL-22 and</p>

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	<p>exceed criteria resulting in permanent hearing loss at distances beyond 750 meters from the foundation. [Footnote 101: See Draft PEIS at G-21 to G-22 (MUL-22).][<b>Bold:</b> Our organizations strongly support BOEM's approach to mitigating noise from turbine installation. Indeed we believe its proposed approach is absolutely essential to meeting the goals set forth in the agency's joint North Atlantic Right Whale and Offshore Wind Strategy[Footnote 102:See BOEM and NOAA Fisheries North Atlantic Right Whale and Offshore Wind Strategy at 44 (2023).] as well as the broader commitment of this administration to sustainable offshore wind. We take its inclusion in the final PEIS as a litmus test of that commitment.]As BOEM knows noise from impact piling constitutes the highest-amplitude noise produced during wind farm development. Without sufficient mitigation piling can cause auditory injury in cetaceans particularly in those exposed over the course of a single installation at distances of several kilometers (see Draft PEIS at 3.5.6-62 to 3.5.6-63); and can affect important marine mammal behaviors over much wider areas of ocean. [Footnote 103:See e.g. J.F. Borsani C.W. Clark B. Nani and M. Scarpiniti Fin whales avoid loud rhythmic low-frequency sounds in the Ligurian Sea Bioacoustics 17: 161-63 (2008); J. Tougaard J. Carstensen J. Teilmann H. Skov and P. Rasmussen Pile driving zone of responsiveness extends beyond 20 km for harbor porpoises (<i>Phocoena phocoena</i> (L.)) Journal of the Acoustical Society of America 126(1): 1-14 (2009).] These risks are of particular concern for North Atlantic right whales which are increasingly found south of New England outside the winter season. [Footnote 104: See e.g. G.E. Davis et al. Long-term passive acoustic recordings track the changing distribution of North Atlantic right whales (<i>Eubalaena glacialis</i>) from 2004 to 2014 Scientific Reports 7: 13460 (2017); D.P. Salisbury C.W. Clark and A.N. Rice Right whale occurrence in the coastal waters of Virginia U.S.A.: Endangered species presence in a rapidly developing energy market Marine Mammal Science 32(2): 508-19 (2016).] They are also of concern for a number of other vulnerable baleen whale populations that are experiencing significant habitat displacement due to climate change or perhaps relatedly are undergoing an unusual mortality event. [Footnote 105: G.E. Davis et al. Exploring movement patterns and changing distributions of baleen whales in</p>	<p>MUL-29 have been revised for clarification in the PEIS. After further consideration, MUL-38 was deleted from the PEIS.</p>

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	<p>the western North Atlantic using a decade of passive acoustic data Global Change Biology 26: 4812-40 (2020); NMFS "2016-2024 Humpback Whale Unusual Mortality Event along the Atlantic Coast" available at <a href="https://fisheries.noaa.gov/national/marine-life-distress">fisheries.noaa.gov/national/marine-life-distress</a> (accessed Feb. 2024).] Noise abatement is perhaps the single most effective means of addressing these risks. In the German North Sea the combination of near-pile and far-pile abatement systems can reduce broadband sound energy levels by over 20 dB at least in water depths up to 40 meters. [Footnote 106: M.A. Bellman A. May T. Wendt S. Gerlach P. Remmers and J. Brinkmann Underwater noise during percussive pile driving: Influencing factors on pile-driving noise and technical possibilities to comply with noise mitigation values at 106 107 (2020).] That degree of reduction makes a substantial difference in take numbers. One 2015 study which applied NMFS' then-current take thresholds in a simulation of marine mammal exposures concluded that a monitoring-based mitigation system using multiple visual observers would be less effective than a minimal 3-dB noise abatement system at reducing acoustic injury from seismic airgun surveys. [Footnote 107: R. Leaper S. Calderan and J. Cooke A simulation framework to evaluate the efficiency of using visual observers to reduce the risk of injury from loud sound sources Aquatic Mammals 41(4): 375-87 (2015).] And of course systems based on visual observations cannot mitigate exposures beyond a short distance from the foundation across the much larger expanse of ocean where the vast majority of takes occur. Until now BOEM has required lessees to achieve pre-defined targets for broadband noise reduction typically 10 dB or greater. That approach however does not account for the trend towards larger and larger piles which require greater strike energy to drive and correlate with higher received sound levels. [Footnote 108: Bellmann Underwater noise during percussive pile driving supra at 57.] These increases begin to taper off as turbine diameters expand beyond 6 and 7 m [Footnote 109: See id. at 56 (fig. 13).] but still should be addressed with a consistent standard if BOEM aims to reduce the distances over which low- frequency cetaceans can experience auditory injury. Moreover the agency's current approach where reduction targets are occasionally ratcheted up as technology</p>	

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	<p>improves provides little predictability for lessees who do not know what standards may be required in future COPs. Just as importantly it has little ability to drive innovation since noise abatement companies do not know what future specifications lessees may be required to meet. Nor is it sufficient for BOEM to rely on a generalized "best available technology" standard. Technology development has been driven since 2010 by the German standard for impact-piling noise; and while that standard has ably demonstrated how noise limits can spur significant innovation in the field it was originally focused on reducing auditory impacts on high-frequency cetaceans particularly harbor porpoises and has lagged in its reduction of low-frequency noise. This lag can readily be found in spectral analyses of noise abatement systems. For example in the spectrograph that Bellmann et al. (2020) provide of noise from unmitigated and unmitigated monopiles in the German EEZ substantially less noise reduction is achieved below 1 kHz; a similar outcome can be seen in specific noise abatement systems used in the North Sea. [Footnote 110: See id. at 109 111 (figs. 32 and 33).] Relying on a generalized best available technology standard will not result in improvements in the frequencies of greatest concern for North Atlantic right whales and other baleen whales. BOEM's noise limits are based both on its synthesis of acoustic modeling from various COPs and on the European experience with noise reduction. [Footnote 111:See BOEM BOEM proposed quieting performance target (2022) (paper presented at Offshore Wind Noise Reduction Workshop convened Dec. 2022 by the U.S. Department of Energy).] Based on that analysis the majority of assessed projects would achieve the May 2026 limit and some would already achieve the furthest limit which will not apply until May 2030. The agency's standards are appropriate and achievable. That said BOEM proposes to provide lessees with the opportunity for an exemption to be considered on a case-by-case basis where "meeting the [limit] is not technically and commercially practicable." [Footnote 112:Draft PEIS at G-22 (MUL-22). See also Draft PEIS at G-29 to G-30 (MUL-38) (articulating a similar case-by-case consideration for noise mitigation plans that do not meet noise reduction targets).] BOEM's proposed approach is essential appropriate and entirely in line with the</p>	

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	<p>general movement in ocean noise policy towards noise abatement. [Footnote 113: On the last point see e.g. J.A. Lee and B.L. Southall Practical approaches for reducing ocean noise associated with offshore renewable energy development (2022) (report of multi-stakeholder workshop convened by the Global Alliance for Managing Ocean Noise demonstrating inter alia strong support for noise minimization as the most promising mitigation approach).] We strongly support BOEM's use of sound level limits as an integral part of its mitigation strategy. Improved Sound Field Verification Process for Impact Pile Driving Noise generated by impact pile driving of turbine foundations is one of the major concerns for marine mammals and other marine life during the construction of offshore wind. A rigorous sound field verification (SFV) process is required to accurately measure the level of noise produced during impact pile driving the effectiveness of any noise abatement systems applied and adherence to the newly proposed BOEM received sound level limit (RSL) requirements (MUL-22) or other required regulatory noise thresholds. We are highly supportive of BOEM's improved sound field verification process as proposed in the Draft PEIS (MUL-29) as well as the final North Atlantic Right Whale and Offshore Wind Strategy. [Footnote 114: BOEM and NOAA Fisheries. North Atlantic Right Whale and Offshore Wind Strategy (Jan. 2024) at 45-46.] In brief BOEM is proposing to conduct "Thorough SFV Monitoring" (defined as recording along a minimum of two radials with at least one radial containing three or more recorders) on the first three foundations of a project as well as when a foundation is expected to differ substantially in key parameters that may significantly affect the noise output during impact piling. Thorough SFV Monitoring is intended to prove adherence to authorized ranges to regulatory thresholds (specified by the RSL or other approvals documents) and will also inform the optimization of any noise abatement systems or other noise reduction technology deployed. An "Abbreviated SFV Check" must then be conducted at all other piles at 750 meters from the pile driving site to monitor for any deviation in adherence to the required regulatory noise thresholds (e.g. due to a reduction in noise abatement system effectiveness). If the Abbreviated SFV Check detects such deviation Thorough SFV Monitoring must again be</p>	

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	<p>conducted until SFVs from three consecutive foundations demonstrate adherence to authorized levels following a foundation that exceeds said limit. An Abbreviated SFV Check will be extremely beneficial in providing regulatory oversight and also key learnings about the design and effectiveness of noise abatement systems for piles driven in U.S. waters (e.g. the effect of local oceanographic conditions on system effectiveness or the influence of larger diameter piles and higher energy impact hammers). We recognize that additional SFV monitoring requirements may require more real-time decision making on the part of developers technicians and agency staff during the construction period. In order to avoid unnecessary delays that may negatively impact a project's construction schedule we recommend BOEM work with NOAA and BSEE to develop clear chains of communication and decision trees that clearly specify an efficient process and remedy in the case that SFV monitoring indicates a deviation from the specified regulatory thresholds. We recommend BOEM detail this process in the Final PEIS. Timely reporting of SFV monitoring is also a top priority. BOEM is proposing to require the submission of SFV Monitoring Reports to BOEM BSEE (TIMS) NMFS and USACE (when applicable) within 48 hours of completion of foundation installation. Abbreviated SFV Check reports may be submitted in weekly batch reports assuming measurements are in compliance with all applicable regulatory thresholds. It is unstated in the Draft PEIS the reporting timeline when an Abbreviated SFV Check indicates a foundation installation is out of compliance with regulatory requirements. We recommend BOEM require immediate reporting in that instance. When determining a timeline for report submission we also recommend that BOEM make certain that the proposed reporting requirements are timely enough to prevent a subsequent foundation from being installed with noise levels that may be out of regulatory compliance. For example several developers are proposing to drive multiple piles per day either consecutively or simultaneously. In this case a 48-hour reporting period may be insufficient. In addition to the agencies listed above BOEM should also require submission of the SFV Monitoring Reports to the Marine Mammal Commission as the independent agency tasked with ensuring compliance to the MMPA.</p>	

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	Transparency is key to shoring up public trust in the offshore wind industry as well as related agency decision making. We strongly recommend that all SFV Monitoring Reports be made publicly available within one month of their submission to BOEM and other relevant agencies. For proposed changes to measure MUL-29 see Attachment 2 table 1.	
BOEM-2024-0001-0439-0061	<p>Measure ID: MUL-7 Measure Name: Vessel noise reduction guidelines Description: The Lessee should to the extent reasonable and practicable follow the most current International Maritime Organization's (IMO) Guidelines for the reduction of underwater radiated noise including propulsion noise machinery noise and dynamic positioning systems of any vessel associated with the project. Previously Applied as a COP T&amp;C: Category: V T/E D BACP Comment: The PEIS indicates that this measure is voluntary. Voluntary measures should not be included in AMMMs. As Alternative C assumes adoption of all AMMMs as terms and conditions of plan approval for the purposes of the analysis these AMMMs are not in fact voluntary. Adoption of voluntary AMMMs through terms and conditions undermines the very voluntary nature of those measures. Implementation of a vessel sound emissions reduction measures appears both unnecessary and impractical. The relative amount of vessel sound associated with offshore wind is minimal. Based on estimates from MarineTraffic.com offshore wind vessels account for less than 2% of all offshore vessel traffic. Even though vessel traffic would increase during construction and operations activities it still represents a very small percentage of overall vessel traffic. Given that offshore wind accounts for such a small percentage of marine traffic implementation of the sound emissions reductions will provide no measurable protection to species and will instead add to the burden of the offshore wind industry and ratepayers. In addition this would not be feasible for the projects currently in the permitting pipeline (including the NY Bight lessees) as they are already making procurement decisions and entering contracts with vessels and because of the limited vessel availability due to the nascent U.S. supply chain and Jones Act requirements. This measure is also attempting to implement guidelines that are USCG's responsibility. The attempt to meet</p>	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs. MUL-7 is being analyzed as an RP within the PEIS rather than an AMMM measure and has been updated for clarification.

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	national and international standards (IMO standards) is outside BOEM's jurisdiction and is not appropriate for BOEM to use NEPA mitigations to enforce compliance with those standards. Instead BOEM should coordinate with USCG NOAA and related agencies to ensure that its ROD is consistent with applicable environmental laws and consultations.	
BOEM-2024-0001-0450-0068	Measure ID and Name: MUL-7: [ <del>Strikethrough: Vessel noise reduction guidelines</del> ] [ <u>Underline: Underwater vessel noise management plans</u> ] Proposed Changes to Measure Description ( <u>underlined text indicates addition; strikethrough text indicates deletion</u> ): "The Lessee [ <del>Strikethrough: should to the extent reasonable and practicable</del> ] [ <u>Underline: must</u> ] [ <del>Strikethrough: follow the most current</del> ] [ <u>Underline: create an underwater vessel noise management plan for each vessel used in construction operations and maintenance. The management plan(s) should to the extent practicable include a description of underwater vessel noise targets identified for each vessel (this may include unique targets when they become available for vessels operating dynamic positioning systems) how such targets will be achieved and the periodic monitoring that will ensure continued achievement of the target. (Where lessees are chartering vessels the underwater vessel noise management plans should describe the lessees' selection of quiet vessels and/or the operational measures chartered vessels will implement to minimize vessel noise both during transit and operations.) Lessees are encouraged to consult the</u> ] International Maritime Organization's (IMO) [ <u>Underline: Revised</u> ] Guidelines for the reduction of underwater radiated noise [ <u>Underline: from shipping to address adverse impacts on marine life MEPC.1/Circ.833 (2023)</u> ]. [ <del>Strikethrough: including propulsion noise machinery noise and dynamic positioning systems of any vessel associated with the project</del> ]. [ <u>Underline: BOEM and BSEE will review the plan for sufficiency and acceptability. Any outstanding comments must be addressed by the Lessee before the plan is considered final. The plan may be submitted as part of the Noise mitigation plan (MUL-38).</u> "]Anticipated enforcing agency: [ <del>Strikethrough: Voluntary</del> ] [ <u>Underline: BOEM and BSEE</u> ] Notes: We recommend that BOEM strengthen MUL-7 by requiring lessees to create an underwater	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs. MUL-7 is being analyzed as an RP within the PEIS rather than an AMMM measure and has been updated for clarification. If this is analyzed at the project stage, additional details can be considered. Upon further consideration, MUL-38 has been removed.

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	vessel noise management plan for each vessel used in construction operations and maintenance.	
BOEM-2024-0001-0446-0002	<p>Avoidance of Underwater Noise From Impact Pile-Driving Should be a Prioritized AMMMBOEM affirms that its "approach to mitigation is to first avoid potential impacts and then to mitigate unavoidable impacts such that the severity or duration of those impacts is minimized to the extent practicable." See Vol. I Sec. 1.9 at 1-11. But the AMMM measures in the dPEIS do not prioritize the avoidance step of the mitigation hierarchy relative to the generation of noise associated with vibratory or impact pile-driving. The mitigation hierarchy provides a framework for offshore wind to deliver biodiversity benefits and climate change mitigation. The hierarchy sets avoidance as the first and most important step to project development. Avoiding impacts to priority habitat features and species is best achieved in the wind energy area selection phase and then at the project-level in the initial design phase (foundation technology selection micro-siting project layout construction scheduling). It is paramount to sequentially and iteratively apply the established mitigation hierarchy throughout the life of a project with the goal of achieving No Net Loss (NNL) for priority species and habitat at the project-level. Although the dPEIS addresses underwater noise and acoustic impacts it does this primarily by recommending measures to "reduce impacts from noise" and to "reduce impacts from pile-driving on mobile species." See Vol. II Sec. J.3.3.1 at J-10. The dPEIS includes a lengthy list of AMMM measures (previously required in COPs) that are designed to "reduce" not to "avoid" impacts such as: soft-start techniques sound attenuation (double bubble curtains) and near field attenuation devices. See Vol. I Sec. 3.5.5.5.1 at 3.5.5-49. For example the acoustic assessment plan found in Appendix J describes the physics of underwater sound and assesses the propagation of sound relative to sound source. It classifies the noise from sources such as vessels (including operations and maintenance general transit and acoustic positioning) geophysical and geotechnical surveying drilling site preparation trenching and unexploded ordinance detonations. Yet the only sound source classified for construction and installation methods is for impact and vibratory pile-driving. See Vol. II Appendix</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs. MUL-6 is being analyzed as an RP within the PEIS rather than an AMMM measure and has been updated for clarification and to include a recommendation for lessees to provide justification as to why they did not select low-noise foundations, if applicable. MUL-22 has been revised for clarification in the PEIS and, upon further consideration, MUL-38 (noise mitigation plan) has been removed.</p>

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	<p>J at J-9. No other construction and installation foundation technology was considered or assessed. AMMM measure MUL-28 requires developers to create an underwater noise mitigation plan with the purpose of "assessing and minimizing potential impactful noise to the maximum extent practicable." Additional discussion of the noise-related AMMMs and how they may reduce (not avoid) noise impacts can be found in Vol. II Appendix J at 3-5.7-49. The dPEIS lists nearly fifty AMMM measures that are designed for the protection of marine mammals and other wildlife from vessel strikes entanglement and noise that may be associated with offshore wind development. Nearly half of these proposed AMMM measures are intended as noise mitigation for marine mammals. The association of such a significant number of AMMM measures with noise mitigation begs the question: is the avoidance of acoustic impacts associated with pile-driving properly prioritized? Although in Appendix G BOEM does "encourage the use of low noise foundations" and states that "the use of non-pile driving foundation types should be considered first" these are listed as voluntary AMMM measures. See MUL-6 at G-19. BOEM's inclusion of a physical distance limit for injurious sound to baleen whales clearly establishes BOEM's interest in reducing the sound fields generated during impact pile-driving over time. See Appendix G J MUL-22 re: the Received Sound Level Limit (RSSL). TNC has previously commented to BOEM that the initial goal of monitoring sound propagation is to establish pile-driving noise thresholds aimed at avoiding both physiological and behavioral impacts to marine species especially from cumulative noise exposure resulting from temporal or spatial project construction overlaps. The establishment and inclusion of the RSSL in the dPEIS is meaningful progress. Ultimately this data will be used to steer developers toward choosing a foundation type that avoids these physiological and behavioral impacts altogether at some future point in time but this is not the only way to elevate quiet foundations as the best first choice. The AMMM measures in Appendix G should demonstrate how developers can design their projects to avoid impacts and the costly and time-consuming mitigation measures that come with not avoiding those impacts. Avoiding exposure of marine wildlife to pile-driving noise unequivocally represents the best practice. Pile-driving</p>	

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	noise is anticipated to have impacts on all taxa of marine life yet by focusing on minimization and mitigation as opposed to avoidance the emphasis is largely on North Atlantic Right Whales and to a lesser extent large whales whereas avoidance would benefit all marine life including but not limited to protected species. As written the dPEIS essentially classifies the avoidance of construction and installation noise associated with impact pile-driving as a voluntary AMMM measure.	
BOEM-2024-0001-0446-0003	<p>[<b>Underline:</b> The dPEIS Should Incentivize Avoidance of Underwater Noise From Impact and Vibratory Pile-Driving by Clearly Outlining Anticipated Mitigation Requirements Associated with the Different Foundation Technologies.] BOEM is soliciting feedback on AMMM measures related to measuring monitoring and reducing noise and its impacts on marine life. Specifically BOEM is seeking information on techniques and procedures that may be helpful to meet any marine noise reduction targets or to reduce the impact of any noise introduced into the marine environment; and what criteria BOEM should consider in determining whether a specific project could be exempted from a noise reduction target for the NY Bight and future projects. See Vol. II Appendix I Sec. I.4 at I-23. Clear descriptions of the available foundation types preferred depths and geologic conditions and the potential associated impacts and corresponding mitigation for each respective foundation technology will inform and inspire not only developer decision-making relative to technology determinations but could also act as criteria of a sort for exempting a specific project from a noise reduction target and related mitigation. BOEM's 2021 white paper entitled Comparison of Environmental Effects from Different Offshore Wind Turbine Foundations[Footnote 1: Horwath (ICF) et al. Comparison of Environmental Effects from Different Offshore Wind Turbine Foundations OCS Study BOEM 2021-053. 2021 This white paper was intended to be incorporated by reference in future NEPA documents but is not mentioned in the dPEIS.] began this foundation- type analysis and included a table (Table ES-1) that listed preferred depths and site conditions needed for various foundation types. [Footnote 2: Preferred depths and site conditions should be updated as technologies evolve and also informed by developer expertise</p>	Thank you for your comment. A description of non-pile-driving methods is provided in Appendix J, Section J.3.7, of the Final PEIS, which encourages developers to use low-noise foundation types and apply noise-abatement systems where possible. For this PEIS, specific water depths and site conditions are unknown, so all possible foundation types are included in the RPDE.

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	relative to applied technologies.] This table could be expanded to more clearly define anticipated impacts and associated mitigation per foundation type. As BOEM addresses this missing data point for the final PEIS it would be incredibly helpful for BOEM to describe the process it uses for determining which mitigation measures align with which foundation technologies. TNC strongly recommends that the relevant federal agencies including NOAA and NMFS work together to achieve this outcome for the final PEIS by coordinating and agreeing on corresponding mitigation requirements for different foundation technologies.	
BOEM-2024-0001-0450-0025	E. MUL-41 Proposed New Mitigation Measure for Quieter Vessels Vessel traffic has the potential to contribute significantly to excess continuous noise levels in offshore lease areas perhaps most especially during construction. Bellmann et al (2020) reported that some offshore wind construction projects in Germany had as many as 20 vessels at a time in operation within a radius of a few kilometers laying cable erecting turbines conducting noise abatement etc. [Footnote 124: Bellmann Underwater noise during percussive pile driving supra at 111.] Noise from these vessels can include not only radiated vessel noise but also noise generated from the use of dynamic positioning systems or underwater communication signals such as echo sounders or sonars. [Footnote 125: Id. at 115.] It is well-established that vessel noise can contribute to changes in behavior and stress levels of marine animals and can cause auditory masking that further disrupts the use and reception of natural sounds. [Footnote 126: Erbe C. S.A. Marley R.P. Schoeman J.N. Smith L.E. Trigg and C.B. Embling. 2019. The effects of ship noise on marine mammals A Review. Front. Mar.Sci. Vol 6. <a href="https://doi.org/10.3389/fmars.2019.00606">https://doi.org/10.3389/fmars.2019.00606</a> .] Indeed vessel activity and pre-piling installation activities have been shown to increase local underwater broadband noise to levels that displace and disturb marine mammals. [Footnote 127: Benhemma-Le Gall A. P. Thompson N. Merchant and I. Graham. 2023. Vessel noise prior to pile driving at offshore windfarm sites deters harbour porpoises from potential injury zones. Environmental Impact Assessment Review 103: 107271.] Unfortunately the mitigation measures BOEM proposes to address vessel noise fail to directly mitigate vessel noise and	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs. MUL-7 is being analyzed as an RP within the PEIS rather than an AMMM measure and has been updated for clarification and to encourage use of quieter ships as outlined by the IMO guidelines.

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	<p>furthermore are voluntary. With significant global attention focused on the need to reduce underwater radiated noise from vessels there have been important advances both in vessel design and vessel underwater noise management planning that BOEM should incorporate into its proposed mitigation measures. Many of the vessels necessary to support the construction operations maintenance and decommissioning of offshore wind are not yet built (largely due to requirements imposed by the Jones Act). [Footnote 128: U.S. Congressional Research Service. Vessel Construction for Offshore Wind Power Generation. In Focus September 12 2023. By John Frittelli. Accessed online: February 12 2024] This creates a unique opportunity for BOEM to create conditions that promote the design (and retrofiting) of quieter vessels. Presently there are seven classification societies globally that offer "Quiet Ship Notations" to vessels that meet criteria that minimize underwater radiated noise. [Footnote 129: The ship classification societies presently offering quiet ship notations include: the American Bureau of Shipping (Underwater noise notation); Bureau Veritas (Underwater Radiated Noise notation); China Classification Society (Underwater noise notation); Det Norske Veritas (SILENT Environmental (E) notation); Korean Register (Underwater Radiated Noise notation); Lloyd's Register (Underwater Radiated Noise (UWN-L) notation); Registro Italiano Navale (DOLPHIN notation).] Furthermore designers now have resources available that identify various quieting technologies and approaches that can be used to achieve such notations. [Footnote 130: Ship energy efficiency and underwater radiated noise. Report 545-000-01 Rev 3. Prepared for Transport Canada by Vard Marine Inc. October 20 2023.] We note that BOEM has developed mitigation measures that encourage low- or zero-emission vessel technologies and fuels (see AQ-2 and AQ-e) if feasible. Likewise we propose a new mitigation measure that encourages adoption of quiet ship notations for all vessels if feasible and requires concurrence by BOEM and BSEE of why adoption of such notations is infeasible. (See Attachment 2 table 2 for new proposed measure MUL-41). Our proposed measure would create the opportunity for BOEM where feasible to ensure that vessels are designed and built to operate quietly both driving innovation</p>	

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	spurring the building of quieter vessels and more effectively mitigating underwater vessel noise impacts.	
BOEM-2024-0001-0224-0004	Noise Pollution: The PEIS acknowledges the consideration of measures to mitigate noise impact on marine life. However the effectiveness and long-term consequences of these measures need further examination particularly regarding potential harm to marine species.	Thank you for your comment.
BOEM-2024-0001-0331-0025	The academic paper in PEIS Appendix J Introduction to Sound and Acoustic Assessment bears no resemblance to the six projects in the PEIS. The paper uses two theoretical sites only 60 turbines each for a total of 120. This is a tenth of the number of turbines planned for the Bight which is 1103. The turbines in the study are only 6 MW compared to the huge 1300 ft high turbines planned for the NY Bight. This study used in the PEIS has no relevance to the NY Bight projects. The pile driving noise level is for driving a roughly 20-foot diameter pile which is small by present and future standards. The 13-15 MW turbines use piles that are around 40 ft in diameter. A 20 MW turbine may be as large as a 60 foot diameter. This lack of rigor is an example of BOEM's rushed and reckless push for offshore wind. Any mitigation measures that are suggested for noise in the PEIS if responding to the irrelevant study are unacceptable.	Thank you for your comment. The framework was used as a theoretical basis for understanding impacts of construction timing and mitigations.
BOEM-2024-0001-0450-0038	1) Use quiet foundations in construction. a) Whenever possible project proponents should use gravity-based and suction bucket foundations which eliminate the need for pile driving and thereby significantly reduce underwater noise pollution and the risk of noise impacts to marine mammals and sea turtles.	Thank you for your comment. MUL-6 has been updated to include new language about quiet foundations.
BOEM-2024-0001-0450-0039	2) Prohibit pile driving during times of highest risk to North Atlantic right whales: a) Pile driving must not occur during periods of highest risk to North Atlantic right whales. Time periods of highest risk include but are not limited to during foraging and migration and times when mother-calf pairs pregnant females surface active groups (indicative of breeding or social behavior) or aggregations of three or more whales (indicative of feeding or social behavior) are or are expected to be present. Time periods must be defined based on the best available scientific information.	Thank you for your comment. Time area closures (times of year when NARW are expected) are applied and BOEM continues to require and monitor development of real-time monitoring systems (PAM and PSOs are also real-time monitoring).

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	<p>b) If a near real-time monitoring system and mitigation protocol for North Atlantic right whales and other large whale species is developed and scientifically validated the system and protocol may be used to dynamically manage the timing of pile driving and other construction activities to ensure those activities are undertaken during times of lowest risk for all relevant large whale species. The development of such a protocol is particularly important where foraging aggregations of other large whale species are observed coincident with the times that pile driving would most likely be undertaken based on times of lower relative risk to North Atlantic right whales.</p>	
BOEM-2024-0001-0450-0040	<p>3) Restrict pile-driving activity at night and during periods of low visibility:</p> <p>a) Pile driving must not be initiated within 1.5 hours of civil sunset or in times of low visibility when the visual clearance zone and exclusion zone (defined in Section III(5) below) cannot be visually monitored as determined by the lead PSO on duty.</p> <p>b) Pile driving may continue after dark only if the activity commenced during daylight hours and must proceed for human safety or installation feasibility reasons [Footnote 24: Throughout this document "installation feasibility" refers to ensuring that the pile installation event results in a usable foundation for the wind turbine (i.e. foundation installed to the target penetration depth without refusal and with a horizontal foundation/tower interface flange). In the event that pile driving has already started and nightfall occurs the lead engineer on duty will make a determination through the following evaluation: 1) Use the site-specific soil data on the pile location and the real-time hammer log information to judge whether a stoppage would risk causing piling refusal at re-start of piling; and 2) Check that the pile penetration is deep enough to secure pile stability in the interim situation taking into account weather statistics for the relevant season and the current weather forecast. Such determinations by the lead engineer (or their alternate) on duty will be made for each pile location as the installation progresses and not for the site as a whole. This information will be included in the reporting for the project.] and if required night-time monitoring protocols are followed (see Section III(8)).</p>	<p>Thank you for your comment. AMMM measure language (MMST-1) has been updated to align with the latest T&amp;Cs.</p>

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BOEM-2024-0001-0450-0041	<p>4) Sound fields generated during impact pile driving must not exceed NOAA Fisheries' Level A permanent threshold shift (PTS) limits for low frequency cetaceans (LFC) by the specified date and at the distances below. Every attempt must be made to reach the Received Sound Level Limit (RSL) at 100% of foundations.</p> <p>a) Voluntary:</p> <p>i) May 1 2025: After the first three foundations no exceedance of RSL beyond 4921 feet (ft) (1500 m) from the foundation for 90% of remaining piles.</p> <p>b) Required:</p> <p>i) May 1 2026: After the first three foundations no exceedance of RSL beyond 4921 ft (1500 m) from the foundation for 90% of remaining piles.</p> <p>ii) May 1 2028: After the first three foundations no exceedance of RSL beyond 3280 ft (1000 m) from the foundation for 90% of remaining piles.</p> <p>iii) May 1 2030: After the first three foundations no exceedance of RSL beyond 2460 ft (750 m) from the foundation for 90% of remaining piles.</p> <p>c) On a case-by-case basis BOEM may consider an exception to the RSL if the lessee provides sufficient written justification as determined by BOEM of why meeting the RSL is not technically and commercially practicable. In these cases compensatory mitigation may be considered such as operator contributions to research and monitoring that reduce noise or contribute To a better understanding of noise reduction.</p> <p>d) Field measurements must be conducted as described in section 3 ("Offshore Wind Pile Driving Sound Field Measurement Recommendations") of the Nationwide Recommendations for Impact Pile Driving Sound Exposure Modeling and Sound Field Measurement for Offshore Wind Construction and Operations Plans (BOEM 2023). As described in BOEM (2023) the "Thorough SFV Monitoring" procedure should be conducted for the first three foundations of a project and when a foundation is to be installed with substantially different foundation construction and environmental parameters. An "Abbreviated SFV Check" should be</p>	<p>Thank you for your comment, which was considered in the updated AMMM measure language (MUL-22) in the Final PEIS.</p>

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	<p>performed on any foundation installation for which "Thorough SFV Monitoring" is not planned.</p> <p>e) Sound source validation reports of field measurements must be evaluated by both BOEM and NOAA Fisheries prior to additional piles being installed. Reports must be made publicly available within one month after their submission to BOEM and other relevant agencies.</p>	
BOEM-2024-0001-0450-0042	<p>5) Require the following clearance zone distances prior to pile driving and exclusion zone distances during pile driving:</p> <p>a) For North Atlantic right whales:</p> <p>i) A visual clearance zone and exclusion zone must extend at minimum 5000 m in all directions from the location of the driven pile.</p> <p>ii) An acoustic clearance zone must extend at minimum 10000 m in all directions from the location of the driven pile.</p> <p>iii) An acoustic exclusion zone must extend at minimum 2000 m in all directions from the location of the driven pile.</p> <p>iv) If a surface active group (indicative of breeding or social behavior) or an aggregation of three or more whales (indicative of feeding or social behavior) is detected via regional or opportunistic detection methods (e.g. regional aerial surveys or WhaleAlert) within 20 kilometers of a pile installation site then the start of pile driving should be delayed until the surface-active group or aggregation is no longer reported within that distance.</p> <p>b) If a large whale is detected visually or acoustically within the clearance or exclusion zones defined in Section III(5)(a) for North Atlantic right whales but the species cannot be identified it must be assumed to be a North Atlantic right whale.</p> <p>c) For all other marine mammals:</p> <p>i) Clearance and exclusion zone distances for other marine mammal species must be designed in a manner that eliminates Level A take and minimizes behavioral harassment to the fullest extent practicable.</p> <p>d) For sea turtles:</p> <p>i) A visual clearance zone and exclusion zone must extend at minimum 500 m in all directions from the location of the driven pile.</p>	<p>Thank you for your comment. These exclusion zone distances are based on acoustic modeling and not fixed for every project. MM-2 encourages implementation of a near-real-time PAM system for the detection of baleen whales in the NY Bight during offshore wind development activities.</p>

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BOEM-2024-0001-0450-0043	<p>6) Require a 24-hour pre-construction passive acoustic monitoring period for North Atlantic right whales prior to commencing pile-driving activities:</p> <p>a) Monitoring for North Atlantic right whales must be undertaken using near real-time PAM assuming a detection range of at least 10000 m for 24 hours prior to commencing pile-driving activities. PAM must be undertaken at the location of the pile-driving site in order to detect whales within a 10000 m radius.</p> <p>b) If a North Atlantic right whale vocalization is detected the 24-hour monitoring period must be recommenced. Pile-driving activities must not commence until a 24-hour monitoring period has passed without any detection of North Atlantic right whale vocalizations.</p>	<p>Thank you for your comment. Pre-construction monitoring already includes a requirement for acoustic monitoring. MMST-4 was updated to specify 24 hours, which was previously established as a COP T&amp;C. BOEM will not be adding a requirement for waiting 24 hours after every detection of NARW; instead, foundation pile-driving may only commence when clearance zones are clear of marine mammals for at least 30 minutes immediately prior to foundation pile-driving, as determined by the lead PSO. Any large whale sighting by a PSO or detected by a PAM operator that cannot be identified as a non-NARW must be treated as if it were a NARW.</p>
BOEM-2024-0001-0450-0044	<p>7) Delay initiation or require shutdown of pile driving if a marine mammal or sea turtle is detected visually or if a North Atlantic right whale is detected acoustically in clearance and exclusion zones (as defined in Section III(5)):</p> <p>a) Pile driving must not be initiated when monitoring methods defined in Section III(8) result in either an acoustic detection within the acoustic clearance zone of one or more North Atlantic right whales or a visual detection within the visual clearance zone of one or more marine mammals or sea turtles.</p> <p>i) If localization cannot be achieved by acoustic detection as described in Section III(8)(a)(i) below pile driving must not be initiated upon detection of a North Atlantic right whale call regardless of distance from the sound source.</p> <p>b) Pile driving must not be initiated or if already underway must be shut down unless continued pile-driving activities are necessary for reasons of human safety or installation feasibility when monitoring methods defined in Section III(8) result in acoustic detection within the acoustic exclusion zone of one or more North Atlantic right whales or a visual detection within the visual exclusion zone of one or more marine mammals or sea turtles.</p> <p>i) If localization cannot be achieved by acoustic detection as described in Section III(8)(a)(i) below pile driving must not be initiated or if already underway must be shut down upon detection of a North Atlantic right whale call regardless of distance from the sound source.</p>	<p>Thank you for your comment. Recommendations provided in the comment are already covered under an existing AMMM measure (MMST-4).</p>

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	<p>c) Pile driving must be shut down unless continued pile-driving activities are necessary for reasons of human safety or installation feasibility if a North Atlantic right whale is visually detected by PSOs at any distance from the pile.</p> <p>d) Once halted pile driving may resume only after using the methods set forth in Section III(8) and the lead PSO confirms no marine mammals or sea turtles have been detected within the relevant acoustic and visual clearance zones.</p>	
BOEM-2024-0001-0450-0045	<p>8) Require robust near real-time monitoring protocols during pre-clearance and when pile-driving activity is underway:</p> <p>a) Monitoring of the acoustic clearance and exclusion zones must be undertaken using near real-time PAM assuming a detection range of at least 10000 m and must be undertaken from a vessel other than the pile-driving vessel or from a stationary unit to avoid the hydrophone being masked by the pile-driving vessel or development-related noise.</p> <p>i) The PAM system should be set up so that it is capable of localizing the position of vocalizing whales. A plan detailing any proposed localization system and analysis methods should be submitted to BOEM and other relevant permitting agencies in advance of deployment. The system should meet the following criteria:[Footnote 25: See also recommendations in Van Parijs SM et al. 2021.](1) Stationary systems must have a minimum of three hydrophones (accuracy can be greatly improved by using four hydrophones) and mobile systems (e.g. towed arrays) must have a minimum of two hydrophones.(2) Simulations should be conducted prior to selecting the number and location of receivers to maximize accuracy (i.e. reduce confidence intervals) in the final configuration.[Footnote 26: There are several mathematical methods to improve the accuracy of localization estimates by reducing the confidence intervals for each parameter that should be follow. See Spiesberger J. 2022.](3) Systems should be calibrated before deployment to ensure accurate detection capability.(4) For time-of-arrival based systems synchronization of data streams from the multiple receivers is necessary for accurate calculations.(5) Irrespective of the system used careful testing and documentation of localization errors should be undertaken.</p>	<p>Thank you for your suggestions. BOEM has updated both MMST-4 and MMST-7, which largely cover requested components. BOEM is not requiring four PSOs at this time, but this could be considered at the project-specific phase.</p>

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	<p>b) During pre-clearance and when pile-driving activity is underway monitoring of the visual clearance and exclusion zones must be undertaken by vessel based PSOs stationed at the pile- driving site and on additional vessels circling the pile-driving site as needed. On each vessel there must be a minimum of four PSOs following a two-on two-off rotation each responsible for scanning no more than 180 of the horizon per pile-driving location. To effectively monitor the full exclusion zone multiple PSOs must be stationed at several vantage points at the highest level to allow each to continuously scan a section of the exclusion zone. Additional vessels must survey the clearance and exclusion zones at speeds of 10 knots or less. Ensure PSOs do not exceed two consecutive watch hours on duty at any time have a two-hour (minimum) break between watches and do not exceed a combined watch schedule of more than 12 hours in a 24-hour period. PSO schedules should be designed to minimize observer fatigue.</p> <p>c) Acoustic and visual monitoring must begin at least 60 minutes prior to the commencement or re-initiation of pile driving and must be conducted throughout the duration of pile-driving activity. Visual monitoring must continue until 30 minutes after cessation of pile driving.</p> <p>d) Infrared technology must be used to support visual monitoring during any pile-driving activities that extend into periods of darkness.</p> <p>e) Additional observers and monitoring technologies (e.g. infrared drones hydrophones) must be deployed as needed to ensure the ability to monitor the established clearance and exclusion zones including during periods of darkness or poor visibility.</p>	
BOEM-2024-0001-0450-0046	<p>9) Require mandatory reporting of marine mammals and sea turtles detected during pre-clearance when pile driving is underway and for at least 30 minutes following pile driving:</p> <p>a) All visual observations and acoustic detections of North Atlantic right whales must be reported to NOAA Fisheries or the United States Coast Guard as soon as possible and no later than the end of the PSO shift. We note that in some cases such as with the use of near real- time autonomous buoy systems the detections will be reported automatically on a pre-set cycle.</p>	<p>Thank you for your comment. Recommendations provided in the comment are mostly covered under an existing AMMM measure (MM-1). Additionally, any ESA-listed species sightings in a shutdown zone are required to be reported per MMST-10.</p>

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	<p>b) Observations of entangled injured or dead North Atlantic right whales and other entangled injured and dead marine mammal species and sea turtles must be immediately reported to NOAA Fisheries' Northeast Marine Mammal and Sea Turtle Stranding and Entanglement Hotline (1-866-755-6622) for states from Maine to Virginia; NOAA Fisheries' Southeast Marine Mammal Stranding Hotline (1-877-942-5343) or Southeast Sea Turtle Stranding and Salvage Network (1-844-732-8785) for states from North Carolina to Florida;[Footnote 27: NOAA Fisheries "Report a Stranded or Injured Marine Animal" <a href="https://www.fisheries.noaa.gov/report.">https://www.fisheries.noaa.gov/report.</a>] or the United States Coast Guard via one of several available systems (e.g. phone app radio). Methods of reporting are expected to advance and streamline in the coming years and projects should commit to supporting and participating in these efforts.</p> <p>c) PSO sightings data must be submitted to BOEM as directed in any relevant guidance site assessment plan (SAP) or construction and operations plan (COP) approval or other agency protocol. Sightings data and reports provided to BOEM should be made publicly available by BOEM to inform marine mammal and sea turtle science and protection.</p>	
BOEM-2024-0001-0450-0047	<p>1) Require the following clearance zone distances prior to construction activities and exclusion zone distances during construction activities:</p> <p>a) Clearance zone and exclusion zone distances for marine mammals must be designed that will eliminate Level A take and minimize behavioral harassment to the full extent practicable during the installation of gravity-based or suction bucket foundations or floating offshore wind platforms considering noise levels expected to be generated during installation.</p> <p>b) Clearance and exclusion zones of 100 m must be established for sea turtles.</p>	Thank you for your comment and suggestion. If other foundation types that were not analyzed as part of the PEIS RPDE are considered at the project-specific stage, they will be analyzed at that time.
BOEM-2024-0001-0450-0048	<p>2) Delay initiation of or require shutdown of construction activities if a marine mammal or sea turtle is detected visually or if a North Atlantic right whale is detected acoustically in clearance or exclusion zones (as defined in Section IV(1)):a) Installation of gravity-based and suction bucket foundations and floating offshore wind platforms must not be initiated when the application of monitoring methods</p>	Thank you for your comment and suggestion. Please refer to response to comment BOEM-2024-0001-0450-0047 regarding other foundation types.

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	<p>defined in Section IV(3) results in a visual detection of a marine mammal or sea turtle or an acoustic detection of a North Atlantic right whale within the relevant clearance zone (as defined based on noise levels expected during installation; see Section IV(1)).i) If localization as described in Section IV(3)(a)(i) below cannot be achieved by acoustic detection installation activities should not be initiated upon detection of a North Atlantic right whale call regardless of distance from sound source.</p> <p>b) Installation of gravity-based and suction bucket foundations and floating offshore wind platforms must be halted unless continued installation activities are necessary for reasons of human safety or installation feasibility when the application of monitoring methods defined in Section IV(3) results in a visual detection of a marine mammal or sea turtle or an acoustic detection of a North Atlantic right whale within the relevant exclusion zone (as defined based on noise levels expected during installation; see Section IV(1)).i) If localization as described in Section IV(3) below cannot be achieved by acoustic detection installation activities should not be initiated upon detection of a North Atlantic right whale call regardless of distance from sound source.</p> <p>c) Once halted installation may resume after use of the methods set forth in Section IV(3) and the lead PSO confirms no marine mammal or sea turtle species have been detected within the relevant clearance zones.</p>	
BOEM-2024-0001-0450-0049	<p>3) Require robust near real-time monitoring protocols during clearance and installation:</p> <p>a) Monitoring of the acoustic clearance and exclusion zones for North Atlantic right whales must be undertaken using near real-time PAM from a vessel other than the installation vessel or from a stationary unit to avoid the hydrophone being masked by installation- related noise.</p> <p>i) The PAM system should be set up so that it is capable of localizing the position of vocalizing whales. A plan detailing any proposed localization system and analysis methods should be submitted to BOEM and other relevant permitting agencies in advance of deployment. The system should meet the following criteria:[Footnote 28: See also recommendations in Van Parijs SM et</p>	<p>Thank you for your comment and suggestion. BOEM has reviewed and considered public comments on AMMM measures and revised the measures as presented in Appendix G.</p>

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	<p>al. 2021.](1) Stationary systems must have a minimum of three hydrophones (accuracy can be greatly improved by using four hydrophones) and mobile systems (e.g. towed arrays) must have a minimum of two hydrophones.(2) Simulations should be conducted prior to selecting the number and location of receivers to maximize accuracy (i.e. reduce confidence intervals) in the final configuration.[Footnote 29: There are several mathematical methods to improve the accuracy of localization estimates by reducing the confidence intervals for each parameter that should be follow. See Spiesberger J. 2022.](3) Systems should be calibrated before deployment to ensure accurate detection capability.(4) For time-of-arrival based systems synchronization of data streams from the multiple receivers is necessary for accurate calculations.(5) Irrespective of the system used careful testing and documentation of localization errors should be undertaken.</p> <p>b) During pre-clearance and installation monitoring of the visual clearance and exclusion zones must be undertaken by vessel-based PSOs stationed at the installation site. On each vessel there must be a minimum of four PSOs following a two-on two-off rotation each responsible for scanning no more than 180 of the horizon per gravity-based or suction bucket foundation or floating offshore wind platform installation location. To effectively monitor the full exclusion zone for sea turtles multiple PSOs must be stationed at several vantage points at the highest level to allow each to continuously scan a section of the exclusion zone. Ensure PSOs do not exceed two consecutive watch hours on duty at any time have a two-hour (minimum) break between watches and do not exceed a combined watch schedule of more than 12 hours in a 24-hour period. PSO schedules should be designed to minimize observer fatigue.</p> <p>c) Acoustic and visual monitoring must be required and monitoring must begin at least 60 minutes prior to the commencement of installation activity and must be conducted throughout the duration of installation. Visual monitoring must continue until 30 minutes after installation.</p> <p>d) Additional observers and monitoring technologies (e.g. infrared drones hydrophones) must be deployed as needed to ensure the</p>	

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	ability to monitor the established clearance and exclusion zones including during periods of darkness or poor visibility.	
BOEM-2024-0001-0450-0050	<p>4) Require mandatory reporting of marine mammals and sea turtles detected during pre- clearance installation and 30 minutes after installation:</p> <p>a) All visual observations and acoustic detections of North Atlantic right whales to NOAA Fisheries or the United States Coast Guard must be reported as soon as possible and no later than the end of the PSO shift. We note that in some cases such as with the use of near real- time autonomous buoy systems the detections will be reported automatically on a pre-set cycle.</p> <p>b) Observations of entangled injured or dead North Atlantic right whales and other entangled injured and dead marine mammal species and sea turtles must be immediately reported to NOAA Fisheries' Northeast Marine Mammal and Sea Turtle Stranding and Entanglement Hotline (1-866-755-6622) for states from Maine to Virginia; NOAA Fisheries' Southeast Marine Mammal Stranding Hotline (1-877-942-5343) or Southeast Sea Turtle Stranding and Salvage Network (1-844-732-8785) for states from North Carolina to Florida; [Footnote 30: NOAA Fisheries "Report a Stranded or Injured Marine Animal" <a href="https://www.fisheries.noaa.gov/report.">https://www.fisheries.noaa.gov/report.</a>] or the United States Coast Guard via one of several available systems (e.g. phone app radio). Methods of reporting are expected to advance and streamline in the coming years and projects should commit to supporting and participating in these efforts.</p> <p>c) PSO sightings data must be submitted to BOEM as directed in any relevant guidance site assessment plan (SAP) or construction and operations plan (COP) approval or other agency protocol. Sightings data and reports provided to BOEM should be made publicly available by BOEM to inform marine mammal and sea turtle science and protection.</p>	<p>Thank you for your comment and suggestion. BOEM has reviewed and considered public comments on AMMM measures and revised the measures as presented in Appendix G. Please also see response to comment BOEM-2024-0001-0450-0047.</p>
BOEM-2024-0001-0357-0024	<p>AMMM Measures Exaggerated and Missing</p> <p>The draft program EIS does relies too much on visual observation and passive acoustic monitoring to detect whale presence and take mitigation actions (see Enclosure IX). It should also have addressed ascribing the BOEM and NMFS reliance on a 10 decibel pile driving source attenuation to bubble curtains and similar devices which is</p>	<p>Thank you for your comment.</p> <p>Both visual and acoustic monitoring have advantages and disadvantages under various conditions; using a suite of tools, including visual and acoustic monitoring, is necessary in the AMMM measures.</p>

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	not technically justified. This is an important issue since many of the agency's positive conclusions regarding harm to marine mammals in the area depend on that flawed assumption (see Enclosure IX). For other impacts the AMMM measures it offers to mitigate adverse impacts are not adequate. For example with regard to the National Historic Preservation Act Section 106 process and the degrading impact of the wind complex on historic properties It provides virtually no substance mitigation measure. Meaningful measures such as restrictions on turbine height minimum turbine spacing particularly for the wind turbines closer to shore and turbine exclusion zones from shore are necessary to mitigate those effects. In fact the entire Section 106 process is flawed as summarized in Enclosure IX.	Using quieting technology (e.g., NAS) reduces the risk of noise impacts on marine mammals by reducing the sound levels that propagate from the pile source. Available studies suggest that when a single or combined NAS is applied to monopile installation, noise reductions ranging from 3 to 17 dB can be achieved depending on the NAS combination, with some frequency-dependent reductions of more than 20 dB (Bellmann et al. 2020).
BOEM-2024-0001-0450-0051	<p>1) Require operational noise reduction to the fullest extent practicable.</p> <p>a) Operational noise should be reduced to the fullest extent practicable using best available technology and design principles. For example direct-drive turbines should be used instead of gear-box turbines and engineering solutions should be used to acoustically decouple the turbine from the mast and platform whenever possible.</p> <p>b) A detailed plan must be provided for how the operator will reduce operational noise output in the construction and operations plan submittal or in a separate plan submitted to BOEM and other relevant permitting agencies in advance of deployment.</p> <p>c) Underwater sound source measurements must be conducted during operations. Plans for sound source measurements including type and placement of equipment and frequency of measurements must be fully described in construction and operations plan submittals. Sound source measurements should follow any available BOEM protocol.</p> <p>d) Sound source measurements must be reported to BOEM as part of the annual certification required under 30 C.F.R. 285.633(a).e) Sound source measurement reports must be made available to the public within one month after the report is submitted to BOEM.</p>	Thank you for your comment. BOEM has analyzed operational noise and, based on available data, believes that current mitigation is appropriate. However, BOEM will continue to monitor and adapt as needed.

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BOEM-2024-0001-0450-0031	<p>Section II. Noise mitigation recommendations during site assessment and characterization<sup>1</sup>)</p> <p>Prohibit site assessment and characterization activities during times of highest risk for North Atlantic right whales:</p> <p>a) Site assessment and characterization activities involving high-resolution geophysical survey equipment with noise levels that could injure or harass marine mammals (at or below a frequency of 180 kHz) should not occur during periods of highest risk to North Atlantic right whales. Time periods of highest risk include but are not limited to during foraging and migration and times when mother-calf pairs pregnant females surface active groups (indicative of breeding or social behavior) or aggregations of three or more whales (indicative of feeding or social behavior) are or are expected to be present. Time periods must be defined based on the best available scientific information.</p> <p>b) If a near real-time monitoring system and mitigation protocol for North Atlantic right whales and other large whale species is developed and scientifically validated the system and protocol may be used to dynamically manage the timing of site assessment and characterization activities to ensure those activities are undertaken during times of lowest risk for all relevant large whale species. The development of such a protocol is particularly important where foraging aggregations of other large whale species are observed coincident with the times that noise-producing activities would most likely be undertaken based on times of lower relative risk to North Atlantic right whales.</p>	<p>Thank you for your comment. MMST-12 has been augmented with an updated version of mitigation measures established in BOEM's Project Design Criteria and Best Management Practices for Protected Species Associated with Offshore Wind Data Collection (<a href="https://www.boem.gov/sites/default/files/documents/PDCs%20and%20BMPs%20for%20Atlantic%20Data%20Collection%2011222021.pdf">https://www.boem.gov/sites/default/files/documents/PDCs%20and%20BMPs%20for%20Atlantic%20Data%20Collection%2011222021.pdf</a>) to minimize potential impacts on marine mammals, including NARW.</p>
BOEM-2024-0001-0450-0033	<p>3) Require the following clearance zone and exclusion zone distances prior to site assessment and characterization activities with noise levels known to injure or harass marine mammals (defined throughout this section as source levels at or below a frequency of 180 kHz):a) For North Atlantic right whales:</p> <p>i) A visual clearance zone and exclusion zone of at least 1000 m must be established around each vessel or sound source.</p> <p>ii) An acoustic clearance zone and exclusion zone of at least 1000 m must be established around each vessel or sound source.</p>	<p>Thank you for your comment. MMST-12 has been augmented with an updated version of mitigation measures established in BOEM's Project Design Criteria and Best Management Practices for Protected Species Associated with Offshore Wind Data Collection (<a href="https://www.boem.gov/sites/default/files/documents/PDCs%20and%20BMPs%20for%20Atlantic%20Data%20Collection%2011222021.pdf">https://www.boem.gov/sites/default/files/documents/PDCs%20and%20BMPs%20for%20Atlantic%20Data%20Collection%2011222021.pdf</a>) to minimize potential impacts on NARW, including establishing clearance zones.</p>

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	<p>b) If a large whale is detected visually or acoustically within the 1000 m clearance or exclusion zone but the species cannot be identified it must be assumed to be a North Atlantic right whale.</p> <p>c) For other large whale species coastal bottlenose dolphins harbor porpoises and manatees:</p> <p>i) A visual clearance zone and exclusion zone must extend at least 500 m in all directions from each vessel or sound source.</p> <p>d) For all other marine mammal species:</p> <p>i) Clearance and exclusion zone distances for other marine mammal species must be designed in a manner that eliminates Level A take and minimizes behavioral harassment to the fullest extent practicable.</p>	
BOEM-2024-0001-0450-0034	<p>4) Delay initiation or require shutdown of site assessment and characterization activities with noise levels known to injure or harass marine mammals (defined throughout this section as source levels at or below a frequency of 180 kHz) if a marine mammal is detected visually or if a North Atlantic right whale is detected acoustically in clearance and exclusion zones (as defined in Section II(3)):</p> <p>a) If a marine mammal species is visually detected within the relevant visual clearance zone for that species as defined under Section II(3) site assessment and characterization activities must not be initiated.</p> <p>b) If a marine mammal is visually detected within the relevant visual exclusion zone for that species as defined under Section II(3) site assessment and characterization activities must be halted.</p> <p>c) If a North Atlantic right whale is acoustically detected within the acoustic clearance zone site assessment and characterization activities must not be initiated.</p> <p>i) If localization as described in Section II(5)(a)(i) below cannot be achieved by acoustic detection site assessment and characterization activities should not be initiated upon detection of a North Atlantic right whale call regardless of distance from sound source.</p> <p>d) If a North Atlantic right whale is acoustically detected within the acoustic exclusion zone site assessment and characterization activities must be halted.</p> <p>i) If localization as described in Section II(5)(a)(i) below cannot be achieved by acoustic detection site assessment and characterization</p>	<p>Thank you for your comment. MMST-12 has been augmented with an updated version of mitigation measures established in BOEM's Project Design Criteria and Best Management Practices for Protected Species Associated with Offshore Wind Data Collection (<a href="https://www.boem.gov/sites/default/files/documents//PDCs%20and%20BMPs%20for%20Atlantic%20Data%20Collection%2011222021.pdf">https://www.boem.gov/sites/default/files/documents//PDCs%20and%20BMPs%20for%20Atlantic%20Data%20Collection%2011222021.pdf</a>) to minimize potential impacts on NARW, including: "If any protected species is observed within the respective Clearance Zone during the 30-minute pre-clearance period, the relevant acoustic sources must not be initiated until the ESA-listed whale (or unidentified whale) is confirmed by visual observation to have exited the relevant zone, or, until 30 minutes have elapsed with no further sighting of the animal."</p>

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	<p>activities should be suspended upon detection of a North Atlantic right whale call regardless of distance from sound source.</p> <p>e) Once halted site assessment and characterization activities may resume following the methods set forth in Section II(5) and after the lead PSO confirms no marine mammals have been detected within the relevant acoustic and visual clearance zones as defined under Section II(3).</p>	
BOEM-2024-0001-0450-0035	<p>5) Require robust monitoring protocols during pre-clearance and when site assessment and characterization activities are underway:</p> <p>a) Monitoring of the acoustic clearance zone must be undertaken using near real-time passive acoustic monitoring (PAM) [Footnote 20: Throughout this document "PAM" refers to a real-time passive acoustic monitoring system. NOAA and BOEM have defined minimum recommendations for use of PAM in monitoring and mitigation for offshore wind development. Van Parijs SM et al. 2021. "NOAA and BOEM Recommendations for Use of Passive Acoustic Listening Systems in Offshore Wind Energy Development Monitoring and Mitigation Programs." Front. Mar. Sci. 8. Available at <a href="https://www.frontiersin.org/articles/10.3389/fmars.2021.760840/full">https://www.frontiersin.org/articles/10.3389/fmars.2021.760840/full</a>.] and must be undertaken from a vessel other than the survey vessel or from a stationary unit to avoid the hydrophone being masked by the survey vessel or development-related noise.</p> <p>i) The PAM system should be set up so that it is capable of localizing the position of vocalizing whales. A plan detailing any proposed localization system and analysis methods should be submitted to BOEM and other relevant permitting agencies in advance of deployment. The system should meet the following criteria:[Footnote 21: See also recommendations in Van Parijs SM et al. 2021.](1) Stationary systems must have a minimum of three hydrophones (accuracy can be greatly improved by using four hydrophones) and mobile systems (e.g. towed arrays) must have a minimum of two hydrophones.(2) Simulations should be conducted prior to selecting the number and location of receivers to maximize accuracy (i.e. reduce confidence intervals) in the final configuration.[Footnote 22: There are several mathematical methods to improve the accuracy of localization estimates by reducing the confidence intervals for each parameter that should be</p>	<p>Thank you for your comment. MM-2, real-time PAM monitoring and alert system for baleen whales, is recommended for all offshore wind development activities in the NY Bight.</p>

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	<p>follow. See Spiesberger J. 2022. Extremely reliable locations and calling abundance via passive acoustic monitoring. Oral Presentation. NYSERDA State of the Science Workshop. July 27 2022. <a href="https://www.youtube.com/watch?v=tV8ViBVQzg.">https://www.youtube.com/watch?v=tV8ViBVQzg.</a>](3) Systems should be calibrated before deployment to ensure accurate detection capability.(4) For time-of-arrival based systems synchronization of data streams from the multiple receivers is necessary for accurate calculations.(5) Irrespective of the system used careful testing and documentation of localization errors should be undertaken.</p> <p>b) During pre-clearance and when site assessment and characterization activities are underway monitoring of the visual clearance zone must be undertaken by vessel-based PSOs stationed on the survey vessel to enable monitoring of the entire clearance zones for marine mammals. On each vessel there must be a minimum of four PSOs following a two-on two-off rotation each responsible for scanning no more than 180 of the horizon. To effectively monitor the full exclusion zone multiple PSOs must be stationed at several vantage points at the highest level to allow each to continuously scan a section of the exclusion zone. Ensure PSOs do not exceed two consecutive watch hours on duty at any time have a two-hour (minimum) break between watches and do not exceed a combined watch schedule of more than 12 hours in a 24-hour period. PSO schedules should be designed to minimize observer fatigue.</p> <p>c) Acoustic monitoring for North Atlantic right whales and visual monitoring for marine mammal species must begin at least 30 minutes prior to the commencement or re- initiation of site assessment and characterization activity and must be conducted throughout the duration of activity.</p>	
BOEM-2024-0001-0450-0036	<p>6) Require underwater noise reduction to the fullest extent feasible:</p> <p>a) The impacts of underwater noise must be minimized to the fullest extent feasible including through the use of technically and commercially feasible and effective noise reduction and attenuation measures. For example project proponents should select and operate sub-bottom profiling systems at power settings that achieve the lowest practicable source level for the objective. The site</p>	<p>Thank you for your comment. G&amp;G survey mitigations for floating wind (greater than 100 meters) as well as SAPs are out of the scope of the PEIS. BOEM may consider these recommendations in the future.</p>

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	<p>assessment plan submittal should provide detail as to how the operator has reduced noise output within the range of marine mammal audibility to the fullest extent feasible.</p> <p>b) For deep-water site assessment and characterization surveys (floating wind only): Where water depth is greater than 100 m survey equipment should be deployed using an autonomous underwater vehicle (AUV) operated 40 m above the seafloor.</p> <p>c) Project proponents should report the steps taken (including for example power settings used) to meet the recommendations in this subsection in the annual report of site assessment activities submitted to BOEM pursuant to 30 C.F.R. 585.615.</p>	
BOEM-2024-0001-0450-0037	<p>7) Require mandatory reporting of marine mammals and sea turtles detected during pre-clearance and site assessment and characterization activities:</p> <p>a) All visual observations and acoustic detections of North Atlantic right whales must be reported to NOAA Fisheries or the United States Coast Guard as soon as possible and no later than the end of the PSO shift. We note that in some cases such as with the use of near real- time autonomous buoy systems the detections will be reported automatically on a pre-set cycle.</p> <p>b) Observations of entangled injured or dead North Atlantic right whales and other entangled injured and dead marine mammal species and sea turtles must be immediately reported to NOAA Fisheries' Northeast Marine Mammal and Sea Turtle Stranding and Entanglement Hotline (1-866-755-6622) for states from Maine to Virginia; NOAA Fisheries' Southeast Marine Mammal Stranding Hotline (1-877-942-5343) or Southeast Sea Turtle Stranding and Salvage Network (1-844-732-8785) for states from North Carolina to Florida;[Footnote 23: NOAA Fisheries "Report a Stranded or Injured Marine Animal" <a href="https://www.fisheries.noaa.gov/report">https://www.fisheries.noaa.gov/report</a>.] or the United States Coast Guard via one of several available systems (e.g. phone app radio). Methods of reporting are expected to advance and streamline in the coming years and projects should commit to supporting and participating in these efforts.</p> <p>c) PSO sightings data must be submitted to BOEM as directed in any relevant guidance site assessment plan (SAP) or construction and operations plan (COP) approval or other agency protocol. Sightings</p>	<p>Thank you for your comment. Sighting report requirements are covered in MM-1. Additionally, PSO reporting during data collection and site survey activities includes animal detection information. This requirement was included in MUL-10 in the Draft PEIS, which has now been split up and is included in MUL-10e.</p>

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	data and reports provided to BOEM should be made publicly available by BOEM to inform marine mammal and sea turtle science and protection.	
BOEM-2024-0001-0450-0075	<p>Measure ID and name: MUL-40: Operational noise reduction and monitoring Proposed description: "Operational noise reduction Lessees should reduce operational noise output to the fullest extent practicable using best available technology and design principles. Lessees shall use direct-drive motors for all turbines. A detailed plan for how the lessee will reduce operational noise output must be provided in the construction and operations plan submittal or in a separate plan submitted to BOEM and other relevant permitting agencies in advance of deployment. In this plan lessees must consider engineering solutions to acoustically decouple the turbine from the mast and platform in addition to other measures for reducing operational noise. The plan may be submitted as part of the noise mitigation plan (MUL-38)."Monitoring Project proponents must conduct underwater sound source measurements during operations. Plans for sound source measurements including type and placement of equipment and frequency of measurements must be described in construction and operations plan submittals. Sound source measurements should follow any available BOEM protocol. Project proponents must report sound source measurements to BOEM as part of the annual certification required under 30 C.F.R. 285.633(a). Project proponents must make sound source measurement reports available to the public within one month after the report is submitted to BOEM. "Resource Area Mitigated: Finfish Invertebrates and EFH; Marine Mammals Sea Turtles Fish Invertebrates Anticipated Enforcing Agency: BOEM and BSEE Notes: We recommend that BOEM establish a mitigation measure directing project proponents to reduce operational noise from turbines to the fullest extent practicable using best available technology and design principles. This includes a requirement that lessees use direct-drive motors instead of gear-boxes. Although MUL-5 provides generally that operators should use low noise best practices BOEM should establish a measure that specifically addresses operational noise to highlight the importance of mitigating this noise source. Because operational noise mitigation is best addressed by technology and</p>	<p>Thank you for your comment. BOEM has analyzed operational noise and, based on available data, believes that current mitigation is appropriate. However, BOEM will continue to monitor and adapt as needed.</p>

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	engineering choices made during the construction phase the proposed language includes a requirement that project proponents submit a plan at the COP stage demonstrating consideration of alternatives for reducing operational noise. In this plan lessees are required to consider use of engineering solutions to acoustically decouple the turbine from the mast and platform In addition we recommend that project proponents conduct underwater sound source measurements during operations and make these measurements publicly available. We also recommend that BOEM develop a protocol or guidelines for monitoring underwater noise during operations.	
BOEM-2024-0001-0450-0076	Measure ID and name: MUL-41: Quieting of vessels engaged in activities on the OCS Proposed description: "Lessees are encouraged to achieve a quiet ship notation for all vessels particularly new builds used in construction operations and maintenance if feasible. The Lessee will evaluate the feasibility of this mitigation measure and will provide the evaluation to BOEM for review. Any instances where the Lessee believes there is technical (and/or economic) infeasibility must be supported by a technical feasibility analysis as appropriate for review and concurrence by BOEM and BSEE." Notes: We recommend that BOEM establish a mitigation measure that encourages adoption of quiet ship notations for all vessels if feasible and requires concurrence by BOEM and BSEE of why adoption of such notations is infeasible.	Thank you for your comment; it will be taken into consideration. MUL-7 is an RP whereby BOEM encourages industry to consider the use of quieter vessels, particularly for new builds, per IMO guidelines.
BOEM-2024-0001-0259-0002	The Consensus Report issued the Recommendations that "The Bureau of Ocean Energy Management National Oceanic Atmospheric Administration and others should promote and where possible require observational studies DURING ALL PHASES OF WIND ENERGY DEVELOPMENT surveying construction operation and decommissioning that target processes at the relevant turbine to wind farm scales to isolate quantify and characterize the hydrodynamic effects." (p. 4-5 emphasis added). In 2023 NJ's efforts to move forward on the all-important development of renewable energy were thwarted in part by the sudden appearance of ocean mammal deaths off the NY & NJ coast which raised alarm and eroded public confidence in the project. Efforts by our organization to obtain data on the monitoring of pre-construction and survey	Thank you for your comment. BOEM will take the recommendations from the comment into consideration.

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	related were unsuccessful and instead the effort became a political football rather than a factually developed prospective evaluation of the 99-turbine development site a potentially immense impact as noted in the study cited above. Our ocean ecosystems the thriving of ocean mammals and other species and impacts on local fisheries among other effects are too important precious and sensitive to have impacts passed off by assumptions of what either advocates or critics of the projects were proposing as explanations for the greater than random mammal deaths. Please ensure adequate and independent research and evaluation modeling is required supported and provided for in any offshore wind turbine preparation and installation activities. Thank you.	
BOEM-2024-0001-0357-0040	So If an offshore wind energy program proceeds that choice to protect the right whale should be obvious. The Atlantic Shores project must be terminated to preserve the New Jersey shore experience and leave a path for the whale to migrate. 2. Limits on the total project nameplate megawatt capacity to allow flexibility in turbine size number and location 3. Limits on the individual turbine power to reduce the operational noise source level 4. Turbines excluded anywhere in the right whale's primary historic migration corridor 20 to 32 miles out to reduce the operational noise impact 5. Turbine exclusion zones on both sides of its 20 to 32 mile out primary migration corridor as shown in Enclosure II to reduce the noise levels within the corridor below the whale disturbance level of 120 decibels (dB) 6. During construction (including pile driving activities) and operation a robust passive acoustic monitoring (PAM) coverage system that extends the full radius of Level A and B harassment noise levels for the right whale 7. Throughout the operation of the project a PAM system in the whale's primary migration corridor to help detect its presence and cause a shutdown of power generation and 8. That all project vessels -- without exception -- must travel to and from the wind development area and within it at 10 knots or less. Again no exceptions for crew transfer vessels or any other kind of boat.	Thank you for your comment. While Atlantic Shores was considered as part of the cumulative analysis in this PEIS, specific concerns related to the project are not within the scope of this document. During the siting process for these projects, marine mammals (and other resources) were taken into consideration to limit potential impacts. Site-specific analyses will also be conducted at the project-specific NEPA stage.
BOEM-2024-0001-0357-0041	With respect to the cumulative impact of multiple vessel surveys discussed in Enclosure VIII AMMM measures should include: 1. A PAM system to help detect the whale's presence and shut down the	Thank you for your comment. MUL-26 was updated to consider ways to maximize efficiencies with additional coordination for monitoring and surveys.

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	survey operation and 2. Scheduling survey vessel paths to avoid the whale's primary migration corridor during its primary migration period. 3. The creation of a data sharing program to minimize the number of vessels and surveys needed.	
BOEM-2024-0001-0357-0045	With respect to the impact of operational turbine noise on fin and humpback whales that frequent the inner part of the project area (Exhibit 2): 1. A turbine exclusion zone of at least 17.2 miles from shore to reduce the likelihood that the operational turbine noise levels between the shore and the inner turbines (which will still be above 120 dB) will drive the whales to shore and cause beach stranding. SEE ORIGINAL ATTACHMENT A2: The Impact of Operational Turbine Noise on the Migration of the North Atlantic right whale from the Wind Energy Projects Planned off the New Jersey and New York Coasts	Thank you for your comment. During the siting process for these projects, marine mammals (and other resources) were taken into consideration to limit potential impacts. Site-specific analyses will be also conducted at the project-specific NEPA stage.
BOEM-2024-0001-0450-0074	<p>Measure ID and name:MMST-15:Establishment of measures for construction of quiet foundations Proposed description: "Clearance zones during construction using quiet foundation types:</p> <ul style="list-style-type: none"> <li>• Lessees and operators must establish clearance zone and exclusion zone distances for marine mammals to eliminate Level A take and minimize behavioral harassment to the full extent practicable during installation of quiet foundation types (i.e. gravity-based or suction bucket foundations) considering noise levels expected to be generated during installation.</li> <li>• Lessees must establish clearance and exclusion zones of 100 meters for sea turtles. Monitoring during construction using quiet foundation types: Operators must conduct near real-time monitoring protocols during clearance and installation as follows:</li> <li>• Operators must conduct monitoring of the acoustic clearance and exclusion zones for North Atlantic right whales using near real-time PAM. Monitoring should be conducted from a vessel other than the installation vessel or from a stationary unit to avoid the hydrophone being masked by installation-related noise. The PAM system should be set up so that it is capable of localizing vocalizing whales as described in MM-2.</li> <li>• Operators must conduct monitoring of the visual clearance and exclusion zones by vessel based PSOs stationed at the installation</li> </ul>	Thank you for your comment. If a project proposes quieter foundation types, additional or different mitigation measures can be revisited at the project-specific NEPA stage.

Comment No.	Comment	Response
	<p>site. On each vessel a minimum of four PSOs must be established following a two-on two-off rotation each responsible for scanning no more than 180 of the horizon per installation location. To effectively monitor the full exclusion zone operators should station multiple PSOs at several vantage points at the highest level possible above the surface of the water to allow each to continuously scan a section of the exclusion zone.</p> <ul style="list-style-type: none"> <li>• Operators must begin acoustic and visual monitoring at least 60 minutes prior to the commencement of installation activity conduct monitoring throughout the duration of installation and continue visual monitoring until 30 minutes after installation.</li> <li>• Operators must use infrared technology to support visual monitoring during any activities that extend into periods of darkness. Operators should deploy additional observers and monitoring technologies (e.g. infrared drones or hydrophones) as needed to ensure the ability to monitor the established clearance and exclusion zones including during periods of darkness or poor visibility. Activity restriction and shutdown upon detection during construction using quiet foundation types: Operators must implement shutdown of activities if a marine mammal or sea turtle is detected visually or in the case of North Atlantic right whales acoustically as follows: <ul style="list-style-type: none"> <li>○ Installation of gravity-based and suction bucket foundations must not be initiated when the application of monitoring methods described in MMST-15 results in a detection of a marine mammal or sea turtle species within the relevant clearance zone.</li> <li>○ Installation of gravity-based and suction bucket foundations must be stopped unless continued installation activities are necessary for reasons of human safety or installation feasibility when the application of monitoring methods described in MMST-15 results in a detection of a marine mammal or sea turtle species within the relevant exclusion zone.</li> <li>○ If localization cannot be achieved by acoustic detection as described in MM-2 installation activities must be stopped</li> </ul> </li> </ul>	

Comment No.	Comment	Response
	<p>upon detection of a whale call regardless of distance from the sound source.</p> <ul style="list-style-type: none"> <li>Once halted installation may be resumed only after use of the monitoring methods described above and after the lead PSO confirms no marine mammal or sea turtle species have been detected within the relevant clearance zones.</li> </ul> <p>"Resource Area Mitigated: Marine Mammals Sea Turtles Anticipated Enforcing Agency: BOEM BSEE and NMFS Notes: We recommend that BOEM establish measures for mitigating noise impacts during construction of quiet foundation types (i.e. non-pile driving construction).If any of the mitigation measures in Appendix G that address construction are intended to apply to construction of quiet foundations as well as pile driving we recommend that BOEM clarify this fact.</p>	
BOEM-2024-0001-0422-0017	<p>MMST-3 Pile-driving clearance and shutdown zone adjustments Comment #15 on MMST-3</p> <p>The requirement that the Lessee must submit the results of the field measurements to BOEM BSEE NMFS and USACE (when applicable) within 48 hours is potentially not feasible due to quality assurance efforts. Attentive Energy recommends providing a bit more time i.e. 72 hours to provide the report.</p>	Thank you for your comment. MMST-3 has been revised in the Final PEIS. Additional changes based on this comment will be taken into consideration.
BOEM-2024-0001-0439-0055	<p>Measure ID: MMST-3 Measure Name: Pile-driving clearance and shutdown zone adjustments Description: In order for pile-driving clearance and/or shutdown zones to be decreased the Lessee must request modification of the clearance and shutdown zones based on Thorough Sound Field Verification (MUL-29) measurements at a minimum of three foundations which must meet the Received Sound Level Limit (MUL-22) when effective as well as minimum seasonal distances for threatened and endangered species that may be specified in the Biological Opinion. If Sound Field Verification (SFV) measurements indicate that the isopleths of concern are larger than those considered in the Proposed Action for the COP NEPA analysis the Lessee must in coordination with applicable federal permitting agencies implement additional sound attenuation measures before driving any additional piles and conduct Thorough Sound Field Verification (MUL-29) for the subsequent three foundation installations. The Lessee must submit the results of the field</p>	Thank you for your comment. MMST-3, MUL-22, and MUL-29 have been revised in the Final PEIS. Additional changes based on this comment will be taken into consideration.

Comment No.	Comment	Response
	<p>measurements to BOEM BSEE NMFS and USACE (when applicable) within 48 hours. The agencies will provide direction to the Lessee on whether any additional modifications are required. Category: T/E G BACP Comment: Industry welcomes the ability to reduce clearance or shutdown zones based on the results in the field. However the criteria should be based on the specific project characterization. In addition expedited timeframes for agency review must be established to avoid construction delays. As discussed in MUL-22 meeting the "Received Sound Level Limit" and its associated SFV requirements are not technically or economically viable and will result in significant delays to projects. To simplify this measure ensure feasibility and consistency with consultations the text should be revised as follows: "Modifications to the clearance and shutdown zones (either decrease or increase) shall follow procedures stipulated in the NOAA Fisheries Incidental Take Authorization and Biological Opinion. "The concerns raised here and in MUL-22 highlight why BOEM must go through a robust guidance development process before imposing these measures on projects. This measure must be removed from consideration in the FEIS and instead considered during COP specific reviews. For the "Received Sound Level Limit" BOEM should engage in a robust public guidance development process that includes a public comment period workshops and outreach to industry stakeholders.</p>	
BOEM-2024-0001-0450-0084	<p>Measure ID and Name:MUL-5 Low Noise Best Practices Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion):For onshore and offshore project activities and across all phases of construction and operations operators should use equipment technology and best practices that produce the least amount of noise practicable to avoid and minimize noise impacts on the environment. See the following as examples: low noise foundation (MUL-6) vessel noise reduction BMP (MUL-7) and the received sound level limit (MUL-22).</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>The NY Bight PEIS can draw insights from various avian mapping data products such as MDAT marine bird models the Northwest Atlantic Seabird Catalog MBO CSAP database and incidental</li> </ul>	<p>Thank you for your comment. Because seabirds have a similar hearing range as some marine mammal species, the mitigations targeting marine mammals necessarily afford some protection to seabirds, as well. As more information becomes available on noise impacts on seabirds, additional mitigations explicitly for impacts on seabirds will be considered.</p>

Comment No.	Comment	Response
	<p>records from eBird revealing a diverse assemblage of diving marine <b>birds</b> in the area.</p> <ul style="list-style-type: none"> <li>While offshore wind activities' sound mitigation measures typically target marine mammals sea turtles fishes and invertebrates diving bird taxa possess hearing thresholds in the frequency band 1-4 kHz similar to seals and toothed whales. Diving seabirds change their foraging behavior and increase distances from sound sources during acoustic disturbances with avoidance distances reaching tens of kilometers. The existing monitoring framework for the NY Bight PEIS overlooks potential adverse injuries from acoustic disturbances to diving birds during project construction and/or operations. Measures such as seasonal curtailment may be justified to minimize harm particularly for species like Razorbills which can dive to depths of 140 meters and are sensitive to loud noises.</li> <li>Diving bird densities peak during winter on inner and middle shelf habitats in the Atlantic OCS portion of the NY Bight region. Seasonal shifting of noisy operations or other sound abatement methods such as establishing safety zones monitored by visual observers using noise reduction gear like bubble curtains or deploying noise-source modifications may mitigate risks to diving birds if time/area closures are not practical.</li> </ul>	

**Table P.5.23-4. Responses to Substantive Comments on Mitigation and Monitoring—Scenic and Visual Resources (VIS)**

Comment No.	Comment	Response
BOEM-2024-0001-0406-0021-a	VIS-1 to VIS-6 which would regulate onshore visual impacts in potential tension with state permitting requirements. For instance many of BOEM's proposed measures are inconsistent with current practice within New York and New Jersey and in urban settings.	Thank you for your comment. BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. Any previously identified AMMM measure that is now an RP has been removed from Alternative C. VIS-1 through VIS-6 are measures that are now RPs. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs. In addition, potential visual impacts will be evaluated again at the project-specific COP NEPA stage.

Comment No.	Comment	Response
BOEM-2024-0001-0357-0067	Missing AMMM Measures. The program EIS fails to include many meaningful measures some suggested in Enclosure I. For example the AMMM measures put forth to address the adverse effects of the project through the National Historic Preservation Act Section 106 process are entirely inadequate. In fact the entire process is seriously flawed. Meaningful measures to mitigate the visible rotating blades impact and operational turbine airborne noise impact on shore historic properties must be presented. These include (see also Enclosure I) limitations on turbine height and power minimum spacing between turbines of at least 2 nautical miles and most notably turbine exclusion zones from shore to reduce the adverse effect on historic properties.	BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs. Additional mitigation measures proposed by the public can be considered by BOEM during subsequent COP-specific NEPA reviews.
BOEM-2024-0001-0313-0024	Affected Environment and Environmental Consequences 3.6.9-59 The PEIS also states 'Presence of structures: Several AMMM measures (VIS-1 VIS-2 VIS-3 VIS-4 and VIS-5) would minimize visual contrast impacts associated with onshore infrastructure (e.g. substations/converter stations transmission towers). These measures would involve selecting transmission towers that minimize visual contrast color treating onshore infrastructure to reduce visual contrast using non-specular conductors for overhead transmission powerlines to avoid glare using color-treated polymer insulators to reduce glare and treating security fencing to eliminate glare and visual contrast. These measures would assist with impacts to SLIA character areas and VIA viewer experiences from future KOPs (determined in the COP VIA) in the vicinity of future onshore infrastructure." Comment Again the chemical composition and potential environmental impact of these coatings and polymer additives should be evaluated and addressed in the final PEIS.	BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. VIS-1 through VIS-5 are now RPs. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs. Polymer insulator is a common product and coatings are also standard. These products and coatings are commonly used in the electrical transmission industry as well as in other industries. Conducting assessments of the environmental effects of the chemical compositions on the environment is not foreseen as necessary at this time.
BOEM-2024-0001-0439-0095	Measure ID: VIS-1 Measure Name: Onshore transmission tower visual contrast mitigation Description: Lessees should select a transmission tower type that has the least amount of visual contrast within the surrounding setting and the extended landscape within view of which the transmission line is routed through in order to avoid undue and unnecessary visual impact. Monopoles typically have less visual contrast within built environments whereas lattice towers typically have less visual contrast in more natural settings. Lessees must color-treat the transmission tower darker grays	Thank you for your comment. BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. Any previously identified AMMM measure that is now an RP has been removed from Alternative C. VIS-1 is now an RP. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs. Subsequent project-specific NEPA analysis will evaluate the specific design features proposed in COPs.

Comment No.	Comment	Response
	<p>(chemically treated galvanized finishes) to reduce visual contrast or powder-coat the tower with Bureau of Land Management Environmental Color Covert Green or Shadow Gray or a BOEM-approved equal submitted by the Lessee for settings where Covert Green or Shadow Gray does not minimize the visual contrast. Lessees must prepare photo simulations of proposed onshore facilities with and without mitigation measures described in VIS-1. Bureau of Land Management color samples may be acquired by email to <a href="mailto:blm_oc_pmds@blm.gov">blm_oc_pmds@blm.gov</a>. Previously Applied as a COP T&amp;C: Category: JACP Comment: The PEIS indicates that this measure is outside BOEM jurisdiction. Measures outside BOEM's jurisdiction should not be included in AMMMs. This measure is overly prescriptive. Selection of transmission tower types will be based on site-specific engineering requirements. Overhead transmission towers are not anticipated or limited to riser poles. BLM color scales are inappropriate in urban/suburban geography. Selection is dependent on site-specifcics and subject to state and local requirements regarding height setbacks color etc.</p>	
BOEM-2024-0001-0439-0096	<p>Measure ID: VIS-2 Measure Name: Onshore substation visual contrast mitigation Description: Lessees should color treat all substation facilities the same color and color-treated to minimize visual contrast with the surrounding setting and the extended landscape within view. The default color choice for substations must be Bureau of Land Management Environmental Color Covert Green or Shadow Gray or a BOEM-approved equal submitted by the Lessee for settings where Covert Green or Shadow Gray does not minimize the visual contrast in order to avoid undue and unnecessary visual impact. Lessees must prepare photo simulations of proposed onshore facilities with and without mitigation measures described in VIS-2. Bureau of Land Management color samples may be acquired by email to <a href="mailto:blm_oc_pmds@blm.gov">blm_oc_pmds@blm.gov</a>. Previously Applied as a COP T&amp;C: Category: JACP Comment: The PEIS indicates that this measure is outside BOEM jurisdiction. Measures outside BOEM's jurisdiction should not be included in AMMMs. This measure is overly prescriptive. While general use of an exterior finish that reduces visual contrast with the surrounding setting is a reasonable commitment exterior finishes on substation facilities will be subject</p>	<p>Thank you for your comment. BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. Any AMMM measure that was reclassified as an RP has been removed from Alternative C. For example, VIS-2 is now an RP. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs. Subsequent project-specific NEPA analysis will evaluate the specific design features proposed in COPs.</p>

Comment No.	Comment	Response
	to state and local requirements (e.g. under Article VII and any municipal requirements negotiated under Article VII settlement procedures) and on stakeholder input. BLM color scales are inappropriate in urban/suburban geography. What color should be used in the "baseline" photo simulation without mitigation?	
BOEM-2024-0001-0439-0097	Measure ID: VIS-3 Measure Name: Onshore overhead transmission conductors visual contrast mitigation Description: Lessees should use non-specular conductors for overhead transmission powerlines to avoid glare commonly associated with untreated conductors to avoid undue and unnecessary visual impact. Lessees must prepare photo simulations of proposed onshore facilities with and without mitigation measures described in VIS-3. Previously Applied as a COP T&C: Category: JACP Comment: The PEIS indicates that this measure is outside BOEM jurisdiction. Measures outside BOEM's jurisdiction should not be included in AMMMs. This measure is overly prescriptive. Use of overhead conductors is unlikely or extremely limited. Use of non-specular conductors would be dependent on availability from cable OEM. The difference between specular and non-specular conductors is likely indiscernible in visual simulations at applicable scales of photo simulations from KOPs and therefore this should be eliminated from this measure.	Thank you for your comment. BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. Any AMMM measure that was reclassified as an RP has been removed from Alternative C. For example, VIS-3 is now an RP. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs. Subsequent project-specific NEPA analysis will evaluate the specific design features proposed in COPs.
BOEM-2024-0001-0439-0098	Measure ID: VIS-4 Measure Name: Onshore overhead transmission line insulator visual contrast mitigation Description: Lessees should use polymer insulators to minimize glare commonly associated with glass insulators. Lessees should use polymer insulators that are a color that minimizes visual contrast with the surrounding setting and the extended landscape that is within view to avoid undue and unnecessary visual impact. The default color choice for polymer insulators substations should be Bureau of Land Management Environmental Color Covert Green or Shadow Gray or Sudan Brown or a BOEM-approved equal submitted by the Lessee for settings where Covert Green or Shadow Gray or Sudan Brown do not minimize the visual contrast. Bureau of Land Management color samples may be acquired by email to blm_oc_pmds@blm.gov. Lessees must prepare photo simulations of proposed onshore facilities with and without mitigation measures described in VIS-4. Previously Applied as a COP T&C: Category: JACP Comment: The	Thank you for your comment. BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. Any AMMM measure that was reclassified as an RP has been removed from Alternative C. For example, VIS-4 is now an RP. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs. The specific colors for insulators will be reviewed during subsequent NEPA analysis based on project-specific information provided in COPs.

Comment No.	Comment	Response
	PEIS indicates that this measure is outside BOEM jurisdiction. Measures outside BOEM's jurisdiction should not be included in AMMMs. This measure is overly prescriptive. BLM color scales are inappropriate in urban/suburban geography.	
BOEM-2024-0001-0439-0099	<p>Measure ID: VIS-5 Measure Name: Onshore facility security fencing visual contrast mitigation Description: Lessees should ensure galvanized and other types of security fencing are treated to eliminate glare and color-treated to minimize visual contrast with the surrounding setting and the extended landscape that is within view to avoid undue and unnecessary visual impact. Methods include vinyl-coating powder-coating and oxidizing treatments. Colors must be dark brown dark grays or dark brown (oxidizing treatments only). Lessees must prepare photo simulations of proposed onshore facilities with and without mitigation measures described in VIS-5. Previously Applied as a COP T&amp;C: Category: JACP</p> <p>Comment: The PEIS indicates that this measure is outside BOEM jurisdiction. Measures outside BOEM's jurisdiction should not be included in AMMMs. This measure is overly prescriptive. Further the difference between galvanized and ungalvanized fencing is likely indiscernible in visual simulations at applicable scales of photo simulations from KOPs and therefore this should be eliminated from this measure.</p>	<p>Thank you for your comment. BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. Any AMMM measure that was reclassified as an RP has been removed from Alternative C. For example, VIS-5 is now an RP. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs. Subsequent project-specific NEPA analysis will evaluate the specific design features proposed in COPs.</p>
BOEM-2024-0001-0439-0100	<p>Measure ID: VIS-6 Measure Name: Onshore facility lighting Description: In order to avoid undue and unnecessary visual impact Lessees should ensure artificial light at night needed for nighttime operations and security at onshore facilities such as operational and maintenance facilities substations and others follows the night lighting principles to avoid light pollution and the artificial lighting best management practices outlined in the Bureau of Land Management Technical Note 457 available at <a href="https://www.blm.gov/sites/default/files/docs/2023-05/IB2023-038_att1.pdf">https://www.blm.gov/sites/default/files/docs/2023-05/IB2023-038_att1.pdf</a>. Lessees must prepare photo simulations of proposed onshore facilities with and without mitigation measures described in VIS-6. Previously Applied as a COP T&amp;C: Category: JACP</p> <p>Comment: The PEIS indicates that this measure is outside BOEM jurisdiction. Measures outside BOEM's jurisdiction should not be included in AMMMs. Nighttime simulations at onshore substations is atypical.</p>	<p>Thank you for your comment. BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. Any AMMM measure that was reclassified as an RP has been removed from Alternative C. For example, VIS-6 is now an RP. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs. The use of galvanized steel fencing will be reviewed during subsequent NEPA analysis based on project-specific information provided in COPs.</p>

Comment No.	Comment	Response
	Onshore substations are expected to be located in areas characterized by high levels of existing ambient lighting. Static imagery photo- simulations will not be able to meaningfully depict this visual distinction between lighting BMPs and baseline conditions.	
BOEM-2024-0001-0439-0101	<p>Measure ID: VIS-7 Measure Name: Monitoring impacts on scenic and visual resources Description: In coordination with BOEM the Lessee must prepare and implement a scenic and visual resource monitoring plan that monitors and compares the visual effects of the wind farm during construction and operations/maintenance (daytime and nighttime) to the findings in the COP Visual Impact Assessment and verifies the accuracy of the visual simulations (photo and video).The monitoring plan must include monitoring and documenting the meteorological influences on actual wind turbine visibility over a duration of time from selected onshore key observation points as determined by BOEM and the Lessee. In addition the Lessee shall include monitoring the operation of ADLS in the monitoring plan. The Lessee must monitor the frequency that the ADLS is operative documenting when (dates and time) the aviation warning lights are in the on position and the duration of each event. Details for monitoring and reporting procedures must be included in the plan. Previously Applied as a COP T&amp;C: Category: J</p> <p>ACP Comment: The PEIS indicates that this measure is outside BOEM jurisdiction. Measures outside BOEM's jurisdiction should not be included in AMMMs. What is the purpose of monitoring visual affects after the wind farm is built? Lessees go through a very exhaustive visual assessment provide mitigation and should not be required to undertake additional assessment. NEPA mitigation is for reasonably foreseeable impacts not unanticipated /unforeseen impacts which is inconsistent with NEPA. With respect to ADLS Lessees should not be required to monitor dates and times when ADLS is activated. The FAA tracks all air traffic and can determine when the ADLS is activated.</p>	VIS-7 was revised to specify that implementation of this AMMM measure is within BOEM's jurisdiction and that the monitoring timeframe is 3 years of operation, with the possibility of extension depending on consistency in data results. The benefit of monitoring visual effects is to validate the visual simulations. ADLS records are already maintained in case FAA requests them. Under this AMMM measure, BOEM is also requesting records of the actual frequency and duration of ADLS operation.
BOEM-2024-0001-0406-0019	VIS-7 requiring the submittal of a scenic and visual resource monitoring plan. The NYB projects are going to be sited far enough from shore and often behind other wind farms nearer to shore that onshore visual impacts will be negligible to non-existent. See Draft	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0439-0101. Subsequent project-specific NEPA analysis will evaluate the detailed information proposed in COPs.

Comment No.	Comment	Response
	PEIS Table 3.6.9-27. Monitoring plans are time- and resource-intensive; as such they should be reserved for instances in which the data collected could contribute to adaptive management of serious anticipated impacts or otherwise ensure compliance with the conditions of the COP. See 50 CFR 1505.3 ("Agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases.") Restraint is also called for where as here project proponents are already being inundated with post-COP approval submittals (see section II.b.v below).	

**Table P.5.23-5. Responses to Substantive Comments on Mitigation and Monitoring—Cultural Resources (CUL)**

Comment No.	Comment	Response
BOEM-2024-0001-0357-0067	Missing AMMM Measures. The program EIS fails to include many meaningful measures some suggested in Enclosure I. For example the AMMM measures put forth to address the adverse effects of the project through the National Historic Preservation Act Section 106 process are entirely inadequate. In fact the entire process is seriously flawed. Meaningful measures to mitigate the visible rotating blades impact and operational turbine airborne noise impact on shore historic properties must be presented. These include (see also Enclosure I) limitations on turbine height and power minimum spacing between turbines of at least 2 nautical miles and most notably turbine exclusion sones from shore to reduce the adverse effect on historic properties.	<p>Visual AMMM measure VIS-7 requires lessees to prepare and implement a scenic and visual resource monitoring plan. VIS-8 is an RP that encourages lessees to evaluate the other visual measures identified as RPs in PEIS Appendix G (see VIS-1 through VIS-6). BOEM is developing a Programmatic Agreement through the Section 106 process that identifies processes for evaluating and resolving visual effects on historic properties. Because effects on historic properties are project and site specific, visual effects will be evaluated at the project-level NEPA and Section 106 reviews.</p> <p>A lessee is allowed to use a PDE as part of its COP submission. The PDE can include a range of facilities and facility-related options such as number of WTGs and OSSs, and WTG size range (height) or spacing. The PDE approach is now codified in via the Modernization Rule via 30 CFR 585.113 (definitions) and its use as part of a COP submission via 30 CFR 585.626.</p> <p>BOEM's regulations allow for BOEM to decide when a PDE is acceptable. The acceptability will typically be linked to whether a PDE is too unreasonably broad or vague to be effectively analyzed through NEPA or consulted upon with another agency, or if there is not enough detail in the COP to ensure sufficient safety and technical feasibility to support a COP approval. BOEM is developing recommendations for PDE limits in its pending</p>

Comment No.	Comment	Response
		<p>updated COP and PDE Guidelines, but those are recommendations and not requirements/regulations. BOEM can address concerns with impacts through the development of alternatives in the COP NEPA review. However, these alternatives must align with the project's purpose and need and primary goals of the applicant/lessee. Additionally, the alternatives must be both technically and economically feasible. For example, if a project's purpose and need and goal are tied to the delivery of an awarded Power Purchase Agreement generation capacity, BOEM cannot include an alternative that would reduce the number of WTGs needed to meet that generation capacity (this includes considering transmission losses). Similarly, BOEM can develop mitigation measures to address specific project impacts, including measures to mitigate adverse effect son historic properties through the NHPA Section 106 review for the COP, that would be instituted as part of the Section 106 Memorandum of Agreement, BOEM's ROD, and BOEM's conditions of COP Approval. However, those must be technically and economically feasible. For example, BOEM cannot require an applicant/lessee to use to a WTG size that does not exist or is not commercially available. BOEM could potentially adjust a wind facility's layout (modify the array spacing) via an alternative or mitigation if the purpose and need and goals were achievable while also being technically and economically feasible. BOEM needs to know the PDE for the actual project (a project-specific COP) to use these mechanisms. The project-specific details in conjunction with BOEM's environmental analysis at the COP stage allow BOEM to assess which alternatives, mitigation, and conditions of COP approval are appropriate.</p>
BOEM-2024-0001-0423-0014	<p>Cultural Resources Cultural resources impacts are highly project specific. As documented in Appendix H (Seascape Landscape and Visual Impact Assessment) Bluepoint Wind's visual impacts are the smallest by far of the six lease areas being the farthest away from land (approximately 43.7 statute miles off the New York coast and approximately 61 mi off the New Jersey coast) and are likely to be even less impactful than the Appendix H analysis which assumed taller turbines than have been designed for the industry. It is highly</p>	<p>BOEM has removed CUL-6 from consideration as an AMMM measure in the PEIS. Compensatory mitigation is project specific and would be formalized at the project-specific COP NEPA and consultations stage. Because it is project specific, CUL-7, Section 106 mitigation fund, was classified as an RP for the Final PEIS.</p>

Comment No.	Comment	Response
	unlikely that the Bluepoint Wind project will be visible from the historic properties examined in the Draft PEIS. As such Ocean Winds insists that those impacts and mitigation measures tied to visual impact should be determined at the individual COP review stage and not generalized in a PEIS. For example [bold: CUL-6] is phrased as a mandatory requirement [italicized: "BOEM with assistance from lessees must develop and implement one or more historic property treatment plans"] to address unavoidable adverse effects. [bold: CUL-7] states BOEM [italicized: "may request that lessees contribute financially to a compensatory mitigation fund to address impacts on historic properties related to OCS offshore wind activities."] Including those AMMMs in the PEIS sets an expectation that they will be applied to all projects and sets project specific EISs up for potential legal challenge should they not include those plans and funding. At the very least BOEM should clarify that such compensatory mitigation would be scaled based on the level of unavoidable impact and that some projects may not have such impacts.	

**Table P.5.23-6. Responses to Substantive Comments on Mitigation and Monitoring—Air Quality (AQ)**

Comment No.	Comment	Response
BOEM-2024-0001-0406-0017	i. Measures That Are Technically or Commercially Infeasible Many of the proposed AMMM measures would force the adoption of novel technologies strategies or guidance that are not technically or commercially feasible to implement now or in the foreseeable future and/or have not been formally accepted as options for use by BOEM and other cooperating agencies. It would be inappropriate for BOEM to make weighty suitability determinations regarding such measures through a regional PEIS particularly where it has introduced so many presenting dozens of novel issues. If BOEM wishes to advance such measures it must conduct focused inquiries into each's feasibility. That sort of inquiry is an appropriate use of tools such as Requests for Information under 30 CFR 585.116 but not an appropriate use of the PEIS process. Examples of measures that fall into this category include: AQ-1 to AQ-7 which would require lessees to replace vessels and equipment that emit greenhouse gases with ones that use	Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have been included in previous BOEM COP approvals from AMMM measures that have not been previously applied; BOEM believes these are all feasible. In addition, several AMMM measures were reclassified as RPs in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are not part of the Proposed Action. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information. BOEM's review and revision of AMMM measures has resulted in AQ-1 through AQ-7 becoming RPs. MUL-22 was analyzed as an AMMM measure that has not been previously applied.

Comment No.	Comment	Response
	<p>reduced- or zero-emissions technology. While we embrace the objectives behind this measure such vessels are either in extremely limited supply (e.g. cleaner fuels under AQ2) or not currently feasible at all (e.g. non-SF6 switchgear electrified service operation vessels and retrofitted diesel engines). Requiring all NYB projects to use these vessels would cause significant delays and cost overruns for each of the projects. Moreover as discussed in detail in the public comments submitted by the American Clean Power Association in which COSW joins the Environmental Protection Agency has jurisdiction over air emissions and has already determined through BACT analyses conducted under its Clean Air Act OCS permit program for several recent offshore wind permit applications that many of these proposed measures are infeasible. MUL-22 which would require sound level thresholds for pile-driving that are not technologically feasible for the anticipated foundation sizes in the timeframe described. This measure would create a de facto maximum size foundation which could increase environmental impacts by requiring the installation of more foundations to meet the same electrical generation capacity and to support meeting clean energy goals.</p>	
BOEM-2024-0001-0406-0020	<p>iv. Measures That Lie Outside of BOEM's Jurisdiction Certain of the AMMM measures proposed in the Draft PEIS particularly those relating to onshore impacts are outside of BOEM's authority to implement. "Agencies should not commit to mitigation however unless they have sufficient legal authorities and expect there will be necessary resources available to perform or ensure the performance of the mitigation." CEQ Mitigation and Monitoring Guidance at 5 (Jan. 2011). Appendix G appears to propose adoption of numerous measures that can only be imposed and enforced by other agencies through federal state- and local-level permitting in contravention of CEQ guidance. Examples include: AQ-6 and AQ-7 under which BOEM would inappropriately regulate onshore air emissions. Authority to regulate air emissions rests with the EPA and with the states in the onshore environment for non-major sources. The fact that onshore components of an offshore wind project may generate minor amounts of emissions may be relevant to BOEM's COP NEPA analysis but does not give it authority to impose emissions limitations or</p>	<p>Refer to response to comment BOEM-2024-0001-0406-0017. AMMM measures are now structured to indicate which have or have not been previously applied, and which are RPs. BOEM can incorporate mitigation considerations and recommendations into planning. AQ-6 and AQ-7 are now RPs that include a caveat for feasibility concerns.</p> <p>Regarding the Footnote 7 statement of cable siting needed pre-COP submittal, the commenter's statement is not correct. Multiple options for cable routing are often investigated throughout the process and additional changes in routing may be identified throughout the consultation process, which could result in the need for further survey work. Lessees have often requested to conduct additional cable routing surveys post COP submittal. The ultimate route(s) chosen can be a condition of COP approval.</p>

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	<p>control requirements on a project. While discussed above in Section IV(b)(i) Measures that are technically and commercially infeasible AQ 1-5 also appear to be under the jurisdiction of the EPA under its Clean Air Act OCS permit program. MUL-18 under which lessees "should coordinate transmission infrastructure among projects." Although it is listed as "voluntary" its adoption would overstep BOEM's jurisdiction by interfering with a process that is largely driven by state procurement decisions and other factors that are largely beyond a project developer's control including the timing of siting permitting and construction of the regional collector line. While we recognize that utilizing a shared transmission has the potential to minimize conflicts with various other ocean uses and increase overall efficiencies its adoption must be driven by state and commercial considerations and not minimization and mitigation requirements imposed in a NEPA review. [Footnote 7: This obligation is inappropriate as an AMMM measures for the additional reason that the siting of cables must be made pre-COP submittal so that developers can collect the geophysical and geotechnical data required in a COP per the NOI Checklist. Cable routing therefore cannot also be a condition of COP approval.]</p>	
BOEM-2024-0001-0439-0018	<p>V. BOEM should remove certain AMMMs from consideration. Even assuming BOEM reframes the PEIS and acknowledges that the agency is considering AMMM measures that it [italicized: may] require as conditions of approval it should remove from consideration certain inappropriate AMMMs. Attachment A provides the OSW industry's detailed comments on specific AMMMs. As demonstrated by those comments many of the AMMMs proposed by BOEM are inappropriate because to varying degrees they are outside of BOEM's statutory authority and are duplicative are more suitably proposed as COP guidance will be technically or economically infeasible will create untenable safety issues or undue burden on industry and/or are voluntary.</p> <p>a. BOEM should remove AMMMs that are outside their statutory authority and duplicative. An agency "may not exercise its authority in a manner that is inconsistent with the administrative structure that Congress enacted into law." [Footnote 38: Food and Drug Admin. v. Brown &amp; Williamson Tobacco Corp. 529 U.S. 120 125 120 S.Ct.</p>	<p>Refer to response to comment BOEM-2024-0001-0406-0017. AMMM measures are now structured to indicate which have or have not been previously applied, and which are RPs. BOEM can incorporate mitigation considerations and recommendations into planning. AQ-1 through AQ-5 are now RPs that include a caveat for feasibility concerns. MMST-13 has been removed and incorporated into MMST-14. BOEM's review and revision of AMMM measures has resulted in EJ-1 from the Draft PEIS being split into a not previously applied AMMM measure (EJ-1a) and an RP (EJ-1b); these AMMM measures have been revised to further reduce potential duplication with existing state and local requirements and describe how lessees may refer to other requirements to satisfy the AMMM measure. MUL-7 is now an RP and has been updated for clarity.</p>

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	<p>1291 146 L.Ed.2d 121 (2000) (quoting ETSI Pipeline Project v. Missouri 484 U.S. 495 517 108 S.Ct. 805 98 L.Ed.2d 898 (1988)).] As such BOEM cannot implement AMMMs that are outside of its authority. While a NEPA analysis can review mitigation measures that are not within an agency's authority the agency cannot impose these measures on the lessee or adopt them in a ROD but can only cross-reference those measures to provide for interagency coordination. In fact "Agencies should not commit to mitigation however unless they have sufficient legal authorities and expect there will be necessary resources available to perform or ensure the performance of the mitigation." [Footnote 39: Final Guidance for Federal Departments and Agencies on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact 76 FR 3843 (Jan. 2011)] Indeed BOEM itself notes that not all "AMMM measures are within BOEM's statutory and regulatory authority; those that are not may still be adopted and imposed by other governmental agencies." [Footnote 40: DPEIS Appendix G.] As such BOEM should not develop duplicative or additive AMMM [Footnote 41: As discussed below the AMMM implies it is within BOEM's authority to issue. Instead BOEM should simply analyze the environmental effects of air permits that would be required by EPA.] or impose any requirements for measures that fall outside of their statutory authority. Instead BOEM should defer to cooperating agencies with regulatory authority to impose certain mitigation measures. [Footnote 42: See Wyoming v. U.S. Dep't of the Interior 493 F. Supp. 3d 1046 (D. Wyo. 2020) (BLM rule referencing EPA regulations "usurps the authority to regulate air emissions Congress expressly delegated to the EPA").] For example AQ-1 through AQ-5 would impose air quality requirements; however emissions in the NY Bight lease area are regulated by the Environmental Protection Agency ("EPA") under its Clean Air Act regulations at 40 C.F.R. Part 55. AQ-1 through AQ-5 are duplicative of EPA's air permit process and create the potential for conflicting requirements and confusion. Through the OCS Air Permit process applicants will perform a Best Available Control Technology (BACT) and/or Lowest Achievable Emission Rate (LAER) analysis for each emission source and New</p>	

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	<p>Source Review (NSR) air pollutant that is emitted in excess of thresholds set forth in the Prevention of Significant Deterioration (PSD) regulations and/or the regulations of the Corresponding Onshore Area. For example with respect to AMMM AQ-4 as part of the BACT/LAER analysis applicants will assess the feasibility of add-on pollution controls (e.g. Selective Catalytic Reduction Selective Non-Catalytic Reduction NOx Adsorber/Scrubber Lean NOx Catalysts SOx Scrubber Diesel Particulate Filter Diesel Oxidation Catalyst etc.) on vessels and engines on the WTGs and ESPs. EPA is responsible for reviewing and concurring with an applicant's justification for why these add-on pollution controls are technically and/or economically infeasible through the BACT/LAER process not BOEM and BSEE. BOEM should not use its AMMMs to reinforce existing standards or legal requirements over which it has no authority itself. Similarly MMST-13 attempts to characterize existing vessel speed rules but may ultimately create conflict if those regulations are modified. EJ-1 would require lessees to develop an Environmental Justice Communications Plan but an Environmental Justice Plan is already required by both the states of New York and New Jersey. AMMMs that are duplicative of (and potentially in conflict with) existing state or Federal requirements should be removed from BOEM's proposed AMMMs. Finally with AMMM MUL-7 BOEM attempts to meet International Maritime Organization ("IMO") standards. These standards are outside of BOEM's jurisdiction and authority and BOEM may not use AMMMs developed through NEPA to enforce compliance with those standards (see Attachment A for additional examples).</p>	
BOEM-2024-0001-0436-0012	<p>b. Duplicative Requirements Some new AMMMs are duplicative with the requirements of other federal and state regulatory processes and risk inconsistency with other agency authorities. The increased regulatory burden of AMMMs that are duplicative or overlap with other agency authorities runs counter to the efficiency-based purpose and need for the PEIS and has the potential to jeopardize the success of offshore wind projects in the New York Bight. For example the Environmental Protection Agency (EPA) has jurisdiction and subject matter expertise over AMMMs AQ-1 (Using a substitute insulator gas</p>	<p>Refer to response to comment BOEM-2024-0001-0406-0017. AMMM measures are now structured to indicate which have or have not been previously applied, and which are RPs. BOEM can incorporate mitigation considerations and recommendations into planning. AQ-1 through AQ-5 are now RPs that include a caveat for feasibility concerns. AQ-8 is also included as an RP in the Final PEIS.</p>

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	in the switch gears and transmission systems to the maximum extent possible) AQ-2 (Cleaner fuels for vessels equipment and vehicles engaged in activities on the OCS) AQ-3 (Electrification of vessels equipment and vehicles engaged in activities on the OCS) and AQ-4 (Exhaust aftertreatment for vessels engaged in activities on the OCS). These air quality AMMMs are duplicative of EPA's Outer Continental Shelf (OCS) Air Permit process under OCS Air Regulations. [Footnote 6: 40 CFR Part 55 ]In the Final PEIS BOEM should identify those new AMMMs that fall under the authorities of other agencies and cross reference the permit and/or consultation processes where those measures will be given proper consideration rather than reiterate such requirements.	
BOEM-2024-0001-0439-0020	c. BOEM should remove AMMMs that are technically and economically infeasible. As stated above NEPA requires agencies to "study develop and describe technically and economically feasible alternatives"[Footnote 44: 43 U.S.C. 4331.] A number of the newly proposed AMMMs are technically and economically infeasible will create unsafe conditions and/or impose undue burden on developers (see Attachment A for additional examples).MUL-22 - Received Sound Level Limit: It is premature to implement new requirements on sound mitigation prior to a thorough and complete analysis of learnings from the construction of the South Fork Wind Farm and Vineyard Wind 1 projects including measured sound fields sound abatement techniques relative effectiveness of mitigation and monitoring measures and documented exposures above relevant thresholds. Ignoring this experience robs BOEM and the industry of the opportunity to learn and improve based on the most recent science and practical considerations. It remains unclear how and to what extent the proposed thresholds will reduce the amount of acoustic exposure and whether these reductions meaningfully increase protection of marine wildlife. Empirical data compiled from projects in construction should be presented and discussed at the joint forums. This measure fails to account for trends in offshore wind technology particularly the use of larger wind turbines and associated larger foundations and piles. Large turbines are essential to make efficient use of the nation's offshore wind resource and to meet President Biden's offshore wind and climate goals myriad State	Refer to response to comment BOEM-2024-0001-0406-0017. AQ-1 through AQ-3 are now RPs that include a caveat for feasibility concerns. MUL-22 and MUL-29 have been revised for clarification in the Final PEIS. These AMMM measures are identified to find an effective approach, within the existing regulatory framework, to address environmental and compliance concerns. BOEM is recommending these measures with emphasis on practicability.

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	<p>goals and individual projects' offtake agreements. Finally mitigation measures for marine wildlife fall under NOAA's authority under the MMPA.MUL-29 - Sound Field Verification (SFV) Process Plan and Reporting: This process will result in significant construction delays to projects and is not economically or technically feasible. Requiring SFV at every turbine location would be unnecessary and cost prohibitive. A standardized target sub-sample of turbine locations would be more than sufficient to determine the effectiveness of sound reduction mitigation measures. Empirical data compiled from the projects currently conducting SFV could be discussed at our proposed BOEM-industry forum and would inform a broader discussion on how best to incorporate lessons learned from early projects. This measure could also unintentionally exacerbate stressors on marine mammals. For example construction time could be extended unnecessarily to accommodate repeated attempts to reduce sound to a specific level (e.g. start-up test fail sound limit shut down add bubble curtain start-up fail by lesser degree shutdown and so on). Also more extensive sound field verification requires additional vessels and equipment which counterproductively adds to the ambient sound level. AMMMs AQ-2 and AQ-3 require lessees to replace diesel fuel and marine fuel oil with alternative fuels such as natural gas propane or hydrogen for vessels and require the replacement of combustion engines with zero-emissions technology (fuel cell-electric or battery- electric) for vessels. Requiring developers to use alternative fuels or zero-emissions technology would severely limit project feasibility since the supply chain for vessels both current and new builds would be constrained to very few vessels globally. Considering the benefits of GHG reductions from deployment of offshore wind power the burden of this mitigation measure is disproportionate given the magnitude of GHG emissions during the relatively brief construction period. AMMMs AQ-2 encourages lessees to replace diesel fuel and marine fuel oil with alternative fuels. Requiring a technical and/or economic feasibility analysis for not using these vessels places an undue burden on developers because of the lack of these vessels in the market both now and in future construction trends. While there are over 25 different types of vessels needed to construct and</p>	

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	<p>maintain an offshore wind project[Footnote 45: See <a href="https://cleanpower.org/resources/offshore-wind-vessel-needs/">https://cleanpower.org/resources/offshore-wind-vessel-needs/</a>.]</p> <p>ACP did an analysis of 5 vessel types that provide a good representation of the vessel size and work scope across the industry including Crew Transfer Vessels Heavy Lift Vessels Rock Installation vessels Service Operation Vessels and Survey Vessels. ACP evaluated how many vessels with alternative fuels exist and how many global vessels are planned for construction or modification from 2024-2027 excluding China. ACP found that of the current fleet only 2% of these five vessel types have alternative fuels. Of these five vessel types under construction between 2024-2027 33% will be fueled by alternative fuels. And 7% of these vessels under modification will have the capacity to use alternative fuels. In total that means only 5% of the global market (excluding China) of these five vessel types will be fueled by alternative fuels. As offshore wind ambitions grow in both Europe the U.S. and other markets these vessels will be in short supply. With vessel availability already a challenge for U.S. projects pushing developers to only hire 5% of available vessels places undue burden on projects and is infeasible.[See original attachment for table titled Alternate Fuel Available by Supply Type]AMMMs AQ-2 encourages lessees to replace combustion engines with zero-emissions technology (fuel cell-electric or battery-electric) if feasible for vessels equipment and vehicles engaged in activities on the OCS. Similar to AQ-1 requiring a technical and/or economic feasibility analysis for not using these vessels places an undue burden on developers because of the lack of these vessels in the market both now and in future construction trends. ACP did a similar analysis for the availability of ESS and Shore Power capability of the same 5 representative vessel types in the current market and under construction and modification between 2024-2027. In the current market 5% of vessels have ESS capability 21% of those under construction and 10% of those under modification excluding China. In total looking at current supply and vessels under construction and modification 5% of vessels will have ESS capability.[See original attachment for table titled ESS]Shore power capacity is even less common. Current vessel availability with shore power is 1% of the global market. 4% of vessels under construction 2024-2027 will have</p>	

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	<p>shore power and 7% of vessels under modification. In total in 2027 only 2% of these 5 representative vessels will have shore power capacity.[See original attachment for table titled Shore Power]A programmatic NEPA review focused on a specific region is not the appropriate vehicle to test out new measures and receive feedback from stakeholders on feasibility. As demonstrated above these measures are infeasible unreasonable and requiring each lessee to prove their infeasibility during the project specific COP review places an undue burden on the industry. The onus should not be on the industry to justify why a measure is infeasible but instead the agency should demonstrate that the AMMMs result in reduced impacts. These measures should be removed prior to the publication of the Final PEIS.</p>	
BOEM-2024-0001-0469-0018	<p>Measure AQ-1 addresses developing technologies in a more environmentally protective way but still stops short of alleviating the threat of sulfur hexafluoride ("SF6"). SF6 is an extremely potent greenhouse gas used in the switchgear of wind turbines with 23500 times the global warming potential of carbon dioxide. [Footnote 66: ENV'T PROT. AGENCY &amp; EASTERN RSCH. GRP. ASSESSMENT OF THE USE OF SULFUR HEXAFLUORIDE (SF6) GAS INSULATED SWITCHGEARS (GIS) WITHIN THE OFFSHORE WIND SECTOR 3 (Aug. 24 2023)] The AMMM measure requires lessees to evaluate the feasibility of using an alternative gas and states that lessees should use alternatives to the extent feasible. [Footnote 67 NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 appx. G at G-3.] If the lessee finds that alternatives are not feasible the lessee would be required to provide a written explanation to BOEM supported by a technical feasibility analysis. [Footnote 68 Id.] COA takes issue with the last provision of the mitigation measure that BOEM "may consider" a monitoring and mitigation plan for SF6 in the event that it is used. [Footnote 69 Id.] Although multiple companies are endeavoring to develop alternatives to SF6 there are not yet widely available commercial alternatives. [Footnote 70 ENV'T PROT. AGENCY &amp; EASTERN RSCH. GRP. supra note 66 at 12-19.] Therefore it is likely that SF6 will still be used for the six New York Bight projects so the industry must have stronger requirements to minimize monitor and mitigate SF6 if commercial alternatives remain</p>	<p>Refer to response to comment BOEM-2024-0001-0406-0017. AQ-1 is now included as an RP in the PEIS. BOEM proposes the use of sulfur hexafluoride-free technology with the caveat of feasibility.</p>

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	infeasible. BOEM should be required to implement a minimization monitoring and mitigation plan rather than having the discretion to decide to consider a plan as well as the discretion to decide to implement one after consideration.	
BOEM-2024-0001-0439-0026	<p>Measure ID: AQ-1 Measure Name: Using a substitute insulator gas in the switch gears and transmission systems to the maximum extent possible Description: Lessees must evaluate the feasibility of using non-SF6 switchgear and shall provide the evaluation to BOEM for review. To the maximum extent feasible Lessees should use a substitute insulator gas rather than SF6 in the switchgear and transmission systems. If the Lessee determines using non-SF6 switchgear is infeasible then the Lessee will provide written justification of this determination to BOEM. Any instances where the Lessee believes there is technical (and/or economic) infeasibility must be supported by a technical feasibility analysis as appropriate for review and concurrence by BOEM and BSEE. If non-SF6 switchgear is determined to be technically infeasible BOEM may consider requirements for SF6 monitoring and leak detection. Category [Footnote 1: G = Measure constitutes new guidance and could not be implemented through terms and conditions of plan approval D = Measure is duplicative of existing laws or processes J = Measure is outside BOEM's jurisdiction T/E = Measure is technically and/or economically infeasible V = Voluntary measure B = Measure puts an undue burden on industry.]: D T/E JACP Comment: This requirement is duplicative of the OCS air permit process and should be removed. Through the OCS Air Permit process applicants will perform a Best Available Control Technology (BACT) analysis for each emission source and New Source Review (NSR) air pollutant that is emitted in excess of significant thresholds set forth in the Prevention of Significant Deterioration (PSD) regulations and the regulations of the Corresponding Onshore Area. This includes SF6 emission' from switchgear located on the WTGs and ESPs. EPA's top-down BACT approach is typically used to determine BACT emission limits for SF6 in switchgear. The top-down BACT analysis consists of these five basic steps: (1) Identify all control technologies; (2) Eliminate technically infeasible options; (3) Rank remaining control technologies by effectiveness; (4) Evaluate most effective controls</p>	Refer to response to comment BOEM-2024-0001-0406-0017. AQ-1 is now included as an RP in the PEIS. BOEM proposes the use of sulfur hexafluoride-free technology with the caveat of feasibility.

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	<p>(taking into account energy environmental and economic impacts) and document results; and (5) Select the BACT. As part of this process the applicant will evaluate the technical and economic feasibility of alternatives to the use of SF6 switchgear. The BACT emission limits are then specified in the OCS Air Permit. As such EPA is responsible for reviewing and concurring with an applicant's justification for why non-SF6 switchgear is technically and/or economically infeasible for the WTGs and ESPs through the BACT process. The PEIS lists BOEM and BSEE as the anticipated enforcing agencies for this and other air quality AMMMs. As described on BOEM's website "BOEM has jurisdiction over Outer Continental Shelf (OCS) air emissions in the Gulf of Mexico west of 87.5 degrees West longitude (off the coasts of Texas Louisiana Mississippi and Alabama). BOEM also has jurisdiction over OCS air emissions within the Chukchi and Beaufort Seas in Alaska according to the Consolidated Appropriations Act of 2012. In all other OCS areas the EPA has jurisdiction as mandated by Section 328 of the CAA." Therefore emissions on the OCS from the construction and operation of offshore wind projects in the New York Bight lease areas are regulated through EPA's OCS Air Permit process under the OCS Air Regulations (40 CFR Part 55). These additional air quality measures are duplicative of current EPA air permit processes and with BOEM and BSEE review and concurrence will lead to confusion with multiple determinations and approvals that may be conflicting. SF6-containing equipment at onshore substations will need to comply with state regulations. For example NYSDEC is proposing a new regulation 6 NYCRR Part 495 "Sulfur Hexafluoride Standards and Reporting." The proposed regulation includes a program to phasedown the use of SF6 in gas insulated equipment used by the electricity sector an emissions limit for gas insulated equipment owners limitations on the use of SF6 and reporting requirements for certain users and suppliers of SF6 and other fluorinated greenhouse gases. As there are already laws and processes in place for evaluation of the use of SF6 BOEM should remove this requirement. Non-SF6 systems would increase the size complexity and cost of several project assets. The majority of the systems being considered for NY Bight projects reaching COD in 2030 have SF6</p>	

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	switchgears. The lack of information guidance or framework for what quantifies and qualifies as technically or economically infeasible is of concern. This demonstration is the responsibility of individual developers through the OCS air permit process.	
BOEM-2024-0001-0422-0020	<p>AQ-1 - Using a substitute insulator gas in the switch gears and transmission systems to the maximum extent possible</p> <p>AQ-2 - Cleaner fuels for vessels equipment and vehicles engaged in activities on the OCS</p> <p>AQ-3 Electrification of vessels equipment and vehicles engaged in activities on the OCS</p> <p>Comment #18 on AQ-1 2 and 3 These three air quality topics are applicable to the U.S. offshore wind industry as a whole are not necessarily project-specific and would benefit from a more global analysis. Therefore Attentive Energy urges BOEM to seek an industry-wide response to the evaluation of these three AMMMs. A single analysis of each AMMM or one joint analysis of all three AMMMs would establish an industry baseline that could then be periodically updated as opportunities for improvement become available. The baseline could also be used by developers as the basis of any required technical feasibility analysis. A baseline analysis(es) like this would be more efficient and timely for all projects and BOEM. If desired BOEM could seek support from an offshore wind energy group such as American Clean Power to assist with the development of these analyses.</p>	Refer to response to comment BOEM-2024-0001-0406-0017. AQ-1 through AQ-3 are now included as RPs in the Final PEIS that include a caveat for feasibility concerns. While an industry-wide analysis would establish a comprehensive baseline for these RPs, BOEM believes the current approach is better suited to the immediate needs of the proposed project(s) regarding location-specific conditions, construction schedules, and project-specific requirements. BOEM acknowledges the benefit of this analysis and would consider this analysis as a part of its technical feasibility process.
BOEM-2024-0001-0436-0014	d. Technical and Economic Feasibility Invenenergy has confirmed that some of the new AMMMs presented in the Draft PEIS are not technically or economically feasible and therefore not appropriate for consideration as part of alternatives. 40 CFR 1508.1(z). For example AQ-2 (Cleaner fuels for vessels equipment and vehicles engaged in activities on the OCS) encourages lessees to replace diesel fuel and marine fuel oil with alternative fuels such as natural gas propane or hydrogen to the extent that use of such alternative fuels is feasible and provides emissions reductions. The lessee must evaluate the feasibility of this mitigation measure and provide the evaluation to BOEM for review. Any instances where the lessee believes there is technical (and/or economic) infeasibility must be supported by a technical feasibility analysis as appropriate for review and concurrence by BOEM and BSEE. Even with "to the extent feasible" or "voluntary" qualifiers the potential effect of burdensome	Refer to response to comment BOEM-2024-0001-0406-0017. Seasonal closures, such as those referenced in REC-1, are included as an RP. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are not part of the Proposed Action. MM-5, which discusses vessel speed restrictions, has been previously applied and remains in the document as an AMMM measure for consideration.

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	<p>analysis to avoid inappropriate application of these AMMMs remains. As drafted these measures shift the burden of proof for feasibility to the developer. As originally conceived the PEIS was scoped to assist the application of AMMMs that are well-supported by PEIS analysis. In evaluating the feasibility of new AMMMs BOEM must consider the individual and cumulative nature of AMMMs to ensure they do not ultimately prohibit or severely limit a lessee's ability to construct operate or maintain projects. For example implementing seasonal closures that force industry to be on the ocean only during certain months could compromise the safety of personnel contractor vessels and other assets and would therefore be infeasible. Further new AMMMs should not be considered in a vacuum. Overly precautionary measures can have the unintended consequence of creating a higher risk for a species through other vectors. For example broad seasonal vessel speed constraints could result in more vessels spending more time on the water thus increasing overall exposure to vessel related risks.</p>	
BOEM-2024-0001-0439-0027	<p>Measure ID: AQ-2 Measure Name: Cleaner fuels for vessels equipment and vehicles engaged in activities on the OCS Description: Lessees are encouraged to replace diesel fuel and marine fuel oil with alternative fuels such as natural gas propane or hydrogen to the extent that use of such alternative fuels is feasible and provides emissions reductions. The Lessee will evaluate the feasibility of this mitigation measure and will provide the evaluation to BOEM for review. Any instances where the Lessee believes there is technical (and/or economic) infeasibility must be supported by a technical feasibility analysis as appropriate for review and concurrence by BOEM and BSEE. Category: D T/E BACP Comment: This requirement is duplicative of the OCS air permit process and should be removed. As noted above emissions on the OCS from the construction and operation of offshore wind projects in the New York Bight lease areas are regulated through EPA's OCS Air Permit process under the OCS Air Regulations (40 CFR Part 55).Through the OCS Air Permit process applicants will perform a Best Available Control Technology (BACT) and/or Lowest Achievable Emission Rate (LAER) analysis for each emission source and New Source Review (NSR) air pollutant that is emitted in excess of thresholds set forth in the Prevention of</p>	<p>Refer to response to comment BOEM-2024-0001-0406-0017. AQ-2 is now included as an RP in the PEIS, with caveat language included regarding feasibility.</p>

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	<p>Significant Deterioration (PSD) regulations and/or the regulations of the Corresponding Onshore Area. As part of the BACT/LAER analysis applicants will assess the feasibility of using lower-emitting fuels (e.g. natural gas/LNG propane or hydrogen) on vessels and engines on the WTGs and ESPs. EPA is responsible for reviewing and concurring with an applicant's justification for why alternative fuels are technically and/or economically infeasible through the BACT/LAER process not BOEM and BSEE. Limits on the fuel types to be used will be specified in the OCS Air Permit. Furthermore several BACT/LAER analyses for offshore wind projects (e.g. Vineyard Wind 1 South Fork Revolution Wind New England Wind 1 New England Wind 2 Empire Wind etc.) have already determined that these alternative fuels (e.g. natural gas/LNG propane or hydrogen) are infeasible. Vineyard Wind 1 explored the possibility of a natural gas-powered vessel but refueling with natural gas could not be supported in the US. Hydrogen's use for marine engines is a novel technology and the production/ supply of hydrogen needed to support marine vessels does not exist in the US. Requiring developers to use alternative fuels would severely limit project feasibility since the supply chain for vessels both current and new builds would be constrained to very few vessels globally. Vessel shortages are already a major burden for the offshore wind industry and creating additional requirements that the existing fleet cannot meet will exacerbate this burden. The Jones Act fleet already has a hard time competing with foreign vessels because shipbuilding in the US cost more than double what it is overseas. This AMMM poses regulatory overreach specifically on the offshore wind industry when other offshore industries such as oil and gas do not face these requirements. The International Maritime Organization regulates vessel air emissions via MARPOL Annex VI and others. Offshore wind is using vessels that also operate in oil and gas and if they are held to dissimilar standards they will be even less competitive in the tight vessel market. When oil prices are high offshore wind has a very hard time competing for vessels and will have an even harder time competing for them if subject to more regulations than the oil and gas industry. Further there is a lack of port capability to fuel such vessels. While new vessels that are used for both O&amp;M and construction may be able to take these technologies into account</p>	

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	<p>due to their longer contracts the majority of vessels will not because of short contracts use in dual markets (O&amp;G and OSW) and ship/port design constraints. Requiring a technical and/or economic feasibility analysis for not using these vessels places an undue burden on developers because of the lack of these vessels in the market both now and in future construction trends. While there are over 25 different types of vessels [Footnote 2: <a href="https://cleanpower.org/resources/offshore-wind-vessel-needs/">https://cleanpower.org/resources/offshore-wind-vessel-needs/</a>] needed to construct and maintain an offshore wind project ACP did an analysis of 5 types of vessels that provide a good representation of the vessel size and work scope across the industry including Crew Transfer Vessels Heavy Lift Vessels Rock Installation vessels Service Operation Vessels and Survey Vessels. We looked at the global fleet of these vessels excluding China. We also looked at the current global fleet and vessels planned for construction or modification from 2024-2027. AMMMs AQ-2 encourages lessees to replace diesel fuel and marine fuel oil with alternative fuels. ACP found that of the current fleet only 2% of these five types vessels have alternative fuels. Of these five types vessels under construction between 2024-2027 33% will be fueled by alternative fuels. And 7% of these vessels under modification will have the capacity to use alternative fuels. In total only 5% of the global vessel market in 2027 will be fueled by alternative fuels. As offshore wind ambitions grow in both Europe the U.S. and other markets these vessels will continue to be in short supply for the NYB projects. With vessel availability already a challenge for U.S. projects pushing developers to only hire 5% of available vessels places undue burden on projects.</p>	
BOEM-2024-0001-0440-0003	<p>III. The PEIS Should Analyze - Not "Adopt" - AMMMs for the Bight Projects BOEM has characterized the "Proposed Action" for the draft PEIS as "the adoption of programmatic AMMM measures that BOEM would require as conditions of approval for activities proposed by lessees in COPs submitted for the NY Bight lease areas unless future COP-specific NEPA analysis shows that implementation of such measures is not warranted or effective." This framing of the PEIS [Footnote 10: Bight Draft PEIS at 14.] is problematic for a number of reasons. In the first instance by purporting to adopt default AMMMs applicable to all Bight projects BOEM appears to be using the PEIS as</p>	<p>BOEM has clarified the alternatives and reviewed all comments on AMMM measures and revised AMMM measures, as appropriate. Refer to response to comment BOEM-2024-0001-0361-0004 for additional clarification on the purpose of Alternative B and revisions to Alternative C, and refer to response to comment BOEM-2024-0001-0406-0017 regarding BOEM's review and updating of AMMM measures and identifying RPs. AQ-2 and AQ-3 are now included as RPs in the PEIS.</p>

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	<p>a rulemaking mechanism without satisfying the rulemaking requirements of the Administrative Procedure Act (APA) and other authorities governing agency rulemakings. The APA defines a "rule/ in pertinent par( as "an agency statement of general or particular applicability and future effect designed to implement interpret (or prescribe law or policy." [Footnote 11: 5 USC 551.] AMMM measures that BOEM "would require as conditions of approval" [Footnote 12: Bight Draft PEIS at 14.] across the Bight projects meets the APA's definition of a "rule." The APA requires agencies to publish notice of a proposed rulemaking in the Federal Register and this notice must include a reference to the legal authority under which the rule is proposed as well a statement of the terms or substance of the proposed rule or a legally adequate description of the subjects and issues involved. [Footnote 13: 5 USC 553(6)] The brief "notice of availability" of the draft PEIS that was published in the Federal Register [Footnote 14: 89 FR 2249 (Jan 12 2024)] does not satisfy the APA's notice requirement for rulemakings and BOEM would not be able to identify a "legal authority" underpinning some of the proposed AMMMs because they fall under the regulatory purview of other agencies. [Footnote 15: Such AMMMs would include those regarding air quality which fall under the EPA's Clean Air Act authority. Further even where AMMMs might fall within BOEM's authority a programmatic DEIS is not the proper vehicle to adopt terms and conditions of permits.] Beyond the basic requirements of the APA there are several Executive Orders governing federal rulemaking actions that BOEM should comply with before imposing new substantive requirements on the Bight lessees. These Executive Orders include E.O. 12866 and E.O. 13563 which require agencies to minimize regulatory burdens and base regulations on the best available science. The framing of the draft PEIS also risks creating legal vulnerabilities for the project-specific reviews and COP approvals for the Bight projects. This is because by "adopting" AMMMs in the PEIS BOEM would effectively establish default AMMMs for the projects and any deviation from those AMMMs in the COP approvals could be subject to litigation risk based on allegations that the record does not support both: (1) that the default AMMM is not warranted or effective and (2) that the</p>	

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	<p>substitute AMMM is warranted and effective. [Footnote 16: To be clear Shell is not suggesting that this would be a valid basis for challenging the project-specific analysis. Rother Shell is simply trying to demonstrate how project opponents might attempt to misuse BOEM's "adoption" of the AMMMs in the PEIS to their advantage.] While this is not an insurmountable hurdle it will require the expenditure of significant time and resources by BOEM consulting agencies and the project developer. This problem is exacerbated by the fact that many of the AMMMs outlined in Appendix G are novel and test the bounds of technical and economic feasibility [Footnote 17: For example AMMMs AQ-2 and AQ-3 pertaining cleaner fuels and/or electrification for vessels equipment and vehicles engaged in activities on the OCS would establish default requirements that ore practically infeasible (for the reasons detailed in the ACP comment matrix) and obligate lessees to justify deviation via submission of a technical feasibility analysis. 17 meaning many deviations from the default AMMMs can be expected. Fortunately BOEM can easily address these problems in the final PEIS by re-framing the proposed action in terms of establishing a baseline environmental analysis for the Bight projects including an analysis (rather than adoption) of programmatic AMMMs that could (but not necessarily would) be applied to the COP approvals depending on the mitigation needs revealed in the project-specific NEPA analysis. Indeed this proposed action would seem to be more consistent with the "objectives" that BOEM set for the PEIS namely:- Analyzing potential impacts if development is authorized in the six NY Bight lease areas.- Analyzing programmatic AMMM measures for the six NY Bight lease areas.- Analyzing focused regional cumulative effects.- Tiering of project-specific environmental analyses. [Footnote 18: Bight Draft PEIS at 15.]If the final PEIS is framed with a focus on these objectives it can avoid the legal issues outlined above while re-orienting the PEIS towards facilitating efficient project-specific reviews.</p>	
BOEM-2024-0001-0439-0028	<p>Measure ID: AQ-3 Measure Name: Electrification of vessels equipment and vehicles engaged in activities on the OCS Description: Lessees are encouraged to replace combustion engines with zero-emissions technology (fuel cell-electric or battery-electric) if feasible. The Lessee will evaluate the feasibility of this mitigation measure</p>	<p>Refer to response to comment BOEM-2024-0001-0406-0017. AQ-3 is now included as an RP in the PEIS, with caveat language included regarding feasibility.</p>

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	<p>and will provide the evaluation to BOEM for review. Any instances where the Lessee believes there is technical (and/or economic) infeasibility must be supported by a technical feasibility analysis as appropriate for review and concurrence by BOEM and BSEE.</p> <p>Category: D T/E BACP Comment: This requirement is duplicative of the OCS air permit process and should be removed. As noted above emissions on the OCS from the construction and operation of offshore wind projects in the New York Bight lease areas are regulated through EPA's OCS Air Permit process under the OCS Air Regulations (40 CFR Part 55).Through the OCS Air Permit process applicants will perform a Best Available Control Technology (BACT) and/or Lowest Achievable Emission Rate (LAER) analysis for each emission source and New Source Review (NSR) air pollutant that is emitted in excess of thresholds set forth in the Prevention of Significant Deterioration (PSD) regulations and/or the regulations of the Corresponding Onshore Area. As part of the BACT/LAER analysis applicants will assess the feasibility of using inherently lower-emitting practices or designs such as the use of batteries or fuel cells on vessels and engines on the WTGs and ESPs. EPA is responsible for reviewing and concurring with an applicant's justification for why these zero-emission technologies are technically and/or economically infeasible through the BACT/LAER process not BOEM and BSEE. This measure raises the same concerns as vessels with alternative fuels above. However the market for zero emissions technology is even smaller. Overall requiring a technical and/or economic feasibility analysis for not using these vessels places an undue burden on developers because of the lack of these vessels in the market both now and in future construction trends. While there are over 25 different types of vessels [Footnote 3: <a href="https://cleanpower.org/resources/offshore-wind-vessel-needs/">https://cleanpower.org/resources/offshore-wind-vessel-needs/</a>] need to construct and maintain an offshore wind project ACP did an analysis of 5 types of vessels that provide a good representation of the vessel size and work scope across the industry including Crew Transfer Vessels Heavy Lift Vessels Rock Installation vessels Service Operation Vessels and Survey Vessels. We looked at the global fleet of these vessels excluding China. We also looked at the current global fleet and vessels planned for construction or modification</p>	

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	<p>from 2024-2027. AMMMs AQ-3 encourages lessees to replace combustion engines with zero-emissions technology (fuel cell-electric or battery-electric) if feasible for vessels equipment and vehicles engaged in activities on the OCS. For Energy Storage Systems (ESS) capability 5% of vessels are currently capable 21% of those under construction and 10% of those under modification. In total looking at current supply and vessels under construction and modification in 2027 5% of vessels will have ESS capability. Shore power is even less common. Current vessel availability with shore power is 1% of the global market. 4% of vessels under construction 2024-2027 will have shore power and 7% of vessels under modification. In total in 2027 only 2% of these 5 representative vessels will have shore power capacity. Even for smaller vessels such as CTVs the operational profile of CTVs for US OSW projects does not have a positive outlook for full electrification. Other vessel types which have successfully been outfitted with ESS are utilized on short fixed transits routes with onshore charging points readily accessible on the dedicated route. Availability of charging points charging time and relatively fixed vessel utilization enables the vessel to carry the correctly sized ESS. The operational profile of CTVs requires high flexibility and utilization. A battery ESS with enough capacity to support CTV's needs is infeasible due to weight and volume which is incredibly limited onboard. Even with the inclusion of offshore charging the demands on a CTV are so variable that it can't be assumed that charging time will always be possible. A measure of this type may work as a regional requirement but it does not work as an industry-specific requirement. For example electric tugs are unlikely to be relocated to the east coast for a few months of work when they have an entire regional market in California.</p>	
BOEM-2024-0001-0439-0029	<p>Measure ID: AQ-4 Measure Name: Exhaust aftertreatment for vessels engaged in activities on the OCS Description: Lessees should evaluate on a vessel-specific basis the use of exhaust aftertreatments such as emission control technologies for example scrubbers for SO2 and selective catalytic reduction for NOX. The Lessee will evaluate the feasibility of this mitigation measure and will provide the evaluation to BOEM for review. Any instances where the Lessee believes there is technical (and/or economic) infeasibility</p>	<p>Refer to response to comment BOEM-2024-0001-0406-0017. AQ-4 is now included as an RP in the PEIS, with caveat language included regarding feasibility.</p>

Comment No.	Comment	Response
	<p>must be supported by a technical feasibility analysis as appropriate for review and concurrence by BOEM and BSEE. Category: D T/EACP</p> <p>Comment: This requirement is duplicative of the OCS air permit process and should be removed. As noted above emissions on the OCS from the construction and operation of offshore wind projects in the New York Bight lease areas are regulated through EPA's OCS Air Permit process under the OCS Air Regulations (40 CFR Part 55).Through the OCS Air Permit process applicants will perform a Best Available Control Technology (BACT) and/or Lowest Achievable Emission Rate (LAER) analysis for each emission source and New Source Review (NSR) air pollutant that is emitted in excess of thresholds set forth in the Prevention of Significant Deterioration (PSD) regulations and/or the regulations of the Corresponding Onshore Area. As part of the BACT/LAER analysis applicants will assess the feasibility of add-on pollution controls (e.g. Selective Catalytic Reduction Selective Non-Catalytic Reduction NOx Adsorber/Scrubber Lean Nox Catalysts Sox Scrubber Diesel Particulate Filter Diesel Oxidation Catalyst etc.) on vessels and engines on the WTGs and ESPs. EPA is responsible for reviewing and concurring with an applicant's justification for why these add-on pollution controls are technically and/or economically infeasible through the BACT/LAER process not BOEM and BSEE. This measure raises the same concerns described above (see AQ-2 and AQ-3) given vessel shortages that are already a major burden for the offshore wind industry and creating additional requirements that the existing fleet cannot meet will exacerbate this burden.</p>	
BOEM-2024-0001-0439-0030	<p>Measure ID: AQ-5 Measure Name: Exhaust aftertreatment for older engines in vehicles and equipment engaged in activities on the OCS</p> <p>Description: Lessees are encouraged to use diesel particulate filters and diesel oxidation catalysts to retrofit older (USEPA Tiers 13) diesel engines if feasible. The Lessee will evaluate the feasibility of this mitigation measure and will provide the evaluation to BOEM for review. Any instances where the Lessee believes there is technical (and/or economic) infeasibility must be supported by a technical feasibility analysis as appropriate for review and concurrence by BOEM and BSEE. Category: D T/E BACP</p> <p>Comment: This requirement is duplicative of the OCS air permit process and should be removed.</p>	<p>Refer to response to comment BOEM-2024-0001-0406-0017. AQ-5 is now included as an RP in the PEIS, with caveat language included regarding feasibility.</p>

Comment No.	Comment	Response
	<p>As noted above emissions on the OCS from the construction and operation of offshore wind projects in the New York Bight lease areas are regulated through EPA's OCS Air Permit process under the OCS Air Regulations (40 CFR Part 55).As noted above emissions on the OCS from the construction and operation of offshore wind projects in the New York Bight lease areas are regulated through EPA's OCS Air Permit process under the OCS Air Regulations (40 CFR Part 55).Through the OCS Air Permit process applicants will perform a Best Available Control Technology (BACT) and/or Lowest Achievable Emission Rate (LAER) analysis for each emission source and New Source Review (NSR) air pollutant that is emitted in excess of thresholds set forth in the Prevention of Significant Deterioration (PSD) regulations and/or the regulations of the Corresponding Onshore Area. As part of the BACT/LAER analysis applicants will assess the feasibility of add-on pollution controls (e.g. Selective Catalytic Reduction Selective Non-Catalytic Reduction NOx Adsorber/Scrubber Lean Nox Catalysts Sox Scrubber Diesel Particulate Filter Diesel Oxidation Catalyst etc.) on vessels and engines on the WTGs and ESPs. EPA is responsible for reviewing and concurring with an applicant's justification for why these add-on pollution controls are technically and/or economically infeasible through the BACT/LAER process not BOEM and BSEE. Lessees typically use 3<sup>rd</sup> party vessels to perform construction. Because these vessels are not owned by the Lessee this condition is not viable to be implemented by Lessee. Further this measure would greatly reduce the projects' ability to find suitable construction vessels. This measure raises the same concerns described above (see AQ-2 and AQ-3) given vessel shortages that are already a major burden for the offshore wind industry and creating additional requirements that the existing fleet cannot meet will exacerbate this burden.</p>	
BOEM-2024-0001-0439-0031	<p>Measure ID: AQ-6 Measure Name: Onshore measures: zero-emissions technologies Description: Lessees are encouraged to require their contractors to use ports equipped with shore power and zero-emissions material-handling equipment and construction firms that offer alternative-fueled or zero-emissions equipment and vehicles. The Lessee may evaluate the feasibility of this mitigation measure and provide the evaluation to BOEM for review. Category: V</p>	<p>Refer to response to comment BOEM-2024-0001-0406-0017. AQ-6 is now included as an RP in the PEIS and has been updated to include language regarding air permitting that is enforced by USEPA and the state.</p>

Comment No.	Comment	Response
	<p>J T/EACP Comment: The PEIS indicates that this measure is voluntary/outside BOEM jurisdiction. Voluntary measures and measures outside BOEM's jurisdiction should not be included in AMMMs. Port authorities with jurisdiction over ports can most appropriately undertake these improvements. A number of port authorities are conducting zero-emissions feasibility studies. This measure would greatly reduce the projects' ability to find suitable ports. In addition Lessees have already committed to utilizing certain ports under their PPA agreements. Offshore Wind ports are already in dire need of basic investments. US. Port infrastructure is largely unable to support offshore wind component manufacturing and deployment and is facing material financing gaps.[Footnote 4: They estimate that the total cost to address the nation's offshore wind port infrastructure gap assuming 2023 construction prices and no financing costs is between \$22.5-27.2 billion. Port improvements to accommodate offshore wind need to be prioritized. Electrification of handling equipment would be especially difficult and infeasible at most ports. However new ports are adding electrification as they are more able to bring in the transmission and electricity required to do shore power/cold ironing.</p>	
BOEM-2024-0001-0439-0032	<p>Measure ID: AQ-7 Measure Name: Onshore measures: diesel engine emissions standards Description: Lessees are encouraged to require their contractors to ensure that all diesel engines in vehicles and equipment meet USEPA Tier 4 emissions standards. The Lessee may evaluate the feasibility of this mitigation measure and provide the evaluation to BOEM for review. Category: D V JACP Comment: The PEIS indicates that this measure is voluntary/outside BOEM jurisdiction. Voluntary measures and measures outside BOEM's jurisdiction should not be included in AMMMs. This measure contains contradictory statements the "Anticipated Enforcing Agency" column notes that this is outside BOEM jurisdiction while the measure states that the evaluation should be provided to BOEM for review. These emission sources are temporary in nature and should be regulated through EPA non-road and vehicle emission standards.</p>	<p>Refer to response to comment BOEM-2024-0001-0406-0017. AQ-7 is now included as an RP in the PEIS and was updated to include language regarding air permitting that is enforced by USEPA and the state. While this is outside of BOEM jurisdiction, the use of these types of engines is beneficial to review for all phases of the project.</p>

**Table P.5.23-7. Responses to Substantive Comments on Mitigation and Monitoring—Navigation and Vessel Traffic (NAV)**

Comment No.	Comment	Response
BOEM-2024-0001-0324-0004	<p>As NASCA has repeatedly explained in its comments submarine cables are critical infrastructure supporting vital economic societal and national security needs. [Footnote 6: See NASCA 2018 Comments at 4. See also Comments of NASCA Docket No. BOEM-2022-0072 (filed Dec. 16 2022) ("NASCA 2022 Mid-Atlantic Comments") at 4-6.] NASCA does not doubt that renewable energy projects similarly constitute critical infrastructure and that uncoordinated development activities would be harmful to both. [Footnote 7: NASCA 2022 Mid-Atlantic at 9-10; Comments of NASCA Docket No. BOEM-2023-0034- 0001 (filed Aug. 31 2023) at 2.] This is underscored by PEIS Figure 3.6.7-5 which shows the significant submarine cable infrastructure already deployed along with New York Bight and other BOEM lease areas. What this figure does not show is the anticipated export transmission line infrastructure. According to the PEIS for the six New York Bight projects BOEM anticipates "44 offshore export cables totaling 1.772 miles (2852 kilometers) and 1582 miles (2546 kilometers) of interarray cables across the NY Bight lease areas." [Footnote 8: PEIS at ES-8.] Deployment of such extensive export infrastructure across lease areas throughout the New York Bight will require carefully planned and coordinated siting activity to ensure the safe siting operating and maintenance of both new and existing infrastructure. Yet BOEM identifies the impact of proposed leasing activities on existing cables as minimal and proposes no programmatic avoidance minimization mitigation and monitoring ("AMMM") mechanisms to address impact. [Footnote 9: PEIS at Tables ES-2 and 2-4 at 3.6.7 pp. ES-12 &amp; 2-37; Section 3.6.7.] Instead BOEM notes that the "potential for overlap of submarine cables in the geographic analysis area will be evaluated during the future COP NEPA stage."</p>	<p>BOEM COP guidelines outline steps lessees should take to coordinate with existing seabed users, including submarine cables, according to International Cable Protection Committee recommendations (referenced in RP MUL-23). BOEM has required lessees to provide cable crossing agreements, or evidence of attempts to reach cable crossing agreements, as part of previous COP T&amp;Cs. Due to existing COP guidelines, coordination with existing cable owners and operators will be continued at the COP-specific NEPA stage.</p> <p>BOEM regulations (30 CFR 585.200(b)) state, "A lease issued under this part confers on the lessee the rights to one or more project easements without further competition for the purpose of installing gathering, transmission, and distribution cables; pipelines; and appurtenances on the OCS as necessary for the full enjoyment of the lease." BOEM cannot limit a lessee's right to a project easement for submarine cables.</p> <p>At cable crossings, both the existing infrastructure and the proposed transmission cable(s) must be protected. The protection and crossing method would be determined on a case-by-case basis.</p> <p>Additionally, BOEM encourages the telecommunication cable industry to coordinate with BOEM prior to installing additional cables, as well, to avoid potential conflicts.</p> <p>The Final PEIS includes RP MUL-18, which encourages lessees to utilize shared transmission corridors, which could reduce the number of cable approaches needed for the six NY Bight lease areas.</p>
BOEM-2024-0001-0324-0006	<p>Accordingly NASCA urges BOEM to include in its final PEIS an AMMM directed at requiring early coordination with existing submarine cable infrastructure pursuant to best practices and guidelines. At the same time NASCA urges BOEM to develop and publicize best practices and guidelines based on internationally-accepted recommendations for coordination between the submarine cable</p>	<p>Thank you for your comment. Refer to response to comment BOEM-2024-0001-0324-0004.</p>

Comment No.	Comment	Response
	and renewable energy industries (to include spatial separation guidelines and the need for proximity and cable crossing agreements). [Footnote 11: NASCA 2022 Mid-Atlantic at 12-18 and 22-24 (arguing that well-established spatial separation recommendations should be used to develop guidelines for coordination between the submarine cable and renewable energy industries including the recommendations of the International Cable Protection Committee and the Federal Communications Commission's Communications Security Reliability and Interoperability Council).] At a minimum BOEM should direct potential licensees to existing recommendations such as those developed and published by the International Cable Protection Committee ("ICPC") in particular ICPC's recommendation No. 2 Cable Routing and Reporting Criteria and Recommendation No. 3 Telecommunications Cable and Oil Pipeline/Power Cables Crossing Criteria. [Footnote 12: For more information on these recommendations please refer to the ICPC's website <a href="http://www.iscpc.org">www.iscpc.org</a> .] In sum NASCA believes that expressly identifying submarine cable infrastructure and incorporating coordination criteria in the final PEIS will go a long way to ensuring efficient and safe installation operation maintenance and repair of both submarine telecommunications cable and offshore wind infrastructure.	
BOEM-2024-0001-0370-0001	The USCG does not oppose the Proposed Action Alternative and recommends all Proposed Action avoidance minimization mitigation and monitoring (AMMM) measures pertaining to Navigation and Vessel Traffic be made mandatory. Additionally the USCG offers the following recommendations. Turbine Layout Proposed Action AMMM measures for consistent turbine layout marking and lighting incorrectly states turbines should have [ <u>Underline</u> : one of the two lines] of orientation per lease area spaced at least 1 nautical mile (nm) apart to support navigation safety and Search and Rescue (SAR). Per Navigation and Vessel Inspection Circular (NVIC) 02-23 the Coast Guard recommends each windfarm be organized in straight rows and. columns creating a grid pattern consisting of two lines of orientation with at least 1 nm between turbines. Each windfarm's bathymetric circumstances are different and spacing of less than 1 nm may be unavoidable but programmatic AMMM measures applied	MUL-25 is now an RP. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs. MUL-25 has been revised to be in alignment with Navigation and Vessel Inspection Circular 02-23, in which USCG recommends that "each windfarm be organized in straight rows and columns, creating a grid pattern consisting of two lines of orientation." Navigation and Vessel Inspection Circular 02-23 does not create a requirement for 1-nautical-mile spacing between turbines.

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	throughout the NYB should align with NVIC 02-23. Deviations from this guidance should be assessed during project-specific environmental impact assessments and Navigation Safety Risk Assessments (NSRA) on a case-by-case basis for each lease area.	
BOEM-2024-0001-0422-0010	MUL-25 Consistent turbine layout markings and lighting Comment #8 on MUL-25 Attentive Energy requests maintaining in this AMMM the existing ability to allow developers to coordinate with the U.S. Coast Guard ("USCG") the National Oceanic and Atmospheric Association BOEM and other federal agencies to address multiple priorities and achieve a layout and spacing that incorporates necessary site conditions and offtake agreements while respecting navigational and search and rescue safety. Rigorous analyses of each offshore wind project are conducted through the preparation of Navigational Safety Risk Assessments and during the individual project COP and EIS process. This AMMM provides less flexibility to allow for project-specific conditions than what has been communicated by the USCG in recent interactions or than by what has been displayed by several of BOEM's recent COP approvals. In addition the reference to the layout "having one of the two lines of orientation" should be modified to allow for projects that have more than two lines of orientation as USCG has made it clear that the guidelines in its NVIC 02-23 language are not meant to be limited to just two lines. Attentive Energy does not believe it is appropriate to use the Massachusetts and Rhode Island Port Access Route Study rather than the more regionally appropriate Seacoast of New Jersey Including Offshore Approaches to Delaware Bay Delaware Port Access Route Study and Northern New York Bight Port Access Route Study. Attentive Energy requests that BOEM state explicitly that a 1nm line of orientation is a recommendation not a requirement as it needs to comport with the requirement that every EIS alternative be technically and economically feasible. In coordination with the USCG other previous offshore wind projects have not included a 1nm line of orientation in their COPs and have received COP approval. These approvals indicate that there are other workable layouts that can both allow for safe navigation and search and rescue operations while also respecting energy output obligations.	<p>Please refer to response to comment BOEM-2024-0001-0370-0001.</p> <p>MUL-25 has been reclassified as an RP in the Final PEIS. BOEM does not intend to limit the number of lines of orientation within a wind farm under MUL-25.</p> <p>Rather, BOEM is recommending that one line of orientation be no less than 1.0 nautical mile for USCG search and rescue (SAR) operations.</p> <p>Project-specific layouts will be analyzed during subsequent NEPA analysis based on information provided in the COP.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0423-0004	<p>B. AMMMs of Greatest Concern Beyond the structural and systemic issues with the PEIS process and the draft document there are certain AMMMs discussed below that we highlight as being particularly problematic. [bold: MUL-25] states that [italicized: "Turbines should have one of the two lines of orientation per lease stipulation spaced at least 1 nautical mile (1.9 kilometers) apart to support navigation safety and Search and Rescue. The spacing would also preserve structure-free areas to facilitate seabird passage and fishing operations." ] The NY Bight lease areas have been sited outside of shipping routes via the five- year robust lease area identification process led by BOEM ahead of the lease auction. The vessels that will transit through the wind farm areas are primarily commercial fishing vessels and pleasure craft. Large commercial traffic will avoid the lease areas per the U.S. Coast Guard's (USCG) designation of offshore fairways for navigation around the NY Bight lease areas. Ocean Winds will work with USCG through the Navigation Safety and Risk Assessment (NSRA) process as all other developers have done to evaluate potential changes in navigation safety for our lease areas. Additionally there is little scientific support for the supposition that wider turbine spacing would assist in seabird passage. Applying the same requirement without considering if the affected lease areas are or are not adjacent to other lease areas is deeply inappropriate. This is of special interest to OW given that our Bluepoint Wind lease area (OCS-A 0537) is effectively an "island" and is not adjacent to any other lease area. Application of a uniform grid pattern to such a lease area would not allow for consistent navigation paths between lease areas given the stretches of open ocean between the other NYB lease areas and Bluepoint. This AMMM would have a significant impact on ratepayer cost due to the need to remove turbine positions to accommodate wider spacing and it would only marginally benefit a small number of ocean users operating in the lease areas. The NSRA process and the extensive stakeholder consultations throughout the larger permitting process will address the concerns of all ocean users without lowering the clean energy output of these projects and increasing the cost to customers by imposing a one-size-fits-all approach.</p>	<p>Please refer to response to comment BOEM-2024-0001-0422-0010.</p> <p>Current guidance states that all vessels, including large commercial vessels, need to be able to navigate safely in and around wind farms.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0439-0072	<p>Measure ID: MUL-25 Measure Name: Consistent turbine layout markings and lighting Description: Lessees should employ consistent turbine grid layouts spacing markings and lighting among lease areas to minimize navigational hazards and facilitate other ocean uses such as fishing and recreational activities. Turbines should have one of the two lines of orientation per lease stipulation spaced at least 1 nautical mile (1.9 kilometers) apart to support navigation safety and Search and Rescue (SAR). This recommended spacing is based on the USCG's 2020 Massachusetts and Rhode Island Port Access Route Study (<a href="https://www.navcen.uscg.gov/sites/default/files/pdf/PARS/FINAL_REPORT_PARS_May_14_2020.pdf">https://www.navcen.uscg.gov/sites/default/files/pdf/PARS/FINAL_REPORT_PARS_May_14_2020.pdf</a>). The spacing would also preserve structure-free areas to facilitate seabird passage and fishing operations. Also per lease stipulations adjacent lease areas that do not adopt the same layout must have an additional setback from shared borders. In accordance with BOEM lighting and marking guidelines and USCG and FAA lighting and marking requirements Lessees must ensure that all structures are properly marked and lighted. Previously Applied as a COP T&amp;C: Category: G DACP Comment: Other COPs have already been approved with spacing that is less than 1nm x 1nm to meet project purpose and need and to provide the maximum benefit of efficient electricity production for ratepayers. Smaller spacing is also very common in Europe. Rigorous analyses of each offshore wind project are conducted through the preparation of NSRAs and during the individual project NEPA process. This measure locks developers into something that the USCG has already said they can work with developers on project-by-project. This measure is guidance and should not duplicate USCG guidance and USCG review of site-specific conditions assessed in the NSRA and through their participation in the NEPA process. The recent NVIC 02-23 (note that reference to guidance from Rhode Island and Massachusetts should be removed) only recommends 1x1 nm. Furthermore this measure is in conflict with a number of leases that allow for alignment across adjacent leases. A qualifying statement would need to be added: "unless otherwise stipulated in a lease "The USCG is currently conducting a NPRM on an Atlantic Coast PARS that is hemming in OSW projects. This measure would further</p>	<p>Please refer to response to comment BOEM-2024-0001-0422-0010. Although the Rhode Island/Massachusetts study is outside of the NY Bight lease areas, the study recommends spacing necessary for SAR operations, which is not location specific.</p>

Comment No.	Comment	Response
	constrain the ability to site clean renewable energy to meet federal and state climate change goals.	
BOEM-2024-0001-0452-0007	<p>C. Turbine Layouts Not Fully Analyzed</p> <p>The proposed turbine layouts in the RPDE include a minimum 0.6 x 0.6 nm separation: spacing which the fishing industry has stated for years is incompatible with operations especially for mobile fisheries and which poses significant risks to transit. Unfortunately the proposed AMMMs MUL-23 and MUL-25 with spacing of 1x1 nm on two lines of orientation set to address these concerns do not achieve the intended goal. The draft PEIS demonstrates that these AMMMs have little utility by stating "(t)hese measures however are unlikely to change the impact rating of the IPF Therefore these potential impacts are unlikely to differ under Alternative C as compared to Alternative B." [Footnote 15: Draft PEIS p. 2-20.] The PEIS should not draw unsupported conclusions especially for measures that have been identified as fishing experts as potentially effective in reducing risk. Failure to even analyze measures that would reduce impacts to fisheries at this stage in the permitting process prior to COP submission is without justification.</p>	<p>Thank you for your comment. The 0.6- by 0.6-nautical-mile spacing was for purposes of analysis in the RPDE for the PEIS and represents the maximum buildout, or maximum number of turbine positions considered in the RPDE. Actual WTG layouts will be determined at the COP-specific NEPA stage and analyzed during project-specific NEPA analysis. Additionally, an NSRA will be submitted with each COP.</p>
BOEM-2024-0001-0352-0006	<p>Recommendations for implementation of AMMM measures. We support implementation of the following AMMM measures as described in Appendix G. These AMMM measures should be implemented at this stage rather than deferring to later project-specific analyses. We have not commented on every AMMM measure in Appendix G. Other listed AMMM measures may also be useful and appropriate but are not directly relevant to avoiding mitigating minimizing or monitoring effects on fisheries or fisheries resources and their habitats. COMFIS-1: Compensation for gear loss and damage. COMFIS-2: Scour and cable protection. COMFIS-5: Fisheries survey guidelines. COMFIS-6: Fisheries compensatory mitigation. MUL-1: Marine debris awareness and elimination. MUL-4: Final cable protection in hardbottom. MUL-5: Low noise best practices. MUL-7: Vessel noise reduction guidelines. MUL-8: Gear identification. MUL-9: Lost survey gear MUL-14: UXO avoidance. MUL-19: Post-installation cable monitoring. MUL-20: Soft start for impact pile-driving. MUL-25: Consistent turbine layout markings and lighting In particular we strongly support requiring turbines to have</p>	<p>Thank you for your comment in support of the PEIS AMMM measures. BOEM notes that, based on comments on the Draft PEIS, all AMMM measures have been reviewed, which resulted in some revisions. In addition, BOEM reclassified several AMMM measures as RPs. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information. Regarding the boulder threshold size in NAV-1 (now MUL-40), the threshold size of 2 meters was selected based on limitations of existing technology for boulder picking and relocation plow.</p>

Comment No.	Comment	Response
	<p>"one of the two lines of orientation per lease stipulation spaced at least 1 nautical mile (1.9 kilometers) apart to support navigation safety and Search and Rescue" as recommended in the U.S. Coast Guard's 2020 Massachusetts and Rhode Island Port Access Route Study. We are pleased that BOEM is considering using this study in this way. MUL-26: Monitoring plan. MUL-27: Minimize sediment disturbance. MUL-28: Inadvertent returns plan and drilling fluids. MUL-21: Sampling gear removal between seasons. MUL-38: Noise mitigation plan. MUL-39: Electrical shielding on underwater cables. NAV-1: Boulder relocation reporting - We support this AMMM measure; however the final PEIS should indicate how the threshold size of 6.6 ft (2 m) was selected. Relocation should be reported for all boulders that would constitute a hang that might entangle fishing gear causing a safety issue. NAV-3: Cable placement for navigation and safety OU-7: Federal survey mitigation program. STF-2: Sea turtle/Atlantic sturgeon identification and data collection - This AMMM measure does not directly impact Council-managed fisheries. However the Councils are required to ensure that fishery management measures will not have adverse impacts on protected species; therefore we support gathering data that will be useful in assessing protected species populations.</p>	
BOEM-2024-0001-0439-0081	<p>Measure ID: NAV-1 Measure Name: Boulder relocation reporting Description: The Lessee must provide USCG NOAA navigational software companies and the local harbormaster with a comprehensive list and shapefile of positions and areas to which boulders &gt;6.6 feet (&gt;2 meters) will be relocated (latitude longitude) at least 60 days prior to boulder relocation activities. Previously Applied as a COP T&amp;C: Category: T/EACP Comment: It is not technically feasible to provide exact locations of relocated boulders in advance of operations. Sea state seabed and logistical conditions arise offshore that will affect exact locations. The boulder plan (measure BEN-1) can provide planned areas but long/lats cannot be provided until after operations. Developers normally update BOEM of boulder relocation within 60 days of completion not in advance. This is not a navigation issue and it is unclear why it is being listed as a "Nav" measure. NOAA will not chart small boulders they would say "rocky" instead. In addition Lessees should not be required to</p>	<p>The AMMM measure is requiring planned areas and planned locations for the relocated boulders in advance, as there are limitations to where they can and cannot be moved to. BOEM has edited the text of NAV-1 (now MUL-40) to remove reference to software companies and local harbormasters.</p>

Comment No.	Comment	Response
	distribute navigational software companies. There are also no harbor masters for these lease areas.	
BOEM-2024-0001-0423-0022	Navigation [bold: NAV-1] would require reporting to BOEM 60-days in advance where a lessee plans to move a boulder. The current standard is to report where boulders are moved 60-days after relocation. It is not clear in the Draft PEIS what impact justifies NAV-1 in the first place and why the current standard is insufficient and needs to be abandoned in lieu of a far more onerous and costly restriction. NAV- 1 if implemented would have the effect of stopping work every time a boulder needed to be moved yet lessees would need to continue to pay for vessel and equipment use during that period or risk losing their use to another customer. Ocean Winds believes this presents an unworkable hurdle and is not conducive to a reasonable approach.	The AMMM measure language aligns with the current standard and would require planned areas and planned locations for the relocated boulder in advance, as there are limitations to where they can and cannot be moved to. This measure has been applied in previous COP approvals and will remain an AMMM measure in the PEIS. BOEM has revised the AMMM measure to remove reference to software companies and local harbor masters.
BOEM-2024-0001-0406-0023	vi. Measures That Should Be Reserved for Guidance Many of the proposed AMMM measures in the Draft PEIS are not true mitigation measures and would be more appropriate to incorporate into BOEM's guidelines. Rather than use the PEIS process as a substitute for guidance BOEM should instead work with offshore wind lessees on a process to inform and amend the appropriate guidance documents. Examples of proposed AMMM measures that fall under this category include all of the measures flagged as vague and unenforceable in section IV.b.ii above as well as the following: COMFIS-4 which appears to be taken verbatim from Sections B and C of BOEM's draft Fisheries Mitigation Guidance. [Footnote 11: DRAFT Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR Part 585 (June 2022) available at <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf</a> .] COSW respectfully recommends that rather than including the entirety of the draft Fisheries Mitigation Guidance in the PEIS by splitting it among several AMMM measures it would be more appropriate to finalize that guidance. NAV-2 which would require the wholesale adoption of the U.S. Coast Guard's (USCG) Marine Planning Guidelines (MPGs) "[i]n developing their initial COP or as part of subsequent updated versions." The MPGs are by their own	After further consideration, BOEM has removed NAV-2, as it is already covered under BOEM's Notice of Intent (NOI) checklist ( <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/BOEM%20NOI%20Checklist.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/BOEM%20NOI%20Checklist.pdf</a> ). Lessees are encouraged to follow the guidance within USCG's Navigation and Vessel Inspection Circulars at the COP-specific NEPA stage.

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	terms guidance intended to be applied on a case-by-case basis. [Footnote 12: See GUIDANCE ON THE COAST GUARD'S ROLES AND RESPONSIBILITIES FOR OFFSHORE RENEWABLE ENERGY INSTALLATIONS (OREI) ON THE OUTER CONTINENTAL SHELF (OCS) NVIC 02-23 (October 2023) Enclosure 4 available at <a href="https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/5ps/NVIC/2020/2023/OREI%20NVIC%202023_V2_29NOV2023.pdf">https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/5ps/NVIC/2020/2023/OREI%20NVIC%202023_V2_29NOV2023.pdf</a> ] Any application of the MPGs to COP review should likewise be accomplished through BOEM guidance. [Footnote 13: We also note that mandatory application of the MPGs could circumvent notice and comment rulemaking under the APA see Section II.b above and may result in the commercially significant loss of wind turbine positions adjacent to shipping lanes.]	
BOEM-2024-0001-0422-0015	NAV-2 Marine Planning Guidelines Comment #13 on NAV-2 Attentive Energy recommends this AMMM be modified by adopting language stipulating adhering to the Marine Planning Guidelines "as reasonable and practicable" as not all measures in the guidelines could be feasibly adopted by every offshore wind project. Further BOEM should clarify what is meant by a "USCG-recognized maritime expert" or remove such reference. To date NVIC 02-23 does not define identify or represent USCG-recognized maritime experts. It is inappropriate for BOEM to require developers to adopt the NVIC 02-23 when it is a guidance document containing recommendations that are further evaluated in the NSRA and individual project NEPA processes.	After further consideration, BOEM has removed NAV-2, as it is already covered under BOEM's NOI checklist ( <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/BOEM%20NOI%20Checklist.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/BOEM%20NOI%20Checklist.pdf</a> ). Lessees are encouraged to follow the guidance within USCG's Navigation and Vessel Inspection Circulars at the COP-specific NEPA stage.
BOEM-2024-0001-0439-0082	Measure ID: NAV-2 Measure Name: Marine Planning Guidelines Description: In developing their initial COP or as part of subsequent updated versions Lessees will adopt the Marine Planning Guidelines (NVIC 02-23 Enclosure (3) or applicable current version: <a href="https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/5ps/NVIC/2020/2023/OREI%20NVIC%202023_FINAL_05OCT2023.pdf?ver=2FtgA6VSQw3TzFDIObhmgQ%3d%3d">https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/5ps/NVIC/2020/2023/OREI%20NVIC%202023_FINAL_05OCT2023.pdf?ver=2FtgA6VSQw3TzFDIObhmgQ%3d%3d</a> where applicable as established by USCG to ensure navigational safety. Additionally Lessees will work closely with USCG and USCG-recognized maritime experts to improve procedures for evaluating and regulating safety at sea including through adjustments to the Port Access Route Study process. Previously Applied as a COP T&C:	After further consideration, BOEM has removed NAV-2, as it is already covered under BOEM's NOI checklist ( <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/BOEM%20NOI%20Checklist.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/BOEM%20NOI%20Checklist.pdf</a> ). Lessees are required to follow USCG's Navigation and Vessel Inspection Circulars at the COP-specific NEPA stage.

Comment No.	Comment	Response
	Category: D GACP Comment: It is inappropriate for BOEM to require developers to adopt the NVIC 02-23 when it is a guidance document containing recommendations that are further evaluated in the NSRA and individual project NEPA processes. It is also meant to be continually updated. ACP and the USCG are currently discussing 58 issues with NVIC 02-23. One example is that NVIC 02-23 contains problematic setback requirements that should not be required after lease execution. The PEIS intends to analyze measures that can be approved as terms and conditions of plan approval for individual project specific COPs. Since this measure dictates how a COP should be developed by its very nature it could not be implemented through terms and conditions of COP approval. NVIC 02-23 is only focused on the offshore wind industry. Are other maritime industries such as oil and natural gas required to comply with similar guidance?	
BOEM-2024-0001-0406-0018-a	NAV-3 which would require lessees to "avoid unfavorable cable placement." Notwithstanding the list of examples the term "unfavorable" is extremely vague at best and incredibly expansive at worst opening lessees up to unchecked liability and inviting potentially excessive agency discretion. Moreover cable routing is planned through COP development and is not appropriate as a condition of COP approval.	Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have and have not been previously applied; BOEM believes these are all feasible. NAV-3 has not been previously applied in previous COP approvals and was analyzed in Sub-alternative C2. Cabling will be analyzed on a case-by-case basis in consultation with USCG.
BOEM-2024-0001-0439-0083	Measure ID: NAV-3 Measure Name: Cable placement for navigation and safety Description: Lessees must seek to avoid unfavorable cable placement including avoidance of Federal Aids to Navigation (ATONs) Private Aids to Navigation (PATONs) anchorage areas (including Ambrose Anchorage) Traffic Separation Schemes and Fairways. If these cannot be avoided the Lessees will coordinate with USCG and make best efforts to route the cable as directly across these routing schemes as reasonably practicable. Cables that need to cross the proposed New York to New Jersey Connector Fairway tug-and-tow lane should cross as perpendicularly to the lane as feasible. Previously Applied as a COP T&C: Category: D JACP Comment: This measure is duplicative of PATON and other processes in place with USCG and falls within USCG jurisdiction and should be removed.	BOEM has cable-placement authority, not USCG. This is a measure that has not been applied in previous COP approvals and was analyzed in Sub-alternative C2. BOEM has revised the AMMM measure to remove that last two sentences to clarify this.

**Table P.5.23-8. Responses to Substantive Comments on Mitigation and Monitoring—Engineering and Technical Review Branch**

Comment No.	Comment	Response
BOEM-2024-0001-0313-0026	<p>2.3 Non-routine Activities and Events</p> <p>The section on severe weather and natural events states "One of these standards calls for the structure to be able to withstand a 50-year return interval event. An additional standard includes withstanding 3-second gusts of a 500-year return interval event which would correspond to Category 5 hurricane windspeeds."</p> <p>Comment Despite assurances that these WTGs are designed to withstand severe storms a catastrophic contingency plan should be provided to address destroyed or substantially damaged TWGs and OSSs. The power of nature trumps design assurances and should be included in the PEIS. Additionally although it is understood that not all catastrophic impacts can be anticipated and evaluated things such as lightning strikes can and should be included in the final PEIS especially as there have been increased reports on WTGs catching fire preventatives planning measures mitigation measures and potential impacts to water quality should be provided in the PEIS.</p>	<p>Thank you for your comment. Fires have been added to Section 2.3, <i>Non-routine Activities and Events</i>. Accidental releases from equipment failure and other non-routine events such as toppling during a storm or an earthquake are described in Section 3.4.2, <i>Water Quality</i>.</p> <p>An Emergency Response Plan is prepared by lessees as part of the COP to outline procedures for emergency incident scenarios, which include fires. Additionally, BOEM and BSEE are working to update language that requires a lessee's standard operating procedures (developed as part of the Emergency Response Plan) that are used in the case of emergencies, accidents, or non-routine conditions to consider mass marine debris events.</p>
BOEM-2024-0001-0352-0008-c	MUL-2: Anchoring plan. We generally support this AMMM measure; however as written it provides lessees too much flexibility (e.g. "to the maximum extent practicable" and "wherever feasible"). It should be revised to be more prescriptive while still allowing for deviations to ensure safety.	<p>MUL-2 has been previously applied in previous COP approvals and will remain an AMMM measure in the PEIS. AMMM measures are not based on flexibility but the extent to which they are safe and economically and technically feasible. Project details would be revisited during the project-specific COP NEPA review. At this programmatic review stage, it is not practical to identify exact locations where boulders will be located.</p>
BOEM-2024-0001-0406-0021-b	MUL-28 an inadvertent return (IR) plan that will be developed as part of the state permitting process.	<p>BOEM has reviewed all AMMM measures in Appendix G and identified measures that are RPs for the offshore wind industry. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are not part of the Proposed Action. MUL-28 is now an RP and the language has been updated to include coordination with the applicable agencies. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs.</p>
BOEM-2024-0001-0439-0075	Measure ID: MUL-28 Measure Name: Inadvertent Returns (IR) Plan and drilling fluids Description: Lessees should develop an Inadvertent Returns (IR) Plan to address prevention control and clean-up of	<p>Refer to response to comment BOEM-2024-0001-0406-0021-b. HDD occurs almost exclusively outside of the OCS, where BOEM does not have enforcement authority.</p>

Comment No.	Comment	Response
	potential IR which is the unintended release of drilling fluids to the surface during drilling operations. To the extent practicable use biodegradable drilling solution and recirculate and recycle drilling fluids used during HDD construction to minimize required water use. Avoid discharging drilling fluids onto the seabed. Previously Applied as a COP T&C: Category: VACP Comment: The PEIS indicates that this measure is voluntary. Voluntary measures should not be included in AMMMs.	
BOEM-2024-0001-0422-0013	OU-1 Mitigation for oceanographic high frequency radars Comment #11 on OU-1 Attentive Energy recommends BOEM remove reference to "curtailment/curtailment agreement". Curtailment could have serious financial ramifications and make a project not economically viable and as such requiring its inclusion is highly problematic. The inclusion of an uncertain obligation to curtail could negatively impact a project's ability to receive financing and could make an EIS alternative including this AMMM not feasible. The windfarm curtailment agreement is unclear and potentially problematic. Please clarify why a curtailment agreement should be part of a data sharing agreement. It is also possible some of the wind turbine performance data requested in this measure would be proprietary and therefore sharing this information publicly might compromise project financing and other considerations. Attentive Energy recommends adding language to make clear the sharing of proprietary information would not be required.	The interpretation of the AMMM measure is incorrect. The AMMM measure offers options to mitigate operational impacts, which include curtailment, but that itself is not a requirement. Details of a data-sharing or curtailment agreement would be finalized in discussions with affected stakeholders at the COP-specific NEPA stage. In addition, see response to comment BOEM-2024-0001-0371-0052 regarding the change to OU-1.
BOEM-2024-0001-0439-0084	Measure ID: OU-1 Measure Name: Mitigation for oceanographic high frequency radars Description: BOEM would require that the Lessee coordinate with the radar operators and the Surface Currents Program of NOAA Integrated Ocean Observing System (IOOS) Office to assess if the project causes radar interference to the degree that radar performance is no longer within the specified radar system's operation parameters or fails to meet mission objectives. If either is the case the Lessee must notify BOEM and engage radar operators and NOAA IOOS on mitigation efforts. The following options to mitigate operational impacts on oceanographic high-frequency radars have been identified: Data sharing from turbine operators to include the following: Sharing real-time telemetry of surface currents and other oceanographic data measured at locations in the project	This AMMM measure only requires lessees to coordinate with radar operators for impact assessment. Analysis of project-specific design would be required to determine whether mitigation is required; this would be done at the subsequent project-specific COP NEPA review. This is a measure that has been applied in previous COP approvals and will remain an AMMM measure in the PEIS. In addition, see response to comment BOEM-2024-0001-0371-0052 regarding the change to OU-1.

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	<p>with radar operators into the public domain. Sharing time-series of blade rotation rates nacelle bearing angles and other information about the operational state of each of the project's turbines with radar operators to aid interference mitigation. Wind farm curtailment/curtailment agreement between NOAA IOOS Lessee and BOEM Additional modifications identified for oceanographic high-frequency radar systems to mitigate impacts: Signal processing enhancements. Antenna modifications Previously Applied as a COP T&amp;C: Category: T/EACP Comment: This AMMM is being considered without specific analysis of impacts from offshore wind development in the NY Bight lease areas to this radar system. The fundamental purpose of mitigation measures in NEPA is to address a reasonably foreseeable impact of the Proposed Action. A general high-level analysis of impacts to radar systems is presented; however this analysis does not cover specific impacts from offshore wind development in the NY Bight leases. In order for this mitigation measure to be included in the final PEIS an analysis of the impacts to oceanographic high frequency radar systems must be included in the document and specific impacts from offshore wind development in the NY Bight must be demonstrated as reasonably foreseeable. In addition the analysis should demonstrate what mitigations could be part of this agreement and how effective they would be at reducing impacts. This analysis should also consider the benefits of those measures when balanced against how they impact the project and any reductions in energy production or increased costs to ratepayers. If this analysis is not included or if specific impacts cannot be demonstrated then this measure must be removed. In addition the windfarm curtailment agreement is problematic and may be economically infeasible Projects that rely on project finance will not be able to obtain financing with uncertain curtailment conditions. Curtailment is considered in COPs specifically for USCG search and rescue.</p>	
BOEM-2024-0001-0423-0029	<p>Other Uses (radar marine minerals NMFS surveys)[bold: OU-1 and OU-2] concern mitigation for interference with NOAA and NEXRAD radar systems including wind farm curtailment of operations. Ocean Winds recommends removal of references to curtailment and curtailment agreements in these measures. Developers can work</p>	<p>See response to comment BOEM-2024-0001-0371-0052 regarding OU-1 and OU-5. In addition, the commenter's interpretation of OU-1 is incorrect. OU-1 offers options to mitigate operational impacts, which include curtailment, but that itself is not a requirement. Details of a data-sharing or</p>

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	with the Department of Defense National Weather Service and NOAA to correct radar interferences with reprogramming sharing of wind field environmental data adding additional other sensors in lease areas and so on as outlined in BOEM-required mitigation agreements. Curtailment is a blunt instrument especially where other measures can correct problems while allowing the system to operate.[bold: OU-5] would require Lessees to[italicized: "enter into a mitigation agreement with the Surface Currents Program of NOAA's Integrated Ocean Observing System (IOOS) Office to determine if the Lessee's project causes radar interference to the degree that radar performance is no longer within the specific radar systems' operational parameters or fails to meet NOAA IOOS's mission objectives and to establish a mitigation agreement." ]This seems like a COP-specific NEPA review item that would be addressed with NOAA during that process. A general requirement to mitigate not knowing what the interference might be and how much the mitigation will cost adds uncertainty to CapEx and future OpEx/revenues.	curtailment agreement would be finalized in discussions with affected stakeholders at the COP-specific NEPA stage. OU-2 is now analyzed as an AMMM measure that has not been previously applied (refer to response to comment BOEM-2024-0001-0371-0004 for more information).
BOEM-2024-0001-0422-0014	OU-2 Mitigation for NEXRAD weather radar systems Comment #12 on OU-2As with OU-1 Attentive Energy recommends BOEM remove reference to "curtailment/curtailment agreement". Curtailment could have serious financial ramifications and make a project not economically viable as such requiring its inclusion is highly problematic. The inclusion of an uncertain obligation to curtail could negatively impact a project's ability to be financed. Attentive Energy recommends removing discussion of curtailment and curtailment agreements in this AMMM given the significant possible ramifications and encourages BOEM to seek other mitigatory measures.	Refer to response to comment BOEM-2024-0001-0423-0029.
BOEM-2024-0001-0439-0085	Measure ID: OU-2 Measure Name: Mitigation for NEXRAD weather radar systems Description: Operational mitigations to NEXRAD weather radar systems include the following: Wind farm curtailment/curtailment agreement Research is being conducted to determine whether impacts on weather radar can be mitigated by using phased array radars to achieve a null in the antenna radiation pattern in the direction of the wind turbine. Previously Applied as a COP T&C: Category: T/E BACP Comment: This AMMM is being	Refer to response to comment BOEM-2024-0001-0423-0029.

Comment No.	Comment	Response
	<p>considered without any specific analysis of impacts from offshore wind development in the NY Bight lease areas to this radar system. A general high-level analysis of impacts to radar systems is presented; however this analysis does not cover specific impacts from offshore wind development in the NY Bight leases. The fundamental purpose of mitigation measures in NEPA is to address a reasonably foreseeable impact of the Proposed Action. In order for this mitigation measure to be included in the final PEIS an analysis of the impacts to the NEXRAD radar system must be included in the document and specific impacts from offshore wind development in the NY Bight must be demonstrated as reasonably foreseeable. In addition the analysis should demonstrate how curtailment would mitigate those impacts and if the benefits of implementation of curtailment is justified when compared to the harm caused to projects as a result of its implementation. If this analysis is not included or if specific impacts cannot be demonstrated then this measure must be removed. In addition the windfarm curtailment agreement is problematic and may be economically infeasible. Projects that rely on project finance will not be able to obtain financing with uncertain curtailment conditions. Curtailment is considered in COPs specifically for USCG search and rescue.</p>	
BOEM-2024-0001-0439-0086	<p>Measure ID: OU-3 Measure Name: Mitigation for ARSR-4 and ASR-8/9 radars Description: Operational mitigations identified for impacts on airport surveillance radar (ASR)-8/9: Passive aircraft tracking using ADS-B or signal/transponder Increased aircraft altitude near radar Sensitivity time control (range-dependent attenuation)Range azimuth gating (ability to isolate/ignore signals from specific range-angle gates)Track initiation inhibiting velocity editing plot amplitude thresholding (limiting the amplitude of certain signals)Modification mitigations for ARSR-4 and for ASR-8/9 systems: Utilizing the dual beams of the radar simultaneously In-fill radars Previously Applied as a COP T&amp;C: Category: T/E DACP Comment: These measures should be developed through consultation with the DoD Clearinghouse and other agencies that would implement these measures and should not be prescribed in an AMMM. Developers can only provide in-fill radars as a mitigation. All others are internal settings or something operators can already do.</p>	<p>BOEM has revised OU-2 and OU-3 to reflect the need for coordination to develop potential mitigations. The mitigations included in this AMMM measure should be considered. Additional mitigation measures outside of lessees providing data to radar operators may be considered at the project stage, as well as those based on project-specific information.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0439-0088	<p>Measure Name: HF radar interference mitigation agreement</p> <p>Description: At least 60 calendar days prior to completion of construction or initiation of commercial operations (whichever is earlier) the Lessee must enter into a mitigation agreement with the Surface Currents Program of NOAA's Integrated Ocean Observing System (IOOS) Office to determine if the Lessee's project causes radar interference to the degree that radar performance is no longer within the specific radar systems' operational parameters or fails to meet NOAA IOOS's mission objectives and to establish a mitigation agreement. Within 15 calendar days of entering into the mitigation agreement the Lessee must provide BOEM with a copy of the executed mitigation agreement. Within 45 calendar days of completing any requirements in the mitigation agreement the Lessee must provide BOEM and BSEE with evidence of compliance with those requirements. Where possible the Lessee will adhere to the recommendations for mitigation to marine radar interference from the National Academy of Science: Wind Turbine Generator Impacts to Marine Vessel Radar (2022). Previously Applied as a COP T&amp;C: Category: ACP Comment: This AMMM is being considered without any specific analysis of impacts from offshore wind development in the NY Bight lease areas to this radar system. The fundamental purpose of mitigation measures in NEPA is to address a reasonably foreseeable impact of the Proposed Action. In order for this mitigation measure to be included in the final PEIS an analysis of the impacts to the HF radar system must be included in the document and specific impacts from offshore wind development in the NY Bight must be demonstrated as reasonably foreseeable. In addition the analysis should demonstrate what mitigations could be part of this agreement and how effective they would be at reducing impacts. This analysis should also consider the benefits of those measures when balanced against how they impact the project and any reductions in energy production or increased costs to ratepayers. If this analysis is not included or if specific impacts cannot be demonstrated then this measure must be removed. This measure has the potential to delay commercial operations. Timeframes for approval must be included.</p>	<p>OU-5 has been required in previous COP approvals and, therefore, is a measure that the offshore wind industry is familiar with for projects on the Atlantic OCS. OU-5 has been merged with OU-1 (refer to response to comment BOEM-2024-0001-0371-0052). Additional mitigation measures outside of lessees providing data to radar operators may be considered at the project stage, as well as those based on project-specific information.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0422-0006	<p>MUL-16 Post-storm event monitoring plan Comment #4 on MUL-16 This measure is unnecessarily burdensome to the offshore wind industry especially as similar measures are not applied to other offshore industries. Inspection schedules are already included in the COP for approval by BOEM and therefore this measure is superfluous. Without specific timeframes for agency review included in this measure this plan could delay the start of construction. To consider such a measure BOEM should:</p> <ul style="list-style-type: none"> <li>• Elaborate on the perceived special risks the offshore wind industry faces to warrant such a special measure</li> <li>• Confirm it has assessed the potential cost of such a measure and determined it is warranted</li> <li>• Provide the data to support using the one-half design return period as a measure and</li> <li>• Articulate how a developer should plan for the cost of such future unknown measures.</li> </ul> <p>Given the multiple uncertainties and questions regarding this measure's implementation Attentive Energy recommends its deletion and suggests reviewing global examples that may inform the concerns raised in this AMMM or whether a single study may provide insight into future specifications for such measures. As currently written this AMMM creates significant uncertainty to a project regarding what is required and the possible cost of such requirements.</p>	BOEM disagrees that the AMMM measure is superfluous. BSEE needs to have awareness of the inspection schedules and methodology. Post-storm monitoring is required by regulations, and this AMMM measure (which has been required in previous COP approvals) outlines what this requirement entails.
BOEM-2024-0001-0423-0023	<p>Multiple Resources [bold: MUL-16] would require a monitoring plan (to monitor "environmental conditions") be developed for post-storm events. However the PEIS does not clarify what classifies a "storm event" or which environmental conditions would need to be monitored. It is in lessees' best interest to monitor offshore wind facilities to ensure that facilities are operating properly and safely. Frequency of operations and maintenance activities is determined by the technology utilized and the site-specific conditions including potential for scour and will be described in the project-specific COP. A minimum inspection requirement of exceedance of one-half the design return period is overly prescriptive and impractical.</p>	This AMMM measure, which has been required as a condition of approval for past COPs, includes an adaptive management element. Because offshore wind is a new industry and in its infancy on the Atlantic OCS, there will be more frequent inspections in the beginning. After the industry becomes more established, BOEM may adjust the inspection frequency when more information is collected. The AMMM measure allows for flexibility to adjust this requirement over the life of the project.

Comment No.	Comment	Response
BOEM-2024-0001-0423-0024	<p>[bold: MUL-18] states that [italicized: "Lessees should coordinate transmission infrastructure among projects. Where practicable transmission infrastructure should use shared intra- and interregional connections have requirements for meshed infrastructure apply parallel routing with existing and proposed linear infrastructure (including export cables and other existing infrastructure such as power and telecommunication cables pipelines) and limit the combined footprint to minimize impacts and maximize potential capacity." ]BOEM itself did not assess potential impact reduction by using a shared transmission corridor stating [italicize: "impacts related to shared transmission infrastructure would need to be evaluated once project-specific information is known for each of the six NY Bight projects"] [Footnote 4: Draft PEIS Volume 1 Table 2-3 Alternatives Considered but not analyzed in detail pp 2-20 - 2-21.] but is directing lessees to add this analysis to individual COPs before all of the COPs are published. The States of New York and New Jersey have expressed interest in creating an offshore transmission network (OTN) that would be used by multiple lessees to export electricity to shore. In fact the New Jersey Board of Public Utilities asked the area's Regional Transmission Operator PJM to incorporate New Jersey's offshore wind goals into the regional transmission planning process creating the "State Agreement Approach" (SAA). [Footnote 5: See Generally In the Matter of Offshore Wind Transmission NJBPU Docket No. QO20100630.] BOEM however rejected analyzing that alternative as being speculative and unnecessary given the inclusion of AMMM MUL-18. It is highly likely that any OTN alternative is one that would come out of a state solicitation for a transmission developer to construct such a network and not be in the control of the lessees. MUL-18 however would direct lessees to consider going forward with an OTN themselves and speculate in their COPs on the location and specifications of equipment on an offshore substation and routing of one or more export cables. Ocean Winds suggests that as the OTN would serve potentially all six lease areas it would be only appropriate for it to be considered in the PEIS under cumulative impacts and if a state selects a transmission developer to construct it that transmission developer would need to go through the NEPA process itself for the</p>	<p>Thank you for your comment. Please refer to the response to comment BOEM-2024-0001-0371-0050-d. MUL-18 is an RP in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are not part of the Proposed Action.</p>

Comment No.	Comment	Response
	transmission facilities they are proposing to build at which point BOEM could tier off the PEIS (or supplement the PEIS with the specific OTN proposed) when conducting the project-specific EIS in evaluating the General Activities Plan application that the transmission developer would submit to BOEM.	
BOEM-2024-0001-0439-0065	<p>Measure ID: MUL-16 Measure Name: Post-storm event monitoring plan Description: The Lessee must provide a plan for post-storm event condition monitoring of the facility infrastructure foundation scour protection and cables to BSEE for review at least 60 days prior to commencing installation activities. The Lessee must receive BSEE's concurrence prior to commencing installation activities. Plans may be submitted separately for the cables (including cable protection) WTG and OSS. The plan must describe how the Lessee will measure and monitor environmental conditions and duration of storm events; specify the environmental condition thresholds (and their associated technical justification) above which post-storm event monitoring or mitigation is necessary; describe potential monitoring mitigation and damage identification methods; and state when the Lessee must notify BSEE of post-storm event related activities. At a minimum post-storm event inspections must be conducted following a storm where conditions exceed one-half the design return period. For example a WTG platform designed for 50-year environmental conditions must be inspected following a storm event with 25-year environmental conditions. BSEE reserves the right to require post-storm mitigations to address conditions that could result in safety risks and/or impacts on the environment. Previously Applied as a COP T&amp;C: CheckCategory1: T/EACP Comment: Inspection schedules are included in the COP for approval by BOEM and therefore this measure is not necessary. The minimum inspection requirement of exceedance of one-half the design return period is overly prescriptive and not technically or economically viable. There are methods and technology that will be used in the monitoring of storm events and their impact on project assets that will obviate the need for this frequency of inspections. Further without specific timeframes for agency review this is another example of a plan that can delay construction start.</p>	Refer to responses to comments BOEM-2024-0001-0423-0023 and BOEM-2024-0001-0422-0006. MUL-16 has been updated and language about review timeframes has been removed.

Comment No.	Comment	Response
BOEM-2024-0001-0451-0005	MUL-16 Post-storm event monitoring: The Lessee must provide a plan for post-storm event condition monitoring of the facility infrastructure foundation scour protection and cables to BSEE for review at least 60 days before commencing installation activities At a minimum post-storm event inspections must be conducted following a storm where conditions exceed one- half the design return period. For example a WTG platform designed for 50-year environmental conditions must be inspected following a storm event with 25-year environmental conditions. BSEE reserves the right to require post-storm mitigations to address conditions that could result in safety risks and/or impacts on the environment. This AMMM does not reflect industry practice. The timeline of this condition is not aligned with cable run inspection thresholds and does not match the return period of the design. The timeline should be limited to the engineered design life. A standard design life is for ULS a 50-year return period and a 500-year return period. Half the design life is then either a 25-year storm or a 250-year storm which is specified in this proposed condition. The requirement should reflect the full design life.	Design life is not used in this AMMM measure. The intent of the AMMM measure is to require inspection during potentially damaging conditions rather than waiting until catastrophic conditions occur (i.e., to ensure conditions do not reach a point of catastrophic failure).
BOEM-2024-0001-0352-0008-d	MUL-16: Post-storm event monitoring plan - We generally support this AMMM measure; however as written it essentially requires just a plan without associated action.	Thank you for your comment. The intent of the AMMM measure is to require inspection during potentially damaging conditions rather than waiting until catastrophic conditions occur (i.e., to ensure conditions do not reach a point of catastrophic failure).

**Table P.5.23-9. Responses to Substantive Comments on Mitigation and Monitoring—Environmental Justice (EJ)**

Comment No.	Comment	Response
BOEM-2024-0001-0406-0021-c	EJ 1-4 whose environmental justice measures relate solely to onshore impacts and are likely to conflict with or duplicate state permitting and procurement requirements.	Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have been included in previous BOEM COP approvals from AMMM measures that have not been included in previous COP approvals; BOEM believes these are all feasible. In addition, several AMMM measures were reclassified as RPs in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and

Comment No.	Comment	Response
		<p>minimize impacts. These RPs are not part of the Proposed Action. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information. BOEM's review and revision of AMMM measures has resulted in EJ-1 from the Draft PEIS being split into a not previously applied AMMM measure (EJ-1a) and an RP (EJ-1b), and EJ-2 becoming an RP. AMMM measure EJ-1a and RP EJ-2 have been revised to further reduce potential duplication with existing state and local requirements and describe how lessees may refer to other requirements to satisfy the AMMM measure. EJ-3 has been updated for clarity in the Final PEIS. EJ-4 is no longer an AMMM measure being considered in the PEIS (refer to response to comment BOEM-2024-0001-0319-0004).</p>
BOEM-2024-0001-0439-0018	<p>V. BOEM should remove certain AMMMs from consideration. Even assuming BOEM reframes the PEIS and acknowledges that the agency is considering AMMM measures that it [italicized: may] require as conditions of approval it should remove from consideration certain inappropriate AMMMs. Attachment A provides the OSW industry's detailed comments on specific AMMMs. As demonstrated by those comments many of the AMMMs proposed by BOEM are inappropriate because to varying degrees they are outside of BOEM's statutory authority and are duplicative are more suitably proposed as COP guidance will be technically or economically infeasible will create untenable safety issues or undue burden on industry and/or are voluntary.</p> <p>a. BOEM should remove AMMMs that are outside their statutory authority and duplicative. An agency "may not exercise its authority in a manner that is inconsistent with the administrative structure that Congress enacted into law." [Footnote 38: Food and Drug Admin. v. Brown &amp; Williamson Tobacco Corp. 529 U.S. 120 125 120 S.Ct. 1291 146 L.Ed.2d 121 (2000) (quoting ETSI Pipeline Project v. Missouri 484 U.S. 495 517 108 S.Ct. 805 98 L.Ed.2d 898 (1988)).] As such BOEM cannot implement AMMMs that are outside of its authority. While a NEPA analysis can review mitigation measures that are not within an agency's authority the agency cannot impose these measures on the lessee or adopt them in a ROD but can only cross-reference those measures to provide for interagency coordination. In fact "Agencies</p>	<p>Refer to responses to comments BOEM-2024-0001-0406-0021-c and BOEM-2024-0001-0435-0038 regarding EJ-1 through EJ-4. Refer to response to comment BOEM-2024-0001-0406-0017 regarding AQ-1 through AQ-5. MUL-7 is now identified as an RP in the PEIS.</p>

Comment No.	Comment	Response
	<p>should not commit to mitigation however unless they have sufficient legal authorities and expect there will be necessary resources available to perform or ensure the performance of the mitigation." [Footnote 39: Final Guidance for Federal Departments and Agencies on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact 76 FR 3843 (Jan. 2011)] Indeed BOEM itself notes that not all "AMMM measures are within BOEM's statutory and regulatory authority; those that are not may still be adopted and imposed by other governmental agencies." [Footnote 40: DPEIS Appendix G.] As such BOEM should not develop duplicative or additive AMMM [Footnote 41: As discussed below the AMMM implies it is within BOEM's authority to issue. Instead BOEM should simply analyze the environmental effects of air permits that would be required by EPA.] or impose any requirements for measures that fall outside of their statutory authority. Instead BOEM should defer to cooperating agencies with regulatory authority to impose certain mitigation measures. [Footnote 42: See Wyoming v. U.S. Dep't of the Interior 493 F. Supp. 3d 1046 (D. Wyo. 2020) (BLM rule referencing EPA regulations "usurps the authority to regulate air emissions Congress expressly delegated to the EPA").] For example AQ-1 through AQ-5 would impose air quality requirements; however emissions in the NY Bight lease area are regulated by the Environmental Protection Agency ("EPA") under its Clean Air Act regulations at 40 C.F.R. Part 55. AQ-1 through AQ-5 are duplicative of EPA's air permit process and create the potential for conflicting requirements and confusion. Through the OCS Air Permit process applicants will perform a Best Available Control Technology (BACT) and/or Lowest Achievable Emission Rate (LAER) analysis for each emission source and New Source Review (NSR) air pollutant that is emitted in excess of thresholds set forth in the Prevention of Significant Deterioration (PSD) regulations and/or the regulations of the Corresponding Onshore Area. For example with respect to AMMM AQ-4 as part of the BACT/LAER analysis applicants will assess the feasibility of add-on pollution controls (e.g. Selective Catalytic Reduction Selective non-Catalytic reduction NOx Adsorber/Scrubber</p>	

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	<p>Lean NOx Catalysts SOx Scrubber Diesel Particulate Filter Diesel Oxidation Catalyst etc.) on vessels and engines on the WTGs and ESPs. EPA is responsible for reviewing and concurring with an applicant's justification for why these add-on pollution controls are technically and/or economically infeasible through the BACT/LAER process not BOEM and BSEE. BOEM should not use its AMMMs to reinforce existing standards or legal requirements over which it has no authority itself. Similarly MMST-13 attempts to characterize existing vessel speed rules but may ultimately create conflict if those regulations are modified. EJ-1 would require lessees to develop an Environmental Justice Communications Plan but an Environmental Justice Plan is already required by both the states of New York and New Jersey. AMMMs that are duplicative of (and potentially in conflict with) existing state or Federal requirements should be removed from BOEM's proposed AMMMs. Finally with AMMM MUL-7 BOEM attempts to meet International Maritime Organization ("IMO") standards. These standards are outside of BOEM's jurisdiction and authority and BOEM may not use AMMMs developed through NEPA to enforce compliance with those standards (see Attachment A for additional examples).</p>	
BOEM-2024-0001-0439-0047	<p>Measure ID: EJ-1 Measure Name: Environmental Justice Communications Plan Description: The Lessee must submit a draft Environmental Justice Communications Plan (EJ Communications Plan) for communicating with Environmental Justice (EJ) communities or populations (defined for all mitigations as "communities with environmental justice concerns" or underserved communities as related to the intent of Executive Orders 12898 and 14096 referred to herein as "EJ populations") as a part of its initial COP submission or in subsequent updated versions. The EJ Communications Plan must document the process of how the Lessee plans to communicate during activities described in the COP including construction operations and decommissioning. Because potential impacts on EJ populations are expected to be much lower during operations than during construction or decommissioning the EJ Communications Plan should reflect different levels of communications needed as appropriate during these different stages. The Lessee may utilize</p>	<p>Refer to responses to comments BOEM-2024-0001-0406-0021-c and BOEM-2024-0001-0435-0038 regarding EJ-1 through EJ-4.</p>

Comment No.	Comment	Response
	<p>efforts or language developed for any state requirements to satisfy this EJ Communication Plan partially or wholly. The EJ Communications Plan must specifically target low-income and minority populations and communities identified by applicable state-level EJ and related screening tools and advance meaningful engagement based on each affected community's unique communication and information needs. The plan must be finalized prior to COP decision. In the EJ Communications Plan the Lessee must: Describe which EJ populations may be potentially affected by COP activities with sufficient detail about which activities could impact which areas or populations and at what times. In identifying EJ populations Lessees should use both federal and state-level screening tools with an intent to be as inclusive as possible and meet the most recent guidance and best practices. At minimum the following screening tools should be used as applicable to the project location: Environmental Protection Agency's EJ Screen [<a href="https://www.epa.gov/ejscreen">https://www.epa.gov/ejscreen</a>] New York Department of Environmental Conservation Potential Environmental Justice Areas [<a href="https://dec.ny.gov/get-involved/environmental-justice/gis-tools">https://dec.ny.gov/get-involved/environmental-justice/gis-tools</a>] New York State Disadvantaged Communities Mapping Tool [<a href="https://climate.ny.gov/resources/disadvantaged-communities-criteria/">https://climate.ny.gov/resources/disadvantaged-communities-criteria/</a>] and New Jersey Department of Environmental Protection EJMAP [<a href="https://dep.nj.gov/ej/communities-location/">https://dep.nj.gov/ej/communities-location/</a>] tool. Lessees should review additional data sources and tools for potential incorporation and must document the sources and methods for identifying EJ populations included in the EJ Communications Plan. Describe how each potentially affected EJ population desires to be communicated with during activities described in the COP (e.g. communication methods language needs). Describe how coordination with other Lessees in the region will occur in advance of communication with EJ populations especially in cases where onshore activities described in the COP may be in proximity to other projects. The intent of coordination is to reduce engagement redundancy and burden on EJ populations. Describe how Lessees will communicate when and where activities described in the COP will take place who they may affect and how they may affect EJ populations. Describe</p>	

Comment No.	Comment	Response
	<p>how Lessees will respond to any concerns or questions from EJ populations during activities described in the COP and the process Lessees will undertake to communicate with EJ populations to ensure these concerns or questions are addressed. Include how the Lessee will handle any questions or concerns that are not related to that Lessee's activities or applicable to regional offshore wind activities. Describe when how and to whom employment opportunities are advertised and how the Lessee plans to maximize access to those opportunities for low-income and minority populations including but not limited to the communication and advertising for training programs and hiring processes. Describe how the Lessee will communicate investment or supply chain opportunities to meet any Lessee commitments to diversity or equal access including but not limited to those included in NY Bight lease stipulation 7.1. Describe any related requirements or ongoing efforts in coordination with the states of New York and New Jersey. Include a summary of feedback received from EJ populations on the above bullets (see EJ-3).Category: DACP Comment: An EJ Plan is required by both NYS and NJ. An additional EJ Plan would be duplicative of current State requirements and will lead to confusion with multiple determinations and approvals that may be conflicting.</p>	
BOEM-2024-0001-0467-0002	<p>UPROSE and NYC-EJA also strongly encourage that the proposed mitigation measures under the adoption of Alternative C that require each lessee to develop an EJ Communication Plan and EJ Mitigation Resources Plan be amended to require the creation of these plans in coordination with environmental justice communities. Environmental and climate justice community residents advocates and organizations impacted by direct and indirect offshore wind activities in the New York Bight are well-positioned to inform lessees about the best ways to communicate information within their communities and what mitigation strategies will be most effective and equitable. We urge BOEM and lessees to continue deep engagement with environmental justice communities and organizations on a long-term continuing basis.</p>	<p>BOEM has revised all applicable AMMM measures, including EJ-1 (EJ-1 from the Draft PEIS was split into a not previously applied AMMM measure [EJ-1a] and an RP [EJ-1b]) and EJ-3, to more strongly reflect the requirement for lessees to create plans in coordination with environmental justice communities and organizations that serve them and reflect the intent of the AMMM measures to set up long-term, continual engagement throughout the life of offshore wind projects. Note that EJ-2 has been revised to be an RP as an "Environmental Justice Impact Mitigation Resources Plan" and includes recommendation that the plan be developed in coordination with environmental justice communities. Refer to responses to comments BOEM-2024-0001-0406-0021-c and BOEM-2024-0001-0435-0038 for additional information on AMMM measure revisions.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0439-0048	<p>Measure ID: EJ-2 Measure Name: Environmental Justice Mitigation Resources Plan Description: Lessees must submit along with the draft EJ Communications Plan (EJ-1) as part of their initial COP submission or in subsequent updated versions a draft Environmental Justice Community Mitigation Resources Plan (EJ Mitigation Resources Plan) for providing households in EJ populations that are impacted by activities described in the COP (affected households) with any supplies or mitigation resources needed (e.g. air filters noise canceling headphones blackout curtains) to reduce adverse impacts. The EJ Mitigation Resources Plan must provide sufficient detail on how eligibility for mitigation resources will be determined including duration for which resources will be provided based on anticipated activities and localized impacts including examples. The plan must also outline roles and responsibilities of households and Lessees and there should be clear guidelines around principles of equity transparency and fairness. The plan must be finalized prior to COP decision. Category: D JACP Comment: An EJ Plan is required by both NYS and NJ. An additional EJ Plan would be duplicative of current State requirements and will lead to confusion with multiple determinations and approvals that may be conflicting. Mitigation measures listed appear to be primarily related to State and/or onshore impacts outside the jurisdiction of BOEM. BOEM should demonstrate why mitigation measures for other resource areas are insufficient for EJ communities.</p>	<p>Refer to responses to comments BOEM-2024-0001-0406-0021-c and BOEM-2024-0001-0435-0038. Note that EJ-2 has been revised to be an RP as an “Environmental Justice Impact Mitigation Plan” (EJ-2) and language has been added to recommend that state and local requirements are described in the plan to ensure there is no duplication of mitigation efforts.</p>
BOEM-2024-0001-0406-0019	<p>EJ-4 which would require lessees to contribute an annual amount (which could be as large as 1% of total revenue a significant sum) to "a third-party managed compensatory mitigation fund to address disproportionate and adverse impacts on EJ populations directly tied to OCS offshore wind activities as related to the impact analysis discussed in the COP-specific NEPA review that has not been addressed through another mitigation measure." While COSW embraces the need to ensure its project minimizes harm and provides benefits to environmental justice communities it is unclear why this fund is needed. BOEM's own analysis fails to demonstrate that any adverse effects of NYB offshore wind development that may not be addressed through other measures (e.g. air emissions at port facilities</p>	<p>Refer to response to comment BOEM-2024-0001-0319-0004.</p>

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	commercial fishing concerns) are likely to fall more heavily on EJ communities. See Draft PEIS 3.6.4 (pp. 3.6.4-1 to -35). Given the extraordinary time and expense required to establish fund and operate third-party compensatory mitigation funds they should be reserved for only the largest and most significant unavoidable impacts.	
BOEM-2024-0001-0436-0015	<p>e. Mitigation Commensurate with Effects</p> <p>Some of the new AMMMs presented in the Draft PEIS presume undefined impacts of a specific type will occur and warrant compensatory mitigation according to a pre-set formula. For example EJ-4 (EJ compensatory mitigation) requires lessees to financially contribute annually an amount (not to exceed 1% of revenue calculated per MWh) for the duration of electricity production to a third-party managed compensatory mitigation fund to address disproportionate and adverse impacts on EJ populations directly tied to OCS offshore wind activities. Consistent with the definition of mitigation 40 CFR 1508.1(s) developers should not be forced to pay for measures that do not demonstrate a "nexus to those effects" of their actions. Any AMMM adopted by BOEM should demonstrate a clear reduction or offset in impacts. AMMMs should provide environmental benefits that are proportional to the effects of the actions being mitigated are not duplicative of mitigation already provided by associated conservation measures and durable in their contribution to science or the duration of the effects of the actions being mitigated.</p>	Refer to response to comment BOEM-2024-0001-0319-0004.
BOEM-2024-0001-0439-0049	<p>Measure ID: EJ-4 Measure Name: EJ compensatory mitigation</p> <p>Description: Lessees will financially contribute annually an amount (not to exceed 1% of revenue calculated per MWh) for the duration of electricity production to a third-party managed compensatory mitigation fund to address disproportionate and adverse impacts on EJ populations directly tied to OCS offshore wind activities as related to the impact analysis discussed in the COP-specific NEPA review that has not been addressed through another mitigation measure. Fund contributions will be based on analysis of residual disproportionate and adverse impacts in the COP-specific NEPA review. Lessees will</p>	Refer to response to comment BOEM-2024-0001-0319-0004.

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	<p>contribute to the fund upon selection of this measure as a condition of approval of the COP. A Board of Trustees with representatives from impacted communities community-based organizations state representatives Tribal Nations and offshore wind Lessees will be set up to make decisions and liaise with the third-party fund managers. A multi-party group with representatives from each aforementioned category will be convened in coordination with third-party fund managers to develop a Charter that specifies roles responsibilities and the selection process for the Board of Trustees. The amount of the contribution(s) will be calculated based on residual impacts and flexible under the 1% threshold and may be adjusted as needed based on the level of impacts occurring which will vary over the life of the project. Specific criteria of fund management and fairness (e.g. fiduciary controls minimization of administrative expenses representation of underserved communities on the board of trustees) will be set to ensure proper management of the fund and selection criteria for recipients of funds. Managed funds would be distributed by the third-party manager as grant(s) to households businesses community-based organizations or other appropriate recipient that demonstrate they (1) meet the definition of being part of an EJ population or community with environmental justice concerns (as defined under Executive Orders 12898 or 14096) or potential EJ areas identified by New York Department of Environmental Conservation or New Jersey's Environmental Justice Law (New Jersey Statutes Annotated 13:1D-157) definition of overburdened communities and (2) have been disproportionately and adversely impacted by OCS offshore wind activities. Any monetary distributions from the fund shall accomplish at least one of the following objectives: (1) improve household or community-level responses or ability to adjust to disproportionate and adverse impacts including lost wages or job loss; (2) protect or improve community-wide access to coastal recreation and greenspace areas or enjoyment of coastal viewsheds to offset any changes directly caused by OCS offshore wind activities; or (3) enhance community welfare to offset disproportionate and adverse impacts of OCS activities on community welfare. Eligible impacts must be a direct result of OCS offshore wind activities and not otherwise</p>	

Comment No.	Comment	Response
	<p>mitigated. The mitigation measure applies to BOEM-authorized and -permitted activities and associated support activities which could occur on the OCS or onshore. Category: D JACP Comment: More explanation is needed on how the 1% of revenue amount was selected. Using a price of \$130 per MWh and assuming 45% capacity factor this would come to approximately \$4.1 million in annual revenue for an 800 MW project or a total of over \$100 million over a 25-year life of a project which is not economically viable unless the States allow for an adjustment to PPAs to account for this loss of revenue. For those projects that do not yet have PPAs the mitigation costs would be factored into pricing and would thus be passed along to ratepayers including those in EJ communities. Furthermore BOEM indicated that this measure was needed to account for any unanticipated /unforeseen impacts which is inconsistent with NEPA. NEPA analysis and mitigation is for reasonably foreseeable impacts. The analysis presented lacks sufficient detail to assess a need for a mitigation measure of this type. In order for such a measure to be considered for adoption BOEM would need to demonstrate in the final PEIS what specific impacts to EJ communities would occur for offshore wind and how this level of funds would be needed to address those impacts. The final PEIS would need to answer what aspects of the project activities analyzed within the COP triggers the need for this significant level of mitigation? EJ impacts are primarily related to onshore impacts outside the jurisdiction of BOEM and as noted above are addressed through State and local requirements. Offshore cultural and fisheries impacts mentioned in this measure are mitigated through other AMMMs and environmental laws including compensatory mitigation. BOEM would need to demonstrate why mitigation measures for other resource areas are insufficient to mitigate for impacts to EJ communities. Community Benefits Agreements specific to the impacts on affected community and stakeholders are a better alternative for supporting EJ communities.</p>	
BOEM-2024-0001-0422-0019	<p>EJ-4 EJ compensatory mitigation Comment #17 on EJ-4: While Attentive Energy supports the intent of this AMMM the measure as written is difficult to justify and implement. The proposed funding amount while seemingly a small percentage is significant over the life</p>	<p>Refer to response to comment BOEM-2024-0001-0319-0004.</p>

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	<p>of the project and would degrade the project's economic viability especially for projects that have already secured offtake agreements. Both New York and New Jersey already require significant efforts toward environmental justice communities as part of their Offshore Renewable Energy Certificate ("OREC") processes and therefore this proposed AMMM is duplicative of other efforts and requirements. Attentive Energy encourages BOEM to coordinate closely with the states so as to ensure efforts to address environmental justice are efficient and not duplicative. Attentive Energy has significant questions regarding this AMMM:</p> <ul style="list-style-type: none"> <li>• The analysis used by BOEM to determine that "1% of revenue calculate per MWh" is appropriate and would not undermine any individual project's economic viability is not articulated and Attentive Energy requests that this analysis be added to the AMMM.</li> <li>• Can BOEM clearly articulate the statutory and regulatory grounds under which it justifies requiring such a contribution?</li> <li>• Who will conduct the "analysis of residual disproportionate and adverse impacts in the COP-specific NEPA review" and what criteria will guide this analysis?</li> <li>• What will be the process to establish the board of trustees? Will membership be capped at a certain number? Will developers be involved in selecting members?</li> </ul>	
BOEM-2024-0001-0423-0016	<p>[bold: EJ-4] directs lessees to financially contribute annually an amount up to 1% of revenue (not profit) for the life of the project to mitigate any disproportionate adverse impacts to environmental justice communities. Ocean Winds notes that many of the burdens EJ communities have had to bear come from siting fossil fuel electric generation facilities with their associated impacts to health in those communities. Given the likely positive impacts in air quality and the potential creation of jobs for communities from offshore wind projects as well as the lack of measurable indicators of adverse impact directly tied to the operation of such projects this open-ended requirement is an overreach and is significantly out of proportion to any impacts. Construction of the onshore project elements may have</p>	Refer to response to comment BOEM-2024-0001-0319-0004.

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	<p>temporary impacts to the surrounding communities (which may or may not be environmental justice communities) that should indeed be mitigated but those impacts would be expected to last no more than weeks for any given community while the benefits of offshore wind will accrue to environmental justice communities for decades. Offshore wind is an essential element in the transition away from the use of the fossil fuel-fired infrastructure that has burdened environmental justice communities for so many decades. Given this Ocean Winds rejects the notion that the offshore wind industry will inherently have a negative impact on environmental justice communities and strongly opposes inclusion of this condition in the PEIS. In fact higher electricity rates due to unnecessary measures like this negatively impact ratepayers including those in EJ communities. Lastly as noted above any such local impact can be addressed through state and local permitting. The application of a compensation fund is a last resort where no other AMMM can adequately reduce impacts. As such it is not an appropriate use of a PEIS.</p>	

**Table P.5.23-10. Responses to Substantive Comments on Mitigation and Monitoring—Recreation and Tourism (REC)**

Comment No.	Comment	Response
BOEM-2024-0001-0406-0021-d	REC-1 which would regulate the timing of onshore construction may not apply to all landfall locations and where it does apply would be a condition of state permitting.	REC-1 is now identified as RP in the PEIS. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on BOEM's review and revisions of AMMM measures and identification of RPs.
BOEM-2024-0001-0439-0091	<p>Measure ID: REC-1 Measure Name: Nearshore construction timing restriction Description: Lessees should prioritize scheduling of nearshore construction activities for outside the summer tourist season which is generally between Memorial Day and Labor Day. Previously Applied as a COP T&amp;C: Category: V D JACP Comment: The PEIS indicates that this measure is voluntary. Voluntary measures should not be included in AMMMs. Nearshore/onshore activities are subject to regulation/oversight by state and local authorities who are in the best position to provide guidance on what is best for the</p>	REC-1 is now identified as RP in the PEIS. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on BOEM's review and revisions of AMMM measures and identification of RPs.

Comment No.	Comment	Response
	relevant communities. Scheduling/activities should be coordinated with these authorities to determine conflicts with summer tourist season. In addition the terms nearshore should be defined as well as the specific construction activities that should occur outside of the summer tourist season. Many construction activities do not produce disruptive noise or interfere with tourist activities.	

**Table P.5.23-11. Responses to Substantive Comments on Mitigation and Monitoring—Multiple Resource Areas (MUL)**

Comment No.	Comment	Response
BOEM-2024-0001-0406-0020	iv. Measures That Lie Outside of BOEM's Jurisdiction Certain of the AMMM measures proposed in the Draft PEIS particularly those relating to onshore impacts are outside of BOEM's authority to implement. "Agencies should not commit to mitigation however unless they have sufficient legal authorities and expect there will be necessary resources available to perform or ensure the performance of the mitigation." CEQ Mitigation and Monitoring Guidance at 5 (Jan. 2011). Appendix G appears to propose adoption of numerous measures that can only be imposed and enforced by other agencies through federal state- and local-level permitting in contravention of CEQ guidance. Examples include: AQ-6 and AQ-7 under which BOEM would inappropriately regulate onshore air emissions. Authority to regulate air emissions rests with the EPA and with the states in the onshore environment for non-major sources. The fact that onshore components of an offshore wind project may generate minor amounts of emissions may be relevant to BOEM's COP NEPA analysis but does not give it authority to impose emissions limitations or control requirements on a project. While discussed above in Section IV(b)(i) Measures that are technically and commercially infeasible AQ 1-5 also appear to be under the jurisdiction of the EPA under its Clean Air Act OCS permit program. MUL-18 under which lessees "should coordinate transmission infrastructure among projects." Although it is listed as "voluntary" its adoption would overstep BOEM's jurisdiction by interfering with a process that is largely driven by state procurement decisions and other factors that are largely beyond a project developer's control including the timing of	<p>Thank you for your comment. Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have and have not been previously applied; BOEM believes these are all feasible. In addition, several AMMM measures were reclassified as RPs in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are also not part of the Proposed Action. AQ-1 through AQ-7 and MUL-18 are all now listed as RPs.</p> <p>Additional analyses will be conducted at the subsequent project-specific stage for each lease area. Although BOEM's authority under the OCSLA only extends to the activities on the OCS, alternatives related to addressing nearshore and onshore elements as well as offshore elements of the Proposed Action would be analyzed at the project-specific COP NEPA stage. BOEM's regulations (30 CFR 585.620) require that the COP describes all planned facilities that the lessee would construct and use for the project, including onshore and support facilities and all anticipated project easements. As a result, those federal, state, and local agencies with jurisdiction over nearshore and onshore impacts are able to adopt, at their discretion, those portions of BOEM's project-specific COP NEPA analysis that support their own permitting decisions.</p>

Comment No.	Comment	Response
	siting permitting and construction of the regional collector line. While we recognize that utilizing a shared transmission has the potential to minimize conflicts with various other ocean uses and increase overall efficiencies its adoption must be driven by state and commercial considerations and not minimization and mitigation requirements imposed in a NEPA review. [Footnote 7: This obligation is inappropriate as an AMMM measures for the additional reason that the siting of cables must be made pre-COP submittal so that developers can collect the geophysical and geotechnical data required in a COP per the NOI Checklist. Cable routing therefore cannot also be a condition of COP approval.]	
BOEM-2024-0001-0352-0007	We are concerned that several of the AMMM measures in Appendix G provide too much flexibility for lessees making their benefits uncertain and consultation more challenging. For example measure BEN-1 (boulder avoidance identification and relocation) states: "The plan must detail to the extent technically and/or economically practical or feasible for the project how the Lessee will relocate boulders as close as practicable to areas immediately adjacent to existing similar habitat." This seems to invite developers to argue that relocation of boulders to specific and more ecologically appropriate sites is overly costly or impractical. We are not directly involved in these negotiations; however our observation of the South Fork and Revolution Wind projects suggests there may have been pushback on adopting conservation measures recommended by fisheries organizations due to concerns about costs. Offshore wind construction vessel availability is at a premium resulting in pressure to complete work as quickly as possible. Similar language about technical and economic flexibility is included in COMFIS-2 (scour and cable protection) COMFIS-4 (in reference to cable burial depths) MUL-2 (anchoring plan) MUL-3 (berm survey and report) MUL-12 (ecological design elements) and MUL-18 (shared transmission corridor). The language in MUL-4 related to cable protection materials is much more definitive.	Thank you for your comment. Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have been included in previous BOEM COP approvals from AMMM measures that have not been included in previous COP approvals; BOEM believes these are all feasible. In addition, several AMMM measures that are RPs are now identified as such in the PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are also not part of the Proposed Action. AMMM measures are not based on flexibility but the extent to which they are safe and economically and technically feasible. Finally, project-specific NEPA analysis for individual COPs could apply revised, additional, or different AMMM measures as needed.
BOEM-2024-0001-0446-0005	[ <b><u>Bold Underline: Monitoring and Adaptive Management Requirements for AMMM Measures Should be Designed to Achieve Similar Objectives Regardless of Taxa and Across the Adjacent Lease Areas.</u></b> Ideally the PEIS will encourage shared and coordinated	Thank you for your comment. BOEM strives to take an adaptive approach to assessing impacts when the PDE is known and requiring mitigation measures. BOEM has revised MUL-26 to

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	<p>monitoring efforts across adjacent projects to improve not only cost-effectiveness but also to better support our understanding of cumulative impacts and species' use of the NY Bight in relation to the multiple projects sited within it. The stated purpose of the monitoring required in Appendix G is "to evaluate the effectiveness of AMMM measures or to identify if resources are responding as predicted to impacts from each NY Bight project." See Vol. II Appendix G at G-2. The information generated by monitoring may be used to "(1) alter how an AMMM measure identified in the ROD is being implemented (2) revise or develop new mitigation or monitoring measures for which compliance would be required under the COPs for the six NY Bight lease areas in accordance with 30 CFR 285.633(b)(2) (3) develop measures for future projects or (4) contribute to regional efforts for better understanding of the impacts and benefits resulting from offshore wind energy projects in the Atlantic (e.g. potential cumulative impact assessment tool)." Id. It is also important to structure the monitoring for the AMMM measures so that we can learn from earlier project designs and mitigation and make adjustments; either adding AMMM measures moving AMMM measures from voluntary to required and perhaps even moving AMMM measures from required to voluntary (if based on monitoring of early projects we find we have over-estimated risk and impacts). These are the right objectives for monitoring but in order for monitoring to be able to secure these outcomes standard monitoring protocols methods and requirements for adaptation should apply similarly across different taxa and across the adjacent lease areas.</p>	<p>encourage coordination for regional monitoring and surveys across lease areas in the NY Bight.</p>
BOEM-2024-0001-0181-0002	<p>The use of ecological concrete as a nature-based solution would support AMMM measure MUL-12 which "proposes the incorporation of ecological design elements where practicable" including "nature-inclusive design products such as environmental concrete oyster shells or other artificial reefs for cable and scour protection."</p>	<p>Thank you for your comment. MUL-12 is now identified as an RP and is more broad by design, as it does not exclude environmental concrete or oyster shells; this particular design element could be proposed at the project-specific stage. Project-specific NEPA analysis for individual COPs could apply revised, additional, or different AMMM measures as needed.</p>
BOEM-2024-0001-0439-0062	<p>Measure ID: MUL-12 Measure Name: Ecological design elements Description: Lessees are encouraged to incorporate ecological design elements into the project design where practicable. For example nature-inclusive design products are an alternative to traditional</p>	<p>Thank you for your comment. Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have and have not been previously applied; BOEM believes these</p>

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	concrete that enhance or encourage the growth of flora or fauna when placed in a marine environment and could result in reduced GHG emissions compared to traditional concrete. Another example is using nature-based scour protection such as oyster beds or artificial reefs. Previously Applied as a COP T&C: Category: V GACP Comment: The PEIS indicates that this measure is voluntary. Voluntary measures should not be included in AMMMs. As Alternative C assumes adoption of all AMMMs as terms and conditions of plan approval for the purposes of the PEIS analysis these AMMMs are not in fact voluntary. Adoption of voluntary AMMMs through terms and conditions undermines the very voluntary nature of those measures. In addition this measure constitutes new COP guidance. If BOEM wishes to establish new COP guidance it should go through the formal guidance development process.	are all feasible. In addition, several AMMM measures were reclassified as RPs in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are also not part of the Proposed Action. MUL-12 is identified as an RP in the PEIS.
BOEM-2024-0001-0352-0008-e	MUL-12: Ecological design elements We generally support this AMMM measure; however we are concerned that use of the phrase “where practicable” provides too much flexibility.	MUL-12 is an RP in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are not part of the Proposed Action.
BOEM-2024-0001-0439-0063	Measure ID: MUL-14 Measure Name: UXO avoidance Description: Lessees should develop and implement standard protocols for addressing unexploded ordnance (UXOs) including implementation of best available technology to avoid or minimize exposure of protected species and sensitive habitats. Where in situ disposal is demonstrated to be necessary for the project the Lessee should consult with state and federal agencies regarding seasonal restriction windows or other precautions. The Lessee must avoid to the maximum extent practicable interactions with UXO/Munitions and Explosives of Concern (MEC). If avoidance is not possible submitted plans should follow all guidance (see Munitions and Explosives of Concern Survey Methodology and In-Field Testing for Wind Energy Areas on the Atlantic Outer Continental Shelf (pnnl.gov) at: <a href="https://tethys.pnnl.gov/sites/default/files/publications/Carton-et-al-2017-BOEM.pdf">https://tethys.pnnl.gov/sites/default/files/publications/Carton-et-al-2017-BOEM.pdf</a> ; Supporting National Environmental Policy Act Documentation for Offshore Wind Energy Development Related to Munitions and Explosives of Concern and Unexploded Ordinances (MEC-UXO White Paper [boem.gov]) at:	MUL-14 has been updated and split into MUL-14a (previously applied AMMM measure) and MUL-14b (RP). MUL-14b encourages lessees to consult the U.S. Committee on the Marine Transportation System guidance, when finalized, if avoidance of munitions and explosives of concern is not feasible.

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	<p><a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/MEC-UXO%20White%20Paper.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/MEC-UXO%20White%20Paper.pdf</a>; and when finalized the US Committee on the Marine Transportation System general guidance addressing MEC at: <a href="https://www.cmts.gov/assets/uploads/documents/DOT-OST-2023-0117-0001_attachment_1.pdf">https://www.cmts.gov/assets/uploads/documents/DOT-OST-2023-0117-0001_attachment_1.pdf</a>; or any other applicable regulation regarding interaction with UXO/MEC. Previously Applied as a COP T&amp;C: Category: D GACP Comment: Lessees should be directed to guidance being provided by the US Committee on the Marine Transportation System (CMTS). ACP submitted comments on this guidance[Footnote 10: <a href="https://www.regulations.gov/comment/DOT-OST-2023-0117-0007">https://www.regulations.gov/comment/DOT-OST-2023-0117-0007</a> ] and BOEM should not be applying measures outside of this guidance process. The CMTS needs to finalize their guidance document. We also note there is no ongoing guidance on how to deal with UXOs in state waters.</p>	
BOEM-2024-0001-0439-0064	<p>Measure ID: MUL-15 Measure Name: Marine debris monitoring around WTG Description: Lessees must monitor and adaptively mitigate impacts associated with commercial charter and recreational gear lost from expected increases in fishing around WTG foundations by surveying at least 10 of the WTGs located closest to shore in the lease area annually. Surveys by remotely operated vehicles divers or other means will inform frequency and locations of marine debris. The results of the surveys will be reported to BOEM (<a href="mailto:renewable_reporting@boem.gov">renewable_reporting@boem.gov</a>) and BSEE (<a href="mailto:marinedebris@bsee.gov">marinedebris@bsee.gov</a>) in an annual report submitted by April 30 for the preceding calendar year in which the survey is performed. Photographic and videographic materials must be provided on a drive. Reports must include daily survey reports that include the survey date contact information of the operator location and pile identification number photographic and/or video documentation of the survey and debris encountered any animals sighted and the disposition of any located debris (i.e. removed or left in place). Required data and reports may be archived analyzed published and disseminated by BOEM. Previously Applied as a COP T&amp;C: Check Category: ACP Comment: These should not be separate "annual" surveys and should be combined with the schedules for other surveys of foundations. This would minimize impacts to the marine</p>	<p>Please refer to response to comment BOEM-2024-0001-0371-0050-c. Marine debris monitoring surveys can be conducted as a component of a broader survey campaign.</p>

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	environment and safety risks associated with more vessels on the water.	
BOEM-2024-0001-0352-0008-f	MUL-15: Marine debris monitoring around wind turbines We support this AMMM measure which would require lessees to monitor and adaptively mitigate impacts associated with fishing gear lost around turbine foundations. It is important however that this lost gear not be used as justification for later implementation of fisheries exclusion zones outside of the Council process.	Thank you for your comment. MUL-15 has been deleted and incorporated into MUL-1.
BOEM-2024-0001-0439-0067	Measure ID: MUL-18 Measure Name: Shared transmission corridor Description: Lessees should coordinate transmission infrastructure among projects. Where practicable transmission infrastructure should use shared intra- and interregional connections have requirements for meshed infrastructure apply parallel routing with existing and proposed linear infrastructure (including export cables and other existing infrastructure such as power and telecommunication cables pipelines) and limit the combined footprint to minimize impacts and maximize potential capacity. Where possible incorporate cable siting principles and routing measures for export cables and associated substations developed from the Atlantic Offshore Wind Transmission Study and the BOEM/DOE transmission planning effort the NYSEERDA's Offshore Wind Cable Corridor Constraints Assessment [Footnote 11: For a list of specific cable siting principles refer to Section 4.1 in the Onshore Wind Cable Corridor Constraints Assessment at: <a href="https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/O?shore-Wind/2306-O?shore-Wind-Cable-Corridor-Constraints-Assessment--completeacc.pdf">https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Programs/O?shore-Wind/2306-O?shore-Wind-Cable-Corridor-Constraints-Assessment--completeacc.pdf</a> .] associated NYS Public Service Commission orders and the results of other state and ISO/RTO transmission planning processes to maximize the utility of Points of Interconnection (POIs). Lessees considering landfall in New Jersey should also comply with the results of the state agreement approach (SAA) [Footnote 12: <a href="https://www.nj.gov/bpu/pdf/boardorders/2022/20221026/8A%20ORDER%20State%20Agreement%20Approach.pdf">https://www.nj.gov/bpu/pdf/boardorders/2022/20221026/8A%20ORDER%20State%20Agreement%20Approach.pdf</a> .] and any other future procurements resulting from similar initiatives. Previously Applied as a COP T&C: Category: T/E D V BACP Comment: Coordination of transmission infrastructure should be guided by the	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0371-0050-d

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	<p>soliciting state agencies. Placing this obligation on the lessee is overly burdensome and infeasible. There are technological and regulatory challenges that cannot be resolved by the lessees alone. The separation of transmission and generation by relocating the POI offshore is essential to enable coordination of transmission infrastructure. ISOs and RTOs should be coordinating with the states to issue solicitations seeking coordinated transmission solutions. In addition given the competitive nature of the industry for both OREC awards and POIs it is not feasible to coordinate infrastructure at the initial planning stages. Shared corridors are being developed by NYS for future projects and are not yet proposed. For current projects corridors were developed with proprietary information and OREC awards were made based on specific landfall locations and POIs. In addition BOEM recognizes that they cannot dictate that a lessee use a shared cable corridors and that developing such a corridor would likely not be technically or economically practicable. In the New England Wind FEIS BOEM fully explains why they did not consider a shared transmission corridor for detailed analysis: "BOEM cannot dictate that a lessee uses a shared cable corridor that does not already exist (30 CFR 585.200(b)). BOEM has no way of determining if the use of a future shared cable corridor would be a technically and economically practical and feasible alternative for the proposed Project. Therefore BOEM cannot require the applicant to use a non-existent shared cable corridor for the proposed Project. Furthermore the proposed Project's export cables would connect to the power grid via different points of interconnection than other offshore wind projects located near Rhode Island Connecticut and Massachusetts (e.g. South Coast Wind). Developing a shared export cable corridor would not likely be technically or economically practicable because each other offshore wind project has distinct interconnection points to the electric power grid." [Footnote 13: New England Wind Project Final Environmental Impact Statement DOI BOEM 2024]Finally the PEIS indicates that this measure is voluntary. Voluntary measures should not be included in AMMMs. As Alternative C assumes adoption of all AMMMs as terms and conditions of plan approval for the purposes of the PEIS analysis these AMMMs are not in fact</p>	

Comment No.	Comment	Response
	voluntary. Adoption of voluntary AMMMs through terms and conditions undermines the very voluntary nature of those measures.	
BOEM-2024-0001-0352-0008-g	MUL-18: Shared transmission corridor We strongly support this concept as it has the potential to meaningfully reduce negative impacts of offshore wind energy projects on the environment and on mobile bottom tending fisheries. However we are concerned that the phrasing used in Appendix G provides too much flexibility to be meaningful (e.g. "where practicable" and "where possible"). It is also noteworthy that this AMMM measure is described as voluntary and has not been previously approved as a COP term and condition. BOEM must play a leadership role in requiring shared transmission if this concept is to become a reality.	MUL-18 is an RP in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are not part of the Proposed Action.
BOEM-2024-0001-0439-0058	Measure ID: MUL-2 Measure Name: Anchoring plan Description: Lessees must submit an anchoring plan for all areas where anchoring is being used during construction operations and decommissioning to avoid or minimize impacts on sensitive habitats including hardbottom and structurally complex habitats. The plan will require that the Lessee consider any new data on benthic habitats and cultural resources to avoid/minimize impacts on these resources to the maximum extent practicable. The anchoring plan must include the planned location of anchoring activities sensitive habitats and locations seabed features potential hazards and any related facility installation activities such as cables WTGs and OSSs as appropriate. It will require all vessels deploying anchors to use whenever feasible and safe mid-line anchor buoys to reduce the amount of anchor chain or line that touches the seafloor. The Lessee must provide the anchoring plan to BOEM and BSEE to coordinate with NMFS for a 60-day review at least 120 days before anchoring activities and construction begins. The Lessee must resolve all comments on the anchoring plan to BOEM and BSEE's satisfaction before conducting any OCS seabed- disturbing activities that require anchoring. For operations and decommissioning the Lessee must provide proposed anchoring plats to BOEM and BSEE for review and concurrence before anchoring activities occur. The proposed anchoring plats must include avoidances identified above and as-placed anchor plats must be submitted to BOEM and BSEE within 90 days of completion of an	Thank you for your comment. The COP does not typically include specifics on where anchoring activities will occur relative to sensitive habitats identified through the EFH assessment and consultation. This level of detail is included in the anchoring plan to avoid or minimize impacts from turbidity and anchor placement on sensitive habitats, including hard-bottom and structurally complex habitats and as-placed anchoring plats. This level of detail is not only required during the construction phase, but also during maintenance conducted during the operational phase, and during decommissioning. The lessee can coordinate with BOEM and BSEE about the details and expectations for preparing a compliant anchoring plan.

Comment No.	Comment	Response
	activity (including during operations) or construction of a major facility component (e.g. buoys export cable installation WTG or OSS installation and interarray cable installation) or decommissioning to demonstrate that seabed-disturbing activities complied with avoidance requirements for seabed features and hazards archaeological resources and/or anomalies. As-placed plats must show the "as-placed" location of all anchors and any associated anchor chains and/or wire ropes and relevant locations of interest or avoidance on the seabed for all seabed-disturbing activities. The plats must be at a scale of 1 inch = 1000 feet (300 meters) with Differential GPS accuracy. Previously Applied as a COP T&C: Check Category: ACP Comment: Anchoring and potential impacts are a part of the seabed impact calculation that goes into the COP. Also "to BOEM and BSEE's satisfaction" is vague and does not define what is or is not acceptable. Further guidance is needed on what is acceptable and why it is not already covered under the seafloor impacts assessment in the COP. The section on operations is confusing and seems to include construction activities. What is needed for operations should be broken out separately.	
BOEM-2024-0001-0423-0025	MUL-21 would encourage the use of or upgrading/retrofitting to the best available technology including new and emerging technologies where practicable. Aside from voluntary measures not being appropriate for a PEIS this AMMM paints with too broad a brush as the cost of upgrading or retrofitting technology is not always supported by meaningful impact reduction. For example when considering the use of closed-loop cooling systems to reduce entrainment risks the Draft PEIS states under discharges/intakes that [italicized: "[b]ecause the potential for measurable impacts on marine mammal prey under Alternative B is anticipated to be small a change in impact levels is not anticipated."] Lastly it is unclear what this requirement adds to existing regulations at 30 CFR 585.621(e) which requires that the COP uses the best available and safest technology. Therefore this measure should be removed or at least revised to assess affordability and applicability of new technology.	Thank you for your comment. Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have and have not been previously applied; BOEM believes these are all feasible. In addition, several AMMM measures were reclassified as RPs in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are also not part of the Proposed Action. MUL-21 is an RP that encourages lessees to adopt new and emerging technologies.
BOEM-2024-0001-0439-0068	Measure ID: MUL-21 Measure Name: Use of new and emerging technology [Footnote 14: Appendix B Supplemental Information and Additional Figures and Tables Section B.9 describes examples of new	Please refer to response to comment BOEM-2024-0001-0423-0025.

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	<p>and emerging technologies that Lessees could research and consider for adoption as part of MUL-21. ]Description: Where practicable Lessees are encouraged to employ best available technology or other measures to avoid or minimize potential impacts in both offshore and nearshore environments including adopting new and emerging technologies. Examples include the use of jet plows closed loop cooling systems trenchless technology gravity-based structures or foundation designs that do not rely on pile-driving and MERLIN radar systems. In addition Lessees should explore opportunities to upgrade/retrofit equipment to the best available technology if it becomes available during project operations. Previously Applied as a COP T&amp;C: Category: V D GACP Comment: The PEIS indicates that this measure is voluntary. Voluntary measures should not be included in AMMMs. This measure is also completely duplicative of BOEM regulations at 30 CFR 585.621 (e) which requires that an applicant demonstrate that the COP uses the best available and safest technology. Best available and safest technology is defined in 30 CFR 585.113 as the "best available and safest technologies that BOEM determines to be economically feasible wherever failure of equipment would have a significant effect on safety health or the environment." This measure therefore duplicates the existing regulatory requirement without the regulatory safeguard of economic feasibility and without needing to demonstrate that failure of equipment would have a significant effect on safety health or the environment. In addition the evaluation of other alternative technologies to what is proposed in a COP can be done through the alternatives analysis in a COP specific NEPA document. This would go through the existing BOEM processes including alternative screening criteria to ensure alternatives analyzed are technically and economically feasible. Furthermore in the New England Wind FEIS a proposed alternative that would include "Project modifications as well as emerging technologies and methodologies" was not considered but not analyzed in detailed because BOEM determined that it was "vague speculative and does not address a specific significant impact or concern or provide sufficient detail to meaningfully analyze impacts." [Footnote 15: New England Wind Project Final Environmental Impact Statement DOI BOEM 2024] If a</p>	

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	very similar alternative was deemed too vague and speculative to meaningfully analyze impacts then this AMMM must also be removed from consideration as there is no way to meaningfully analyze how this mitigation measure will reduce impacts. For these reasons this measure is duplicative vague and highly inappropriate as a mitigation measure and should be removed. If BOEM would like to change the regulatory requirements around use of best available technology or provide clarification on those provisions they should go through the appropriate process for changing regulations or establishing new guidance. This process should include outreach to industry and public review and comment.	
BOEM-2024-0001-0450-0019	G. MUL-21 Use of New and Emerging Technology In order to evaluate all avian impacts from offshore wind farms integration of multiple technologies will be necessary for measuring four key variables: (1) direct collision rates (2) micro-avoidance behavior (3) meso-avoidance behavior and (4) macro-avoidance behavior. [Footnote 83: Skov H Heinnen S Norman T Ward R Mndez S. 2018. ORJIP Bird avoidance behaviour and collision impact monitoring at offshore wind farms. The Carbon Trust: London UK. 127 pp.] With all of these parameters it should be possible to comprehensively estimate (model) collision impacts to birds. An ideal single integrated monitoring system should have diverse components such as radar (horizontal and vertical) cameras (still video and/or thermographic) acoustic recording and detection of acoustically-signaled biologging or geo-tracking devices and collision detection. We strongly urge BOEM to require such integrated monitoring systems when and as the technology becomes sufficiently mature standardized and commercially available.	Please refer to response to comment BOEM-2024-0001-0423-0025. The list of examples in MUL-21 is not exhaustive; however, the language was updated to include information about integrated monitoring systems.
BOEM-2024-0001-0450-0085	Measure ID and Name: MUL-21 Use of New and Emerging Technology Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): Where practicable Lessees are encouraged to employ best available technology or other measures to avoid or minimize potential impacts in both offshore and nearshore environments including adopting new and emerging technologies. Examples include the use of jet plows closed loop cooling systems trenchless technology gravity-based structures or foundation designs that do not rely on	Please refer to response to comment BOEM-2024-0001-0423-0025. The list of examples in MUL-21 is not exhaustive; however, the language was updated to include information about integrated monitoring systems.

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	<p>piledriving and MERLIN radar systems. In addition Lessees should explore opportunities to upgrade/retrofit equipment to the best available technology if it becomes available during project operations.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>Integration of multiple technologies will be necessary to evaluate all avian impacts from offshore wind farms including measuring direct collision rates micro-avoidance behavior meso-avoidance behavior and macro-avoidance behavior.</li> <li>Comprehensive estimation of collision impacts to birds can be achieved by integrating diverse components into an ideal single integrated monitoring system such as radar (horizontal and vertical) cameras (still video and/or thermographic) acoustic recording and detection of acoustically-sigaled biologging or geo-tracking devices and collision detection. We strongly urge BOEM to require such integrated monitoring systems when the technology becomes sufficiently mature standardized and commercially available.</li> </ul>	
BOEM-2024-0001-0469-0017	<p>AMMM measure MUL-21 would encourage OSW developers to adopt and upgrade to new technologies when practicable. This measure is voluntary though it is characterized elsewhere in the Draft PEIS as a requirement. [Footnote 64: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 at 3.4.2-23.] BOEM presents this measure as a way to mitigate the negative environmental impacts of once-through cooling systems expected in offshore substations for OSW; however it is far from certain that closed-loop technology will become available in the foreseeable future. [Footnote 65: Id. at 3.4.2-23-24; see supra Part V.] At the very least adopting new less environmentally impactful technologies must be mandatory when practicable.</p>	<p>Please refer to response to comment BOEM-2024-0001-0423-0025. MUL-21 is an RP that encourages lessees to adopt new and emerging technologies, including potential new closed-loop technology as it becomes available.</p>
BOEM-2024-0001-0352-0008-h	<p>MUL-21: Use of new and emerging technologies We generally support this AMMM measure; however its description is overly broad which poses challenges for understanding what specific measures may be implemented by BOEM at this stage in the process.</p>	<p>MUL-21 was updated with new and emerging technologies proposed in comments received during scoping and on the Draft PEIS. MUL-21 is an RP in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are not part of the Proposed Action.</p>

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BOEM-2024-0001-0422-0008	<p>MUL-23 Adjust project design to reduce impacts. Comment #6 on MUL-23</p> <p>The breadth of this AMMM makes it almost impossible to interpret and implement successfully. As written this AMMM is unclear but appears to be unreasonably burdensome; and therefore Attentive Energy recommends that this AMMM should be deleted. If it is determined that this AMMM be retained for the Final PEIS some questions that may clarify this proposed AMMM include:</p> <ul style="list-style-type: none"> <li>• What is meant by "consider all potential WTG positions to allow flexibility in project design"?</li> <li>• What "marine mammal vessel strike models" should be considered?</li> </ul> <p>Overall as the purpose of the COP and EIS process is to identify and avoid minimize and mitigate potential impacts to important environmental and social resources making the identification of a specific AMMM to do the same is unnecessarily redundant.</p>	<p>Thank you for your comment. MUL-23 is an RP and the language was updated to highlight existing guidelines (Information Guidelines for a Renewable Energy Construction and Operations Plan Best Management Practices [Attachment A, <a href="https://www.boem.gov/sites/default/files/documents/about-boem/COP%20Guidelines_Technical_Corrections.pdf">https://www.boem.gov/sites/default/files/documents/about-boem/COP%20Guidelines_Technical_Corrections.pdf</a>]). Suggestions that were duplicative of those guidelines were removed, and remaining suggestions were left as additional considerations.</p>
BOEM-2024-0001-0439-0070	<p>Measure ID: MUL-23 Measure Name: Adjust project design to reduce Impacts Description: Lessees must consider how to avoid or reduce potential impacts on important environmental resources including sensitive habitats (e.g. Mid-Shelf Scarp NJDEP-designated prime fishing grounds hardbottom SAV ledges) by adjusting project design. Lessees must demonstrate this consideration through their initial COP submission or subsequent updated versions. At a minimum project design adjustment considerations must include: Utilizing shared cable crossing positions to reduce the overall seabed footprint and quantity of any additional cable protection materials; Using cable installation methods such as horizontal directional drilling that avoid and minimize adverse impacts on sensitive habitats and difficult-to-replace resources; Avoiding routing export cables through estuaries and embayments to reduce impacts on numerous sensitive habitats and difficult-to-replace resources as well as many sensitive life stages of various species; Ensuring all mooring systems and ancillary equipment are contained inside the approved lease area to reduce impacts on fishing navigation and other uses; Adjusting turbine layout or co-locating ancillary equipment to avoid sensitive habitats; Using outputs from marine</p>	<p>Please refer to response to comment BOEM-2024-0001-0422-0008. MUL-23 was updated to highlight existing guidelines (Information Guidelines for a Renewable Energy Construction and Operations Plan Best Management Practices [Attachment A, <a href="https://www.boem.gov/sites/default/files/documents/about-boem/COP%20Guidelines_Technical_Corrections.pdf">https://www.boem.gov/sites/default/files/documents/about-boem/COP%20Guidelines_Technical_Corrections.pdf</a>]), suggestions that were duplicative of those guidelines were removed, and remaining suggestions were left as additional considerations.</p>

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	<p>mammal vessel strike models to inform project design; Considering all potential WTG positions to allow for flexibility in project design due to identification of sensitive habitats or cultural properties through the environmental review process; and Using micro siting as a tool for identifying and avoiding sensitive habitats. Previously Applied as a COP T&amp;C: Category : G DACP Comment: The inclusion of this measures is counter to the proposed action which states that "BOEM would require as conditions of approval for activities proposed by lessees in COPs submitted for the NY Bight lease areas unless future COP-specific NEPA analysis shows that implementation of such measures is not warranted or effective." The PEIS intends to analyze measures that can be approved as terms and conditions of plan approval for individual project specific COPs. How would this be implemented through a term and condition of plan approval? How would this work with already established processes such as the "Process for Identifying Alternatives for Environmental Reviews of Offshore Wind Construction and Operations Plans pursuant to the National Environmental Policy Act?" Why is a new process being developed here and is it meant to circumvent the process for identifying alternatives which emphasize project feasibility and meeting the purpose and need? These measures are best addressed during project specific environmental reviews utilizing the process for identifying alternatives established by BOEM. Technical and economic viability could then be factored in. For example: Given the competitive nature of the industry for both OREC awards and POIs it is not feasible to coordinate infrastructure at the initial planning stages. Shared corridors are being developed by NYS for future projects and are not yet proposed. For current projects corridors were developed with proprietary information and OREC awards were made based on specific landfall locations and POIs. The need to Microsite for sensitive habitats and cultural properties should be deferred to individual project NEPA processes. For these reasons this measure is duplicative and highly inappropriate as a mitigation measure and should be removed.</p>	
BOEM-2024-0001-0423-0026	<p>[bold: MUL-23] and [bold: MUL-24] would formalize the assumption that lessees should adjust project design to reduce impacts even to the extent of removing turbine positions. Even more directly and</p>	<p>Thank you for your comment. Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that</p>

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	alarmingly the summary of this measure in Chapter 3 Table 3.6.1-20 reads only [italicized: "[t]his measure proposes that where practicable developers avoid or reduce potential impacts on important environmental resources by adjusting project design."] Other measures in these AMMMs offer concrete options to consider but it is not appropriate for a PEIS to include any requirement that would remove turbine positions without a clear justification based on a project-specific proposal. Project design is evaluated during the review process and approved at ROD. These AMMMs (amongst many others) are not enforceable terms and conditions of a COP.	have and have not been previously applied; BOEM believes these are all feasible. In addition, several AMMM measures were reclassified as RPs in the Final PEIS. MUL-23 has been classified as an RP in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are also not part of the Proposed Action. MUL-24 has been deleted because it is covered in other AMMM measures and through consultations.
BOEM-2024-0001-0347-0004-b	MUL-23: While ASGA wholly prefers avoiding complex and sensitive habitats earlier in the lease identification processes we maintain our support for utilizing this AMMM's strategies to further minimize and avoid impacts in offshore and inshore ecosystems.	Thank you for your comment.
BOEM-2024-0001-0352-0008-i	MUL-23: Adjust project design to reduce impacts We support this AMMM measure; however it is unclear how it could be effectively implemented at this stage rather than during the review of project-specific construction and operations plans. We are also concerned that this AMMM measure will have limited effectiveness given that it requires consideration of how to reduce impacts but does not appear to require any specific actions.	Thank you for your comment. MUL-23 has been classified as an RP in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are not part of the Proposed Action.
BOEM-2024-0001-0406-0018-b	MUL-23 which would require lessees to "consider how to avoid or reduce potential impacts on important environmental resources including sensitive habitats [...] by adjusting project design." It is unclear how a lessee could ever know when they have engaged in enough impact avoidance or reduction to comply with this obligation how agencies would exercise their enforcement discretion or how this is an appropriate condition of COP approval when compliance must be demonstrated "through [the] initial COP submission or subsequent updated versions."	Thank you for your comment. MUL-23 has been classified as an RP in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are not part of the Proposed Action.
BOEM-2024-0001-0422-0009	MUL-24 Adaptive management for NMFS Trust Resources Comment #7 on MUL-24The breadth and lack of clarity of this AMMM make it nearly impossible for developers to implement; and therefore Attentive Energy recommends that this AMMM should be deleted. The purpose of the offshore wind permitting process is to identify avoid minimize and mitigate environmental risks from the leasing process through the EIS to the COP approval. Given this extensive	Thank you for your comment. After further consideration, MUL-24 has been deleted because it is covered in other AMMM measures and through consultations.

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	<p>review process which takes into account decades of global offshore wind development experience environmental risks are identified planned for and mitigated. Currently per existing COP approvals there are post-construction monitoring plans already required for each project and these plans have been developed to address the likely future impacts and as such are sufficient without an additional adaptive management plan that would hypothesize future impacts. Hypothesizing now "unanticipated issues" is a premature exercise and unnecessary conjecture given the extensive pre- and post-construction review and monitoring required. It is not appropriate for each offshore wind project to "define thresholds above which environmental impacts would be deemed unacceptable" as this is inherently a government responsibility. If BOEM believes there are unacceptable impacts associated with a project it should define and manage those through the EIS and COP approval and not ask a developer to do so. Further Attentive Energy finds that it would be challenging to define environmental thresholds now for "unanticipated issues" without having those issues in some way defined and anticipated. BOEM already requires adherence to time of year restrictions and it is unclear why this requirement needs to be restated in this AMMM. Consideration of a "no-build migratory routing measure" is best done across projects and therefore by the government it should not be the responsibility of each project. BOEM should provide a statutory or regulatory reference to support the use of the term "precautionary principle" in this AMMM. If no such reference exists then the term should be deleted. Finally it is unclear how BOEM would approve any adaptive management plan and what would be BOEM's timeframe for review/approval. The use of the wording "must develop" and "be finalized prior to construction activities being initiated" is unspecific and represents a potential delay risk to project schedule with associated unknown future costs.</p>	
BOEM-2024-0001-0423-0008	<p>[bold: MUL-24] would require lessees to develop an adaptive management plan to resolve unanticipated issues and integrate new information (seemingly ahead of construction start). It states that the plan should include the consideration of no-build migratory routing measures for protected species including the North Atlantic</p>	<p>Thank you for your comment. After further consideration, MUL-24 has been deleted because it is covered in other AMMM measures and through consultations.</p>

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	<p>right whale (NARW) (i.e. removing turbines) and implementing the "precautionary principle for sensitive habitats" including setbacks from spawning areas fishery rotational and access management areas and other critical habitat. It is imperative that lessees have certainty at the ROD stage. Creating such certainty is a key purpose for a NEPA ROD and it is used to support the financing needed to construct the project. MUL-24 takes away needed certainty by leaving open the possibility that the project design could be significantly altered after the conclusion of the NEPA process. The certainty that flows from ROD issuance provides assurance not just to the lessee but also to the financial institutions like banks who must commit billions of dollars to these clean energy projects prior to construction. Removing legally required certainty by contemplating plans that would cause a material change to the design and energy production of the project after ROD is issued is tantamount to cutting off the flow of funds to climate-protecting projects at a critical juncture. Further this provision of the Draft PEIS inappropriately invokes the Endangered Species Act (ESA) and Marine Mammal Protection Act in a manner contrary to the Appeals Court decision in [italized: Maine Lobstermen's Association v. National Marine Fisheries Service (MLA v. NMFS) No. 22-5238 (D.C. Cir. 2023)] by invoking the prospect of action premised on the "precautionary principle." The D.C. Circuit decision in [italized: MLA v. NMFS] made it plain that the agency must meet the statutory standard of making decisions based on proven and tested science not on speculative hypotheses that are characterized as "applying the precautionary principle." Moreover this provision contemplates including elements in an "adaptive management plan" that can and should not be included such a plan as doing so would be to twist the meanings of the words "adaptive management" substantially. Suggested mitigations contemplated in this section such as the prospect of removal of turbines are about project design. Putting them into an "adaptive management" plan would be inappropriate as adaptive management should be implemented by observing real conditions and actively adapting the management of the facility. A re-review of mitigations at the end of the regulatory process as contemplated by the Draft PEIS is inappropriate. An appropriate</p>	

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	adaptive management plan would be a framework not a prescriptive set of measures. The goal of such a plan must be (as the name suggests) to have a plan in place to potentially modify the management and operation of the facility to adapt to newly observed conditions. Matters like setbacks and placement (including the addition or removal) of wind turbines are not appropriate subject matter for an adaptive management plan but instead are elements of the project design and environmental review that plays out through documents that include: the COP the DEIS the FEIS the Fabrication and Installation Report and the Facility Design Report.	
BOEM-2024-0001-0439-0071	Measure ID: MUL-24 Measure Name: Adaptive management for NMFS Trust Resources Description: Lessees must develop an adaptive management plan to resolve unanticipated issues and integrate new information. The adaptive management plan must be finalized prior to initiating construction activities. This plan should include the following: Defining thresholds above which environmental impacts would be deemed unacceptable and how adaptive management will be implemented for review and approval by BOEM and BSEE; Adhering to all relevant Time of Year Restrictions (TOYRs) for protected species present in the area and minimizing impacts if work must occur within TOYRs; Considering no-build migratory routing measures for protected species already under threat including for the NARW; and Implementing the precautionary principle for sensitive habitats including setbacks from important spawning areas fishery rotational and access management areas and other critical habitat. Previously Applied as a COP T&C: Category: DACP Comment: This provision contemplates including elements in an "adaptive management plan" that cannot and should not be included in such a plan. Suggested changes in projects contemplated in this section (like the prospect of removal of turbines) are about project design and putting them into an "adaptive management" plan would be inappropriate. Adaptive management should be about observing real conditions and actively adapting the management of the facility it cannot be a re-review at the end of the regulatory process which the PEIS seems to contemplate. An appropriate Adaptive Management Plan would be a framework not a prescriptive set of measures. The goal of such a plan must be as the name	Thank you for your comment. After further consideration, MUL-24 has been deleted because it is covered in other AMMM measures and through consultations.

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	<p>suggests to have a plan in place to potentially modify the management and operation of the facility to adapt to newly observed conditions. Matters like setbacks placement (including the addition or removal) of wind turbines are not appropriate for an Adaptive Management Plan but instead are elements of the project design and extensive project and environmental review processes. BOEM's planning and leasing process identifies areas most suitable for offshore wind development. Wholesale removal of areas at the COP stage based off proximity to sensitive habitats is not appropriate or justified. ACP is also concerned about proposing setbacks from sensitive habitat whose identification can be very subjective. A prime example is the Cod Spawning HAPC which has been proposed without concrete evidence or data and is highly speculative. For more details on the subjective nature of this HAPC see ACPs comments on the draft cod spawning HAPC.<sup>16</sup> In addition rotational areas are adaptive by design inappropriate for creating removals or buffers from areas that are not fixed. We strongly believe that the precautionary principle should not be used for the development of mitigation measures. All mitigation should be developed based upon best available information. Furthermore the DC Circuit Court of Appeals has ruled that the use of the precautionary principle is illegal in the case of the Maine Lobsterman's Association v. National Marine Fisheries Service. The opinion states that "Here the Service misconceived the law wrongly claiming the legislative history of the ESA had ordained if legislative history could ever ordain a precautionary principle in favor of the species. The Service therefore gets no deference<sup>a</sup> and its action cannot stand." [Footnote 17: MLA v NMFS 70 F.4th 582 p. 25 (D.C. Cir. 2023)] Furthermore the court clarifies that "...when the Congress wants an agency to apply a precautionary principle it says so." [Footnote 18: MLA v NMFS 70 F.4th 582 p. 28 (D.C. Cir. 2023)] Congress has not specified that BOEM BSEE or NMFS may apply a precautionary principle and therefore the use of such a principle is not only inappropriate but in violation of the law. BOEM should remove the reference to the precautionary principle from this measure and should ensure that mitigation measures are not written in the spirit of the precautionary principle. Mitigation measures should only be developed when there</p>	

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	is clear evidence of an impact and the measure would reduce the effects of that impact in a measurable manner.	
BOEM-2024-0001-0450-0070	<p>Measure ID and Name: MUL-24: Adaptive management for NMFS Trust Resources Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): "Lessees must develop an adaptive management plan to resolve unanticipated issues and integrate new information. The adaptive management plan must be finalized prior to initiating construction activities [Underline: and must address adaptive management during the construction phase and the operations phase of offshore wind development]. This plan should include the following:</p> <ul style="list-style-type: none"> <li>• [Strikethrough: Defining] [Underline: T]hresholds [Underline: as defined by NMFS and BOEM] above which environmental impacts would be deemed unacceptable;</li> <li>• [Underline: H]ow adaptive management will be implemented [Underline: by the lessee] for review and approval by BOEM and BSEE;</li> <li>• Adhering to all relevant Time of Year Restrictions (TOYRs) for protected species present in the area and minimizing impacts if work must occur within TOYRs;</li> <li>• Considering no-build migratory routing measures for protected species already under threat including for the NARW; and</li> <li>• Implementing the precautionary principle for sensitive habitats including setbacks from important spawning areas fishery rotational and access management areas and other critical habitat.[Underline: BOEM will periodically analyze post-installation monitoring data and convene expert workshops for further review."]</li> </ul> <p>Notes: We support BOEM's requirement that lessees apply adaptive management to offshore wind planning and construction. We recommend that BOEM clarify in MUL-24 that adaptive management planning must apply to the operations stage of offshore wind development in addition to the construction stage. We also recommend that BOEM clarify that "defining thresholds above which environmental impacts would be deemed unacceptable" is the role</p>	<p>Thank you for your comment. After further consideration, MUL-24 has been deleted because it is covered in other AMMM measures and through consultations.</p>

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	of regulatory agencies (i.e. NMFS and BOEM) and not the role of the developer. Additionally we recommend that BOEM commit to periodic independent analysis of the data produced through post-installation monitoring and to holding one or more expert workshops for additional review and reflection.	
BOEM-2024-0001-0406-0018-c	MUL-24 which would require the submittal of an "adaptive management plan" to be finalized after COP approval and which includes implementation of "the precautionary principle for sensitive habitats." At minimum this obligation would contravene the D.C. Circuit's ruling in <i>Maine Lobstermen's Association v. NMFS</i> that the Endangered Species Act does not codify the precautionary principle in favor of the species. 70 F.4th 582 597-98 (D.C. Cir. 2023). [Footnote 6: We also note that the proposed "no build" requirement for the North Atlantic right whale's migratory routes would potentially prevent any wind farm construction in the NY Bight as the entire coast is used for NARW migration.]	Thank you for your comment. After further consideration, MUL-24 has been removed.
BOEM-2024-0001-0422-0011	MUL-26 Monitoring Plan Comment #9 on MUL-26 This AMMM's lack of clarity makes it difficult and potentially unreasonable to implement. It is unclear what is meant by "This monitoring plan should cover resources that are not covered by other resource-specific monitoring plans". Attentive Energy asks BOEM to provide a comprehensive list of all other resources that are not covered under existing monitoring plans and would need to be addressed through this AMMM. If other resources should be covered under a monitoring plan Attentive Energy recommends that BOEM should specify those resources and require a plan. It is not appropriate to ask each project to hypothesize what resources are not but should be covered under a monitoring plan. This measure is overly broad and should be removed as an AMMM as it is believed all important resources are already covered by specific monitoring plans.	Thank you for your comment. Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have and have not been previously applied; BOEM believes these are all feasible. In addition, several AMMM measures were reclassified as RPs in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are also not part of the Proposed Action. MUL-26 was updated to reflect that this RP does not require an additional plan or additional monitoring. Instead, this RP encourages lessees to coordinate their monitoring plans if applicable; follow guidance from ROSA, RWSC, and NMFS/BOEM; and make results publicly available.
BOEM-2024-0001-0423-0009	[bold: MUL-26] would require a monitoring plan to cover all potentially impacted [italicized: "resources that are not covered by other resource-specific monitoring plans."] This is an extremely broad directive that is not supported by data. It is impractical to require lessees to monitor every resource that could possibly be indirectly impacted by offshore wind. Requirements for monitoring plans	Thank you for your comment. Please see response to comment BOEM-2024-0001-0422-0011, which indicates that this RP does not require an additional plan or additional monitoring.

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	should be specific and focused on issues and/or target species determined to be potentially most impacted by the project after BOEM's project-specific NEPA review.	
BOEM-2024-0001-0446-0006	<p>Separate and individualized monitoring plans for projects that are all located in the same vicinity misses the opportunity to detect and mitigate change and impacts and deliver benefits to the resources that are moving across the lease areas. Designing a single monitoring project of a specific resource that interacts with offshore wind projects across all six lease areas may provide the best view into whether there are species or habitat-specific cumulative impacts to mitigate and coordinated biodiversity net-positive projects that could increase benefits. AMMM measure MUL- 26 encourages "coordination of monitoring efforts across lease areas in the NY Bight to maximize efficiencies in monitoring efforts especially at a regional scale." See MUL-26 at G-22. But the goal of coordinating monitoring efforts should not only be to "maximize efficiencies." Coordination of monitoring and standardization of approaches across the six lease areas is fundamental to our ability to actually detect change and adaptively manage across an ecosystem. Indeed this is the point of a six-lease area PEIS focused on identifying and coordinating AMMM measures. For this reason the inclusion of MUL-26 as a "highly encouraged" AMMM measure is not alone enough to support identification and adaptation of effective ecosystem-wide AMMM measures.</p>	<p>Thank you for your comment. Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have and have not been previously applied; BOEM believes these are all feasible. In addition, several AMMM measures were reclassified as RPs in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are also not part of the Proposed Action. MUL-26 was updated to reflect that this RP does not require an additional plan or additional monitoring. Instead, this RP encourages lessees to coordinate their monitoring plans if applicable; follow guidance from ROSA, RWSC, and NMFS/BOEM; and make results publicly available.</p>
BOEM-2024-0001-0406-0024	<p>vii. Measures That are Duplicative and/or Internally Inconsistent</p> <p>Several of BOEM's proposed AMMM measures have the additional flaw of being duplicative of or inconsistent with other measures proposed both within the Draft PEIS and other expected agency approvals a project will receive. This duplication and inconsistency is problematic for three primary reasons. First compliance with multiple measures that have the same substantive purpose wastes developer and agency resources. Second duplicative and inconsistent measures create considerable project and legal risk by imposing potentially divergent standards and requirements. Third duplicative and inconsistent measures create challenges for developers in demonstrating compliance. Some examples of the duplicative or inconsistent measures included in the Draft PEIS include: MUL-26</p>	<p>Thank you for your comment. We have reconciled duplicative measures. MUL-36 and MUL-38 were deleted. MMST-13 was removed and incorporated into MMST-14 and MM-5. MUL-26 was updated to clarify that a new plan is not required.</p>

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	requiring an "environmental monitoring plan" that is overly vague and duplicative of numerous preexisting environmental monitoring requirements (e.g. BB-3 COMFIS-3) MUL-36 requiring visual vessel strike monitoring that is both duplicative of and potentially inconsistent with MM-5 (NARW strike management plan) MMST-13 (vessel speed requirements) and MMST-14 (vessel strike mitigation measures); MUL-38 requiring a noise mitigation plan that is duplicative of many marine mammal and sea turtle measures (e.g. MMST-4 MUL-5 MUL-6 MUL-7). To avoid these unnecessary risks BOEM must eliminate duplication and inconsistency in the final list of potential AMMM measures in the PEIS.	
BOEM-2024-0001-0347-0004-c	MUL-26: Monitoring plans are foundational to effective OSW development and must be scientifically sound to accurately assess and analyze impacts. ASGA agrees with BOEM that monitoring plans should be coordinated across other NY Bight leases and the results should be made public. However we recommend that monitoring plans also be coordinated to other leases outside of the NY Bight to encourage more standardized plans and data collection activities. Additionally where possible monitoring plans should utilize fishermen to assist in the completion of this work and address key concerns raised by fishing communities.	Thank you for your comment. The RP has been updated to encourage lessees to develop monitoring and survey plans that meet regional data requirements and standards.
BOEM-2024-0001-0439-0074	Measure ID: MUL-27 Measure Name: Minimize sediment disturbance Description: Lessees must employ methods to minimize sediment disturbance including but not limited to the use of midline buoys to prevent cable sweep not side-casting materials and removal and reuse of dredged material for backfill or other beneficial use. Previously Applied as a COP T&C: Category: T/EACP Comment: This measure needs to be qualified with the following language: if technically and economically viable.	Thank you for your comment. MUL-27 is an RP and has been updated with caveat language.
BOEM-2024-0001-0439-0077	Measure ID: MUL-32 Measure Name: Daily weekly and final PSO reporting requirements (including foundation pile- driving) Description: PSOs must be previously approved by NMFS to conduct mitigation and monitoring duties for pile-driving activity. An adequate number of PSOs must be used to effectively monitor the area of the clearance and shutdown zones. Data fields must be reported in an electronic CSV format as daily reports during shutdowns and weekly reports during pile-driving and construction.	Thank you for your comment. BOEM will work with the lessees to remove Confidential Business Information prior to disseminating/publishing the raw weekly data.

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	<p>Data categories must include Project Operations Monitoring Effort and Detection. Data must be generated through software applications or otherwise recorded electronically by PSOs. Applications developed to record PSO data are encouraged as long as the data fields listed below can be recorded and exported to Excel. Alternatively BOEM has developed an Excel spreadsheet with all the necessary data fields that is available upon request from BOEM. The third-party PSO providers must submit the daily (if applicable) and weekly monitoring reports to BOEM (renewable_reporting@boem.gov) NMFS (incidental.take@noaa.gov) and BSEE (submittals via TIMSWeb and notification email to protectedspecies@bsee.gov) every Wednesday during construction for the previous week (Sunday through Saturday) of monitoring of pile-driving activity. Daily PSO forms including electronic effort survey and sightings forms must be submitted to BOEM (renewable_reporting@boem.gov) monthly on the 15th day of each month for the previous calendar month of activities. Required data and reports may be archived analyzed published and disseminated by BOEM. The following should be included in PSO reports: Detection Information for Protected Species: Date (YYYY-MM-DD)Sighting ID (V01 V02 or sequential sighting number for that day) (multiple sightings of same animal or group should use the same ID)Date and time at first detection in UTC (YY-MM-DDT HH:MM) Time at last detection in UTC (YY-MM-DDT HH:MM)PSO name(s) (Last First)Effort (On = source on; Off = source off)Latitude (decimal degrees dd.ddddd) Longitude (decimal degrees dd.ddddd) Compass heading of vessel (degrees)Water depth (meters) Swell height (meters) Beaufort scale Precipitation Visibility (km) Cloud coverage (%) Glare Sightings including common name scientific name or family Certainty of identification Number of adults Number of juveniles Total number of animals Bearing to animal(s) when first detected (ship heading + clock face) Range from vessel (reticle distance in meters)Description (include features such as overall size; shape of head; color and pattern; size shape and position of dorsal fin; height direction and shape of blow)Detection narrative (note behavior especially changes in relation to survey activity and distance from source vessel)Direction of travel/first</p>	

Comment No.	Comment	Response
	<p>approach (relative to vessel)Behaviors observed: Indicate behaviors and behavioral changes observed in sequential order (use behavioral codes)If any bow-riding behavior observed record total duration during detection (HH:MM) Initial heading of animal(s) (degrees)Final heading of animal(s) (degrees) Source activity at initial detection Source activity at final detection (on or off)Shutdown zone size during detection (meters)Was the animal inside the shutdown zone? Closest distance to vessel (reticle distance in meters) Time at closest approach (UTC HH:MM)Time animal entered shutdown zone (UTC HH:MM) Time animal left shutdown zone (UTC HH:MM)If observed/detected during ramp up / power up: First distance (reticle distance in meters) Closest distance (reticle distance in meters) Last distance (reticle distance in meters) Behavior at final detection Shutdown or power-down occurrences Detections with PAM Monitoring Effort Information for Pile-Driving: Date Effort (On = source on; Off = source off)If visual how many PSOs on watch at one time? PSOs (Last First)Start time of observations End time of observations Duration of visual observation Wind speed (knots) from direction Beaufort scale Swell (meters)Water depth (meters) Visibility (km)Glare severity Block name and number Location: latitude and longitude. The daily report during shutdown (if applicable) must include the date time species pile identification number GPS coordinates time and distance of the animal when sighted time the shutdown or power-down occurred behavior of the animal direction of travel time the animal left the shutdown zone time the pile- driver was restarted or powered back up any photographs that may have been taken number of animals closest approach of animal to pile-driving distance of animal to pile-driving when shutdown was initially requested and total time animal spent in the shutdown zone. Weekly reports can consist of raw data. Required data and reports provided to BOEM and BSEE may be archived analyzed published and disseminated by BOEM. PSO data must be reported weekly every Wednesday during construction for the previous week (Sunday through Saturday) from the start of visual and/or PAM efforts during pile-driving activities and every week thereafter until the final reporting period upon conclusion of pile-driving activity. Any editing review and quality assurance checks</p>	

Comment No.	Comment	Response
	<p>must be completed only by the PSO provider prior to submission to NMFS BOEM and BSEE. The Lessee must submit to BOEM and BSEE at renewable_reporting@boem.gov for BOEM and via TIMSWeb and notification email to protectedspecies@bsee.gov for BSEE a final summary report of PSO monitoring 90 days following the completion of pile-driving. The following required data fields for the final PSO report should include: Project Information: Project name Lease number State coastal zones PSO contractor(s) Vessel name(s) Reporting date(s) Visual monitoring equipment used (e.g. bionics magnification IR cameras etc.) Distance finding method used PSO names (last first) and training Observation height above sea surface Operations Information: Date (YYYY-MM-DD) Hammer type used (make and model) Greatest hammer power used for each pile Pile identifier and pile number for the day (e.g. pile 2 of 3 for the day) Pile diameters Pile length Pile locations (latitude and longitude) Monitoring Effort Information: Date (YYYY-MM-DD) Noise source (On = hammer on; Off = hammer off) PSO name(s) (Last First) If visual how many PSOs on watch at one time? Time pre-clearance visual monitoring began in UTC (HH:MM) Time pre-clearance monitoring ended in UTC (HH:MM) Time pre-clearance PAM monitoring began in UTC (HH:MM) Time PAM monitoring ended in UTC (HH:MM) Duration of pre-clearance visual and PAM monitoring Time power up/ramp up began. Time equipment full power was reached Duration of power up/ramp up. Time pile-driving began (hammer on) Time pile-driving activity ended (hammer off) Duration of activity. Duration of visual observation Wind speed (knots) from direction Swell height (meters) Water depth (meters) Visibility (km) Glare severity. Latitude (decimal degrees) longitude (decimal degrees) Compass heading of vessel (degrees) Beaufort scale Precipitation Cloud coverage (%) Did a shutdown/power-down occur? Time shutdown was called for (UTC) Time equipment was shut down (UTC) Record any habitat or prey observations Record any marine debris sighted. Detection Information: Date (YYYY-MM-DD) Sighting ID (V01 V02 or sequential sighting number for that day) (multiple sightings of same animal or group uses the same ID) Date and time at first detection in UTC (YY-MM-DDT HH:MM) Time at last detection in UTC (YY-MM-DDT HH:MM) PSO name(s) (Last First) Effort (On = hammer</p>	

Comment No.	Comment	Response
	<p>on; Off = hammer off)If visual how many PSOs on watch at one time?</p> <p>Start time of observations. End time of observations Duration of visual observation. Wind speed (knots) from direction Swell height (meters)Water depth (meters) Visibility (km)Glare severity. Latitude (decimal degrees) longitude (decimal degrees) Compass heading of vessel (degrees)Beaufort scale Precipitation Cloud coverage (%)Sightings including common name scientific name or family. Certainty of identification. Number of adults Number of juveniles Total number of animals. Bearing to animal(s) when first detected (ship heading + clock face) Range from vessel (reticle distance in meters)Description (include features such as overall size; shape of head; color and pattern; size shape and position of dorsal fin; height direction and shape of blow etc.)Detection narrative (note behavior especially changes in relation to survey activity and distance from source vessel)Direction of travel/first approach (relative to vessel)Behaviors observed: indicate behaviors and behavioral changes observed in sequential order (use behavioral codes)If any bow-riding behavior observed record total duration during detection (HH:MM) Initial heading of animal(s) (degrees) Final heading of animal(s) (degrees)Shutdown zone size during detection (meters) Was the animal inside the shutdown zone? Closest point of approach to pile-driving operation (reticle distance in meters) Time at closest approach (UTC HH:MM)Time animal entered shut-down zone (UTC HH:MM) Time animal left shut-down zone (UTC HH:MM)If observed/detected during ramp up/power up: first distance (reticle distance in meters) closest distance (reticle distance in meters) last distance (reticle distance in meters) behavior at final detection. Did a shutdown/power-down occur? Time shutdown was called for (UTC) Time equipment was shut down (UTC)Reason shutdown was not implemented Previously Applied as a COP T&amp;C: Check Category: ACP</p> <p>Comment: "Required data and reports provided to BOEM and BSEE may be archived analyzed published and disseminated by BOEM."</p> <p>Agencies must work with the lessees to remove Confidential Business Information prior to disseminating/publishing the raw weekly data. This was committed to in the past.</p>	

Comment No.	Comment	Response
BOEM-2024-0001-0347-0004-d	MUL-35: Monthly/annual reporting requirements We support this AMMM measure and request that the associated reports be made available to the public.	Thank you for your comment. MUL-35 was deleted and incorporated into MUL-32. BOEM may consider making the associated reports available to the public.
BOEM-2024-0001-0423-0010	[bold: MUL-36] would require trained protected species observers or alternative monitoring on [italicized: all vessels while operating within US Exclusive Economic Zone.] This measure includes vessels traveling from Europe or other regions. At the very least this measure would cause direct project delays and add to the complexity and cost of construction and burdening of electricity customers. Further no other maritime industry is being tasked with this condition. Burdening offshore wind with considerable additional obligations without demonstrating any impact reductions that would come from offshore wind alone being subject to this requirement would be unjustified. More moderate steps like certifying crew members as Strike Avoidance Observers should be studied and potentially applied to other maritime industries.	Thank you for your comment. Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have and have not been previously applied; BOEM believes these are all feasible. MUL-36 has been deleted and incorporated into MMST-14, which only applies to construction, operation, and decommissioning.
BOEM-2024-0001-0423-0027	[bold: MUL-36] would require trained protected species observers or alternative monitoring on [italicize: all vessels while operating within US Exclusive Economic Zone.] This includes vessels traveling from Europe or other regions. At the very least this measure would cause project delays and add to the complexity and cost of construction. No other industry is being tasked with this condition and it burdens offshore wind with considerable additional costs without demonstrating any impact reductions that would come from the offshore wind industry (which represents a small percent of OCS vessel traffic) exclusively being subject to this requirement. More moderate steps like certifying crew members as Strike Avoidance Observers should also be studied and potentially could be applied to all industries.	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0423-0010 regarding MUL-36.
BOEM-2024-0001-0439-0078	Measure ID: MUL-36 Measure Name: Visual vessel strike monitoring Description: Lessees must require visual vessel strike monitoring of protected species for all vessels while operating within US EEZ waters. This includes vessels traveling from Europe or other regions in which visual monitoring is conducted for vessel strike avoidance when the vessel is within the US EEZ boundary. This can include the use of trained observers onboard the vessel or alternative monitoring such as IR camera systems with the possibility of remote	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0423-0010 regarding MUL-36.

Comment No.	Comment	Response
	monitoring for systems with established and documented efficacy. Previously Applied as a COP T&C: Category: BACP Comment: This measure applies a requirement on the offshore wind industry that doesn't apply to any other marine industry. Offshore wind vessels represent only 2% of ship traffic on the OCS. The other 98% of vessels will not be required to have visual vessel strike monitoring when operating in the US EEZ. Therefore this measure would have a negligible benefit if any to marine mammals and would not result in a discernable lower risk of vessel strikes. However this measure would result in a significant burden to the offshore wind industry and would result in increased costs and an increase in human safety risk.	
BOEM-2024-0001-0450-0072	Measure ID and Name: MUL-36: Visual vessel strike monitoring Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): "Lessees must require visual vessel strike monitoring of protected species for all vessels while operating within US EEZ waters. This includes vessels traveling from Europe or other regions in which visual monitoring is conducted for vessel strike avoidance when the vessel is within the US EEZ boundary. This [ <del>can</del> ] [ <u>must</u> ] include the use of trained observers onboard the vessel [ <del>or</del> ] [ <u>which may be supplemented by</u> ] [ <del>alternative</del> ] [ <u>other</u> ] monitoring such as IR camera systems. [ <del>with the possibility of remote monitoring for systems with established and documented efficacy.</del> ]" Notes: We support MUL-36's requirement that lessees require visual vessel strike monitoring of protected species for all vessels while operating within US EEZ waters. We recommend that BOEM remove the option for lessees to use alternative monitoring methods in place of visual observers until near real-time monitoring technologies for North Atlantic right whales are developed and shown to provide comparable or greater vessel strike risk reduction than a 10-knot speed restriction.	Thank you for your comment. Please refer to response to comment BOEM-2024-0001-0423-0010 regarding MUL-36. Alternative monitoring methods are reviewed through the reduced visibility monitoring plan (MMST-1) when project details are known.
BOEM-2024-0001-0423-0028	[ <b>MUL-39</b> ] would require the use of standard underwater cables that have electrical shielding to "control the intensity" of EMF. While this is a theoretically useful measure the Draft PEIS determined that the potential impacts would be negligible with or without the	Thank you for your comment. Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included separating AMMM measures that have and have not been previously applied; BOEM believes these

Comment No.	Comment	Response
	application of these measures. Therefore this measure should not be required.	are all feasible. In addition, several AMMM measures that are RPs are now identified as such in the PEIS. MUL-39 is an RP in the Final PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are also not part of the Proposed Action.
BOEM-2024-0001-0439-0080	Measure ID: MUL-39 Measure Name: Electrical shielding on underwater cables Description: Lessees should use standard underwater cables that have electrical shielding to control the intensity of electromagnetic fields (EMF). EMF will be further refined as part of the design or cable burial risk assessment. Previously Applied as a COP T&C: Category: ACP Comment: BOEM should change "control the intensity" to "reduce" as shielding does not control the intensity.	Refer to response to comment BOEM-2024-0001-0423-0028. The text in MUL-39 has been revised to address the commenter's concern.
BOEM-2024-0001-0446-0007	1) Identification of Target Species Occasionally the dPEIS uses the term "target species." The term is mostly used in the dPEIS in reference to "changes in target species abundance and distribution" of commercial and recreationally important fish species. See e.g. Vol. I Sec. 3.6.1.3.3 at 3.6.1-46. But it is also used in Appendix G referring mostly to listed species and ESA-listed species of birds and bats. See Vol. II Appendix G BB-3 at G-3-4. The process of identifying and prioritizing "target species" is essential to the sequential and iterative application of the mitigation hierarchy across the full project life-cycle with the goal of achieving No Net Loss (NNL). This is even more important where there are multiple proximate projects planned in an eco-region. In many instances the "target species" identified in the dPEIS will inform developers' commitments to monitor assess cumulative impacts restore regenerate compensate for and offset. For this reason "target species" should refer to a process and criteria that are used to inventory focal species or habitat areas and select and prioritize species and habitat that require AMMM measures. The criteria could include ESA-listed species but also should be broad enough to include non-listed ESA species that are likely to interact with offshore wind projects and which may be impacted or displaced. TNC is not suggesting that all non-listed species and habitats require AMMM measures but the process and criteria used to inventory and select target species should be able to capture effects and interactions with non-listed	Thank you for your comment. The term "target species" was removed from BB-3.

Comment No.	Comment	Response
	species and habitats in order to assess cumulative impacts across lease areas effects on function and productivity and to adaptively manage and mitigate in an ecosystem mindset. Referencing existing standards for habitat and species criteria like those set forth in the International Finance Corporation's Performance Standard 6 may be helpful in identifying target species.	

**Table P.5.23-12. Responses to Substantive Comments on Mitigation and Monitoring—Benthic Resources (BEN) and Commercial Fisheries and For-Hire Recreational Fishing (COMFIS)**

Comment No.	Comment	Response
BOEM-2024-0001-0352-0008-j	We generally support implementation of the following AMMM measures; however we have concerns with how they are described in Appendix G. BEN-1: Boulder avoidance identification and relocation. As written this AMMM measure provides lessees too much flexibility. For example it allows lessees to deviate from the listed requirements based on considerations about technical and/or economic practicality or feasibility. This AMMM measure would be more useful if it were more prescriptive.	Minor edits have been made to BEN-1 to remove some timeline information. A more detailed measure could be developed in the future as a result of project-specific information and consultations.
BOEM-2024-0001-0439-0037	Measure ID: BEN-1 Measure Name: Boulder avoidance identification and relocation Description: Lessees must avoid boulders within the lease area and along the export cable corridor; if avoidance is not possible Lessees must minimize the boulder relocation distance. If the Lessee needs to relocate boulders they must submit a Boulder Identification and Relocation Plan. The plan must detail to the extent technically and/or economically practical or feasible for the project how the Lessee will relocate boulders as close as practicable to areas immediately adjacent to existing similar habitat. The plan must be submitted to BOEM and BSEE to coordinate with NMFS for a 60-day review 120 days prior to boulder relocation activities. The Lessee must resolve all comments on the Boulder Relocation Plan to BOEM and BSEE's satisfaction prior to implementation of the plan. If BOEM or BSEE do not provide comments on the plan within 60 days of its submittal then the Lessee may presume concurrence with the plan. The plan must include sufficient scope to mitigate boulders for facility installation and operation risks. Previously Applied as a COP	Minor edits have been made to BEN-1 to remove some timeline information. Project-specific NEPA analysis for individual COPs could apply revised, additional, or different AMMM measures as needed.

Comment No.	Comment	Response
	T&C: Check ACP Comment: The last sentence contains a very vague and unclear requirement: "The plan must include sufficient scope to mitigate boulders for facility installation and operation risks." Please provide clarity on what the Plan should contain.	
BOEM-2024-0001-0352-0008-k	BEN-2: Foundation scour protection monitoring. We support this AMMM measure; however it should include further details on what action will be required if issues with scour protection are detected.	BEN-2 has been renamed MUL-41 because it is a technical requirement that does not mitigate impacts on benthic resources. Instead, it includes monitoring scour protection for the integrity of the infrastructure. BOEM has reviewed the suggested AMMM measure modification and determined that any action that may be required would be determined on a case-by-case basis if/when the issue is discovered. Therefore, BOEM has not made any modifications to MUL-41.
BOEM-2024-0001-0447-0005	Further the AMMMS listed in Appendix G regarding commercial fishing mitigation are seriously deficient and the document already violates some of its own premises. Appendix G states that "Project design should be planned in coordination with fisheries" However the PEIS is proposing turbines spaced 0.6x 0.6 nm apart- something commercial fisheries would never propose and object. At 0.6x 0.6 nm spacing if the turbines were uniformly aligned in a grid pattern transiting on a diagonal through the area would put the spacing at close to 0.25 nm. BOEM cannot rely on this AMMM as a true mitigation measure since it is already proposing project layouts that are not supported by the commercial fishing industry. Should BOEM continue to support this spacing it must count all commercial fishing activity as lost in the NY Bight lease areas and adjust analysis accordingly.	The 0.6-by 0.6-nautical-mile spacing was for purposes of analysis in the RPDE for the PEIS and represents the maximum buildout, or maximum number of turbine positions considered in the RPDE. Actual WTG layouts will be determined at the COP-specific NEPA stage and analyzed during project-specific NEPA analysis. Additionally, an NSRA will be submitted with each COP.
BOEM-2024-0001-0452-0005	A. AMMMs Do Not Mitigate Impacts to Fisheries. The draft PEIS identifies twenty AMMM measures that could reduce impacts on commercial fisheries and for-hire recreational fishing. Unfortunately these measures are vague and wholly insufficient to mitigate impacts especially compared to the fisheries impact minimization alternative which is rejected without analysis. Impacts to commercial fisheries in the NY Bight are major but the proposed AMMMs do nothing to reduce the impact level. This leads to the conclusion that there is no difference between Alternative B and Alternative C. The commercial fishing industry has repeatedly requested [Bold: effective] AMMMs including in the NOI for this PEIS	Thank you for your comment. Project-specific NEPA analysis for individual COPs could apply revised, additional, or different AMMM measures as needed. Additional mitigation measures may be implemented at the project-specific level and through consultation with the agencies. Section 2.2 of the Final PEIS describes alternatives considered but not analyzed in detail and the justifications for their dismissal.  As stated in PEIS Section 1.3, BOEM's Proposed Action in the Final PEIS is to identify AMMM measures that could avoid, minimize, mitigate, and monitor impacts on resources in the six NY Bight lease areas. At this programmatic stage, the PEIS does not

Comment No.	Comment	Response
	<p>many of which were not included or considered herein. We incorporate those comments in full by reference above and urge BOEM to consider and analyze these measures if it issues a Final PEIS based on this draft. It is disappointing that "BOEM considered and rejected a "Fisheries Impact Minimization" alternative that would have considered a range of measures that would increase the likelihood that fishing could still occur removed key fishing areas and considered anticipated shifts in fishing grounds. The PEIS should have included this alternative as some impacts of development are still considered "unavoidable" with the proposed AMMMs. While it may not be possible to completely avoid all disruption to harvesting activities disruption is required to be minimized and mitigated as much as possible. Similarly the rejection of the "Pelagic Habitat Impact Minimization" fails to provide the public with an analysis of tailored AMMMs to protect the Mid Atlantic Cold Pool which is a key driver of productivity in the region and for which fishing experts have long requested effective mitigation efforts.</p>	<p>approve any projects and BOEM is not considering project-level details, individual alternatives, or AMMM measures that are project specific.</p>
BOEM-2024-0001-0352-0001	<p>Our key recommendations are as follows. Additional details are provided below. We support the concept of a PEIS for adopting programmatic AMMM measures; however the value of this PEIS as a decision-making tool for determining which AMMM measures to adopt is unclear. The final PEIS should focus on the AMMM measures that are not already very likely to be required by regulation or guidance and are within BOEM's purview. This would make it easier to evaluate the incremental benefits of each AMMM measure on individual impacted resources. It is not possible to comment effectively on AMMM measures related to the final guidance on fisheries mitigation as this document has not been released. BOEM should accept additional comments on these AMMM measures and their impacts once the final guidance is published. We support several of the proposed AMMM measures although we are concerned that some afford too much flexibility in how they are implemented. We suggest additional AMMM measures related to coordination between developers on site assessment and fisheries surveys. We offer several specific comments on the impacts analysis including areas where impacts to fish and fisheries may be underestimated.</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0352-0009	Additional AMMM measures. We recommend that the following additional programmatic AMMM measures be analyzed in the final PEIS and adopted for all six New York Bight leases. All these recommendations are consistent with past recommendations provided by the Councils. BOEM should require consistency and coordination between new and existing lessees on site assessment and characterization survey methods including fisheries surveys considering the [Underline: recommendations of the Responsible Offshore Science Alliance for fisheries assessment and NOAA Fisheries habitat mapping recommendations for seabed characterization.] Site assessment and characterization survey activities should be carried out as early as possible to inform potential locations for all types of project infrastructure. Information from these surveys should be available to inform the development of alternatives for public comment. Survey locations including for geophysical surveys should not be so narrowly prioritized or limited that flexibility in the precise final locations of project infrastructure is precluded. Clear and coordinated communication should be required for all pre-construction construction and post-construction activities including surveys. This should include the specific locations times vessels gear types contact information and procedures for filing claims for compensatory mitigation.	<p>Thank you for your comment. BOEM provides guidance documents to lessees to inform their fisheries surveys for site assessment. The Guidelines for Providing Information on Fisheries for Renewable Energy Development on the Atlantic Outer Continental Shelf, which contain recommended survey protocols, can be accessed here: <a href="https://www.boem.gov/sites/default/files/documents/about-boem/Fishery-Survey-Guidelines.pdf">https://www.boem.gov/sites/default/files/documents/about-boem/Fishery-Survey-Guidelines.pdf</a>. These guidelines also reference and encourage lessees to follow ROSA's Offshore Wind Project Monitoring Framework and Guidelines (<a href="https://www.rosascience.org/offshore-wind-and-fisheries-resources/">https://www.rosascience.org/offshore-wind-and-fisheries-resources/</a>). Additionally, BOEM and NMFS are collaborating on an EFH consultation template, which includes a reference to NOAA Fisheries Habitat Mapping Recommendations (<a href="https://media.fisheries.noaa.gov/2021-03/March292021_NMFS_Habitat_Mapping_Recommendations.pdf?null">https://media.fisheries.noaa.gov/2021-03/March292021_NMFS_Habitat_Mapping_Recommendations.p</a>df?null).</p> <p>In response to comments received on the Draft PEIS, MUL-26, Coordination for regional monitoring and surveys, was updated to encourage lessees to coordinate survey and monitoring efforts, develop monitoring and survey plans that meet regional data requirements and standards, and make results from monitoring publicly available.</p> <p>In addition, survey data are made available to agencies for consultation purposes and communication of project activities is covered under the Fisheries Communication Plan.</p>
BOEM-2024-0001-0439-0041	Measure ID: COMFIS-1 Measure Name: Compensation for gear loss and damage Description: The Lessee should implement a gear loss and damage compensation program. The Lessee should consult BOEM's draft guidance for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR 585 or as modified in response to public comment in the development of the program. For example the Lessee should consider compensation for damaged gear resulting from interactions between the fishing industry and non-marked/non-charted or marked/charted property (e.g. concrete mattresses) of the Lessee. ACP Comment: Language should include reasonableness of claims.	<p>Thank you for your comment. Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs. COMFIS-1 was</p>

Comment No.	Comment	Response
	Developers are responsible for following federal mandates to mark installed structures as directed by the USCG. Lessees can request that NOAA place facilities and obstructions on NOAA charts but lessees do not and cannot control what NOAA includes on its charts. It is the responsibility of mariners to maintain awareness of that information just as they must pay attention to all mariners rules of the road.	combined into COMFIS-6, Fisheries compensatory mitigation, and has been previously applied as a T&C.
BOEM-2024-0001-0423-0013	Commercial & Recreational Fisheries Ocean Winds recognizes the need to reduce potential for loss and provide compensation for fishing gear damaged by interactions with survey and construction operations. Cable protection should be designed to minimize potential for snagging and constructed facilities will be marked/charted so fisheries can avoid these facilities while navigating. It appears that [bold: COMFIS-1] however would have leaseholders compensate fisheries for damage to gear resulting from interaction with marked/charted fixed infrastructure which is not required of any other industry. Rather than avoiding marked/charted facilities this measure could have the effect of encouraging fisheries to deploy gear around known hazards. Leaseholders should properly compensate fisheries for economic losses relating to the buildout of the lease areas but Ocean Winds opposes compensation for gear lost to known hazards that will be charted.	Thank you for your comment. BOEM will take this into consideration in the updated Fisheries Compensatory Mitigation guidance. The guidance is being addressed in a process that is separate from the PEIS.
BOEM-2024-0001-0352-0005	COMFIS-1 and COMFIS-6 refer to BOEM's draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf. It is our understanding that the final guidance has been internally approved by BOEM and will be released later this year. The public has not yet been notified of the ways in which the final guidance will differ from the draft. We recommend that BOEM release the final guidance as soon as possible. We also recommend that BOEM continue to solicit comments on these AMMM measures and related impacts analysis following publication of the final guidance. The final PEIS should incorporate the final mitigation guidance.	Thank you for your comment. BOEM is actively working on finalizing the Guidance for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf. The guidance is being addressed in a process that is separate from the PEIS.
BOEM-2024-0001-0439-0042	Measure ID: COMFIS-2 Measure Name: Scour and cable protection Description: In areas where scour and/or cable protection measures are required the Lessee must ensure that all materials used for these	Thank you for your comment; economic and technical feasibility is already considered at the project-specific COP NEPA review phase.

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	<p>measures reflect the pre-existing conditions at the site as technically or economically feasible. To avoid new hangs for mobile fishing gear in areas that are regularly trawled cable protection measures must have tapered or sloped edges. In areas that are not regularly trawled natural or engineered stone or concrete may be employed. These materials should provide three-dimensional complexity in height and in interstitial spaces as technically or economically feasible. All materials should not inhibit epibenthic growth. The Lessee must prepare a Scour and Cable Protection Plan (SCPP) that includes descriptions and specifications for all cable protection materials. The Lessee must submit the SCPP to BOEM BSEE and NOAA. The Lessee must resolve all comments on the SCPP to BOEM and BSEE's satisfaction before placement of cable protection measures. Previously Applied as a COP T&amp;C: Check Category: T/EACP Comment: Concrete mattresses and rock size that may be needed for scour or cable protection will not "reflect the pre-existing conditions at the site". BOEM should not restrict the use of rock or concrete mattresses. Fourth sentence is unclear what "these" refers to. Cable protection for crossings with other cables and infrastructure may need to be undertaken in a way that is different from these requirements. This condition is too prescriptive flexibility should be built in due to availability of materials and availability of vessels that can install those materials.</p>	
BOEM-2024-0001-0423-0018	<p>[bold: COMFIS-3] would require leaseholders to create and implement a scallop monitoring plan. The Responsible Offshore Science Alliance (ROSA) is currently working on updating their offshore wind project monitoring framework and guidelines to include a regional/multi-developer approach. Ocean Winds believes that creation and implementation of a scallop monitoring plan would be better suited to a regional approach like ROSA is taking or one by an established independent marine institute such as Woods Hole Gulf of Maine Research Institute or similar. The Virginia Institute of Marine Science and the Coonamessett Farm Foundation are also deeply involved in scallop monitoring. Further it is the purview and responsibility of the National Marine Fisheries Service (NOAA Fisheries) to effectively manage the nation's fish stocks. Lessees can assist NOAA Fisheries to the extent NOAA-Fisheries' historic survey</p>	<p>Based on comments received on the Draft PEIS, COMFIS-3 has been broadened to include the development and implementation of a Fisheries and Benthic Monitoring Plan. Additionally, MUL-26, Coordination for regional monitoring and surveys, was revised. This RP now encourages coordination for regional monitoring and surveys, development of monitoring and survey plans that meet regional data requirements and standards, and making monitoring results publicly available.</p>

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	efforts are impacted by offshore wind structures to monitor how the marine environment may change as a result of wind development. Similarly although other BOEM-approved projects have required and implemented fisheries monitoring plans BOEM should consider shifting to a regional monitoring approach that can be more easily coordinated and performed by an appropriate independent expert entity. Leaseholders can contribute to the costs of such monitoring but the continued piecemeal approach to fisheries resource monitoring is excessively burdensome to leaseholders and will likely be of less value than the federal government working directly with respected research institutions.	
BOEM-2024-0001-0352-0008-I	COMFIS-3: Scallop monitoring plan We support this AMMM measure; however we are concerned with the implication that lessees will decide if their monitoring results show impacts that differ from expectations and new mitigation and/or monitoring measures are needed. We recommend that BOEM and NMFS work together to review the monitoring results and make this determination.	Based on comments received on the Draft PEIS, COMFIS-3 has been broadened to include a Fisheries and Benthic Monitoring Plan, which still includes scallops. At the COP stage, the agency communication plan will cover coordination between BOEM and NMFS to review monitoring results and make any necessary determinations. All monitoring plans will be shared, by BOEM, with the other relevant agencies.
BOEM-2024-0001-0439-0043	Measure ID: COMFIS-3 Measure Name: Scallop Monitoring Plan Description: The Lessee should coordinate with NMFS and potentially impacted scallop fishermen to develop a Scallop Monitoring Plan. The plan should discuss potential impacts from construction including turbidity problems due to scour protection cooling of waters changed currents etc. and methods to avoid or reduce those impacts. Lessees should monitor potential impacts on scallop populations and use consistent methodologies for standard and robust data collection. Data should be compatible with other collected information for regional data integration and analyses. If the monitoring results deviate substantially from the anticipated impacts the Lessees are encouraged to propose new mitigation measures and/or monitoring methods to BOEM and BSEE for review and concurrence. ACP Comment: A number of scallop monitoring programs are currently in place. BOEM should address the need for additional monitoring. Current regional data collection efforts are not standardized so it is unclear how lessees can comply with this measure. Clarification should be provided on what standard for data collection should be used. Further there are no guidelines on what	Thank you for your comment. Based on comments received on the Draft PEIS, COMFIS-3 has been broadened to include a Fisheries and Benthic Monitoring Plan. This plan includes fisheries and benthic resources generally. Adaptive management in COMFIS-3 will be considered on a case-by-case basis and clarification on standards for data collection will be provided in the plan itself. BOEM will work with the lessee and NOAA Fisheries on this component at the COP stage.

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	constitutes a substantial deviation from anticipated impacts. In addition all impacts on scallops should be put into the context of warming waters and effects from climate change.	
BOEM-2024-0001-0446-0009-a	For example COMFIS-3 Scallop Monitoring Plan states that if the monitoring results deviate substantially from the anticipated impacts lessees are encouraged to propose new mitigation measures and/or monitoring methods to BOEM and BSEE for review and concurrence. Lessees should be required to propose new mitigation if results substantially deviate from anticipated impacts. This is adaptive management and it should apply across the board to all AMMM measures. See COMFIS-5.	Thank you for your comment. Based on comments received on the Draft PEIS, COMFIS-3 has been revised. The revised AMMM measure requires that lessees submit a Fisheries and Benthic Monitoring Plan for monitoring impacts of project activities on fisheries and benthic resources. Adaptive management as a result of COMFIS-3 monitoring may be considered on a case-by-case basis. BOEM retains the authority to review a COP and require a revision if circumstances change.
BOEM-2024-0001-0452-0010	F. Exclusion of Mitigation Measures Complementary to Monitoring Measures. We support the two AMMMs dedicated to monitoring fisheries impacts COMFIS-3 and COMFIS-5 and strongly encourage BOEM to require developers to use survey methodology developed by NMFS and industry partners to inform these monitoring plans. Regrettably there is no clear recourse for next steps if and when monitoring shows adverse and unavoidable impacts to benthic and pelagic habitats and regional fisheries. For example COMFIS-3 is directed at scallop monitoring but there are no clear terms on actions to take if the resource is irreversibly damaged. What actions will BOEM take if monitoring plans show fisheries are unable to remain sustainable amid years of habitat-disruptive construction and with introduction of thousands of turbines changing pelagic and benthic conditions? The absence of a regulatory pathway to halting construction or removing turbines before the thirty year lifetime of a project creates significant uncertainty over the effectiveness of mitigation measures that are adopted before impact factors on fishery stocks are well understood.	Based on comments received on the Draft PEIS, COMFIS-3 has been broadened to include a Fisheries and Benthic Monitoring Plan, which includes scallop. BOEM is working with partners, NOAA Fisheries in particular, to make appropriate responses to potential negative impacts on resources. As indicated in COMFIS-3, If the monitoring results deviate substantially from the anticipated impacts, the lessee is encouraged to propose new mitigation measures or monitoring methods to BOEM and BSEE for review and concurrence.
BOEM-2024-0001-0347-0004-e	Specific AMMMs ASGA Supports: COMFIS-4: ASGA supports this AMMM and has frequently advocated for the use of nature-inclusive designs for OSW construction. In addition navigational safety has been a consistent concern among fishermen; ensuring consistent safe access to and through a lease area and providing technology enhancement programs will allow fishermen to adapt.	Thank you for your comment.

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BOEM-2024-0001-0352-0008-m	COMFIS-4: Fisheries mitigation We generally support this AMMM measure; however it requires several revisions. It contains a long list of potential requirements. It is not clear if BOEM may choose to implement only some components or if everything is intended to be implemented together. It may be beneficial to split this into multiple separate AMMM measures to allow for consideration of the various components separately. We are also concerned that a minimum cable burial depth of three feet below stable seabed "where technically feasible" is too shallow to minimize impacts to mobile bottom tending gear fisheries and provides lessees with too much flexibility.	COMFIS-4 came directly from the draft fisheries mitigation guidance (found here: <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf</a> ). BOEM's ultimate recommendations will follow the Final Fisheries Mitigation Guidance. COMFIS-4 has been classified as an RP. Project-specific mitigation measures to reduce impacts will be considered at the project stage.
BOEM-2024-0001-0383-0010	Additionally AMMM COMFIS-4 of Appendix G identifies artificial reefs as sensitive benthic features important to commercial fisheries as "areas of commercial fishery production." [Footnote 27: See Appendix G at <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/NY%20Bight_DraftPEIS_AppG_Mitigation%20and%20Monitoring_508.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/NY%20Bight_DraftPEIS_AppG_Mitigation%20and%20Monitoring_508.pdf</a> p. G-7.] This is also incorrect- commercial fisheries even certain fixed gear fisheries are prohibited from fishing on artificial reefs either due to the nature of their gear (mobile bottom tending fisheries) or regulations exist that establish artificial reefs for recreational use areas only and prohibit commercial use (fixed gear). [Footnote 28: See for example NOAA's prohibition on fixed gear in artificial reef areas off the New Jersey coast: <a href="https://www.federalregister.gov/documents/2018/07/09/2018-14661/fisheries-of-the-northeastern-united-states-special-management-zones-for-13-new-jersey-artificial">https://www.federalregister.gov/documents/2018/07/09/2018-14661/fisheries-of-the-northeastern-united-states-special-management-zones-for-13-new-jersey-artificial</a> and <a href="https://www.fisheries.noaa.gov/action/special-management-zones-13-new-jersey-artificial-reefs">https://www.fisheries.noaa.gov/action/special-management-zones-13-new-jersey-artificial-reefs</a> .] BOEM's assumption that artificial reefs are areas of "commercial fishery production" is false. BOEM must stop living in a world of its own making and honestly identify impacts and facts for what they are not what BOEM would like them to be.	Thank you for your comment. BOEM, in consultation with NMFS, strives to minimize and mitigate potential negative impacts of offshore wind infrastructure on fisheries and habitats.
BOEM-2024-0001-0383-0011	The Appendix G COMFIS-4 AMMM also falls short of the OSCLA mandate to "ensure safety" when it comes to offshore wind development. The AMMM simply requires "Considering Lessee-	Thank you for your comment. BOEM will continue to work with lessees and potential regional compensatory funds to support updating units. The draft fisheries mitigation guidance (found

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	<p>funded radar system upgrades for commercial and for-hire recreational fishing vessels (e.g. solid state Doppler-based marine vessel radar systems" and then quotes the 2022 National Academies of Sciences which study confirmed years of data we had previously submitted to BOEM and BOEM ignored. Perhaps BOEM did not read the study. If it had it would know that the study found that no current solutions to marine vessel radar interference because of offshore wind turbines exist. The National Academies of Sciences report concluded that "WTGs reduce the effectiveness of both magnetron-based and Doppler-based (or pulse) MVR radar" [Footnote 29: Wind Turbine Generator Impacts to Marine Vessel Radar (2022) National Academies Press available at <a href="https://nap.nationalacademies.org/catalog/26430/wind-turbine-generator-impacts-to-marine-vessel-radar">https://nap.nationalacademies.org/catalog/26430/wind-turbine-generator-impacts-to-marine-vessel-radar</a> p. 5.] and that the USCG recognizes that "how MVR will lose efficacy in a WTG environment and corresponding impact on navigation performance requires in-depth testing and evaluation". [Footnote 30: Ibid p. 66.] Therefore providing fishermen with a fund to purchase new radars that will themselves experience interference is not an effective mitigation measure. It is not a solution. Solutions will require "in depth testing and evaluation" that has not yet occurred. The NAS study was careful to point out that "It is noteworthy that there are no published studies of WTG interference on Doppler-based solid-state radar used for marine navigation Therefore assertions of the suitability of solid-state radar or lack thereof for operation in a WTG environment are inconclusive from these experiments." [Footnote 31: Wind Turbine Generator Impacts to Marine Vessel Radar (2022) National Academies Press available at <a href="https://nap.nationalacademies.org/catalog/26430/wind-turbine-generator-impacts-to-marine-vessel-radar">https://nap.nationalacademies.org/catalog/26430/wind-turbine-generator-impacts-to-marine-vessel-radar</a> p. 5]. Therefore BOEM cannot assert that solid-state radar is a solution to the very real impact of marine radar interference caused by its proposed action. This does not count as a mitigation measure.</p>	<p>here:  <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf</a>) also includes radar system upgrades for commercial and for-hire recreational fishing vessels.</p>
BOEM-2024-0001-0423-0005	<p>[bold: COMFIS-4] directs lessees to design their projects in coordination with fisheries including locating turbines to avoid areas of commercial fishery production. Developers bid on lease areas based on estimates of the expected income versus expected</p>	<p>BOEM continues to work with developers and NOAA Fisheries for micro-siting and the development of COP NEPA alternatives that may consider removing WTG positions. This will occur at the project-specific stage and is, therefore, out of the scope of the</p>

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	<p>expenses to permit construct maintain and decommission a wind project with an eye towards optimizing clean energy production while delivering value to the electricity customers who will be the ultimate purchasers of the power from the project. The loss of turbine positions creates a suboptimal lease area with a reduced generation yield and a significant impact to the cost per megawatt and a corresponding decrease in clean energy production and its associated benefits to the climate and environment while unfortunately increasing ratepayer cost. Any decision concerning the utilization of wind turbine positions must be left to the developer who must balance costs (including potentially the cost of mitigating fisheries impacts identified as needed during project review) and impacts to the project cost. Additionally this measure proposes using cable installation techniques that would remove potential obstructions from areas where bottom-tending fishing gear is actively used or consolidating such obstructions in areas where bottom- tending fishing gear is not actively used. This would appear to be in conflict with the directive in BEN-1 [italicized: "if avoidance is not possible Lessees must minimize the boulder relocation distance."] Lastly it is important to recognize that as a practical matter it is often difficult to know where areas of commercial fishery production are located given the competitive pressures on fishing operators that press them to keep such information to themselves. This can make efforts to avoid such impacts into an exercise in speculation and can empower fishing interests to undermine offshore wind development (and resulting societal benefits in the form of emissions reductions and increased electricity reliability) by reporting fishing activity in particular locations.</p>	<p>PEIS. At the project-specific level, consultations are done with NMFS and USFWS and the lessee is not the sole decisionmaker on turbine locations. BOEM has classified COMFIS-4 as an RP. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs.</p>
BOEM-2024-0001-0439-0044	<p>Measure ID: COMFIS-4 Measure Name: Fisheries mitigation Description: Static cable design elements are recommended: All static cables should be buried to a minimum depth of 3 feet below stable seabed where technically feasible. Technical feasibility constraints include seabed conditions that preclude burial such as telecommunication cable crossings. Deeper cable burial depths may be required dependent on risks identified in cable route design (see the Carbon Trust's Cable Burial Risk Assessment Methodology at: <a href="https://ctprodstorageaccountp.blob.core.windows.net/prod-drupal-">https://ctprodstorageaccountp.blob.core.windows.net/prod-drupal-</a></p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM</p>

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	<p>files/documents/resource/public/cable-burial-risk-assessment-guidance.pdf). Lessees should avoid installation techniques that raise the profile of the seabed such as the ejection of large previously buried rocks or boulders onto the surface. The ejection of this material may damage fishing gear. If raising the profile of the seabed is unavoidable the Lessees should propose measures in the COP to minimize the total area of impact through measures such as removing potential obstructions from areas where bottom-tending fishing gear is actively used or consolidating such obstructions in areas where bottom-tending fishing gear is not actively used. If needed cable protection measures should reflect the pre-existing conditions at the site. This mitigation measure ensures that seafloor cable protection does not introduce new obstructions for mobile fishing gear. Thus the cable protection measures should be trawl-friendly with tapered or sloped edges. If cable protection is necessary in "non-trawlable" habitat such as rocky habitat then the Lessees should use materials that mirror the benthic environment. Where technically and economically feasible cables should share corridors and minimize the total area disturbed. Project design should be planned in coordination with fisheries:1. The facility design should seek to maximize existing access to fisheries in balance with other siting constraints by considering: Transit within the project area and traditional fishing activities within the project area. Consolidation of infrastructure where practicable to reduce space-use conflicts. Technologies to reduce total project area and meet energy production commitments. Turbine locations should be sited to avoid areas of commercial fishery production such as known sensitive benthic features and natural and artificial reefs. Facility planning should use nature-inclusive designs (see Evaluating the Effectiveness of Nature Inclusive Design Materials at: <a href="https://www.boem.gov/sites/default/files/documents/environmental-studies/SDP_2022-2023.pdf">https://www.boem.gov/sites/default/files/documents/environmental-studies/SDP_2022-2023.pdf</a>) where applicable to maximize available habitat for fish. Installation techniques and time windows should minimize disruption to fishing activities (e.g. simultaneous lay and burial or conducting activity during the appropriate time of year). To improve safety at sea in and around offshore wind facilities BOEM recommends that Lessees consider the</p>	<p>measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs. BOEM has classified COMFIS-4 as an RP.</p>

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	<p>following measures in their plan submittals:2. Charting all facilities and obstructions resulting from construction and operations of an offshore wind energy facility and providing that information to NOAA USCG and navigational software companies. Employing liaisons with experience in the commercial fishing industry to provide safety and communication services during construction. Monitoring cable burial in real-time and reporting all potential hazard events to USCG as soon as possible throughout the life of the project. Using digital information technology platforms (e.g. smartphone applications) to bring together survey and construction schedules and locations in addition to standard local notices to mariners via the USCG. Marking facilities and appurtenances with permanent identification of the project and company. Providing training opportunities for the commercial fishing industry to simulate safe navigation through a wind facility in various weather conditions and at various speeds. Monitoring safety threats (e.g. radar disruption ice shedding vessel allisions and collisions security threats unexploded ordnance/munitions of explosive concern and impacts on search and rescue efforts) throughout the life of a project. Consulting with the fishing industry and USCG to identify which structures would be most appropriate for Automatic Identification System (AIS) transponders consistent with BOEM's Lighting and Marking Guidelines (<a href="https://www.boem.gov/2021-lighting-and-marking-guidelines">https://www.boem.gov/2021-lighting-and-marking-guidelines</a>).Considering Lessee-funded radar system upgrades for commercial and for-hire recreational fishing vessels (e.g. solid state Doppler-based marine vessel radar systems; see National Academies of Science Engineering and Medicine 2022).[Footnote 7: National Academies of Science Engineering and Medicine. 2022. Wind Turbine Generator Impacts to Marine Vessel Radar. Washington D.C.: The National Academies Press. <a href="https://doi.org/10.17226/26430">https://doi.org/10.17226/26430</a>.Category: V G DACP Comment: The PEIS indicates that this measure is voluntary. Voluntary measures should not be included in AMMMs. This measure also constitutes new COP guidance. If BOEM wishes to implement such a measure it should be proposed for inclusion in guidance and go through the guidance development process. This process should include outreach to industry and public review and comment. Static design measures: Measure 2: The measure to avoid</p>	

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	<p>installation techniques that raise the profile of the seabed may be impractical as the ability to move all possible ejected rocks may not be feasible. Recommended narrowly tailoring this based on risk based approach that focuses on the size of boulder the use of the area and how these factors combine to create a risk profile. Measure 3: Concrete mattresses or rock is needed for cable protection and will not resemble the pre-existing environment. Measure 4: Shared corridors are being developed by NYS and NJ for future projects. For current projects corridors were developed with proprietary information and OREC awards were made based on specific landfall locations and POIs. Project design measures: Measures for reducing project area needed for windfarm or consolidating cables do not consider economic and technical viability. In addition these measures are duplicative of the alternatives development process in which the technical and economic feasibility of alternatives are measured using the criteria established in the "Process for Identifying Alternatives for Environmental Reviews of Offshore Wind Construction and Operations Plans pursuant to the National Environmental Policy Act". This measure serves to circumvent the process established to identify alternatives and creates a separate process without a public process. BOEM should remove these measures and should instead rely on its established processes for alternatives identification and environmental review. If BOEM wishes to create new guidance for COP development it would need to go through a public process to revise current COP guidance. Safety measures: Lessees can request that NOAA place facilities and obstructions on NOAA charts but lessees do not and cannot control what NOAA includes on its charts.</p>	
BOEM-2024-0001-0452-0011	<p>G. Safety RODA and our members have repeatedly raised concerns regarding the ability of vessels to safely navigate through and around leased areas. COMFIS-4 includes consideration of funding radar system upgrades for fishing vessels citing the 2022 National Academies of Sciences (NAS) report. [Footnote 16: Draft PEIS Appendix G p. G-7.] However in contradiction to the draft PEIS's conclusions the NAS report found no solutions to marine vessel radar interference from offshore wind turbines currently exist and additional studies need to occur. [Footnote 17: Wind Turbine</p>	<p>Thank you for your comment. COMFIS-4 came directly from the draft fisheries mitigation guidance (found here: <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf</a>). BOEM's ultimate recommendations will follow the Final Fisheries Mitigation Guidance. BOEM has classified COMFIS-4 as an RP. BOEM encourages lessees to analyze and consider</p>

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	Generator Impacts to Marine Vessel Radar (2022) National Academies Press available at <a href="https://nap.nationalacademies.org/catalog/26430/wind-turbine-generator-impacts-to-marine-vessel-radar">https://nap.nationalacademies.org/catalog/26430/wind-turbine-generator-impacts-to-marine-vessel-radar</a> p. 5.] It is therefore premature for BOEM to assert that solid-state radar is a solution to marine radar interference and include it as a AMMM	implementing these RPs, as they may further avoid and minimize impacts.
BOEM-2024-0001-0452-0009	E. Minimum Cable Burial Depth is Insufficient For years the commercial fishing industry and others have informed BOEM about the dynamic nature of soft bottom areas in the Mid-Atlantic and Southern New England regions. COMFIS-4 maintains a minimum depth of cable burial of three feet which is insufficient in high-energy areas where ocean sediment moves. It is paramount that bottom tending gear will not be threatened by potentially exposed cables which would pose risk for operator and developer alike. Greater burial depths are also known to reduce impacts to stocks vulnerable to heat and EMF effects from cables. Therefore we maintain previous requests for a [Bold: minimum of six feet for cable burial depth] across all projects with site-specific analyses to inform where greater depths are merited.	COMFIS-4 is an RP and burial is recommended at 3 feet below stable seabed as the minimum. Actual depths will be determined at the project-specific phase. Export cable burial depth of 3 to 19.6 feet (0.9 to 6 meters) is the anticipated potential range of burial depth; 6 feet (1.8 meters) is typical target burial depth. Depths may vary based on site-specific factors (e.g., soil type, cable/pipeline crossings, crossing of navigation channels or other federal civil work projects, other federal or state requirements). BOEM has adopted a procedural risk assessment approach to establishing minimum cable burial depth, where lessees provide analyses on site-specific risks along cable routes and establish cable burial depths accordingly. Risks are varied along cable routes and cable burial depths should reflect these changes in risk. Accordingly, BOEM has adopted the Carbon Trust's Cable Burial Risk Assessment Methodology. A BOEM-funded study identified a typical burial depth between 3 and 6 feet, dependent on site-specific conditions (Sharples 2011). This study supports a minimum cable burial depth of 3 feet; however, the minimum burial depth was based on an assumed heat dissipation at the seafloor, unrelated to fishing activity. Carbon Trust's Cable Burial Risk Assessment Methodology notes a maximum penetration depth of 0.3 meter for fishing activity, including trawling. With a safety factor of 2, a 2-foot minimum cable burial depth is supported in areas with fishing activity.
BOEM-2024-0001-0346-0007	4. The Draft PEIS Unreasonably Rejected Developing Sets of Alternatives That Would Protect Fisheries and Fishing Grounds In its PEIS scoping comments FSF explained that BOEM's Fisheries Mitigation Guidelines drafted and released back in late 2021 established a series of steps that could be taken to mitigate the impacts of offshore wind development on fishing activity. FSF urged	Thank you for your comment. COMFIS-4, Fisheries mitigation, came directly from the draft Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR Part 585 ( <a href="https://www.boem.gov/sites/default/files/documents/renewabl">https://www.boem.gov/sites/default/files/documents/renewabl</a> e-

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	<p>BOEM to include these proposed mitigation measures as AMMMs in the PEIS. FSF explained: In particular the AMMMs should focus on adopting a coherent set of standards that integrate with each element of the Fisheries Mitigation Guidelines. For instance subpart B Project Siting Design Navigation and Access identifies a series of "[r]ecommended facility design elements" that "should maximize access to fisheries." Draft Guidelines at Especially for the four contiguous lease areas in the New York Bight each of these facility design elements apply with equal force to these four lease areas collectively as they would for an individual lease area standing alone. For instance transit should be coordinated within these project areas (not just within a single project area). Likewise infrastructure within these project areas should be laid out to reduce overall space-use conflicts. As the Fisheries Mitigation Guidelines explain "Coordination of turbine and substation array layouts between and among neighboring lease areas to allow safe fishing and transit through multiple projects" should be pursued. Draft Guidelines at 6. If there are areas on the borders of project areas where fishing activity is less intense it would make sense to group supporting infrastructure such as substations in that border area. Sensitive benthic features or valuable fishing grounds may straddle project areas and so "[f]acility planning should use nature inclusive designs where applicable to maximize available habitat for fish." Draft Guidelines at 6. As an example of valuable fishing grounds straddling project areas the figures set forth above show that the northeastern quadrant of Community Offshore Wind lease and the entirety of the adjacent Attentive Energy lease overlap with levels of high scallop fishing activity. However after much fanfare in releasing and seeking comment on these Mitigation Guidelines in mid to late 2021 BOEM has done nothing further with them for over two years since the comment period closed on January 7 2022.</p>	<p><a href="#">energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf</a>). BOEM's ultimate recommendations will follow the Final Fisheries Mitigation Guidance once completed.</p>
BOEM-2024-0001-0346-0006	<p>Further the COMFIS-4 AMMM requires a minimum cable burial depth of three feet. (3.6.1-53) However other BOEM documents have required six feet minimum cable burial depth. The fishing industry has repeatedly explained that given how the soft ocean bottom moves six feet should be an absolute minimum burial depth. Even the Draft PEIS discusses how cables buried only three feet deep</p>	<p>COMFIS-4 is an RP and burial is recommended at 3 feet below stable seabed as the minimum. Actual depths will be determined at the project-specific phase. Generally, export cable burial depth of 3 to 19.6 feet (0.9 to 6 meters) is the anticipated potential range of burial depth; 6 feet (1.8 meters) is the typical target burial depth. Depths may vary</p>

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	<p>are quite likely to become unburied. (3.6.1-45) The Draft PEIS explained that wind farm development will have other adverse and unavoidable impacts on the New York Bight pelagic and benthic habitat identifying in particular "[s]uspension and re-settling of sediments due to seafloor disturbance habitat quality impacts including reduction in certain habitat types as a result of seafloor disturbance [and] conversion of soft-bottom habitat to new hard-bottom habitat." (4.1-2) Indeed even though hundreds of millions of dollars of ex vessel revenue is at stake there is but one Draft PEIS AMMM directed to scallops and that is for monitoring. Monitoring is important but it will likely be more in the realm of conducting an autopsy on the Mid-Atlantic scallop resource rather than trying to do something to save it. If and when monitoring reveals the projected negative impacts are actually happening it's not like BOEM can or will do anything about it. Wind turbines aren't going to be removed for thirty years once they are installed.[Footnote 2: The PEIS can't even bring itself to admit that impacts from wind farms on fisheries are irretrievable apparently because in 30 years the windfarms are set to be decommissioned. (4.2-3) BOEM seems to think that fish and fisheries can sprout again like a phoenix. However in thirty years these fishing businesses will be long since gone and the shore- side infrastructure the lucrative scallop fishery supports will give way to other uses of highly-valuable shorefront real estate and infrastructure.]</p>	<p>based on site-specific factors (e.g., soil type, cable/pipeline crossings, crossing of navigation channels or other federal civil work projects, other federal or state requirements). BOEM has adopted a procedural risk assessment approach to establishing minimum cable burial depth, where lessees provide analyses on site-specific risks along cable routes and establish cable burial depths accordingly. Risks are varied along cable routes and cable burial depths should reflect these changes in risk. Accordingly, BOEM has adopted the Carbon Trust's Cable Burial Risk Assessment Methodology. A BOEM-funded study identified a typical burial depth between 3 and 6 feet, dependent on site-specific conditions (Sharples 2011). This study supports a minimum cable burial depth of 3 feet; however, the minimum burial depth was based on an assumed heat dissipation at the seafloor, unrelated to fishing activity. Carbon Trust's Cable Burial Risk Assessment Methodology notes a maximum penetration depth of 0.3 meter for fishing activity, including trawling. With a safety factor of 2, a 2-foot minimum cable burial depth is supported in areas with fishing activity. Adaptive management as a result of COMFIS-3, Fisheries and Benthic Monitoring Plan, will be assessed on a project-by-project basis. At the COP stage, the agency communication plan will cover coordination between BOEM and NMFS to review monitoring results and make any necessary determinations. All monitoring plans will be shared, by BOEM, with the other relevant agencies.</p>
BOEM-2024-0001-0383-0009	<p>8. AMMMS: The AMMMS listed in Appendix G regarding commercial fishing mitigation are seriously deficient and the document already violates some of its own premises. Measure ID COMFIS-4 of Appendix G states that "Project design should be planned in coordination with fisheries". [Footnote 24: See Appendix G at <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/NY%20Bight_DraftPEIS_AppG_Mitigation%20and%20Monitoring_508.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/NY%20Bight_DraftPEIS_AppG_Mitigation%20and%20Monitoring_508.pdf</a> p. G-6.] However the PEIS is proposing turbines spaced 0.6x 0.6 nm apart- something commercial fisheries would never propose. At 0.6x 0.6 nm spacing if the turbines were uniformly aligned in a grid pattern transiting on a diagonal through the area</p>	<p>Thank you for your comment. The 0.6- by 0.6-nautical-mile spacing was for purposes of analysis in the RPDE for the PEIS and represents the maximum buildout, or maximum number of turbine positions considered in the RPDE. Actual layouts will be determined on a project-specific basis and will be analyzed through the COP-specific NEPA review. Relative to the reef effect, BOEM, in consultation with NMFS, strives to minimize and mitigate potential negative impacts of offshore wind infrastructure on fisheries and habitat. Regarding vessel traffic, the Final PEIS text has been updated to remove reference to commercial traffic that will be farther</p>

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	<p>would put the spacing at close to 0.25 nm! BOEM cannot rely on this AMMM as a true mitigation measure since it is already proposing project layouts that are not supported by the commercial fishing industry. Should BOEM continue to support this spacing it must count all commercial fishing activity as lost in the NY Bight lease areas and adjust analysis accordingly. BOEM also continues to assume that turbine structures creating artificial "reef effect" will be "beneficial" for commercial fishing. For example the PEIS states that the turbines "could create an artificial reef effect that attracts species of interest for commercial fishing resulting in commercial traffic farther offshore than typically occurs." [Footnote 25: See PEIS at <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/_NY%20Bight_DraftPEIS_Vol1_Chapters1-4_January2024_508.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/_NY%20Bight_DraftPEIS_Vol1_Chapters1-4_January2024_508.pdf</a> p. 3.6.7-18.] First of all commercial fishing already exists in the area. Commercial fishing traffic already occurs that far offshore. All the time. BOEM misrepresents accurate commercial fishing activity with this statement. Secondly artificial reefs create exclusion zones for mobile bottom tending gear fisheries. Mobile bottom tending gear can hang up on existing reefs- whether natural or artificial- and cause gear loss/damage as well as safety situations. Therefore existing artificial and natural reefs are already exclusion zones for mobile bottom tending gear fisheries. The same will be true for all "reef effects" created by the turbines. Therefore by identifying a "reef effect" BOEM has already identified that its action is creating exclusion zones for mobile bottom tending gear vessels. We therefore request that BOEM specifically identify this as a major adverse impact specifically on mobile bottom tending fisheries. BOEM must differentiate between fisheries gear types as not all commercial fisheries are the same. By conflating all commercial fisheries into one category impacts are masked. In fact the above quote from the PEIS in its full format masks impacts by conflating impacts between commercial and recreational fisheries- these impacts are not the same. [Footnote 26: Ibid. "The installation of WTGs within the geographic analysis area could create an artificial reef effect that attracts species of interest for commercial or recreational fishing and sightseeing resulting in recreational and commercial vessel traffic farther offshore than typically occurs."]</p>	<p>offshore. The use of the word <i>commercial</i> was not intended to refer to commercial fishing vessels, but rather commercial sightseeing or other commercial activity vessels.</p>

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	<p>BOEM cannot include both in the same sentence as if the impacts will be the same; they will not. By combining recreational fisheries (which may desire artificial reefs for targeting certain species) and commercial fisheries (some of which will be excluded from a wind farm specifically due to the presence of artificial reefs) in the same analysis and giving blanket impacts statements BOEM masks the true impacts to each distinct user group. This is inappropriate and must stop.</p>	
<p>BOEM-2024-0001-0406-0023</p>	<p>vi. Measures That Should Be Reserved for Guidance Many of the proposed AMMM measures in the Draft PEIS are not true mitigation measures and would be more appropriate to incorporate into BOEM's guidelines. Rather than use the PEIS process as a substitute for guidance BOEM should instead work with offshore wind lessees on a process to inform and amend the appropriate guidance documents. Examples of proposed AMMM measures that fall under this category include all of the measures flagged as vague and unenforceable in section IV.b.ii above as well as the following: COMFIS-4 which appears to be taken verbatim from Sections B and C of BOEM's draft Fisheries Mitigation Guidance. [Footnote 11: DRAFT Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR Part 585 (June 2022) available at <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/DRAFT%20Fisheries%20Mitigation%20Guidance%2006232022_0.pdf</a>.] COSW respectfully recommends that rather than including the entirety of the draft Fisheries Mitigation Guidance in the PEIS by splitting it among several AMMM measures it would be more appropriate to finalize that guidance. NAV-2 which would require the wholesale adoption of the U.S. Coast Guard's (USCG) Marine Planning Guidelines (MPGs) "[i]n developing their initial COP or as part of subsequent updated versions." The MPGs are by their own terms guidance intended to be applied on a case-by-case basis. [Footnote 12: See GUIDANCE ON THE COAST GUARD'S ROLES AND RESPONSIBILITIES FOR OFFSHORE RENEWABLE ENERGY INSTALLATIONS (OREI) ON THE OUTER CONTINENTAL SHELF (OCS) NVIC 02-23 (October 2023) Enclosure 4 available at <a href="https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/5ps/NV">https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/5ps/NV</a></p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs. COMFIS-4 has been classified as an RP. Upon finalization of Fisheries Mitigation Guidelines, lessees will be encouraged to follow that guidance.</p>

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	IC/2020/2023/OREI%20NVIC%202023_V2_29NOV2023.pdf] Any application of the MPGs to COP review should likewise be accomplished through BOEM guidance. [Footnote 13: We also note that mandatory application of the MPGs could circumvent notice and comment rulemaking under the APA see Section II.b above and may result in the commercially significant loss of wind turbine positions adjacent to shipping lanes.]	
BOEM-2024-0001-0347-0004-f	COMFIS-5: While ASGA fully supports efforts to mitigate the impacts of OSW on federal fisheries surveys BOEM must finalize its Draft Guidance and continue working with NOAA Fisheries Science Centers and commercial and recreational fishing industries to develop collaborative effective and adaptive methods to maintain the longstanding time series of these surveys in WEAs.	Thank you for your comment.
BOEM-2024-0001-0439-0045	Measure ID: COMFIS-5 Measure Name: Fisheries Survey Guidelines Description: Lessees should follow the BOEM Fisheries Survey Guidelines (Fisheries Guidelines updated March 27 2023 at: <a href="https://www.boem.gov/sites/default/files/documents/about-boem/Fishery-Survey-Guidelines.pdf">https://www.boem.gov/sites/default/files/documents/about-boem/Fishery-Survey-Guidelines.pdf</a> ) with regards to pre- during- and post-construction fisheries monitoring survey plan design. Category: VACP Comment: The PEIS indicates that this measure is voluntary. Voluntary measures should not be included in AMMMs. As Alternative C assumes adoption of all AMMMs as terms and conditions of plan approval for the purposes of the analysis these AMMMs are not in fact voluntary. Adoption of voluntary AMMMs through terms and conditions undermines the very voluntary nature of those measures.	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs.
BOEM-2024-0001-0469-0019	AMMM measure COMFIS-5 states that lessees should follow BOEM's Fishery Survey Guidelines. [Footnote 71 NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 appx. G at G-7.] These guidelines are intended to aid lessees in performing a survey that is maximally helpful to BOEM in determining the impacts to shellfish and finfish in a lease area. [Footnote 72 BUREAU OF OCEAN ENERGY MGMT. GUIDELINES FOR PROVIDING INFORMATION ON FISHERIES FOR RENEWABLE ENERGY DEVELOPMENT ON THE ATLANTIC OUTER CONTINENTAL SHELF PURSUANT TO 30 CFR PART 585 1-2 (Mar. 27 2023) <a href="https://www.boem.gov/sites/default/files/documents/about-">https://www.boem.gov/sites/default/files/documents/about-</a>	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs. COMFIS-5 is an RP and project-

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	boem/Fishery-Survey-Guidelines.pdf] Rather than listing an entity responsible for enforcement of the proposed mitigation measure the Draft PEIS states that it is voluntary. [Footnote 73 NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 appx. G at G-7.] Again COP conditions should not be voluntary; BOEM can and should mandate that lessees follow the guidelines.	specific mitigation measures to reduce impacts will be considered during the COP-specific NEPA review.
BOEM-2024-0001-0423-0017	[bold: COMFIS-6] expands fisheries compensation mitigation to require compensation to shoreside businesses for losses indirectly related to project development. This is extremely troubling as tying businesses losses to the presence of wind turbines (much less specific projects) as opposed to transitory economic or market conditions or other causes would be extremely difficult. Before compensation is required for shoreside businesses a demonstrated loss caused by offshore wind should be shown and conditions should relate first to avoiding minimizing and mitigating measures with financial compensation only where the other measures in the hierarchy have proven insufficient. At best such a fund should be determined and funded through the regional administrative fund along the lines of the proposed Nine-State Regional Fisheries Compensation Fund[Footnote 3: See Nine Atlantic Coast States Scoping Document: Framework for Establishing a Regional Fisheries Compensation Fund Administrator for Potential Impacts to the Fishing Community from Offshore Wind Energy Development Revised April 13 2023. Potential losses to be considered for potential compensation from "up or downstream effects to shoreside fishing businesses" are included in the framework on page 15.] not on a project level. Additionally this AMMM would require that [italicized: "for losses to commercial and for-hire recreational fishermen the Fund must be based on the revenue exposure for fisheries."] Ocean Winds reminds BOEM that many of the studies that consider the impact that offshore wind will have to fisheries rely on the flawed assumption that would assume full exclusion for fishing with the Project Areas. In fact offshore wind projects have been designed to facilitate navigation and fishing activities. A grid layout is [bold: not] optimized for wind production. As such we believe and have been told directly by members of the fishing industry that fishing will	Thank you for your comment. BOEM agrees that compensatory mitigation is last step in the mitigation hierarchy. The project-specific COP NEPA stage will evaluate potential impacts on commercial fisheries and potential site-specific AMMM measures. COMFIS-6, Fisheries compensatory mitigation fund, allows for compensation to shoreside businesses for losses indirectly related to project development. Revenue exposure data compiled by NOAA/NMFS attempt to capture both commercial and party/charter information. In current draft T&Cs, these data are the minimum basis for Direct Compensation Program funding. BOEM anticipates that shoreside service expected exposed revenue be based off a multiplier on the commercial and for-hire recreational fishing revenues to ensure proper funds are available. However, it should be incumbent upon the shoreside business or service to verify its loss. Additional project- and site-specific analysis will be conducted during the COP-specific NEPA review, which may result in revised, additional, or different AMMM measures.

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	occur in the Project Areas. Assumptions to the contrary dramatically overstate the impact that the offshore wind industry will have on fisheries.	
BOEM-2024-0001-0347-0004-g	COMFIS-6: Fisheries Compensatory Mitigation is a complicated yet necessary component to OSW development. While ASGA fully supports projects inclusion of such funds for fishermen we have been frustrated by lack of a centralized and standardized process. We encourage BOEM and developers look to established fisheries compensation programs for lessons learned and continue assisting in the development of a regional/national framework.	Thank you for your comment.
BOEM-2024-0001-0383-0012	The Appendix G COMFIS-6 AMMM leaves the analysis for determining losses to shoreside businesses from the proposed projects to the developer. [Footnote 32: "For losses to shoreside businesses the Lessee will analyze the impacts on shoreside seafood businesses." See Appendix G at <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/NY%20Bight_DraftPEIS_AppG_Mitigation%20and%20Monitoring_508.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/NY%20Bight_DraftPEIS_AppG_Mitigation%20and%20Monitoring_508.pdf</a> p. G-7.] This is unacceptable. It is BOEM's responsibility under NEPA to analyze the socioeconomic impacts of actions that it is proposing. The AMMM details that the developer must submit a report of its analysis to BOEM subject to BOEM's approval but this takes the entire analysis process out of the public process and precludes public comment on the document/plan. This is unacceptable. Shoreside businesses such as Seafreeze Shoreside and Seafreeze Ltd. should have the opportunity to see how the analysis of impacts to our vessels is being conducted and the opportunity to comment on such; it should not be a process conducted behind closed doors between BOEM and developers. As part of the federal public process analyzing socioeconomic impacts mandated by NEPA the analysis should be conducted by BOEM and as part of the public NEPA process. Additionally the AMMM specifies that the Lessee may use BOEM's Draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries in developing its analysis for shoreside impacts. There are two problems with this: (1) The document is a Draft document which has never addressed the myriad of responses as to its inadequacies; a Draft should not be the authoritative definition of a NEPA mitigation measure and (2) One of the most	Thank you for your comment. COMFIS-6, Fisheries compensatory mitigation fund, also allows for compensation to shoreside businesses for losses indirectly related to project development. Revenue exposure data compiled by NOAA/NMFS attempt to capture both commercial and party/charter information. In current draft T&Cs, these data are the minimum basis for Direct Compensation Program funding. BOEM anticipates that shoreside service expected exposed revenue be based off a multiplier on the commercial and for-hire recreational fishing revenues to ensure proper funds are available. However, it should be incumbent upon the shoreside business or service to verify its loss. Additional project- and site-specific analysis will be conducted during the COP-specific NEPA review, which may result in revised, additional, or different AMMM measures. The lessees are encouraged to use BOEM's draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR 585. BOEM anticipates also recommending the guidance once it is finalized, which will help avoid, minimize, and mitigate impacts on fisheries.

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	<p>egregious sections of the Draft was its extremely errant section on shoreside impacts. We have attached our comments on the Draft inclusive of our comments on the uninformed and incorrect Draft assumptions regarding shoreside impacts as well as fishing impacts. The Draft simply cannot be used to estimate shoreside impacts. It is wrong. We reiterate the SBA's Office of Advocacy letter attached regarding BOEM's Draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries in which it states that BOEM must conduct a Regulatory Flexibility Act analysis on the impacts to small fishing businesses from its offshore wind development activities. This includes both fishing vessels as well as related shoreside businesses. That cannot be part of a developer analysis; that must be conducted by BOEM itself.</p>	
BOEM-2024-0001-0406-0021-e	<p>COMFIS-6 which would require each developer to establish and implement a fisheries compensatory mitigation fund. This process has historically been managed by state agencies and BOEM has previously stated that it lacks the authority to require contributions to any particular compensation fund. [Footnote 8: Request for Information Guidance for Mitigating Impacts to Commercial and Recreational Fisheries from Offshore Wind Energy Development (November 2021) at 4 available at <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/BOEM-2021-0083-0001.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/BOEM-2021-0083-0001.pdf</a>.] Moreover this AMMM measure also disregards the offshore wind industry's voluntary participation in the development of a regional fisheries compensation fund in collaboration with eleven Atlantic coast states and representatives from the fishing industry. [Footnote 9: See <a href="https://offshorewindpower.org/fisheries-mitigation-project">https://offshorewindpower.org/fisheries-mitigation-project</a>.] COSW acknowledges that the impacts and mitigation associated with onshore facilities should be analyzed under NEPA as a connected action and thus we support the general discussion of onshore impacts in the Draft PEIS. But as the Draft PEIS acknowledges "the location of landfalls and onshore facilities are unknown." Draft PEIS 2.1.2.11 (p.2-5). Because of this the Draft PEIS "describes the types of impacts from construction and operation of onshore components generally and largely defers the analysis of onshore components to the COP-specific NEPA documents." Id. Therefore consideration of</p>	<p>A new RP (COMFIS-7) was created in response to comments received on the Draft PEIS to encourage lessees' participation in the Fisheries Compensation Fund. BOEM does not preclude the lessees of the NY Bight from using a regional fund administrator, provided BOEM's requirements are met. BOEM recognizes the advantages of a single fund, yet also recognizes that a lessee may prefer to set the terms of a fund for its individual project. Project-specific details, including potential mitigation measures, will be analyzed at the COP-specific NEPA stage because project-specific details are out of scope for the PEIS. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are not part of the Proposed Action.</p>

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	non-jurisdictional AMMM measures should be deferred to the individual COP phase as well (with "adoption" of such measures being the responsibility of the relevant federal state and local agencies). Moreover BOEM's authority under OCSLA applies only on the OCS so BOEM cannot and should not commit itself to onshore mitigation measures through the PEIS.	
BOEM-2024-0001-0439-0046	<p>Measure ID: COMFIS-6 Measure Name: Fisheries compensatory mitigation Description: The Lessees must establish a compensation/mitigation fund (Fund) to compensate commercial and for-hire recreational fishermen for loss of income due to unrecovered economic activity resulting from displacement from fishing grounds due to project construction and operations. The Fund should also allow for compensation to shoreside businesses for losses indirectly related to project development. The Lessee may use BOEM's draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR 585 (Guidance) to aid it in establishing such a Fund. For losses to commercial and for-hire recreational fishermen the Fund must be based on the revenue exposure for fisheries. For losses to shoreside businesses the Lessee will analyze the impacts on shoreside seafood businesses. Shoreside businesses that may be impacted may include (but are not limited to): fishing gear suppliers and repair services vessel fuel and maintenance services ice and bait suppliers seafood processors and dealers and wholesale seafood distributors. The Lessee will be required to provide BOEM with its analysis (including any model outputs such as an IMPLAN model or other economic report) verifying the impacts on shoreside businesses and services. The Lessee must submit to BOEM a report that includes (1) a description of the structure of the Fund and (2) an analysis of the impacts of the expected development on shoreside businesses for a 45-day review and comment period at least 90 days prior to establishment of the Fund. The Lessee must resolve all comments on the report to BOEM's satisfaction before implementation of the Fund. The Lessee must then submit to BOEM evidence of the implementation of the Fund including: A description of any implementation details not covered in the report to BOEM regarding the mechanism established to compensate for losses to commercial</p>	<p>COMFIS-6, Fisheries compensatory mitigation fund, requires that lessees establish a compensation/mitigation fund to compensation commercial and for-hire recreational fishermen for loss of income resulting from displacement from fishing grounds due to project construction and operations. COMFIS-6 also allows for compensation to shoreside businesses for losses indirectly related to project development.</p> <p>Revenue exposure data compiled by NOAA/NMFS attempt to capture both commercial and party/charter information. In current draft T&amp;Cs, these data are the minimum basis for Direct Compensation Program funding. BOEM anticipates that shoreside service expected exposed revenue be based off a multiplier on the commercial and for-hire recreational fishing revenues to ensure proper funds are available. However, it should be incumbent upon the shoreside business or service to verify its loss.</p> <p>A new RP (COMFIS-7) was created in response to comments received on the Draft PEIS to encourage lessees' participation in the Fisheries Compensation Fund. BOEM does not preclude the lessees of the NY Bight from using a regional fund administrator, provided the requirements set forth from BOEM are met. BOEM recognizes the advantages of a single fund, yet also recognizes that a lessee may prefer to set the terms of a fund for its individual project.</p> <p>BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations.</p>

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	<p>and for-hire recreational fishermen and shoreside businesses resulting from all phases of the project development on the lease area (pre-construction construction operation and decommissioning);The Fund charter including the governance structure audit and public reporting procedures and standards for paying compensatory mitigation for impacts on fishers and related shoreside businesses from lease area development; and Documentation regarding the funding account including the dollar amount establishment date financial institution and owner of the account. ACP Comment: BOEM should defer to the planned multi-state offshore wind comprehensive fisheries compensatory mitigation fund being developed to ensure standardization of the claims process and mitigation across projects. Additional clarification is needed on shoreside businesses. Quantifying losses for shoreside businesses and compensating for those losses is very difficult. Before a condition includes required compensation for shoreside businesses a demonstrated loss should be shown. "For losses to commercial and for-hire recreational fishermen the Fund must be based on the revenue exposure". Basing calculations on revenue exposure seems to assume that commercial fishing would be excluded from offshore wind facilities which is not anticipated. That assumption may result in higher compensation levels than are expected to occur.</p>	
BOEM-2024-0001-0446-0009-b	<p>COMFIS-6 Fisheries Surveys Guidelines directs lessees to address certain criteria when designing pre during- and post-construction fisheries monitoring survey plans. But there are no evaluations or audits required for the administration of the Fisheries' compensatory mitigation fund. This fund is intended to "compensate commercial and for-hire recreational fishermen for loss of income due to unrecovered economic activity resulting from displacement from fishing grounds due to project construction and operations" but without some independent post-compensation assessment there will not be data to understand whether displacement occurred and whether the compensation effectively mitigated displacement impacts. There should be some-type of post-compensation audit.</p>	<p>Current T&amp;Cs note reporting requirements. While there can be differences between individual T&amp;Cs, the general requirements typically include providing the following on an annual basis: the fund charter (including the governance structure), audit and public reporting procedures, documentation regarding the funding account (including the dollar amount, establishment date, financial institution, and owner of the account), and standards for paying compensatory mitigation for direct impacts on commercial and for-hire fishers and related shoreside businesses resulting from all phases of project development on the lease area (post-COP pre-construction, construction, operation, and decommissioning), and the number of claims processed, approved, and denied. The lessee must also publicly report an annual audit.</p>

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		<p>In addition, BOEM recommends that lessees work with state and federal fisheries management agencies to explore the need and methods to monitor changes in fishing activity as a result of proposed offshore wind energy development. Separately, BOEM provides recommendations for conducting and reporting the results of baseline collection studies in separate guidelines: <a href="https://www.boem.gov/Survey-Guidelines/">https://www.boem.gov/Survey-Guidelines/</a> (per the Draft Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf). BOEM may also modify the measures at the COP-specific NEPA stage to tailor them to the characteristics of the proposed project and the site(s) of proposed activities, and to ensure conformity with project-specific consultations and authorizations.</p>
BOEM-2024-0001-0447-0006	<p>The Appendix G COMFIS-6 AMMM leaves the analysis for determining losses to shoreside businesses from the proposed projects to the developer. This is unacceptable. It is BOEM's responsibility under NEPA to analyze the socioeconomic impacts of actions that it is proposing. The AMMM details that the developer must submit a report of its analysis to BOEM subject to BOEM's approval but this takes the entire analysis process out of the public process and precludes public comment on the document/plan. This is unacceptable. Shoreside businesses should have the opportunity to see how the analysis of impacts to our vessels and supporting processing facilities is being conducted and the opportunity to comment on such; it should not be a process conducted behind closed doors between BOEM and developers. As part of the federal public process analyzing socioeconomic impacts mandated by NEPA the analysis should be conducted by BOEM and be part of the public NEPA process. Additionally the AMMM specifies that the Lessee may use BOEM's Draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries in developing its analysis for shoreside impacts. There are two problems with this: (1) The document is a Draft document which has never addressed the myriad of responses as to its inadequacies; a Draft should not be the authoritative definition of a NEPA mitigation measure and (2) One of the most egregious sections of the Draft was its extremely errant section on</p>	<p>Thank you for your comment.</p> <p>COMFIS-6, Fisheries compensatory mitigation fund, also allows for compensation to shoreside businesses for losses indirectly related to project development. Revenue exposure data compiled by NOAA/NMFS attempt to capture both commercial and party/charter information. In current draft T&amp;Cs, these data are the minimum basis for Direct Compensation Program funding. BOEM anticipates that shoreside service expected exposed revenue be based off a multiplier on the commercial and for-hire recreational fishing revenues to ensure proper funds are available. However, it should be incumbent upon the shoreside business or service to verify its loss. Additional project- and site-specific analysis will be conducted during the COP-specific NEPA review, which may result in revised, additional, or different AMMM measures.</p> <p>The lessees are encouraged to use BOEM's draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR 585. BOEM anticipates also recommending the guidance once it is finalized, which will help avoid, minimize, and mitigate impacts on fisheries.</p>

Comment No.	Comment	Response
	shoreside impacts. That cannot be part of a developer analysis; that must be conducted by BOEM itself.	
BOEM-2024-0001-0452-0012	H. Shortfalls of Fisheries Compensation Measure The fisheries compensatory mitigation measure (COMFIS-6) does not provide clear and adequate requirements for a compensation fund. Lessees "may use BOEM's draft Guidance for Mitigation Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf..."(emphasis added). [Footnote 18: Draft PEIS Appendix G p. G-7.] First RODA and numerous fishing associations businesses and community members have provided detailed comments on the shortcomings of the draft Guidance and incorporate those comments in full by reference above. It is unclear how a PEIS could rely on a draft agency document before the mandatory public comment process has been completed and before that document has incorporated any input from the affected parties. Second a developer could propose a compensation plan that varies from the BOEM's Guidance (which would only be supported by the fishing industry if it is significantly improved) or greatly undervalues the costs and losses associated with project development by developing an alternative plan. The vagueness of COMFIS-6 is concerning because it suggests that appropriate level of compensation funding is unlikely as it is left to the discretion of the developer. Furthermore it undermines BOEM's own argument that compensatory mitigation will drive a reduction in impacts to fisheries. How can BOEM claim that there will be a reduction in impacts through compensation if there are no clear requirements to provide sufficient funding much less any known calculation of what sufficient funding might even be. It bears repeating compensation must not be the primary means of mitigating impacts from offshore wind development.	Thank you for your comment. BOEM agrees that compensatory mitigation is last step in the mitigation hierarchy. The project-specific COP NEPA stage will evaluate potential impacts on commercial fisheries and potential site-specific AMMM measures. COMFIS-6, Fisheries compensatory mitigation fund, requires that lessees establish a compensation/mitigation fund to compensation commercial and for-hire recreational fishermen for loss of income resulting from displacement from fishing grounds due to project construction and operations. The lessees are encouraged to use BOEM's draft Guidance for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR 585. BOEM anticipates also recommending the guidance once it is finalized, which will help avoid, minimize, and mitigate impacts on fisheries.
BOEM-2024-0001-0452-0006	B. Over Reliance on Compensation. The draft PEIS states for commercial fisheries and for-hire recreational fishing under Alternative C "(t)he AMMM measures would compensate for loss of income due to unrecovered economic activity and to shoreside businesses for losses indirectly related to the expected development." [Footnote 13: Draft PEIS p. 2-32.] While RODA supports appropriate compensation for losses and increased costs to the fishing industry when those losses cannot otherwise be avoided	Thank you for your comment. BOEM agrees that compensatory mitigation is last step in the mitigation hierarchy. The project-specific COP NEPA stage will evaluate potential impacts on commercial fisheries and potential site-specific AMMM measures.

Comment No.	Comment	Response
	[Bold: compensation cannot be the primary recourse for impact reduction and mitigation.] "(A) reduction driven largely by the compensatory mitigation that would mitigate impacts on Commercial and recreational fishing operations" [Footnote 14: Id. p. 2-33.] demonstrates that BOEM's analysis is vastly overly reliant on compensation rather than mandated or even suggested steps to avoid minimize and mitigate through project design parameters or alternative mitigation programs to reduce impacts to fisheries.	
BOEM-2024-0001-0346-0005	3. The AMMMs in the Draft PEIS Do Nothing To Protect Fisheries or Fishing Grounds The AMMMs in the draft PEIS for commercial fishing are vague and weak especially when compared to alternatives BOEM considered and rejected without analysis. In a rare moment of candor the PEIS explained the reduction of projected fishery impacts from major to moderate following application of three AMMMs was driven "largely" by inclusion of a fishery compensation plan. (3.6.1-56) Compensation of course is the last step in the NEPA mitigation hierarchy it's the step to take when all else fails. The fishing industry has repeatedly asked BOEM to provide for effective AMMMs that could forestall the need for compensation. But the AMMMs do not achieve this goal. For instance the fisheries impact minimization alternative is labeled as considered and rejected because "AMMMs analyze the benefits of consistent turbine layouts across adjacent lease areas as well as increased spacing as ways to reduce impacts." (2- 20) However in the fisheries impact analyses under "presence of structures" the Draft PEIS explains these AMMMs as designed have little utility: MUL-23 and MUL-25 are designed to analyze turbine layout in order to resolve potential impacts on environmental resources including commercial fisheries These measures however are unlikely to change the impact rating of the IPF because the impact from long-term reef and hydrodynamic effects from the presence of structures would remain the same and would exist for any sited locations post-installation. Therefore these potential impacts are unlikely to differ under Alternative C as compared to Alternative B.	Thank you for your comment. Site-specific AMMM details will be analyzed at the COP-specific NEPA stage, including fishing grounds and EFH. Consultations will still happen at the COP-specific NEPA stage and additional AMMM measures may be added as a result of those consultations.
BOEM-2024-0001-0347-0004-h	OU-7: Again mitigating the impacts of OSW on federal fisheries Surveys is a primary concern of ours. Mitigation efforts for fisheries surveys must be scientifically sound and robust enough to preserve	Thank you for your comment. BOEM is continuing to work on federal fisheries survey mitigation and will continue to work with the lessees on implementing federal fisheries' survey guidance.

Comment No.	Comment	Response
	these surveys' time series. We have been encouraged by the efforts of NOAA Fisheries and BOEM to address this impact but time will tell how effective these efforts prove. We encourage innovative approaches that involve fishing communities to address the preclusion of traditional survey methods.	
BOEM-2024-0001-0439-0090	<p>Measure ID: OU-7 Measure Name: Federal Survey Mitigation Program Description: There are NMFS scientific surveys that overlap with wind energy development in the northeast region. Consistent with NMFS and BOEM survey mitigation strategy actions 1.3.1 1.3.2 2.1.1 and 2.1.2 in the NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy Northeast US Region (Hare et al. 2022) [Footnote 19: Hare J.A. Blythe B.J. Ford K.H. Godfrey-McKee S. Hooker B.R. Jensen B.M. Lipsky A. Nachman C. Pfeiffer L. Rasser M. and Renshaw K. 2022. NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast US Region. NOAA Technical Memorandum 292. Woods Hole MA. 33 pp.] within 120 days of COP approval the Lessee must submit to BOEM a survey mitigation agreement between NMFS and the Lessee. The survey mitigation agreement must describe how the Lessee will mitigate the project impacts on the NMFS surveys. The Lessee must conduct activities in accordance with such agreement. If the Lessee and NMFS fail to reach a survey mitigation agreement then the Lessee must submit a survey mitigation plan to BOEM and NMFS that is consistent with the procedures described below within 180 days of COP approval. BOEM will review the survey mitigation plan in consultation with NMFS Northeast Fisheries Science Center (NEFSC) and the Lessee must resolve comments to BOEM's satisfaction and must conduct activities in accordance with the plan. As soon as reasonably practicable but no later than 30 days after the issuance of the project's COP approval the Lessee must initiate coordination with NMFS NEFSC to develop the survey mitigation agreement described above. Mitigation activities specified under the agreement must be designed to mitigate the project impacts on the NMFS NEFSC surveys that overlap with the project. At a minimum the survey mitigation agreement must describe actions and the means to address impacts on the affected surveys due to the preclusion of sampling platforms and impacts on statistical designs. NMFS has determined that the</p>	Thank you for your comment. BOEM is continuing to work on federal fisheries survey mitigation and will continue to work with the lessees on implementing federal fisheries' survey guidance.

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	<p>project area is a discrete stratum for surveys that use a random stratified design. This agreement may also consider other anticipated project impacts on NMFS surveys such as changes in habitat and increased operational costs due to loss of sampling efficiencies. The survey mitigation agreement must identify activities that will result in the generation of data equivalent to data generated by NMFS' affected surveys for the duration of the project. The survey mitigation agreement must describe the implementation procedures by which the Lessee will work with NEFSC to generate share and manage the data required by NEFSC for each of the surveys impacted by the project as mutually agreed upon between the Lessee and NMFS/NEFSC. The survey mitigation agreement must also describe the Lessee's participation in the NMFS NEFSC Northeast Survey Mitigation Program to support activities that address regional-level impacts for the surveys. Previously Applied as a COP T&amp;C: Check Category: ACP Comment:120 days post COP-approval is not enough time for the lessee to come to a survey mitigation agreement with NMFS. This condition should be modified to provide more time for the development of the agreement. This measure requires that Federal survey mitigation is handled on a project-by-project basis. NOAA and BOEM should work with the offshore wind industry to incorporate lessons learned from the survey mitigation programs and agreements currently under development and then develop a comprehensive plan industry wide to ensure consistency in mitigation of Federal surveys.</p>	
BOEM-2024-0001-0332-0013	<p>6) Mitigation Financial Compensation Last but certainly not least I attended a meeting in July 12 2022 BOEM Draft Fisheries Mitigation Guidance Document Meeting and have tried to stay up to date on the process of this document. At the time the Fishing Tackle Retail Bait &amp; Tackle Tackle Manufacturers Boat Builders and ancillary businesses were completely left out of consideration for financial compensation in the event of lost income as a result of offshore wind development_Still today I believe this is completely absurd. Congress must give BOEM more direct authority to fund mitigation. The Economic Contributions of Recreational Fishing [Embedded Hyperlink: <a href="https://asafishing.org/economic-impacts-of-recreational-fishing/">https://asafishing.org/economic-impacts-of-recreational-fishing/</a>] by the American Sportfishing Association in partnership</p>	<p>Thank you for your comment. COMFIS-6, Fisheries compensatory mitigation, requires that lessees establish a compensation/mitigation fund that includes for-hire recreational fishermen. COMFIS-6 should also allow for compensation to shoreside businesses for losses indirectly related to project development.</p>

Comment No.	Comment	Response
	with the Southwicks Associates (for over 30 years the leading market research and economics firm specializing in hunting sportfishing and the outdoor recreation markets) must be included in the DPEIS. The recreational fishing industry is an economic engine that is very much overlooked by BOEM and the entire offshore wind development processes. DPEIS 3.6.1 2-32: "Fishing could experience substantial disruptions indefinitely even with implementation of the AMMM measures. The AMMM measures would compensate commercial and for-hire recreational fishermen for loss of income due to unrecovered economic activity and to shoreside businesses for losses indirectly related to the expected development; provide monetary compensation for lost gear or income. Other AMMM measures propose the development of monitoring plans or adaptive management plans that would increase data and knowledge that might facilitate the development of future mitigation. "Impacts very well take years to manifest and the fishing industry as a whole must be included in this mitigation package. FURTHERMORE mitigation payments must come from top line revenue ONLY! They should not be passed along to ratepayers!	
BOEM-2024-0001-0450-0056	5) Require reporting and appropriate disposition of recovered fishing gear. a) Report recovered fishing gear to NMFS and the relevant state agency. Consult with those agencies to arrange for the return or disposal of the gear at a suitable location prioritizing the physical recycling of materials (as opposed to incineration).	BOEM has reviewed the suggested AMMM measure and determined that it is out of scope for this PEIS because the RPDE does not consider floating offshore wind structures.
BOEM-2024-0001-0332-0013	6) Mitigation Financial Compensation Last but certainly not least I attended a meeting in July 12 2022 BOEM Draft Fisheries Mitigation Guidance Document Meeting and have tried to stay up to date on the process of this document. At the time the Fishing Tackle Retail Bait & Tackle Tackle Manufacturers Boat Builders and ancillary businesses were completely left out of consideration for financial compensation in the event of lost income as a result of offshore wind development. Still today I believe this is completely absurd. Congress must give BOEM more direct authority to fund mitigation. The Economic Contributions of Recreational Fishing [Embedded Hyperlink: <a href="https://asafishing.org/economic-impacts-of-recreational-fishing/">https://asafishing.org/economic-impacts-of-recreational-fishing/</a> ] by the American Sportfishing Association in partnership	The suggested AMMM measure is beyond the scope of this PEIS and beyond BOEM's jurisdictional authority.

Comment No.	Comment	Response
	with the Southwicks Associates (for over 30 years the leading market research and economics firm specializing in hunting sportfishing and the outdoor recreation markets) must be included in the DPEIS. The recreational fishing industry is an economic engine that is very much overlooked by BOEM and the entire offshore wind development processes. DPEIS 3.6.1 2-32: "Fishing could experience substantial disruptions indefinitely even with implementation of the AMMM measures. The AMMM measures would compensate commercial and for-hire recreational fishermen for loss of income due to unrecovered economic activity and to shoreside businesses for losses indirectly related to the expected development; provide monetary compensation for lost gear or income. Other AMMM measures propose the development of monitoring plans or adaptive management plans that would increase data and knowledge that might facilitate the development of future mitigation. "Impacts very well take years to manifest and the fishing industry as a whole must be included in this mitigation package. FURTHERMORE mitigation payments must come from top line revenue ONLY! They should not be passed along to ratepayers!	

**Table P.5.23-13. Responses to Substantive Comments on Mitigation and Monitoring—Birds and Bats (BIR, BB)**

Comment No.	Comment	Response
BOEM-2024-0001-0325-0006	Current understanding of bats in the offshore and activity rates do not account for potential attraction to offshore wind turbines. Attraction to turbines is thought to be a significant factor in the rate of fatalities observed at onshore wind turbines and may be more significant in the offshore environment (Guest et al. 2022 Jonasson et al. 2024). Any assessment of risk to bats must account for the potential of attraction. Early offshore wind energy development should study attractive forces of turbines for bat activity to help inform risk and minimization measures of future wind energy projects. Offshore wind turbine development poses risks to bat populations although the extent of risk is unclear. We encourage BOEM to include detailed survey and analysis of the risk that wind turbines pose to bats in these environments in the Proposed Action as well as require mitigation measures that minimize bat mortality.	Acoustic detection is already occurring for other offshore wind projects and this information will inform appropriate mitigation measures for the NY Bight project-specific COP NEPA reviews. Mitigation measures for onshore wind farms may not be appropriate for the offshore environment, including feathering turbine blades or curtailment. BB-3 requires that data be made available in NABat.

Comment No.	Comment	Response
	<p>These include: [Bold: Feather turbine blades below the manufacturer's cut-in speed.] The practice of feathering blades below manufacturer's cut-in speed can reduce fatalities of bats by approximately 30% at land-based wind energy facilities. Feathering is considered a best practice because it has negligible impact to wind energy production and reduces risk to bats. To maximize reduction of risk to bats feathering should be standard practice during all times of year when bats are active. Feathering turbines should be done day and night to maximize potential benefits for bats and birds. [Bold: Acoustically Monitor bat activity at a subset of turbines] monitor acoustic bat activity at turbines using ultrasonic acoustic detectors at a subset of turbines. Monitoring should take place day and night (Willmott et al. 2023). Data should be made available to NAbat and analyzed to describe acoustic exposure rates (Peterson et al. 2021). This would be similar for recommendations to monitor marine mammals using long term passive acoustics (MM-3). [Bold: Minimize mortality exposure through curtailment]. Currently curtailment is the only effective measure that reduces bat mortality at wind turbines and is effective across land-based wind energy facilities with an estimated average 33% decrease in bat mortality with every 1 m/s increase in cut-in speed above the manufacturer's cut-in speed (Whitby et al. 2021). The use of refined curtailment schedules (so-called "smart curtailment") that are based on real-time shut- down response to bat activity measured with either acoustic or video presence mayo reduce power loss compared to curtailment regimes based only on pre-defined wind-speed and seasonal activity periods. Efficacy of different curtailment regimes have yet to be tested in offshore environments and deserve further research attention. We do not encourage the incorporation of current acoustic deterrents as a feasible minimization tool. Acoustic deterrents have had mixed effects and in some cases act as an attractant and increase bat mortality (Schirmacher et al. 2016 Romano et al. 2019 Weaver et al. 2020). Furthermore ultrasonic acoustic deterrents have high attenuation rates and as such can transmit limited distances that will not cover the full rotor swept area and also may be perceived by bats at too close of a distance to allow them to effectively maneuver away from the turbine itself. Development and careful study of</p>	

Comment No.	Comment	Response
	acoustic deterrents that effectively cover the entirety of the rotor-swept area could be warranted but current technology does not appear sufficient. When alternative actions are evaluated the concept of no net loss should apply even if it changes the financial forecast or energy yield assessments of a project. For curtailment alternatives impact to electrical generation at proposed cut-in speeds can be evaluated using energy production curves and historical wind speed data.	
BOEM-2024-0001-0439-0033	Measure ID: BB-1 Measure Name: Immediate reporting of injured/dead ESA-listed bird and bats Description: Any occurrence of dead or injured ESA-listed birds or bats must be reported to BOEM BSEE and USFWS as soon as practicable (taking into account crew and vessel safety) ideally within 24 hours and no more than 72 hours after the sighting. If practicable the Lessees must carefully collect the dead specimen and preserve the material in the best possible state contingent on the acquisition of any necessary wildlife permits and compliance with the Lessees' health and safety standards. Previously Applied as a COP T&C: Check ACP Comment: BOEM should not be requiring or recommending the collection of dead birds. This is a significant health safety and environmental hazard as avian flu is a significant global concern.[Footnote 5: <a href="https://www.cdc.gov/flu/avianflu/index.htm">https://www.cdc.gov/flu/avianflu/index.htm</a> ] Dead birds should not be stored on offshore industry vessels.	The health and safety standards part of BB-1 offers flexibility to collection of dead birds. As stated in BB-1, the collection and preservation of dead specimens is “contingent on the acquisition of any necessary wildlife permits and compliance with the lessees’ health and safety standards.”
BOEM-2024-0001-0450-0077	Measure ID and Name: BB-1 Immediate Reporting of Injured/Dead ESA-listed Bird and Bats Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion):Any occurrence of dead or injured ESA-listed birds or bats must be reported to BOEM BSEE and USFWS as soon as practicable (taking into account crew and vessel safety) ideally within 24 hours and no more than 72 hours after the sighting. If practicable the Lessees must carefully collect the dead specimen and preserve the material in the best possible state contingent on the acquisition of any necessary wildlife permits and compliance with the Lessees' health and safety standards. Notes: We support this measure but note that BOEM should add the requirement that these reports be promptly made publicly available. See MUL-21 below regarding	BOEM is currently exploring options to facilitate sharing the information collected under BB-1.

Comment No.	Comment	Response
	employing best available technology which could facilitate better documentation of fatalities and injuries.	
BOEM-2024-0001-0439-0034	Measure ID: BB-2 Measure Name: Injured/dead bird and bat reporting Description: Lessees must submit an annual report covering each calendar year due by January 31 documenting any dead or injured birds or bats found on vessels and structures during construction operations and decommissioning in the preceding year. The report must be submitted to BOEM BSEE and USFWS. The report must contain the following information: the name of species date found location a picture to confirm species' identity (if possible) and any other relevant information. Carcasses with federal or research bands must be reported to the United States Geological Survey Bird Band Laboratory. ACP Comment: BOEM should be cognizant of the increasing number of reports being required. This creates a significant burden on lessees and as well as agencies who must review these reports. BOEM should analyze whether the new reporting requirements reduce impacts to resources and compare any benefits of those requirements to the burden imposed on industry.	Given the infancy of U.S. offshore wind development, there is some level of uncertainty regarding bird and bat collision risk (see more information in PEIS Appendix E). Therefore, it is important that BOEM continue to collect information regarding this risk, as the information will inform appropriate mitigation measures for future COP-specific NEPA reviews. BB-2 is an AMMM measure that has been included in previous BOEM COP approvals on the Atlantic OCS and will continue to be an AMMM measure that BOEM requires as U.S. offshore wind continues to develop.
BOEM-2024-0001-0450-0078	Measure ID and Name: BB-2 Injured/Dead Bird and Bat Reporting Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): Lessees must submit an annual report covering each calendar year due by January 31 documenting any dead or injured birds or bats found on vessels and structures during construction operations and decommissioning in the preceding year. The report must be submitted to BOEM BSEE and USFWS. The report must contain the following information: the name of species date found location a picture to confirm species' identity (if possible) and any other relevant information. Carcasses with federal or research bands must be reported to the United States Geological Survey Bird Band Laboratory. Notes: We support this measure but note that BOEM should add the requirement that these reports be promptly made publicly available. See MUL-21 below regarding employing best available technology which could facilitate better documentation of fatalities and injuries.	BOEM is currently exploring options to facilitate sharing the reports that would be submitted under BB-2.

Comment No.	Comment	Response
BOEM-2024-0001-0439-0035	<p>Measure ID: BB-3 Measure Name: Bird and bat monitoring</p> <p>Description: Bird and Bat Post-Construction Monitoring Plan. The Lessees must develop and implement a Bird and Bat Post-Construction Monitoring Plan (BBPCMP) based on the Lessees' Bird and Bat Post-Construction Monitoring Framework (BB-4) in coordination with BSEE USFWS and appropriate state agencies. Annual monitoring reports will be used to determine the need for adjustments to monitoring approaches consideration of new monitoring technologies and/or additional periods of monitoring. Prior to or concurrent with offshore construction activities the Lessees must submit a BBPCMP for BOEM BSEE and USFWS review. BOEM BSEE and USFWS will review the BBPCMP and provide any comments on the plan within 60 days of its submittal. The Lessees must resolve all comments on the BBPCMP to the satisfaction of BOEM and BSEE before implementing the plan and prior to the commissioning of WTG operations. The goals of the BBPCMP will be: (1) to advance understanding of how the target species utilize the offshore airspace and do (or do not) interact with the wind farm; (2) to improve the collision estimates from the Stochastic Collision Risk Assessment for Movement (SCRAM) (or its successor) for listed bird species; and (3) to inform any efforts aimed at minimizing collisions or other project effects on target species. Monitoring. The Lessees must conduct monitoring as outlined in the Bird and Bat Post-Construction Monitoring Plan which shall include use of radio-tags to monitor movement of ESA-listed birds in the vicinity of the project. The BBPCMP will allow for changing methods over time in order to regularly update and refine collision estimates for listed birds. Specific to this purpose the plan shall include an initial monitoring phase involving deployment of Motus radio tags on listed birds in conjunction with installation and operation of Motus receiving stations on WTGs in the Lease Area following offshore Motus recommendations (<a href="https://motus.org/groups/atlantic-offshore-wind/">https://motus.org/groups/atlantic-offshore-wind/</a>). The initial phase may also include deployment of satellite-based tracking technologies (e.g. Global Positioning System [GPS] or Argos tags). The monitoring shall also include digital aerial surveys to monitor avoidance behavior and densities. Annual Monitoring Reports. The Lessees must submit to BOEM (at</p>	Thank you for your comment. BB-3 has been revised.

Comment No.	Comment	Response
	<p>renewable_reporting@boem.gov) USFWS and BSEE (via TIMSWeb and at protectedspecies@bsee.gov) a comprehensive report after each full year of monitoring (pre- and post-construction) within 12 months. The report must include all data analyses and summaries regarding ESA-listed and non-ESA-listed birds and bats. BOEM BSEE and the USFWS shall use the annual monitoring reports to assess the need for reasonable revisions (based on subject matter expert analysis) to the BBPCMP. BOEM and BSEE reserve the right to require reasonable revisions to the BBPCMP and may require the use of new technologies as they become available for use in offshore environments. Post-Construction Quarterly Progress Reports. The Lessees must submit quarterly progress reports during the implementation of the BBPCMP to BOEM (at renewable_reporting@boem.gov) BSEE and USFWS by the 15th day of the month following the end of each quarter during the first full year that the project is operational. The progress reports must include a summary of all work performed an explanation of overall progress and any technical problems encountered. Monitoring Plan Revisions. Within 30 days of submitting the annual monitoring report the Lessees must meet with BOEM BSEE USFWS and appropriate state agencies to discuss the following: the monitoring results; the potential need for revisions to the BBPCMP including technical refinements or additional monitoring; and the potential need for any additional efforts to reduce impacts. If based on this annual review meeting BOEM in consultation with USFWS determines that revisions to the BBPCMP are necessary BOEM will require the Lessees to modify the BBPCMP. If the projected collision levels as informed by monitoring results deviate substantially from the effects analysis the Lessees must transmit recommendations for new mitigation measures and/or monitoring methods to BOEM. The frequency duration and methods for various monitoring efforts in future revisions of the BBPCMP will be determined adaptively based on current technology and the evolving weight of evidence regarding the likely levels of collision mortality for each listed bird species. The effectiveness and cost of various technologies/methods will be key considerations when revising the plan. Grounds for revising the BBPCMP include but are not limited to: (i) greater than expected</p>	

Comment No.	Comment	Response
	<p>levels of collision of listed birds; (ii) evolving data input needs for SCRAM (or its successor); (iii) changing technologies for tracking or otherwise monitoring listed birds in the offshore environment that are relevant to assessing collision risk; (iv) new information or understanding of how listed birds utilize the offshore environment and/or interact with wind farms; and (v) coordination and alignment of tracking monitoring and other data collection efforts for listed birds across multiple wind farms/leases on the OCS. The Lessees shall continue implementation of appropriate monitoring activities for listed birds (under the current and future versions of the BBPCMP) until one of the following occurs: (i) the WTGs cease operation; (ii) USFWS concurs that a robust weight of evidence has demonstrated that collision risks to all listed birds from WTG operations are negligible (i.e. the risk of take from WTG operation is discountable); or (iii) USFWS concurs that further data collection is unlikely to improve the accuracy or robustness of collision mortality estimates and is unlikely to improve the ability of BOEM and the Lessee to reduce or offset collision mortality. Operational Reporting (Operations). The Lessees must submit to BOEM (at <a href="mailto:renewable_reporting@boem.gov">renewable_reporting@boem.gov</a>) and BSEE (via TIMSWeb and at <a href="mailto:protectedspecies@bsee.gov">protectedspecies@bsee.gov</a>) an annual report summarizing monthly operational data calculated from 10-minute supervisory control and data acquisition data for all WTGs together in tabular format: the proportion of time the WTGs were operational (spinning at &gt;x revolutions per minute [rpm]) each month the average rotor speed (rpm) of spinning WTGs plus 1 standard deviation and the average pitch angle of blades (degrees relative to rotor plane) plus 1 standard deviation. Any operational data considered by the Lessee to be privileged or confidential must be clearly marked as confidential business information and will be handled by BOEM and BSEE in a manner consistent with 30 CFR 585.114. Raw Data. The Lessees must store the raw data from all avian and bat surveys and monitoring activities according to accepted archiving practices. Such data must remain accessible to BOEM BSEE and USFWS upon request for the duration of the lease. The Lessees must work with BOEM to ensure the data are publicly available. All avian tracking data (i.e. from radio and satellite transmitters) must be stored managed and made</p>	

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	<p>available to BOEM BSEE and USFWS following the protocols and procedures outlined in the agency document entitled Guidance for Coordination of Data from Avian Tracking Studies or its successor applicable at the time the particular data is being stored. All bat data must be stored in NBat. Previously Applied as a COP T&amp;C: Check ACP</p> <p>Comment: In general the NY Bight Draft PEIS states that for birds and bats presence in the offshore environment is anticipated to be low and the AMMM measures may not significantly reduce impacts. Therefore additional measures should not be necessary. Additional concerns with this measure include: Monitoring: Digital aerial surveys should not be a required monitoring measure and it has not been a standard measure for COP approval. Other monitoring measures can be more effective and less onerous. Annual Reports: BOEM/BSEE requirements for the use of new technologies is very open-ended and does not speak to economic and technical viability. Care needs to be taken to not double count quarterly and annual reports in agency tracking systems. Monitoring Plan Revisions: BOEM/BSEE requirements for the use of new technologies is very open-ended and does not speak to economic and technical viability. The rigorous fatality studies needed to estimate fatality rates cannot be done in an offshore environment. Operating Reporting: This is a huge dataset. Lessees should be able to provide data snapshots rather than the entirety of the operations.</p>	
BOEM-2024-0001-0446-0009-c	<p>b. Address inconsistencies between monitoring requirements for different AMMMs. Consider that AMMM measure BB-3 Bird and Bat Post-Construction Monitoring Plan sets ambitious goals (1) to [Bold: advance understanding] of how the target species utilize the offshore airspace (or do not) and interact (or do not) with the wind farm; (2) to [Bold: improve the collision estimates] from the Stochastic Collision Risk Assessment for Movement (SCRAM) (or its successor) for listed bird species; and (3) to [Bold; inform any efforts] aimed at minimizing collisions or other project effects on target species. See Vol. II Appendix G BB-3 at G-3-5.</p>	Thank you for your comment.
BOEM-2024-0001-0450-0013	<p>A. BB-3 Bird and Bat Monitoring. We strongly support expectations detailed in the Bird and Bat Post-Construction Monitoring Plan (BBPCMP) to require reporting that will enable deciding "the need for adjustments to monitoring approaches consideration of ne" w</p>	BOEM has revised BB-3 to include potential integrated multi-sensor systems. BOEM is currently monitoring the best available science and technology and could revisit identification of such at the project-level COP NEPA review and consultation stage.

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	<p>monitoring technologies and/or additional periods of monitoring" (emphasis supplied). [Footnote 41:Id.] Such adjustments help conform to best practices identified for implementing adaptive monitoring during environmental impact assessments of wind energy projects on wildlife. [Footnote 42: Copping AE et al. 2020. Enabling renewable energy while protecting wildlife: An ecological risk-based approach to wind energy development using ecosystem-based management values. Sustainability 12:9352.] And we agree fully with: "Grounds for revising [current and future versions of the BBPCMP] include but are not limited to: (i) greater than expected levels of collision of listed birds; (ii) evolving data input needs for SCRAM (or its successor); (iii) changing technologies for tracking or otherwise monitoring listed birds in the offshore environment that are relevant to assessing collision risk; (iv) new information or understanding of how listed birds utilize the offshore environment and/or interact with wind farms; and (v) coordination and alignment of tracking monitoring and other data collection efforts for listed birds across multiple wind farms/leases on the [Atlantic] OCS." [Footnote 43: BOEM 2024 p. G-4.] The NY Bight Draft PEIS requires Lessees to use Motus tags coupled with receiving stations to monitor certain ESA-listed birds in the project vicinity. [Footnote 44: Id.] Where possible GPS tracking also should be used for monitoring. Satellite-uploading GPS transmitters weighing 4 g are commercially available so any individual bird or bat weighing 133 g could be tracked using GPS without exceeding the conventionally accepted 3% body mass threshold for ideal transmitter weight. Transmitter weight will likely decrease even further over time as transmitters weighing 1 g (suitable for a 33 g animal) are in development. We are thus pleased to see that "[t]he initial phase [of the BBPCMP] may also include deployment of satellite-based tracking technologies (e.g. Global Positioning System [GPS] or Argos tags)." [Footnote 45: Id.] Good justifications may exist too for tracking non-listed avian species. In cases where welfare concerns or outright rarity discourage movement studies of listed species non-listed substitutes can be used (e.g. Common Terns for Roseate Terns). [Footnote 46: Loring PH Paton PWC McLaren JD Bai H Janaswamy R Goyert HF Griffin CR Sievert PR. 2019. Tracking offshore occurrence of Common</p>	

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	<p>Terns endangered Roseate Terns and threatened Piping Plovers with VHF arrays. [Online.] Available at <a href="https://espis.boem.gov/final%20reports/BOEM_2019-017.pdf">https://espis.boem.gov/final%20reports/BOEM_2019-017.pdf</a></p> <p>Similarly marine bird species for tagging priorities include those that are globally imperiled under the IUCN Red List but not listed under the U.S. ESA because of delays or because they breed elsewhere. [Footnote 47: Trindade Petrel <i>Pterodroma arminjoniana</i> about as rare as the recently ESA-listed Black-capped Petrel <i>P. hasitata</i> also occurs in U.S. waters but breeds elsewhere: Krger L Paiva VH Petry MV Montone RC Ramos JA. 2018. Population estimate of Trindade Petrel <i>Pterodroma arminjoniana</i> by the use of predictive nest habitat modelling. <i>Bird Conservation International</i> 28:197207.] Regardless of listing status species with high vulnerability to offshore wind or uncertain population trends should be included in tracking studies to better measure migratory connectivity and determine the appropriate locations for population monitoring. As articulated in this Draft PEIS the monitoring (under BB-3) [Footnote 48: BOEM 2024 p. G-4.] does not detail adequately how all bird or bat traffic around offshore wind energy infrastructure can be assessed e.g. for nocturnally-active species. [Footnote 49: Some nocturnal activity about migratory birds species however may be detected from the use of additional kinds of acoustic sensors that are deployed at the project site. In general acoustic-only systems are limited in ability to detect all bird taxa and they will not fully measure the actual migration or movement volumes as do and can radar-based detection systems.] Motus receiving towers while valuable can help identify only those fortuitously-tagged birds that happen to pass through the turbine area. Moreover acoustic sensors cannot reliably count large flocks identify migrating birds that do not call in-flight or separate those species that have very similar calls. [Footnote 50: Sanders CE Menhill DJ. 2014. Acoustic monitoring of nocturnally migrating birds accurately assesses the timing and magnitude of migration through the Great Lakes. <i>Condor</i> 116:371383.] Integrating acoustic data collection with multi-sensor camera technologies and radar systems is essential to fully detect aerial wildlife and to effectively identify all species as well as provide valuable supplementary data on the number of individuals flight speed and</p>	

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	<p>flight height. [Footnote 51: Horton KG et al. 2015. A comparison of traffic estimates of nocturnal flying animals using radar thermal imaging and acoustic recording. Ecological Applications 25:390401.] We are pleased to see avian displacement given a key emphasis in this PEIS: "monitoring shall also include digital aerial surveys to monitor avoidance behavior and densities." [Footnote 52: Monitoring BOEM 2024 p. G-4.] Previous research indicates marine birds respond to offshore wind infrastructure by: (1) displacement around (2) attraction to (3) or neutral association with a project's overall footprint. One large literature review of North American and European bird reactions around wind farms indicates displacement in offshore habitats to be two to three times more prevalent than attraction. [Footnote 53: Marques AT Batalha H Bernardino J. 2021. Bird displacement by wind turbines: Assessing current knowledge and recommendations for future studies. Birds 2:460475.] Across 71 peer-reviewed studies displacement distances from turbines (mean standard deviation) ranged from 116 64 m in the Anseriformes (ducks) 2517 5560 m in the Charadriiformes (gulls terns shorebirds) and 12062 6911 m in the Gaviiformes (loons). [Footnote 54: Id.] Deploying the appropriate study design(s) across all six lease areas is the key to success of detecting bird displacement using digital aerial surveys. To detect differences in avian distribution pre- and post-construction surveys must be designed and implemented to account for detection bias to adequately cover the lease area and its surroundings and to collect data at the necessary spatial and temporal resolutions. The BBPCMP for the NY Bight PEIS gives little or no mention of how to detect or estimate micro-avoidance i.e. ability of birds and bats to make last minute behavioral adjustments at small scales to avoid collision with rotors and other infrastructure. To better address both displacement and collision risk we strongly urge requirements for lessees to deploy integrated multi-sensor systems at project substations and/or at a subset of selected turbines. This will improve detection and identification of nocturnal migrants and promote better estimates of collision and avoidance rates. Designing multi-sensor systems [Footnote 55: Suryan R. et al. 2016. A Synchronized Sensor Array for Remote Monitoring of Avian and Bat Interactions with Offshore Renewable Energy Facilities (No.</p>	

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	DOE-OSU-EE0005363). Oregon State Univ. Corvallis OR; Lagerveld S et al. 2020. Assessing fatality risk of bats at offshore wind turbines. (No. C025/20). Wageningen Marine Research.] or using commercially available integrated monitoring systems that already combine acoustic detection with radar visual camera technologies thermographic and infrared camera imaging and very high frequency (VHF) detection [Footnote 56: Willmott JR Forcey G Vukovich M. 2023. New insights into the influence of turbines on the behaviour of migrant birds: implications for predicting impacts of offshore wind developments on wildlife. Journal of Physics: Conference Series 2507:012006.] serves to facilitate collecting information for the NY Bight PEIS BBPCMP. Integrated multi-sensor systems will enable better assessment; if monitoring results significantly deviate from the effects analysis lessees must then propose new mitigation measures and/or monitoring methods to BOEM. [Footnote 57: Monitoring Plan Revisions given in: BOEM 2024 p. G-4.]	
BOEM-2024-0001-0450-0079	Measure ID and Name: BB-3 Bird and Bat Monitoring Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): Bird and Bat Post-Construction Monitoring Plan. The Lessees must develop and implement a Bird and Bat Post-Construction Monitoring Plan (BBPCMP) based on the Lessees' Bird and Bat Post-Construction Monitoring Framework (BB-4) in coordination with BSEE USFWS and appropriate state agencies. Annual monitoring reports will be used to determine the need for adjustments to monitoring approaches consideration of new monitoring technologies and/or additional periods of monitoring. Prior to or concurrent with offshore construction activities the Lessees must submit a BBPCMP for BOEM BSEE and USFWS review. BOEM BSEE and USFWS will review the BBPCMP and provide any comments on the plan within 60 days of its submittal. The Lessees must resolve all comments on the BBPCMP to the satisfaction of BOEM and BSEE before implementing the plan and prior to the commissioning of WTG operations. The goals of the BBPCMP will be: (1) to advance understanding of how the target species utilize the offshore airspace and Bats Birds BOEM BSEE and USFWS ? Mitigation and Monitoring G-4 USDO I   BOEM Measure ID1 Measure Name Description Resource Area Mitigated Anticipated Enforcing Agency	Thank you for your comment. BOEM has revised BB-3 to include acoustic bat detectors and corrected the NABat typo.

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	<p>Previously Applied as a COP Term and Condition do (or do not) interact with the wind farm; (2) to improve the collision estimates from the Stochastic Collision Risk Assessment for Movement (SCRAM) (or its successor) for listed bird species; and (3) to inform any efforts aimed at minimizing collisions or other project effects on target species. Monitoring. The Lessees must conduct monitoring as outlined in the Bird and Bat Post-Construction Monitoring Plan which shall include use of radio-tags to monitor movement of ESA-listed birds in the vicinity of the project. The BBPCMP will allow for changing methods over time in order to regularly update and refine collision estimates for listed birds. Specific to this purpose the plan shall include an initial monitoring phase involving deployment of Motus radio tags on listed birds in conjunction with installation and operation of Motus receiving stations on WTGs in the Lease Area following offshore Motus recommendations (<a href="https://motus.org/groups/atlantic-offshore-wind/">https://motus.org/groups/atlantic-offshore-wind/</a>). The initial phase may also include deployment of satellite-based tracking technologies (e.g. Global Positioning System [GPS] or Argos tags). The monitoring shall also include digital aerial surveys to monitor avoidance behavior and densities. Annual Monitoring Reports. The Lessees must submit to BOEM (at <a href="mailto:renewable_reporting@boem.gov">renewable_reporting@boem.gov</a>) USFWS and BSEE (via TIMSWeb and at <a href="mailto:protectedspecies@bsee.gov">protectedspecies@bsee.gov</a>) a comprehensive report after each full year of monitoring (pre- and post-construction) within 12 months. The report must include all data analyses and summaries regarding ESA-listed and non-ESA-listed birds and bats. BOEM BSEE and the USFWS shall use the annual monitoring reports to assess the need for reasonable revisions (based on subject matter expert analysis) to the BBPCMP. BOEM and BSEE reserve the right to require reasonable revisions to the BBPCMP and may require the use of new technologies as they become available for use in offshore environments. Post-Construction Quarterly Progress Reports. The Lessees must submit quarterly progress reports during the implementation of the BBPCMP to BOEM (at <a href="mailto:renewable_reporting@boem.gov">renewable_reporting@boem.gov</a>) BSEE and USFWS by the 15th day of the month following the end of each quarter during the first full year that the project is operational. The progress reports must include a summary of all work performed an</p>	

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	<p>explanation of overall progress and any technical problems encountered. Monitoring Plan Revisions. Within 30 days of submitting the annual monitoring report the Lessees must meet with BOEM BSEE USFWS and appropriate state agencies to discuss the following: the monitoring results; the potential need for revisions to the BBPCMP including technical refinements or additional monitoring; and the potential need for any additional efforts to reduce impacts. If based on this annual review meeting BOEM in consultation with USFWS determines that revisions to the BBPCMP are necessary BOEM will require the Lessees to modify the BBPCMP. If the projected collision levels as informed by monitoring results deviate substantially from the effects analysis the Lessees must transmit recommendations for new mitigation measures and/or monitoring methods to BOEM. The frequency duration and methods for various monitoring efforts in future revisions of the BBPCMP will be determined adaptively based on current technology and the evolving weight of evidence regarding the likely levels of collision mortality for each listed bird species. The effectiveness and cost of various technologies/methods will be key considerations when revising the plan. Grounds for revising the BBPCMP include but are not limited to: (i) greater than expected levels of collision of listed birds; (ii) evolving data input needs for SCRAM (or its successor); (iii) changing technologies for tracking or otherwise monitoring listed birds in the offshore environment that are relevant to assessing collision risk; (iv) new information or understanding of how listed birds utilize the offshore environment and/or interact with wind farms; and (v) coordination and alignment of tracking monitoring and other data collection efforts for listed birds across multiple wind farms/leases on the OCS. The Lessees shall continue implementation of appropriate monitoring activities for listed birds (under the current and future versions of the BBPCMP) until one of the following occurs: (i) the WTGs cease operation; (ii) USFWS concurs that a robust weight of evidence has demonstrated that collision risks to all listed birds from WTG operations are negligible (i.e. the risk of take from WTG operation is discountable); or (iii) USFWS concurs that further data collection is unlikely to improve the accuracy or robustness of collision mortality estimates and is unlikely</p>	

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	<p>to improve the ability of BOEM and the Lessee to reduce or offset collision mortality. Operational Reporting (Operations). The Lessees must submit to BOEM (at <a href="mailto:renewable_reporting@boem.gov">renewable_reporting@boem.gov</a>) and BSEE (via TIMSWeb and at <a href="mailto:protectedspecies@bsee.gov">protectedspecies@bsee.gov</a>) an annual report summarizing monthly operational data calculated from 10-minute supervisory control and data acquisition data for all WTGs together in tabular format: the proportion of time the WTGs were operational (spinning at &gt;x revolutions per minute [rpm]) each month the average rotor speed (rpm) of spinning WTGs plus 1 standard deviation and the average pitch angle of blades (degrees relative to rotor plane) plus 1 standard deviation. Any operational data considered by the Lessee to be privileged or confidential must be clearly marked as confidential business information and will be handled by BOEM and BSEE in a manner consistent with 30 CFR 585.114.Raw Data. The Lessees must store the raw data from all avian and bat surveys and monitoring activities according to accepted archiving practices. Such data must remain accessible to BOEM BSEE and USFWS upon request for the duration of the lease. The Lessees must Mitigation and Monitoring G-5 USDO I   BOEM Measure ID1 Measure Name Description Resource Area Mitigated Anticipated Enforcing Agency Previously Applied as a COP Term and Condition work with BOEM to ensure the data are publicly available. All avian tracking data (i.e. from radio and satellite transmitters) must be stored managed and made available to BOEM BSEE and USFWS following the protocols and procedures outlined in the agency document entitled Guidance for Coordination of Data from Avian Tracking Studies or its successor applicable at the time the particular data is being stored. All bat data must be stored in NBat. Notes:</p> <ul style="list-style-type: none"> <li>• Support adaptive monitoring outlined in the BBPCMP including adjustments new technologies and extended monitoring periods. This is a critical addition to proceeding with offshore wind development when there are unknown impacts on birds and bats and no commercially available technologies to facilitate monitoring of impacts.</li> </ul>	

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	<ul style="list-style-type: none"> <li>• Many of the provisions in the BBPCMP are limited to birds. We highly recommend that BOEM extend these to include both listed and migratory bat species including understanding how species use the air space improve collision estimates Motus tagging adaptive monitoring based on collision estimates revising monitoring based on changing technologies or new information on interactions and continued monitoring based on USFWS input.</li> <li>• Advocate for revising the BBPCMP based on factors like collision rates evolving technologies and new bird behavior data. Recommend Motus tags with GPS tracking for ESA-listed birds and tracking of non-listed species vulnerable to offshore wind.</li> <li>• Stress integrating acoustic data with radar and camera technologies for comprehensive wildlife detection.</li> <li>• Encourage digital aerial surveys to monitor avian displacement and densities around wind farms.</li> <li>• Emphasize deploying integrated multi-sensor systems for improved nocturnal migrant detection and collision rate estimation.</li> <li>• Suggest using commercial integrated monitoring systems for efficient data collection.</li> <li>• Highlight the importance of proposing new mitigation measures if monitoring results deviate significantly.</li> <li>• BOEM should correct the typo of "NBat" to clarify that data should be stored in NABat which we support.</li> </ul>	
BOEM-2024-0001-0439-0036	<p>Measure ID: BB-4 Measure Name: Bird and bat monitoring plan framework Description: Lessees must develop a framework for a Bird and Bat Post-Construction Monitoring Plan (BB-3) in coordination with BOEM and USFWS. Lessees are encouraged to include this framework with their initial COP submission or subsequent updated versions. Category: GACP Comment: This is COP guidance and is not appropriate for inclusion as an AMMM and should be removed. The inclusion of this measure is counter to the proposed action which states that "BOEM would require as conditions of approval for activities proposed by lessees in COPs submitted for the NY Bight lease areas unless future COP-specific NEPA analysis shows that implementation of such measures is not warranted or effective." The</p>	<p>BB-4 is now classified as an RP and no longer considered as an AMMM measure (or part of the Proposed Action) in the PEIS. Refer to response to comment BOEM-2024-0001-0371-0004 for additional information on Alternative C, the updating of AMMM measures, and RPs.</p>

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	<p>PEIS intends to analyze measures that can be approved as terms and conditions of plan approval for individual project specific COPs. Since this measure dictates how a COP should be developed by its very nature it could not be implemented through terms and conditions of COP approval. If BOEM wishes to implement such a measure it should be proposed for inclusion in revised COP guidance and go through the guidance development process. This process should include outreach to industry and public review and comment. However this measure should not be required in any initial or early-stage COPs. As post-construction monitoring occurs many years after COP development a monitoring framework and plan would be more appropriate for development during ESA Section 7 consultation and potentially for final COP approval.</p>	
BOEM-2024-0001-0450-0014	<p>B. BB-4 Bird and Bat Monitoring Plan Framework Lessees are to develop a framework for the BBPCMP alongside their submission of a COP. [Footnote 58: BOEM 2024 p. G-5.] We encourage all lessees under the NY Bight PEIS to furnish as much detail as possible for this framework and to indicate where how and why the BBPCMP can be adapted continuously to any new information or technology during all phases of post-construction operations and monitoring.</p>	<p>Refer to response to comment BOEM-2024-0001-0439-0036. If BB-4 is applied during a project-specific COP NEPA review, then additional details can be considered.</p>
BOEM-2024-0001-0450-0080	<p>Measure ID and Name: BB-4 Bird and Bat Monitoring Plan Framework Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion):Lessees must develop a framework for a Bird and Bat Post-Construction Monitoring Plan (BB-3) in coordination with BOEM and USFWS. Lessees are encouraged to include this framework with their initial COP submission or subsequent updated versions.</p> <p>Notes:</p> <ul style="list-style-type: none"> <li>• Require lessees to develop a framework for the BBMCMP alongside their submission of a COP.</li> <li>• Encourage all lessees under the NY Bight PEIS to provide comprehensive detail for this framework. Emphasize the importance of indicating how and why the BBMCMP can be continuously adapted to new information or technology during all phases of post-construction operations and monitoring.</li> </ul>	<p>Refer to response to comment BOEM-2024-0001-0439-0036. If BB-4 is applied during a project-specific COP NEPA review, then additional details can be considered.</p>

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BOEM-2024-0001-0357-0042	With respect to the cumulative impact on migratory birds in Enclosure IV AMMM measures should include: 1. A minimum turbine spacing of at least two nautical miles to facilitate passage through the wind turbine complex to its nesting grounds and its other migration corridors.	Based on the current literature, and as cited in the PEIS, there is no evidence that 2 nautical miles would be better than the minimum 0.6- by 0.6-nautical-mile spacing analyzed in the PEIS RPDE. For details, see the description and summary results of the Madsen et al. (2012) and Vattenfall (2023) studies cited in PEIS Sections 3.5.3.3.3 and 3.5.3.4.1, respectively.
BOEM-2024-0001-0439-0038	Measure ID: BIR-1 Measure Name: Bird-Deterrent Devices and Plan Description: To minimize attracting birds to operating WTGs the Lessees must install bird perching-deterrent device(s) on each WTG and OSS. The Lessees must submit a plan to deter perching on offshore infrastructure by roseate terns and other marine birds for BOEM and BSEE to review in coordination with USFWS and with the FIR ("Bird Perching Deterrent Plan"). BOEM and BSEE will review the Bird Perching Deterrent Plan and provide any comments on the plan within 60 days of its submittal. The Lessees must resolve all comments on the Bird Perching Deterrent Plan to the satisfaction of BOEM and BSEE before implementing the plan The Bird Perching Deterrent Plan must include the type(s) and locations of bird perching-deterrent devices and a monitoring plan for the life of the project must allow for modifications and updates as new information and technology becomes available and must track the efficacy of the deterrents. The plan must be based on best available science regarding the effectiveness of perching-deterrent devices on minimizing collision risk. The location of bird perching-deterrent devices must be proposed by the Lessees based on best management practices applicable to the appropriate operation and safe installation of the devices. The Lessees must also provide the location and type of bird-deterrent devices as part of the as-built submittals to BSEE. Previously Applied as a COP T&C: Check Category: BACP Comment: This measure should be caveated to note that deterrent devices would be subject to safety and operational risk. Tracking the effectiveness of perching-deterrent devices and their impact of minimizing collision risk would be technically and economically challenging to the developer when there are already standard practices for perching-deterrents that have proven effectiveness. This measure is adding yet another plan requirement to the current long list and significant burden of plan development	BIR-1 is an AMMM measure that has been applied as previous terms of BOEM COP approvals for offshore wind development on the Atlantic OCS and will continue to be an AMMM measure that BOEM requires as U.S. offshore wind continues to develop. Through measures like BIR-1, BOEM will continue to collect information regarding bird collision risk with WTGs to inform appropriate mitigation measures for future COP-specific NEPA reviews.

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	requirements. BOEM should consider the environmental benefit of each plan requirement in the context of the burden it places on industry and determine whether there is sufficient environmental benefit to justify the need for the plan and level of burden being imposed.	
BOEM-2024-0001-0450-0015	<p>C. BIR-1 Bird-Deterrent Devices and Plan. We applaud steps taken to minimize perching at operating wind turbine generators (WTGs) and other offshore wind energy infrastructure a requirement to monitor effectiveness of such measures and any allowances for modifications and updates as new information and technology becomes available. [Footnote 59: BOEM 2024 p. G-5.] In addition to perching deterrents we support expanding other means to discourage birds and bats away from collision risk zones including minimizing the motion smear of spinning turbine blades and other forms of vision-based deterrence that exploits the limitations of avian visual capabilities. [Footnote 60: Martin GR Shaw JM. 2010. Bird collisions with power lines: failing to see the way ahead? Biological Conservation 143:2695 2702; Martin GR. 2022. Vision-based design and deployment criteria for power line bird diverters. Birds 3:410422; Martin GR Banks AN. 2023. Marine birds: vision-based wind turbine collision mitigation. Global Ecology and Conservation 42:e02386.] Should monitoring reveal the potential for significant impacts BOEM should consider brief temporary operational curtailment if periods of especially high collision risk can be identified with great accuracy i.e. predictably intense bird migration events can be forecast based on meteorological and avian radar data. [Footnote 61: Hayes MA Hooton LA Gilland KL Grandgent C Smith RL Lindsay SR Collins JD Schumacher SM Rabie PA Gruver JC Goodrich Mahoney J. 2019. A smart curtailment approach for reducing bat fatalities and curtailment time at wind energy facilities. Ecological Applications 29: e01881; Smallwood KS Bell DA. 2020. Effects of wind turbine curtailment on bird and bat fatalities. The Journal of Wildlife Management 84:685696; Brabant R Rumes B Degraer S. 2021. Occurrence of intense bird migration events at rotor height in Belgian offshore wind farms and curtailment as possible mitigation to reduce collision risk. Memoirs on the Marine Environment pp.</p>	<p>Based on current literature, there are few, if any, options to address the potential impacts on birds from motion smear. Recently, a study was conducted in Norway that indicated a reduction in bird fatalities if a turbine blade is painted black; however, the study was limited and, more importantly, FAA prohibits the painting of turbine blades other than light gray or pure white in the United States (see response to comment BOEM-2024-0001-0448-0009 for additional information). Regardless, as documented in the PEIS, bird presence on the Atlantic OCS is low and, therefore, BOEM anticipates a low risk to bird populations. Mitigation measures for onshore wind farms may not be appropriate for the offshore environment, including feathering turbine blades or curtailment, as they need to be proven effective in the onshore environments first (it is very difficult to study this offshore). As documented in PEIS Section 3.5.3, bird fatalities from onshore wind farms represent a fraction of a percentage of all bird deaths in the United States, and BOEM anticipates that bird fatalities from offshore wind farms will be substantially lower due to the much lower presence of birds offshore.</p>

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	4760. Royal Belgian Institute of Natural Sciences Operational Directorate Natural Environment.]	
BOEM-2024-0001-0450-0081	<p>Measure ID and Name: BIR-1 Bird-Deterrent Devices and Plan Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): To minimize attracting birds to operating WTGs the Lessees must install bird perching-deterrent device(s) on each WTG and OSS. The Lessees must submit a plan to deter perching on offshore infrastructure by roseate terns and other marine birds for BOEM and BSEE to review in coordination with USFWS and with the FIR ("Bird Perching Deterrent Plan"). BOEM and BSEE will review the Bird Perching Deterrent Plan and provide any comments on the plan within 60 days of its submittal. The Lessees must resolve all comments on the Bird Perching Deterrent Plan to the satisfaction of BOEM and BSEE before implementing the plan. The Bird Perching Deterrent Plan must include the type(s) and locations of bird perching-deterrent devices and a monitoring plan for the life of the project must allow for modifications and updates as new information and technology becomes available and must track the efficacy of the deterrents. The plan must be based on best available science regarding the effectiveness of perching-deterrent devices on minimizing collision risk. The location of bird perching-deterrent devices must be proposed by the Lessees based on best management practices applicable to the appropriate operation and safe installation of the devices. The Lessees must also provide the location and type of bird-deterrent devices as part of the as-built submittals to BSEE.</p> <p>Notes:</p> <ul style="list-style-type: none"> <li>• Continue steps to minimize perching at operating wind turbine generators (WTGs) and other offshore wind energy infrastructure.</li> <li>• Require monitoring of the effectiveness of perching deterrents and allow for modifications and updates as new information and technology become available.</li> <li>• Support expanding means to discourage birds and bats away from collision risk zones including minimizing the motion smear of spinning turbine blades and other forms of vision-based</li> </ul>	<p>Refer to response to comment BOEM-2024-0001-0450-0015. Through measures like BB-3, BOEM will continue to collect information regarding bird collision risk with WTGs to inform appropriate mitigation measures for future COP-specific NEPA reviews.</p>

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	deterrence. Urge appropriate consideration of brief temporary operational curtailment during periods of especially high collision risk based on accurate forecasts of intense bird migration events using meteorological and avian radar data	
BOEM-2024-0001-0451-0004	BIR-1 Bird-Deterrent Device Plan: To minimize attracting birds to operating WTGs the Lessees must install bird perching-deterrent device(s) on each WTG and OSS This AMMM is too prescriptive. There are minimal areas where birds can perch on the WTGs. Furthermore perching deterrents have not been demonstrated to decrease collision risk to listed avian species including Roseate Terns Red Knots and Piping Plovers or other avian species. In addition perching behavior is not associated with collision risk at offshore wind facilities nor has perching on offshore wind infrastructure by Roseate Terns or other listed avian species been widely observed. This AMMM could be better phrased to require leases to only install the devices where it may be expected to be reasonably effective and where installation can be done safely.	BOEM has revised BIR-1 to include language regarding effectiveness. Language regarding safe installation of bird-deterrent devices was already present in BIR-1.
BOEM-2024-0001-0439-0039	Measure ID: BIR-2 Measure Name: Light impact reduction for birds Description: Nothing in this condition supersedes or is intended to conflict with lighting marking and signaling requirements of FAA USCG or BOEM. The Lessee must use lighting technology that minimizes impacts on avian species to the extent practicable including lighting designed to minimize upward illumination. The Lessee must provide USFWS with a courtesy copy of the final Lighting Marking and Signaling Plan and the Lessee's approved application to USCG to establish Private Aids to Navigation (PATON).Category: G ACP Comment: This measure is duplicative of the BOEM Guidelines for Lighting and Marking of Structures Supporting Renewable Energy Development[Footnote 6: <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/2021-Lightning-and-Marking-Guidelines.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/2021-Lightning-and-Marking-Guidelines.pdf</a> ] and therefore should be removed. If BOEM would like to add lighting or marking requirements or provide clarification to them they should do so through the guidance development process. This process should include outreach to industry coordination with relevant Federal agencies including FAA and USCG and public review and comment.	This is a measure that has been applied in previous COP approvals and remains an AMMM measure in the Final PEIS. As noted in BIR-2, nothing in this condition supersedes or is intended to conflict with lighting marking and signaling requirements for FAA, USCG, or BOEM.

Comment No.	Comment	Response
BOEM-2024-0001-0450-0016	<p>D. BIR-2 Light Impact Reduction for Birds</p> <p>To mitigate light-driven attraction (phototaxis) on birds during assessment construction and operations in the NY Bight "measures that minimize lighting impacts on avian species [should] be implemented where feasible as approved by FAA [Federal Aviation Administration] BOEM USCG [U.S. Coast Guard] and other regulatory agencies." [Footnote 62: Maryland Offshore Wind Project Construction and Operations Plan. 2023 Appendix G: Mitigation and Monitoring p. G-6.] For coastal habitats and fauna these "lighting-related impacts will be minimized by using BMPs [best management practices] where feasible" including "minimizing lighting the onshore facility at night and down-shielded light fixtures to reduce the visibility" plus "aiming light upward and using the longest permissible off cycles[Footnote 63: Id. pp. G-9 G-18.] We strongly recommend red flashing FAA- approved lights and yellow flashing marine navigation lights on the WTGs instead of any constant white lights to further reduce bird attraction. As an additional BMP the NY Bight PEIS should extend this approach to include use of minimal lighting intensity on vessels wind turbine generators and electric service platforms wherever possible to reduce potential attraction of birds. Although lighting practices might reduce impacts to birds no provision for studying avian response(s) to lights has been made in the monitoring plan. [Footnote 64: BOEM 2024 p. G-5.]We stress that phototaxis i.e. disoriented attraction of birds drawn from some distance to lights on turbine towers creates conditions in which the bird numbers attracted scale as the square of the range from which they are drawn [Footnote 65: Deakin Z Cook A Daunt F McCluskie A Morley N Witcutt E Wright L Bolton M. 2022. A review to inform the assessment of the risk of collision and displacement in petrels and shearwaters from offshore wind developments in Scotland. Scottish Government: Riaghaltas na h-Alba. ISBN: 978-1-80525-029-6 (web only) <a href="https://www.researchgate.net/profile/Zoe-Deakin-2/publication/366139542_A_review_to_inform_the_assessment_of_the_risk_of_collision_and_displacement_in_petrels_and_shearwaters_from_offshore_wind_developments_in_Scotland/links/6393231e484e65005bf86842/A-review-to-inform-the-assessment-of-the-risk-of-collision-and-displacement-in-petrels-and-">https://www.researchgate.net/profile/Zoe-Deakin-2/publication/366139542_A_review_to_inform_the_assessment_of_the_risk_of_collision_and_displacement_in_petrels_and_shearwaters_from_offshore_wind_developments_in_Scotland/links/6393231e484e65005bf86842/A-review-to-inform-the-assessment-of-the-risk-of-collision-and-displacement-in-petrels-and-</a></p>	<p>Lessees are required to implement BOEM lighting and marking guidelines and USCG and FAA lighting and marking requirements. Nothing in BIR-2 is intended to conflict with these requirements. Red flashing FAA-approved lights and yellow flashing marine navigation lights have been recommended and required in previous COP approvals. BOEM will analyze lighting during the project-specific COP NEPA review.</p> <p>BOEM is unable to address lights on vessels through this Final PEIS. Navigation lights on vessels are fully within the purview of USCG and are federally mandated. They can only be modified/alterd via the <i>Federal Register</i> process and by USCG. The minimal lighting request is covered within BIR-2.</p> <p>The commenter should consider submitting study ideas related to phototaxis to BOEM's Environmental Studies Program, which develops, funds, and manages scientific research to inform policy decisions on the development of energy and mineral resources on the OCS. Calls for study ideas are typically announced annually in November. More information about Environmental Studies Planning can be found here: <a href="https://www.boem.gov/environment/environmental-studies/environmental-studies-planning">https://www.boem.gov/environment/environmental-studies/environmental-studies-planning</a>.</p>

Comment No.	Comment	Response
	<p>shearwaters-from-offshore-wind-developments-in- Scotland.pdf] thereby greatly increasing potential for adverse impacts (i.e. higher collision risk). In the context of collision with turbine blades the probability of collision is inflated by flux density as disoriented birds pass repeatedly through rotor swept areas. Research and monitoring are needed to measure distances at which this phototaxis operates in seabirds (especially the susceptible procellariiforms). [Footnote 66: At least 56 species of Procellariiformes more than one-third of them (24) imperiled are vulnerable to grounding caused by lights. See the synthesis in: Rodrguez A Holmes ND Ryan PG Wilson KJ Faulquier L Murillo Y Raine AF Penniman JF Neves V Rodrguez B Negro JJ. 2017. Seabird mortality induced by land based artificial lights. Conservation Biology 31:9861001.] Neither the avian risk assessment nor avian monitoring framework in the NY Bight PEIS suitably address the potential of high flux density caused by turbine-associated phototaxis.</p>	
BOEM-2024-0001-0450-0082	<p>Measure ID and Name: BIR-2 Light Impact Reduction for Birds  Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): Nothing in this condition supersedes or is intended to conflict with lighting marking and signaling requirements of FAA USCG or BOEM. The Lessee must use lighting technology that minimizes impacts on avian species to the extent practicable including lighting designed to minimize upward illumination. The Lessee must provide USFWS with a courtesy copy of the final Lighting Marking and Signaling Plan and the Lessee's approved application to USCG to establish Private Aids to Navigation (PATON). Notes: Measures to minimize lighting impacts on avian species during assessment construction and operations in the NY Bight should be implemented where feasible as approved by FAA BOEM USCG and other regulatory agencies.</p> <ul style="list-style-type: none"> <li>Lighting-related impacts on coastal habitats and fauna should be minimized using Best Management Practices (BMPs) such as minimizing onshore facility lighting at night using down-shielded light fixtures aiming light upward and utilizing the longest permissible off cycles.</li> </ul>	Refer to response to comment BOEM-2024-0001-0450-0016.

Comment No.	Comment	Response
	<ul style="list-style-type: none"> <li>• Red flashing FAA-approved lights and yellow flashing marine navigation lights should be used on wind turbine generators (WTGs) instead of constant white lights to reduce bird attraction.</li> <li>• The NY Bight PEIS should extend the minimal lighting intensity approach to include vessels wind turbine generators and electric service platforms wherever possible to reduce potential bird attraction.</li> <li>• Research and monitoring are needed to measure distances at which phototaxis operates in seabirds especially the susceptible procellariiforms as this phenomenon greatly increases the potential for adverse impacts including higher collision risk.</li> <li>• Neither the avian risk assessment nor avian monitoring framework in the NY Bight PEIS adequately address the potential impact of turbine-associated phototaxis.</li> </ul>	
BOEM-2024-0001-0439-0040	<p>Measure ID: BIR-3 Measure Name: Compensatory Mitigation Plan for Piping Plover and Red Knot Description: At least 180 days prior to the start of commissioning of the first WTG the Lessee must distribute a Compensatory Mitigation Plan to BOEM BSEE and USFWS for review and comment. BOEM BSEE and USFWS will review the Compensatory Mitigation Plan and provide any comments on the plan to the Lessee within 60 days of its submittal. The Lessee must resolve all comments on the Compensatory Mitigation Plan to BOEM and BSEE's satisfaction before implementing the plan and before commissioning of the first WTG. The Compensatory Mitigation Plan must provide compensatory mitigation actions to offset take of piping plover and red knot by the fifth year of WTG operation. The Compensatory Mitigation Plan must include: (a) detailed description of the mitigation actions including mitigation mechanisms (e.g. mitigation agreement applicant-proposed mitigation) (b) the specific location for each mitigation action (c) a timeline for completion of the mitigation measures (d) itemized costs for implementing the mitigation actions and (e) monitoring to ensure the effectiveness of the mitigation actions in offsetting take. Previously Applied as a COP T&amp;C: Check ACP Comment: Guidance and clarification is needed on compensatory mitigation actions for offsetting take in 5 years.</p>	<p>BOEM is continually reviewing this requirement. Guidance and clarification on BIR-3 in the context of a proposed project in the NY Bight lease areas can be provided at the project-specific COP NEPA review, including consideration of a post-implementation study.</p>

Comment No.	Comment	Response
	Compensatory mitigation should only be implemented after assessment of what the actual impacts are based on study.	
BOEM-2024-0001-0446-0009-d	AMMM measure BIR-3 Compensatory Mitigation for Piping Plover and Red Knot requires monitoring [Bold: to ensure the effectiveness of the mitigation actions] in offsetting take relative to Piping Plover and Red Knot. The type of hypothesis-driven monitoring in BB-3 and BIR-3 is intended to advance broader fundamental knowledge of phenomena being examined together with providing answers to specific questions needed for management decisions. See 2022-2023 Studies Development Plan at 4 [[Footnote 8: <a href="https://www.boem.gov/sites/default/files/documents/environmental-studies/SDP_2022-2023.pdf">https://www.boem.gov/sites/default/files/documents/environmental-studies/SDP_2022-2023.pdf</a> ] But all of the goals stated in BB-3 are not carried over to BIR-3 and the collective goals of both BB-3 and BIR-3 (advance understanding improve estimates inform efforts to minimize ensure effectiveness of mitigation) are not similarly found in any of the other monitoring requirements listed in Appendix G.	Thank you for the comment. BOEM will take this into consideration.
BOEM-2024-0001-0450-0017	E. BIR-3 Compensatory Mitigation for Piping Plover and Red Knot We are pleased to see requirements to offset any take of the ESA-listed Piping Plover and Red Knot no later than the fifth year of operations in the NY Bight. [Footnote 67: BOEM 2024 p. G-6.] Moreover we support requirements that an accompanying Compensatory Mitigation Plan include: detailed description of the mitigation actions and mechanisms specific location for each mitigation action a timeline for completing such mitigation measures itemized costs for implementing the mitigation actions and monitoring protocols sufficient to ensure effectiveness of mitigation actions to offset take. [Footnote 68: Id.] Because policy and technical aspects of compensatory mitigation are evolving so rapidly we urge BOEM and industry to adopt the most recent recommendations and guidance established for best management practices in this still-emergent field especially in marine settings. [Footnote 69: Croll DA Ellis AA Adams J Cook AS Garthe S Goodale MW Hall CS Hazen E Keitt BS Kelsey EC Leirness JB. 2022. Framework for assessing and mitigating the impacts of offshore wind energy development on marine birds. Biological Conservation 276:109795.] As a general principle we strongly urge compensatory mitigation (whether required or	Thank you for the comment. BOEM will take this into consideration. Details regarding the Compensatory Mitigation Plan are project specific and would be determined at the project-specific COP NEPA consultations stage, as appropriate.

Comment No.	Comment	Response
	voluntary) for bird species that are not imperiled but that may experience high rates of displacement or collision.	
BOEM-2024-0001-0450-0083	<p>Measure ID and Name: BIR-3 Compensatory Mitigation for Piping Plover and Red Knot Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): At least 180 days prior to the start of commissioning of the first WTG the Lessee must distribute a Compensatory Mitigation Plan to BOEM BSEE and USFWS for review and comment. BOEM BSEE and USFWS will review the Compensatory Mitigation Plan and provide any comments on the plan to the Lessee within 60 days of its submittal. The Lessee must resolve all comments on the Compensatory Mitigation Plan to BOEM and BSEE's satisfaction before implementing the plan and before commissioning of the first WTG. The Compensatory Mitigation Plan must provide compensatory mitigation actions to offset take of piping plover and red knot by the fifth year of WTG operation. The Compensatory Mitigation Plan must include:(a) detailed description of the mitigation actions including mitigation mechanisms (e.g. mitigation agreement applicant-proposed mitigation) (b) the specific location for each mitigation action (c) a timeline for completion of the mitigation measures(d) itemized costs for implementing the mitigation actions and (e) monitoring to ensure the effectiveness of the mitigation actions in offsetting take.</p> <p>Notes:</p> <ul style="list-style-type: none"> <li>• Requirements to offset any take of the ESA-listed Piping Plover and Red Knot by the fifth year of operations in the NY Bight are commendable.</li> <li>• Supporting requirements for an accompanying Compensatory Mitigation Plan including detailed mitigation actions specific locations timelines costs and monitoring protocols to ensure effectiveness.</li> <li>• Urging BOEM and industry to adopt the most recent recommendations and guidance for best management practices in compensatory mitigation especially in marine settings due to rapid policy and technical evolution in this field.</li> </ul>	<p>Thank you for the comment. BOEM will take this into consideration. Details regarding the Compensatory Mitigation Plan are project specific and would be determined at the project-specific COP NEPA consultations stage, as appropriate.</p>

Comment No.	Comment	Response
	<ul style="list-style-type: none"> <li>Strongly advocating for compensatory mitigation whether required or voluntary for bird species not imperiled but at risk of displacement or collision.</li> </ul>	
BOEM-2024-0001-0450-0018	<p>F. MUL-5 Low Noise Best Practices. The NY Bight PEIS for offshore marine birds can be informed by several different avian mapping data products e.g. the Marine-life Data and Analysis Team (MDAT) marine bird relative density and distribution models [Footnote 70: Curtice C Cleary J Shumchenia E Halpin PN. 2019. Marine-life Data and Analysis Team (MDAT) technical report on the methods and development of marine-life data to support regional ocean planning and management. Prepared on behalf of the Marine-life Data and Analysis Team (MDAT).] the Northwest Atlantic Seabird Catalog the Manomet Bird Observatory (MBO) Seabird and Cetacean Assessment Program (CSAP) database [Footnote 71: Menza C Kinland BP Dorfman DS Poti M Caldow C (eds.). 2012. A Biogeographic Assessment of Seabirds Deep Sea Corals and Ocean Habitats of the New York Bight: Science to Support Offshore Spatial Planning. NOAA Technical Memorandum NOS NCCOS 141. Silver Spring MD. 224 pp.] and incidental records from eBird among various other sources. In combination these data reveal that the NY Bight and adjacent wind energy lease areas host a diverse assemblage of diving marine birds including sea ducks alcids and loons some or all of which occur primarily during the fall winter or spring months. Although sound mitigation measures during offshore wind activities are usually aimed at impacts on marine mammals sea turtles fishes and invertebrates the underwater hearing abilities for diving bird taxa are found to possess hearing thresholds in the frequency band 14 kHz (comparable to seals and toothed whales). [Footnote 72: Hansen KA Maxwell A Siebert U Larsen ON Wahlberg M. 2017. Great cormorants (<i>Phalacrocorax carbo</i>) can detect auditory cues while diving. <i>Science of Nature</i> 104:17; McGrew KA Crowell SE Fiely JL Berlin AM Olsen GH James J Hopkins H Williams CK. 2022. Underwater hearing in sea ducks with applications for reducing gillnet bycatch through acoustic deterrence. <i>Journal of Experimental Biology</i> 225:jeb243953.] Diving marine birds foraging &lt;100 km away from seismic operations change their foraging direction during</p>	<p>MUL-5 is now considered an RP in the PEIS. Underwater noise impacts are addressed in the PEIS; the project-specific COP NEPA review would revisit all potential impacts for resources and may consider other AMMM measures that are not part of this PEIS.</p>

Comment No.	Comment	Response
	<p>acoustic disturbances and increase the distance between their feeding areas and the sound source. [Footnote 73: Pichegru L Nyengera R McInnes AM Pistorius P. 2017. Avoidance of seismic survey activities by penguins. Scientific Reports 7:18.] Indeed avoidance distances by diving seabirds to sounds generated from anthropogenic activities manifest at spatial scales up to tens of kilometers very similar to displacement distances reported in cetaceans during seismic surveys. [Footnote 74: Gordon J Gillespie D Potter J Frantzis A Simmonds MP Swift R Thompson D. 2003. A review of the effects of seismic surveys on marine mammals. Marine Technology Society Journal 37:1634.]The existing monitoring framework for the NY Bight PEIS ignores potential adverse injuries from acoustic disturbances to diving birds that might arise from project construction and/or operations. [Footnote 75: Monitoring and mitigation for diving birds is nowhere mentioned in conjunction with underwater acoustic disturbances during project construction activities in the NY Bight PEIS e.g. BOEM 2024 p. G-13.] We refer to lethal or sublethal injury from underwater sound pressure waves caused by high intensity acoustic pulses not to avoidance or temporary displacements that arise solely from avian changes in behavior. Because seabird taxa sensitive to this impact are more prevalent during winter minimization activities like seasonal curtailment may be justified to abate harm. Capable of diving to 140 m depths [Footnote 76: Wanless S Harris JA Morris MP. 1988. Diving behaviour of guillemot <i>Uria aalge</i> puffin <i>Fratercula arctica</i> and razorbill <i>Alca torda</i> as shown by radio-telemetry. Journal of the Zoological Society of London 216:7381.] Razorbills especially are known to flush readily from loud noises [Footnote 77: Lavers J Hipfner JM Chapdelaine G. 2020. Razorbill (<i>Alca torda</i>). In: Birds of the World v.2. Billerman SM (ed) Cornell Lab of Ornithology Ithaca NY USA. <a href="https://doi.org/10.2173/bow.razorb.01">https://doi.org/10.2173/bow.razorb.01</a>] they can occur during winter in the waters of the NY Bight region [Footnote 78: Williams KA Stenhouse IJ Adams EM Connelly EE Gilbert AT Duron M. 2015. Integrating novel and historical survey methods: a comparison of standardized boat-based and digital video aerial surveys for marine wildlife in the United States chapter 12 p. 7. </p>	

Comment No.	Comment	Response
	<p>Chapter-13-Williams-et-al-2015.pdf] and like other alcids they are vulnerable to both displacement and macro- avoidance. [Footnote 79: Robinson Willmott JC Forcey G Kent A. 2013. The Relative Vulnerability of Migratory Bird Species to Offshore Wind Energy Projects on the Atlantic Outer Continental Shelf: An Assessment Method and Database. Final Report to the U.S. Department of the Interior Bureau of Ocean Energy Management Office of Renewable Energy Programs. OCS Study BOEM 2013-207. 275 pp. ] Densities of diving birds peak during winter on inner and middle shelf habitats [Footnote 80: Figure 42 in Robinson Willmott J Forcey G Vukovich M McGovern S Clerc J Carter J. 2020. Ecological Baseline Studies of the US Outer Continental Shelf: Final Report. Gainesville FL. OCS Study BOEM 2021079 p. 39.] at least in this portion of the Atlantic OCS. Thus seasonal shifting of noisy operations may eliminate acoustic risks to diving birds. Other methods for sound abatement include: (1) establishing safety zones monitored by visual observers [Footnote 81: E.g. the scope of responsibilities for Protected Species Observers (PSOs) could be extended to cover marine birds. PSOs are already required in adjacent projects; see for example Ocean Wind 1 Offshore Wind Farm. 2023. Final Environmental Impact Statement Appendix H Mitigation and Monitoring pp. H-6 H-12.] or passive acoustics and that trigger shut-down or low-power operations if large diving marine bird flocks enter these zones (2) using noise reduction gear like bubble curtains around pile driving and (3) deploying other noise-source modifications or changes to operational parameters such as soft starts. [Footnote 82: Erbe C Dunlop R Dolman S. 2018. Effects of noise on marine mammals. Pp. 277309 in Effects of anthropogenic noise on animals. Springer New York NY.]</p>	

**Table P.5.23-14. Responses to Substantive Comments on Mitigation and Monitoring—Marine Mammals, Sea Turtles, Finfish, Invertebrates, and EFH (MM, ST, MMST, STF)**

Comment No.	Comment	Response
BOEM-2024-0001-0450-0027	<p>Section I. Vessel strike mitigation recommendations during all stages of offshore wind development1) Require mandatory vessel speed restrictions:</p> <p>a) All project-associated vessels must adhere to a 10-knot speed restriction at all times except for reasons of safety.</p> <p>b) When traveling in any area where one or more regulations establish a speed restriction either seasonally or dynamically all project-associated vessels must adhere to the most stringent (i.e. the lowest speed) regulation applicable to that area. Vessels must also comply with all applicable speed restrictions established by permit.</p> <p>c) All project-associated vessels must slow to 4 knots except for reasons of safety while transiting through areas of visible jellyfish aggregations or floating vegetation lines or mats to improve protection for sea turtles.</p>	<p>Thank you for your comment. MM-5 requires all offshore wind-related vessels transiting between the O&amp;M facility and the lease area to travel at or below 10 knots (18.5 kilometers per hour) during a Seasonal Management Area period, unless a Marine Mammal Vessel Strike Management Plan is submitted to BOEM, BSEE, and NMFS at least 180 days prior to the plan's implementation.</p>
BOEM-2024-0001-0450-0028	<p>2) Future alternative for vessel strike risk reduction:</p> <p>a) A 10-knot speed restriction is currently the only proven method for reducing the risk of lethal vessel strike of large whales. However the development of near real-time monitoring technologies for North Atlantic right whales and potentially other species of large whales may provide alternative tools for mitigating vessel strike risk in the future. When the best available science demonstrates that vessel strike avoidance methods can provide comparable or greater vessel strike risk reduction than a 10-knot speed restriction project proponents may develop an "Adaptive Plan" that modifies the 10-knot speed restriction. A determination that vessel strike avoidance methods can provide comparable or greater vessel strike risk reduction than a 10-knot speed restriction should be informed by the effectiveness criteria being developed by the joint Regional Wildlife Science Collaborative for Offshore Wind (RWSC) and Marine Technology Society Technology Workshop Series. [Footnote 17: RWSC "Technology Workshops" <a href="https://rwsc.org/technology-workshops/">https://rwsc.org/technology-workshops/</a>. This series is being funded by the Department of Energy with contributions from NOAA and BOEM.] Any Adaptive Plan must</p>	<p>Thank you for your comment. The vessel strike mitigation measure for marine mammals and sea turtles (MMST-14) details conditions for vessel transits associated with the projects, including speed restrictions. MM-5 requires all offshore wind-related vessels transiting between the O&amp;M facility and the lease area to travel at or below 10 knots (18.5 kilometers per hour) during a Seasonal Management Area period, unless a Marine Mammal Vessel Strike Management Plan is submitted to BOEM, BSEE, and NMFS at least 180 days prior to the plan's implementation. Additionally, a new RP was developed (MM-8; effectiveness criteria for vessel strike avoidance plans) that states lessees should include in their vessel strike avoidance plans effectiveness criteria being applied. The joint RWSC and Marine Technology Society Technology Workshop Series may be a good resource for such effectiveness criteria. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. These RPs are not part of the Proposed Action.</p>

Comment No.	Comment	Response
	be developed in consultation with the National Ocean and Atmospheric Administration (NOAA) Fisheries.	
BOEM-2024-0001-0450-0029	<p>3) Implement other vessel-related measures:</p> <p>a) Any designated crew lookouts must receive training on protected species identification including distinguishing between large whale species and observing for the presence of small cetaceans manatees and sea turtles; vessel strike minimization procedures; how and when to communicate with the vessel captain; and reporting requirements.</p> <p>b) All vessel crew members must be briefed on the identification of marine mammal and sea turtle species.</p> <p>c) Vessels should maintain a separation distance of 500 meters (m) from North Atlantic right whales and other large whale species. i) Any time a large whale is within 200 m of an underway vessel or the vessel encounters a feeding aggregation of large whales a full stop is required if safety permits. ii) The vessel should remain stationary until large whales have moved at least 200 m away from the vessel after which point the separation distance should again be maintained.</p> <p>d) Vessels should maintain a separation distance of 50 m from all other marine mammal species and from sea turtles.</p> <p>e) Vessels in transit must post at least one trained lookout or Protected Species Observer (PSO) [Footnote 18: Protected Species Observers are trained professionals who monitor for protected species so that the possibility of vessel strikes is minimized and to prevent or shut down any sound sources or other development activity causing harassment if protected species are detected within a certain distance. For the purposes of the recommendations set out in this document lessees operators and developers should use trained independent third-party Protected Species Observers (e.g. not construction personnel) that are approved by NOAA Fisheries. Protected Species Observers should have no duties other than to effectively implement mitigation and monitoring measures during site assessment construction and/or operations.] to search for marine mammals and sea turtles and notify the captain upon visual detection.[Footnote 19: Additional PSO requirements for vessels conducting site assessment and construction activities are provided</p>	AMMM measures MMST-14, MMST-7, and MMST-9 cover various aspects of vessel strike mitigation for marine mammals and sea turtles, PSO coverage, and training requirements.

Comment No.	Comment	Response
	<p>in Section II(5)(b) (site assessment and characterization activities) Section III(8)(b) (pile-driving activities) and Section IV(3)(b) (installation of quiet foundations).] i) If the trained lookout is a vessel crew member this must be their designated role and primary responsibility while the vessel is transiting. ii) If a whale is observed that may be a North Atlantic right whale but its species cannot be confirmed the vessel operator must assume that it is a North Atlantic right whale and take appropriate action for avoidance or stoppage. f) All vessels responsible for crew transport should use thermal detection systems to supplement visual monitoring of marine mammals during transit with at least one additional trained crew lookout or PSO monitoring the thermal detection system at all times. g) All vessels (developer- and contractor-operated) must maintain a functioning Automatic Identification System (AIS) onboard and operate this system at all times.</p>	
BOEM-2024-0001-0450-0030	<p>4) Additional vessel-related measures for the North Atlantic right whale:</p> <p>a) Develop and implement the project's schedule to reduce vessel density during the times of year when North Atlantic right whales are most likely to occur in lease areas and along vessel routes. Coordinate across different offshore wind development projects to reduce cumulative vessel density within the region to the extent practicable. i) Time periods of highest risk include but are not limited to during foraging and migration and times when mother-calf pairs pregnant females surface active groups (indicative of breeding or social behavior) or aggregations of three or more whales (indicative of feeding or social behavior) are or are expected to be present. Time periods should be defined based on the best available scientific information.</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&amp;Cs and AMMM measures not previously applied as T&amp;Cs. MM-7 states that lessees are encouraged to develop and implement the project's schedule to reduce vessel density during the times of year when NARWs are most likely to occur in lease areas and along vessel routes. Lessees are encouraged to coordinate across different offshore wind development projects to reduce cumulative vessel density within the region to the extent practicable.</p>
BOEM-2024-0001-0439-0052	<p>Measure ID: MM-5 Measure Name: NARW Strike Management Plan Description: All offshore wind-related vessels will travel at 10 knots (18.5 kilometers per hour) or less while transiting to and from U.S. ports to lease areas and while operating within lease areas unless a NARW Strike Management Plan is submitted to BOEM BSEE and</p>	<p>AMMM measure MM-5 has been reviewed by BOEM and updated. MM-5 requires all offshore wind-related vessels transiting between the O&amp;M facility and the lease area to travel at or below 10 knots (18.5 kilometers per hour) during a Seasonal Management Area period, unless a Marine Mammal Vessel Strike</p>

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	<p>NMFS prior to the Plan's implementation. The plan must provide details on how the required vessel and/or aerial-based surveys and PAM and/or other detection methodologies will be conducted to clear the vessel routes of NARW presence. The plan must also provide details on the vessel-based observer protocol on transiting vessels as well as any further efforts to minimize potential impacts. BOEM and BSEE will review the NARW Strike Management Plan and provide comments if any on the plan. The Lessee must resolve all comments on the NARW Strike Management Plan to BOEM and BSEE's satisfaction prior to implementing the plan. Category: D G B T/EACP Comment: NOAA NMFS has an ongoing rulemaking process (Proposed Amendment to the North Atlantic Right Whale Vessel Strike Reduction Rule) that would greatly expand the size and duration of 10-knot vessel speed requirements and expand the size of vessels for which it is applicable to. By applying this measure BOEM would be circumventing the active rulemaking process. Therefore BOEM should remove this measure. ACP provided detailed comments on the proposed rule[Footnote 8: <a href="https://www.regulations.gov/comment/NOAA-NMFS-2022-0022-21043">https://www.regulations.gov/comment/NOAA-NMFS-2022-0022-21043</a>] which among other comments provides alternatives to a one size fits all speed rule which can be applied here. How does this mitigation measure reduce impacts when this measure only applies to offshore wind vessels which comprise only 2% of vessel traffic? 98% of vessels are not held to any speed restrictions. In fact offshore wind vessels conduct visual monitoring during vessel transits which the other 98% of vessels do not do. Therefore the application of this mitigation measure when put into the context of past present and reasonably foreseeable activities would have a negligible difference in impacts. Mitigation measures should only be imposed if they can demonstrate a true reduction in impacts. Although there is no measurable reduction in impacts from the application of this measure it puts a significant burden on industry. Applying the 10-knot speed restriction year-round to all vessels regardless of length impedes the offshore wind industry ability to construct projects. This measure is not feasible reasonable or practical and if it was a year-round 10-knot vessel speed requirement for all vessels would be part of the vessel speed rule. In addition this measure conflicts with</p>	<p>Management Plan is submitted to BOEM, BSEE, and NMFS at least 180 days before the plan's implementation. Additionally, reference to the NMFS Proposed Rule, Amendments to the North Atlantic Right Whale Vessel Strike Reduction Rule, has been added.</p>

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	<p>MMST-13 which details a seasonal speed measure. This measure also means more time on the water and longer construction timeframes which increases health and safety risks to workers and exposure to marine mammals. In addition aerial surveys are expensive and are dangerous (leading cause of observer death in the field). If BOEM is to impose a 10-knot speed restriction it should only apply to vessels greater than 65 feet. Visual clearance from the vessel should be added to the potential methodologies for clearing routes of NARW presence. Other plans submitted for offshore wind projects have exceeded 14 rounds of comment review and time limits for plan approval must be incorporated. Finally this measure overlaps with many other plans/AMMMs. This plan contains elements of other plans and is simply being called out on its own. The measure is not well linked to other highly related measures such as dedicated watch standards situational awareness network tools vessel speed constraints measures to avoid sighted animals and the real time PAM requirements. BOEM should overhaul their approach to this topic as it is adding burden and confusion to both the agencies and developers with multiple individual plans and conditions that are inherently connected and in some cases duplicative or contradicting. The issue remains that offshore wind is carrying the financial burden of what is a maritime industry issue. It would be more acceptable if the federal government/USCG developed a requirement for all vessels to participate in a situational awareness network managed by the USCG with financial support spread across all maritime vessels. (in Puget Sound the USCG has started a 24/7 Whale Desk for this purpose).We recommend that all vessel strike related measures be condensed into one Vessel Strike Avoidance plan which allows for adaptability and optionality that includes flexibility in speed constraints. That plan should be tightly linked to the vessel speed rule and should not conflict with or exceed those requirements. Sea turtle and other larger whale measures should be included in this.</p>	
BOEM-2024-0001-0450-0060	<p>Measure ID and Name:MM-5: [Strikethrough: NARW Strike Management Plan] [<u>Underline: Vessel speed requirements</u>]  Proposed Changes to Measure Description (<u>underlined text indicates addition; strikethrough text indicates deletion</u>): “All offshore wind-related vessels will travel at 10 knots (18.5 kilometers per hour) or</p>	<p>AMMM measure MM-5 has been reviewed by BOEM and updated. MM-5 requires all offshore wind-related vessels transiting between the O&amp;M facility and the lease area to travel at or below 10 knots (18.5 kilometers per hour) during a Seasonal Management Area period, unless a Marine Mammal Vessel Strike</p>

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	<p>less while transiting to and from U.S. ports to lease areas, and while operating within lease areas, except for reasons of safety. When traveling in an area where one or more regulations establish a speed restriction, all project-associated vessels must adhere to the most stringent (i.e. the lowest speed) regulation applicable to that area. [Underline: A 10-knot speed restriction is currently the only proven method for reducing the risk of lethal vessel strike of large whales. However, the development of near real-time monitoring technologies for North Atlantic right whales, and potentially other species of large whales, may provide alternative tools for mitigating vessel strike risk in the future. When the best available science demonstrates that vessel strike avoidance methods can provide comparable or greater vessel strike risk reduction than a 10-knot speed restriction,<sup>1</sup> project proponents may develop an “Adaptive Plan” that modifies the 10-knot speed restriction. Any such Adaptive Plan must be developed in consultation with the National Ocean and Atmospheric Administration (NOAA) Fisheries.] [Strikethrough:; unless a NARW Strike Management Plan is submitted to BOEM, BSEE and NMFS prior to the Plan’s implementation. The plan must also provide details on the vessel-based observer protocol on transiting vessels as well as any further efforts to minimize potential impacts. BOEM and BSEE will review the NARW Strike Management Plan and provide comments if any on the plan. The Lessee must resolve all comments on the NARW Strike Management Plan to BOEM and BSEE's satisfaction prior to implementing the plan." ] Notes: We support the 10-knot speed restriction for all offshore wind-related vessels provided by MM-5. We recommend that BOEM disallow vessels from using monitoring or vessel strike avoidance measures (i.e. an "Adaptive Plan") in lieu of a 10-knot vessel speed restriction until best available science demonstrates that monitoring methods are indeed capable of providing equal or greater protection to NARW than a 10-knot speed restriction. This determination should be informed by the effectiveness criteria being developed by the joint Regional Wildlife Science Collaborane Technology Society Technology (<a href="https://rwsc.org/technology-workshops/">https://rwsc.org/technology-workshops/</a>).</p>	<p>Management Plan is submitted to BOEM, BSEE, and NMFS at least 180 days prior to the plan’s implementation. Additionally, reference to the NMFS Proposed Rule, Amendments to the North Atlantic Right Whale Vessel Strike Reduction Rule, has been added. A new RP was developed (MM-8; effectiveness criteria for vessel strike avoidance plans) that states lessees should include in their vessel strike avoidance plans effectiveness criteria being applied. The joint RWSC and Marine Technology Society Technology Workshop Series may be a good resource for such effectiveness criteria. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. RPs are not part of the Proposed Action.</p>

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BOEM-2024-0001-0450-0021	<p>A. MM-5 NARW Strike Management Plan and MMST-5 PSO Coverage of Expanded Clearance/Shutdown Zones<sup>1</sup>. Vessel strike risk reduction measures are insufficient As BOEM is well aware vessel collisions are one of the leading causes of large whale injury and mortality particularly for North Atlantic right whales and are a primary driver of multiple Unusual Mortality Events currently designated for other large whales. Furthermore current research shows that a collision between a whale and a vessel of any length traveling above a speed of 10 knots is highly likely to result in a lethal strike. [Footnote 93: Jessica V. Redfern et al. Estimating reductions in the risk of vessels striking whales achieved by management strategies BIOLOGICAL CONSERVATION 290: 110427 (2024); Dan E. Kelley et al. Assessing the lethality of ship strikes on whales using simple biophysical models MARINE MAMMAL SCI. 37: 25167 (2021).] This risk is likely higher for calves and juveniles. In the Draft PEIS BOEM proposes to require all offshore wind-related vessels to reduce vessel speed to 10 knots or less while transiting to and from U.S. ports to lease areas and while operating within lease areas unless a "NARW Strike Management Plan" is submitted to BOEM the Bureau of Safety and Environmental Enforcement (BSEE) and National Marine Fisheries Service (NMFS) prior to the Plan's implementation (MMST-5). The NARW Strike Management Plan is a required package of measures that aims to reduce vessel strikes which may include a 10-knot speed limit as well as other risk reduction measures such as the deployment of Protected Species Observers (PSOs) and is reviewed and approved by BOEM prior to its implementation. Additionally BOEM proposes to require all offshore wind-related vessels to travel at 10 knots or less when transiting to and from or within the wind development area from November 1<sup>st</sup> through May 14<sup>th</sup> [Footnote 94: We note that the November 1<sup>st</sup> to May 14<sup>th</sup> timeframe is inconsistent with the period when the Seasonal Speed Zone for the Atlantic described in the proposed amendments to the North Atlantic right whale vessel speed rule would be in effect (November 1<sup>st</sup> to May 30<sup>th</sup>). 87 Fed. Reg. 46921 (Aug. 1 2022).] with the exception of crew transfer vessels. BOEM will allow crew transfer vessels to travel at speeds in excess of 10 knots if there is at least one visual observer on duty at all times</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&amp;Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&amp;Cs, and 3) RPs. MMST-13 has been removed, as it is covered in MMST-14. MMST-14 has been updated to include Seasonal Management Areas and Dynamic Management Areas to cover when vessels are in the area. Additionally, in MM-5, reference to the NMFS Proposed Rule, Amendments to the North Atlantic Right Whale Vessel Strike Reduction Rule, has been added.</p>

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	<p>aboard the vessel to visually monitor for large whales and real time passive acoustic monitoring (PAM) is conducted. If a North Atlantic right whale is detected via visual observation or PAM within or approaching the transit route all crew transfer vessels must travel at 10 knots or less for the remainder of the day (MMST-13). When the requirements are considered collectively it can be concluded that the NARW Strike Management Plan under MMST-<sup>5</sup> can only be use<sup>d</sup> outside of the specific high risk dates of November 1st through May 14th and that crew transfer vessels are the only ves<sup>se</sup>l type that may <sup>e</sup>xceed a vessel speed limit of 10 knots between May 15th and October 31st if the required visual and acoustic monitoring measures are in effect. The vessel strike risk reduction measures proposed in the Draft PEIS are insufficient and we strongly disagree with BOEM's determination that vessel traffic impacts to North Atlantic right whales can be recategorized from "major" to "negligible" based on the AMMM Measures included in Alternative-C. [Footnote 95: DPEIS 3.5.6-90.] The vulnerability of North Atlantic right whales to vessel strikes the fact the species cannot withstand a single mortality per year if it is to ever recover and that individual whales may now be found virtually anywhere off the U.S. East Coast at any time of year due to climate-change driven shifts in their distribution means that vessel strike risk to North Atlantic right whales posed by the offshore wind industry must practically be eliminated. We remind BOEM that rather than being "known and highly effective" [Footnote 96: Id.] many of the AMMM measures proposed to reduce vessel strike risk to North Atlantic right whales are as yet unproven in reducing strike risk from offshore wind-associated vessels. North Atlantic right whales regularly occupy habitat outside of regulatory seasonal 10-knot slowdown areas and are at high risk apart from in the few instances where they are sighted and reported or detected acoustically and NOAA triggers a Dynamic Management Area or Slow Zone. While we agree that the AMMM Measures proposed will help to reduce vessel strike risk to North Atlantic right whales they are insufficient in entirely preventing the risk of a single lethal vessel strike to an individual whale even from a single offshore wind project. As such the risk of vessel traffic to North Atlantic right whales should be retained as "Major" in Alternative-C. Further BOEM</p>	

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	<p>must also address potential impacts to other protected large whale species and should pursue vessel strike reduction measures protective of all large whale species found in the New York Bight. Humpback whales in particular have been experiencing an Unusual Mortality Event since 2016 and vessel strikes have been determined to be one of the contributing factors. [Footnote 97:NOAA Fisheries. 2016-2024 Humpback Whale Unusual Mortality Event Along the Atlantic Coast. <a href="https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2024-humpback-whale-unusual-mortality-event-along-atlantic-coast">https://www.fisheries.noaa.gov/national/marine-life-distress/2016-2024-humpback-whale-unusual-mortality-event-along-atlantic-coast</a>.] Human-caused mortality of the humpback whale population that inhabits the New York Bight has now exceeded the potential biological removal level for the stock [Footnote 98:The potential biological removal (PBR) level is an estimate of the number of individuals that could be taken as a result of human activities while still allowing the stock to recover to or remain within the envelope of its optimum sustainable population size. The most recent PBR estimate for the Gulf of Maine stock of humpback whales is 22 and the number of human- caused mortalities documented in 2023 was 37. See NOAA Fisheries. 2016-2024 Humpback Whale Unusual Mortality Event Along the Atlantic Coast supra; and the April 2020 NOAA Fisheries Marine Mammal Stock Assessment for the Gulf of Maine Stock of humpback whales. <a href="https://s3.amazonaws.com/media.fisheries.noaa.gov/2020-10/2019%20humpback%20whale%20gulf%20of%20Maine%20508.pdf?null">https://s3.amazonaws.com/media.fisheries.noaa.gov/2020-10/2019%20humpback%20whale%20gulf%20of%20Maine%20508.pdf?null</a>.] putting in question their continued recovery. To improve vessel strike risk reduction for North Atlantic right whales and other large whales in the New York Bight BOEM should require that all project-associated vessels adhere to a 10-knot speed restriction at all times except for reasons of safety. When traveling in an area where one or more regulations establish a speed restriction all project-associated vessels must adhere to the most stringent (i.e. the lowest speed) regulation applicable to that area. For proposed changes to measures MM-5 and MMST- 13 see Attachment 2 table 1.A 10-knot speed restriction is currently the only proven method for reducing the risk of lethal vessel strike of large whales. However the development of near real-time monitoring technologies for North Atlantic right whales and potentially other species of large whales</p>	

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	<p>may provide alternative tools for mitigating vessel strike risk in the future. When the best available science demonstrates that vessel strike avoidance methods can provide comparable or greater vessel strike risk reduction than a 10-knot speed restriction BOEM may allow project proponents to develop an "Adaptive Plan" that modifies the 10-knot speed restriction. Any such Adaptive Plan must be developed in consultation with NOAA Fisheries. We recommend that the determination of the equivalency of a vessel strike avoidance measure with a 10-knot vessel speed limit be informed by the effectiveness criteria being developed by the joint Regional Wildlife Science Collaborative for Offshore Wind (RWSC) and Marine Technology Society Technology Workshop Series funded by the Department of Energy with contributions from NOAA and BOEM. [Footnote 99: <a href="https://rWSC.org/technology-workshops/">https://rWSC.org/technology-workshops/</a>.] For proposed changes to measure MUL-5 see Attachment 2 table 1.</p>	
BOEM-2024-0001-0439-0053	<p>Measure ID: MMST-1 Measure Name: Alternative Monitoring Plan Description: The Lessees must submit a single Alternative Monitoring Plan containing two parts: (1) Low-Visibility Pile-Driving Monitoring and (2) Nighttime Pile-Driving Monitoring for review by NMFS BSEE and BOEM prior to initiating foundation pile-driving activities. The purpose of this plan is to demonstrate that the Lessees can meet the visual monitoring criteria for the Level A harassment zone(s)/mitigation and monitoring zones plus an agreed-upon buffer zone (these combined zones are referred to henceforth as the nighttime and low-visibility clearance and shutdown zones). Both parts will demonstrate effective use of technologies that the Lessee is proposing to use for monitoring during nighttime and low-visibility conditions for instances during daylight hours when lighting or weather (e.g. fog rain sea state) prevent visual monitoring of the full extent of the clearance and shutdown zones. "Daytime" is defined as 1 hour after civil sunrise to 1.5 hours before civil sunset. The Alternative Monitoring Plan must also include measures for deploying additional observers or using PAM with the goal of ensuring the ability to maintain all clearance and shutdown zones in the event of unexpected poor visibility conditions. BOEM and BSEE will review the Alternative Monitoring Plan and provide comments if any on the plan. The Lessee must resolve all comments on the</p>	<p>Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures. MMST-1 has been revised and renamed to Reduced Visibility Monitoring Plan/Nighttime Pile Driving Monitoring Plan. Additional clarity has been provided in the measure, including that the lessee may submit one plan covering both reduced visibility and nighttime monitoring. Project-specific nighttime/low-visibility zones will be established on a project-by-project basis.</p>

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	<p>Alternative Monitoring Plan to BOEM and BSEE's satisfaction prior to implementing the plan.3. Low-Visibility Pile-Driving Monitoring: This part of the plan will need to identify the following components: identification of low-visibility monitoring devices (e.g. vessel-mounted thermal infrared [IR] camera systems handheld or wearable night vision devices [NVDs] handheld IR imagers) that would be used to detect marine mammal and sea turtle species relative to the established clearance and shutdown zones. The buffer zone distance and visual monitoring criteria will be developed by NMFS and BOEM at the project stage. The Low-Visibility Pile-Driving Monitoring part will be applicable during pile-driving activities conducted in poor or low-visibility conditions (i.e. instances where clearance and shutdown zones cannot be effectively monitored) hereafter termed low-visibility pile-driving. If during low-visibility pile-driving undetected animals are found in the clearance and/or shutdown zones low-visibility pile-driving activities must cease as soon as possible in consideration of human safety and applicable federal permitting agencies must be notified immediately. Low-visibility pile-driving must not restart until approval is provided by applicable federal permitting agencies unless visibility improves to normal conditions. Nighttime Pile-Driving Monitoring: This part of the plan must demonstrate the capability of the proposed monitoring methodology to detect marine mammals and sea turtles within the full extent of the established clearance and shutdown zones (i.e. species can be detected at the same distances and with similar confidence) with the same effectiveness as daytime visual monitoring (i.e. same detection probability). Only devices and methods demonstrated as being capable of detecting marine mammals and sea turtles to the maximum extent of the clearance and shutdown zones will be acceptable. This part of the plan will include the following components: identification of nighttime monitoring devices (e.g. vessel-mounted thermal IR camera systems handheld or wearable NVDs handheld IR imagers); the Lessee must discuss the efficacy (range and accuracy) of each device proposed for nighttime monitoring as demonstrated in field trials. The plan must include procedures and timeframes for notifying the applicable federal permitting agencies of the Lessee's intent to pursue</p>	

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	<p>nighttime foundation pile-driving and reporting procedures contacts and timeframes. The Nighttime Pile-Driving Monitoring part would be reviewed by both NMFS and BOEM. Factors for review will be developed by NMFS and BOEM at the project stage. If the Nighttime Pile-Driving Monitoring part of the plan is not accepted foundation pile-driving may commence only during daylight hours and no earlier than 1 hour after civil sunrise. Foundation pile-driving may not be initiated any later than 1.5 hours before civil sunset and may continue after dark only when the installation of that pile began during daylight hours and must proceed for human safety or installation feasibility reasons. If the Nighttime Pile-Driving Monitoring part of the plan is accepted in addition to foundation pile-driving commencing during daylight hours new piles may be initiated outside of the previously defined daylight hours (1 hour after civil sunrise to 1.5 hours before civil sunset) to meet schedule requirements. Category: B T/E DACP Comment: The condition is differentiating two different types of periods where visual monitoring could be constrained. BOEM should consult and agree with NMFS OPR on consistent naming of plans that both require. NMFS and BOEM need to provide the industry with clear guidelines and standards with regards to what the technology industry/developers need to provide/demonstrate to achieve "demonstrate effective use of technologies". Time limits for plan approvals must be incorporated. Visual monitoring for sea turtles during nighttime or low visibility is not practicable as the species is ectothermic and should not be included in this measure. The only known method is to illuminate the surrounding waters which will serve to attract marine species and birds/bats. NMFS does authorize mortality takes for sea turtles and this must be considered. The reference to sea turtles should be removed from this condition. In addition we recommend the following changes to the language within the measure: Requiring "full extent of the established clearance and shutdown zones" should be changed to "with the goal of monitoring the shutdown zones". In addition "with the same effectiveness as daytime visual monitoring" should be modified to state "with the goal of similar effectiveness as daytime visual monitoring." "Factors for review will be developed by NMFS and</p>	

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	<p>BOEM at the project stage": NMFS needs to provide clear and fair guidelines and standards that all developers and the tech industry can follow to demonstrate the effectiveness of alternative monitoring technologies. It's not feasible to wait until the "project stage" to determine the ability to pile at night. The measure states "...if during low-visibility pile-driving undetected animals are found in the clearance and/or shutdown zones..". This language is unclear -- if an animal is undetected how is it found? The measures states that "Low-visibility pile-driving must not restart until approval is provided by applicable federal permitting agencies unless visibility improves to normal conditions". This is not feasible and is why the PSOs are there. They make the determination that the zones are clear. This is inherently their job to do onsite. If this is a measure the activity will be constrained in a way never seen before for any project. Will there be a 24/7 line to reach applicable Federal permitting agencies? What happens on the weekends? Again this is the responsibility and authority of the PSOs to determine this and the agencies entrust them to implement the measures. PSOs regularly shut down and restart noise producing activities. NMFS and BOEM set the criteria and they implement. The language stipulates additional approvals before nighttime piling starts while understandable as a measure industry needs certainty of the time frame of those turn arounds. There should be 24/7 support and an established turnaround time for the approval so the opportunity given good nighttime conditions is not lost due to process delays.</p>	
BOEM-2024-0001-0450-0061	<p>Measure ID and Name: MMST-1: Alternative Monitoring Plan Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): "The Lessees must submit a single Alternative Monitoring Plan containing two parts: (1) Low-Visibility Pile-Driving Monitoring and (2) Nighttime Pile-Driving Monitoring for review by NMFS BSEE and BOEM prior to initiating foundation pile-driving activities. The purpose of this plan is to demonstrate that the Lessees can meet the visual monitoring criteria for the Level A harassment zone(s)/mitigation and monitoring zones plus an agreed-upon buffer zone (these combined zones are referred to henceforth as the nighttime and low visibility clearance and shutdown zones). Both parts will demonstrate effective use of</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all AMMM measures. MMST-1 has been renamed to Reduced Visibility Monitoring Plan/Nighttime Pile Driving Monitoring Plan for consistency. MM-2: Real-time PAM monitoring and alert system for baleen whales is an RP that encourages implementation of a near-real-time PAM system for the detection of baleen whales in the NY Bight during offshore wind development activities. In addition, another new RP (MM-8) was developed encouraging lessees to include in their vessel strike avoidance plans effectiveness criteria being applied.</p>

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	<p>technologies that the Lessee is proposing to use for monitoring during nighttime and low-visibility conditions for instances during daylight hours when lighting or weather (e.g. fog rain sea state) prevent visual monitoring of the full extent of the clearance and shutdown zones. "Daytime" is defined as 1 hour after civil sunrise to 1.5 hours before civil sunset. The Alternative Monitoring Plan must also include measures for deploying additional observers or using PAM with the goal of ensuring the ability to maintain all clearance and shutdown zones in the event of unexpected poor visibility conditions. BOEM and BSEE will review the Alternative Monitoring Plan and provide comments if any on the plan. The Lessee must resolve all comments on the Alternative Monitoring Plan to BOEM and BSEE's satisfaction prior to implementing the plan. 1. Low-Visibility Pile-Driving Monitoring: This part of the plan will need to identify the following components: identification of low visibility monitoring devices (e.g. vessel-mounted thermal infrared [IR] camera systems handheld or wearable night vision devices [NVDs] handheld IR imagers) that would be used to detect marine mammal and sea turtle species relative to the established clearance and shutdown zones. The buffer zone distance and visual monitoring criteria will be developed by NMFS and BOEM at the project stage. The Low-Visibility Pile-Driving Monitoring part will be applicable during pile-driving activities conducted in poor or low-visibility conditions (i.e. instances where clearance and shutdown zones cannot be effectively monitored) hereafter termed low-visibility pile-driving. If during low-visibility pile-driving undetected animals are found in the clearance and/or shutdown zones low-visibility pile-driving activities must cease as soon as possible in consideration of human safety and applicable federal permitting agencies must be notified immediately. Low-visibility pile-driving must not restart until approval is provided by applicable federal permitting agencies unless visibility improves to normal conditions.2. Nighttime Pile-Driving Monitoring: This part of the plan must demonstrate the capability of the proposed monitoring methodology to detect marine mammals and sea turtles within the full extent of the established clearance and shutdown zones (i.e. species can be detected at the same distances and with similar confidence) with the same effectiveness as daytime</p>	<p>BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. RPs are not part of the Proposed Action.</p>

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	<p>visual monitoring (i.e. same detection probability). Only devices and methods demonstrated as being capable of detecting marine mammals and sea turtles to the maximum extent of the clearance and shutdown zones will be acceptable. This part of the plan will include the following components: identification of nighttime monitoring devices (e.g. vessel-mounted thermal IR camera systems handheld or wearable NVDs handheld IR imagers); the Lessee must discuss the efficacy (range and accuracy) of each device proposed for nighttime monitoring as demonstrated in field trials. [Strikethrough: The plan must include procedures and timeframes for notifying the applicable federal permitting agencies of the Lessee's intent to pursue nighttime foundation pile-driving and reporting procedures contacts and timeframes. The Nighttime Pile-Driving Monitoring part would be reviewed by both NMFS and BOEM. Factors for review will be developed by NMFS and BOEM at the project stage. If the Nighttime Pile-Driving Monitoring part of the plan is not accepted] Foundation pile-driving may commence only during daylight hours during times of good visibility and no earlier than 1 hour after civil sunrise. Foundation pile-driving may not be initiated any later than 1.5 hours before civil sunset and may continue after dark only when the installation of that pile began during daylight hours and must proceed for human safety or installation feasibility reasons. [Strikethrough: If the Nighttime Pile Driving Monitoring part of the plan is accepted in addition to foundation pile-driving commencing during daylight hours new piles may be initiated outside of the previously defined daylight hours (1 hour after civil sunrise to 1.5 hours before civil sunset) to meet schedule requirements.] However the development of near real-time monitoring technologies may provide alternative monitoring tools to allow the commencement of pile-driving at night in the future. When the best available science demonstrates that nighttime monitoring tools are as effective as daytime monitoring in good visibility conditions at detecting marine mammals and sea turtles during pile-driving activities[Footnote 2 We recommend this determination be informed by the effectiveness criteria being developed by the joint Regional Wildlife Science Collaborative for Offshore Wind (RWSC) and Marine Technology Society Technology Workshop Series being funded by the</p>	

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	<p>Department of Energy with contributions from NOAA and BOEM. <a href="https://rwsc.org/technology-workshops/">https://rwsc.org/technology-workshops/</a>.) project proponents may develop an Alternative Monitoring Plan that allows pile-driving activities to commence at nighttime subject to approval by NMFS and BOEM. "Notes: We recommend that BOEM modify measure MMST-1 to disallow lessees from initiating pile-driving activities during periods of low visibility and at night under an Alternative Monitoring Plan. Presently alternative monitoring methods have insufficient capability to detect marine mammals and sea turtles during periods of low visibility and at night. We recommend that BOEM disallow initiation of pile-driving activities during periods of low visibility or at night until the best available science demonstrates that low visibility and nighttime monitoring tools are as effective as daytime monitoring in good visibility conditions at detecting marine mammals and sea turtles. This determination should be informed by the effectiveness criteria being developed by the joint Regional Wildlife Science Collaborative Technology Society Technology (<a href="https://rwsc.org/technology-workshops/">https://rwsc.org/technology-workshops/</a>).</p>	
BOEM-2024-0001-0469-0021	<p>AMMM measure MMST-12 outlines shutdown standards depending on the type of equipment and animal. Regarding sea turtles "there is no need to wait for the turtle to leave the pre-start clearance zone and no need to wait 30 minutes if not detected after the initial sighting before turning the source back on after a shutdown (i.e. it can be considered a brief "pause")". [Footnote 74: Id. at G-16.] This approach is too lax given that little research has been done on sea turtle hearing and population density surveys are lacking. [Footnote 75: NEW YORK BIGHT DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT supra note 5 appx. E.; L. Bennun et al supra note 42.] Moreover all the sea turtle species that frequent the New York Bight are endangered. [Footnote 76: See N.Y. STATE DEP'T ENV'T CONSERVATION Protecting and Conserving Marine Life <a href="https://dec.ny.gov/nature/waterbodies/oceans-estuaries/ocean-action-plan/protecting-conserving-marine-life">https://dec.ny.gov/nature/waterbodies/oceans-estuaries/ocean-action-plan/protecting-conserving-marine-life</a> (last visited Mar. 13 2024).] In order to prevent adverse acoustic impacts and/or vessel strike vessels should wait for a sea turtle to leave the pre-start clearance zone and wait thirty (30) minutes before resuming the use of acoustic equipment.</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all AMMM measures. The review resulted in many revisions, including MMST-12, which now includes sea turtles in the shutdown standards.</p>

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BOEM-2024-0001-0439-0057	<p>Measure ID:MMST- 13Measure Name: Vessel speed requirements November 1through May 14Description:From November 1 through May 14 all vessels must travel at 10 knots (18.5 kilometers per hour) or less when transiting to/from or within the wind development area with the exception of crew transfer vessels as described below. From November 1 through May 14 crew transfer vessels may travel at more than 10 knots (18.5 kilometers per hour) if there is at least one visual observer on duty at all times aboard the vessel to visually monitor for large whales and real-time PAM is conducted. If a NARW is detected via visual observation or PAM within or approaching the transit route all crew transfer vessels must travel at 10 knots (18.5 kilometers per hour) or less for the remainder of that day. Previously Applied as a COP T&amp;C: Category: D G J BACP Comment: NOAA NMFS has an ongoing rulemaking process (Proposed Amendment to the North Atlantic Right Whale Vessel Strike Reduction Rule) that would greatly expand the size and duration of 10-knot vessel speed requirements and expand the size of vessels for which it is applicable to. By applying this measure BOEM would be circumventing the active rulemaking process and may end up with a requirement that conflicts with the final rule. The result would be one set of requirements for offshore wind and another set of requirements for every other vessel on the OCS. This measure also conflicts with MM-5. Therefore BOEM should remove this measure. ACP provided detailed comments on the proposed rule[Footnote 9: <a href="https://www.regulations.gov/comment/NOAA-NMFS-2022-0022-21043">https://www.regulations.gov/comment/NOAA-NMFS-2022-0022-21043</a>] which among other comments provide alternatives to a one size fits all speed rule.</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included consolidating and removing redundant components of AMMM measures. MMST-13 has been removed, as it is covered in MMST-14. MMST-14 has been updated to include Seasonal Management Areas and Dynamic Management Areas to cover when vessels are in the area. MM-5 requires all offshore wind-related vessels transiting between the O&amp;M facility and the lease area to travel at or below 10 knots (18.5 kilometers per hour) during a Seasonal Management Area period, unless a Marine Mammal Vessel Strike Management Plan is submitted to BOEM, BSEE, and NMFS at least 180 days prior to the plan's implementation. Additionally, in MM-5, reference to the NMFS Proposed Rule, Amendments to the North Atlantic Right Whale Vessel Strike Reduction Rule, has been added.</p>
BOEM-2024-0001-0450-0064	<p>Measure ID and Name:MMST-13:Vessel speed requirements November 1through May 14 Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion):"From November 1 through May 14 all vessels must travel at 10 knots (18.5 kilometers per hour) or less when transiting to/from or within the wind development area.[Strikethrough: with the exception of crew transfer vessels as described below. From November 1 through May 14 crew transfer vessels may travel at more than 10 knots (18.5 kilometers per hour) if there is at least one visual observer on duty at all times aboard the</p>	<p>Based on comments received on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions that included consolidating and removing redundant components of AMMM measures. MMST-13 has been removed, as it is covered in MMST-14. MMST-14 has been updated to include Seasonal Management Areas and Dynamic Management Areas to cover when vessels are in the area. MM-5 requires all offshore wind-related vessels transiting between the O&amp;M facility and the lease area to travel at or below 10 knots (18.5 kilometers per hour) during a Seasonal Management Area period, unless a</p>

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	<p>vessel to visually monitor for large whales and real-time PAM is conducted. If a NARW is detected via visual observation or PAM within or approaching the transit route all crew transfer vessels must travel at 10 knots (18.5 kilometers per hour) or less for the remainder of that day."] Notes: We support the 10-knot speed restriction for all offshore wind-related vessels provided by MM-5 (see above). We recommend that BOEM apply a 10-knot speed restriction to all vessels during the full year including crew transfer vessels. Therefore we recommend that BOEM remove the exception from the 10-knot speed restriction for crew transfer vessels. Considering MMST-13 together with MM-5 we read MMST-13 to provide a range of dates (November 1 through May 14) during which project proponents may use alternative monitoring or vessel strike avoidance measures (as detected in the "NARW Strike Management Plan" in place of following the 10-knot speed limit provided in MM-5. As stated in the notes to MM-5 above we recommend that BOEM disallow the use of adaptive monitoring or vessel strike avoidance measures in lieu of a 10-knot vessel speed restriction until vessel strike avoidance methods can provide comparable or greater vessel strike risk reduction than a 10-knot speed restriction. However we support MMST-13's provision of dates during which NARW Strike Management Plans may not provide an exception to the 10-knot speed limit such as at times when one or more regulations establish a 10-knot (or lower) speed restriction.</p>	<p>Marine Mammal Vessel Strike Management Plan is submitted to BOEM, BSEE, and NMFS at least 180 days prior to the plan's implementation. Exceptions have been removed for crew transfer vessels. Additionally, in MM-5, reference to the NMFS Proposed Rule, Amendments to the North Atlantic Right Whale Vessel Strike Reduction Rule, has been added.</p>
BOEM-2024-0001-0450-0065	<p>Measure ID and Name: MMST-14: Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): "Vessel personnel must do the following to avoid causing injury or death to marine mammals and sea turtles: Vessel strike mitigation measures for marine mammals and sea turtles</p> <ul style="list-style-type: none"> <li>• Notify the vessel captain of any whale within 1640 feet (500 meters) of the vessel and immediately implement strike-avoidance procedures to maintain a separation distance of 1640 feet (500 meters) from all listed species of whales including changing vessel direction or reducing vessel speed to allow the animal to travel away from the vessel. Any time a listed whale is within 656 feet (200 meters) of an underway vessel a full stop is</li> </ul>	<p>BOEM has reviewed all AMMM measures, including MMST-14, which has been revised to state in part that a minimum separation distance of 500 meters or greater for marine mammals must be maintained around all surface vessels and that vessels must slow and avoid sea turtles within a separation distance of 100 meters. MMST-14 has been updated to clarify vessel strike mitigations for avoiding large whales. References to separation distances for small cetaceans have been removed from MMST-14. Language regarding a waiver has been removed.</p>

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	<p>required if safety permits. If a whale is observed but cannot be confirmed as a species other than a NARW the vessel operator must assume that it is a NARW and take appropriate action to avoid the animal.</p> <ul style="list-style-type: none"> <li>When sea turtles [Underline: non-listed] [Strikethrough: small] cetaceans or seals are sighted attempt to maintain a minimum separation distance of [Underline: 328] [Strikethrough: 164] feet ([Underline: 100] [Strikethrough: 50] meters) [Underline: from sea turtles and small cetaceans and a separation distance of] 164 feet (50 meters) [Underline: from seals] to the maximum extent practicable with an exception made for those animals that approach the vessel[Strikethrough: The Lessee may file for consideration by a request for a waiver of any of these restrictions by submitting a vessel strike risk reduction plan that details revised measures along with an analysis to demonstrate that the measure(s) will provide a level of risk reduction at least equivalent to the measure(s) being proposed to be replaced. The plan must be provided at least 120 days prior to a request for approval and will not be implemented until approved."]</li> </ul> <p>Notes: We support MMST-14's requirement that vessels maintain a separation distance of 500 meters from all listed whale species and its requirement that operators should assume that whales are NARW if they cannot confirm otherwise. We ask BOEM to clarify what separation distance applies to non-listed large whales. MMST-14 provides that vessels maintain a separation of 500 meters from "all listed species of whales" and a separation distance of 50 meters from "small cetaceans" but the measure does not specify a separation distance for large whales that are not "listed." We recommend that BOEM require a separation distance of at least 100 meters between vessels and all non-listed cetaceans. We also recommend that BOEM remove the option for lessees to apply for a waiver of MMST-14's restrictions until near real-time monitoring technologies for North Atlantic right whales are developed and shown to provide comparable or greater vessel strike risk reduction than a 10-knot speed restriction.</p>	

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BOEM-2024-0001-0439-0054	<p>Measure ID: MMST-2 Measure Name: Impact Pile-Driving Monitoring Plan Description: In the case where low noise foundation types are not practicable and impact pile-driving is required Lessees must submit a final Pile-Driving Monitoring Plan (PDM Plan) to BOEM (renewable_reporting@boem.gov) BSEE (via TIMSWeb and protectedspecies@bsee.gov) and NMFS for review 120 days prior to the commencement of pile-driving activities. The Lessee must resolve all comments to BOEM and BSEE's satisfaction on the plan before operations can begin and operations must be conducted according to the plan. The plan will detail all plans and procedures for any noise mitigation used as well as for monitoring ESA-listed whales and sea turtles during all impact and vibratory pile-driving. The PDM Plan must:4. Contain information on the visual and PAM components of the monitoring describing all equipment procedures and protocols. Demonstrate that the PAM system has a near-real-time capability of detection to the full extent of the 160 dB distance from the pile-driving location. Include a detection confidence that a vocalization originated from within the clearance and shutdown zones to determine that a possible NARW has been detected. Any PAM detection of a NARW within the clearance/shutdown zone surrounding a pile must be treated the same as a visual observation and trigger any required delays in pile installation. Ensure that the full extent of the harassment distances from piles are monitored for marine mammals and sea turtles to document all potential take. Include number of PSOs that will be used the platforms or vessels upon which they will be deployed and contact information for the PSO providers. Include an Alternative Monitoring Plan (see MMST-1) that provides for enhanced monitoring capabilities in the event that poor visibility conditions unexpectedly arise and pile-driving cannot be stopped. Describe a communication plan detailing the chain of command mode of communication and decision authority. Include reporting PSO and crew member/equipment operator titles and responsibilities including who makes determinations of equipment shutdown feasibility. PSOs as determined by NMFS and BOEM must be used to monitor the area of the clearance and shutdown zones. Seasonal and species-specific clearance and shutdown zones must also be described in the PDM Plan including time-of-year</p>	<p>The detailed Impact Pile-Driving Monitoring Plans submitted by the lessees will be evaluated on a project-by-project basis. The AMMM measures in the NY Bight PEIS are only being analyzed for the six NY Bight lease areas.</p>

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	<p>requirements for NARWs. A copy of the approved PDM Plan must be in the possession of and followed by the Lessee Representative the PSOs impact-hammer operators and any other relevant designees operating under the authority of the approved COP and carrying out the requirements on site. Category: T/E BACP Comment: NMFS/BOEM need to define what is needed to "demonstrate that the PAM system has a near real-time capability of detection to the full extent of the 160 dB distance from the pile-driving location". PSOs should not be required to monitor to the extent of the Level B zone as this would likely not be feasible without increasing the number of vessels. More vessels on the water increase the human safety risk the environmental risk (including the risk of vessel strikes) and the costs of the project. BOEM should consult with NMFS to ensure consistency on requirements for visual and PAM detection for clearance and exclusion zone sizes as this statement could conflict with the ITA requirements for specific projects. In addition the language "Ensure that the full extent of the harassment distances from piles are monitored for marine mammals and sea turtles to document all potential take." is problematic as the Level B zones can be large (in particular for vibratory piling) and NMFS OPR has historically NOT required their full monitoring. It's an exercise in diminishing returns if there is no additional mitigation measure to be taken and take is authorized for the level B extent. It also has the potential to increase environmental impacts if more vessels are needed to meet the monitoring requirement. These impacts should be weighed against the potential benefits of this measure in the PEIS and should be carefully weighed when determining the reasonableness of this measure. Finally is this standard being applied to other marine industries? Will it be applied by BOEM to multi air gun activities in the Gulf of Mexico?</p>	
BOEM-2024-0001-0439-0056	<p>Measure ID: MMST-4 Measure Name: Establishment of foundation pile-driving measures Description: The following measures apply to all foundation pile driving activities:</p> <ol style="list-style-type: none"> <li>1. Time of Day Restrictions: Foundation pile-driving may commence only during daylight hours unless an Alternative Monitoring Plan has been submitted and approved (see MMST-1). Foundation pile-driving may begin no earlier than 1 hour after (civil) sunrise. Foundation</li> </ol>	MMST-4 has been edited to clarify that the shutdown zone for sea turtles will be determined at the project-specific COP NEPA stage.

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	<p>pile-driving may not be initiated any later than 1.5 hours before (civil) sunset. Foundation pile-driving may continue after dark only when the installation of the same pile began during daylight hours (1.5 hours before civil sunset) when clearance zones were fully visible for at least 30 minutes and only when they must proceed for human safety or installation feasibility reasons.</p> <p>2. The Lessee must deploy at least two PSOs on duty on the foundation pile-driving platform or nearby construction vessel in the immediate vicinity of the foundation pile-driving platform at all times during foundation pile-driving to visually monitor for marine mammals.</p> <p>3. Monitoring must take place from 30 minutes immediately prior to initiation of foundation pile-driving activity through 30 minutes post-completion of foundation pile-driving activity.</p> <p>4. For all foundation pile-driving activity the Lessee must follow designated clearance zones.</p> <p>5. Foundation pile-driving may only commence when the clearance zones are fully visible (e.g. not obscured by darkness rain fog) unless an Alternative Monitoring Plan (see MMST-1) has been submitted and approved and only when clearance zones are clear of marine mammals for at least 30 minutes immediately prior to foundation pile-driving as determined by the lead PSO.</p> <p>6. If a marine mammal is visually detected entering or within designated shutdown zones after foundation pile-driving has commenced a shutdown of foundation pile-driving must be implemented.</p> <p>7. Following a shutdown foundation pile-driving may not commence until appropriate conditions (i.e. measures 15 above) have been met.</p> <p>8. Pile-driving of wind turbine foundations and OSSs in the wind development area must not occur from January 1 through April 30. Impact pile-driving must not occur in December unless unanticipated delays due to weather or technical problems arise notified to and approved by BOEM that necessitate extending impact pile-driving into December. For sea turtles: To ensure that foundation pile-driving operations are carried out in a way that minimizes the exposure of listed sea turtles to noise that may result in injury or behavioral disturbance PSOs will establish a 1640-foot (500-meter)</p>	

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	<p>shutdown zone for all foundation pile-driving activities. Adherence to the 1640-foot (500-meter) shutdown zones must be reflected in the PSO reports. Any visual detection of sea turtles within the 1640-foot (500-meter) shutdown zones must trigger the required shutdown in pile installation. Upon a visual detection of a sea turtle entering or within the shutdown zone during foundation pile-driving the Lessee must shut down the pile-driving hammer (unless activities must proceed for human safety or for concerns of installation feasibility) from when the PSO observes until:</p> <ol style="list-style-type: none"> <li>1. The lead PSO verifies that the animal(s) voluntarily left and headed away from the clearance area; or</li> <li>2. 30 minutes have elapsed without re-detection of the sea turtle(s) by the lead PSO. Additionally if shutdown is called for but the Lessee determines shutdown is not technically feasible due to human safety concerns or to maintain installation feasibility reduced hammer energy must be implemented when the lead engineer determines it is technically feasible to do so. Previously Applied as a COP T&amp;C: Check Category: T/EACP Comment: A 500m EZ for Sea Turtles is not feasible to monitor at night.</li> </ol>	
BOEM-2024-0001-0450-0062	<p>Measure ID and Name: MMST-4: Establishment of foundation pile-driving measures Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion): "The following measures apply to all foundation pile driving activities:1. Time of Day Restrictions: Foundation pile-driving may commence only during daylight hours. [<del>Strikethrough: unless an Alternative Monitoring Plan has been submitted and approved (see MMST-1).</del>] Foundation pile-driving may begin no earlier than 1 hour after (civil) sunrise. Foundation pile-driving may not be initiated any later than 1.5 hours before (civil) sunset. Foundation pile-driving may continue after dark only when the installation of the same pile began during daylight hours (1.5 hours before civil sunset) when clearance zones were fully visible for at least 30 minutes and only when they must proceed for human safety or installation feasibility reasons3. Monitoring must take place from [<del>Strikethrough: 30</del>] [<u>Underline: 60</u>] minutes immediately prior to initiation of foundation pile-driving activity through 30 minutes post-completion of foundation pile-driving activity 5. Foundation pile-driving may only commence when</p>	<p>The lessee must demonstrate that its Reduced Visibility Monitoring Plan/Nighttime Pile Driving Monitoring Plan (MMST-1) is effective. MMST-4 has been edited to clarify that monitoring must take place from 60 minutes immediately prior to initiation of foundation pile-driving activity through 30 minutes post-completion of foundation pile-driving activity.</p>

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	the clearance zones are fully visible (e.g. not obscured by darkness rain fog) [Strikethrough: unless an Alternative Monitoring Plan (see MMST-1) has been submitted and approved] and only when clearance zones are clear of marine mammals for at least 30 minutes immediately prior to foundation pile-driving as determined by the lead PSO. Notes: As stated above regarding MMST-1 we recommend that BOEM remove the option to submit an Alternative Monitoring Plan to allow commencement of pile-driving activities during low visibility conditions and nighttime. We also recommend that BOEM require monitoring to take place 60 minutes immediately prior to initiation of pile-driving instead of 30 minutes. The extended monitoring period will increase the likelihood that any marine mammals or sea turtles in the area are detected.	
BOEM-2024-0001-0439-0066	Measure ID:1. The lead PSO verifies that the animal(s) voluntarily left and headed away from the clearance area; or2. 30 minutes have elapsed without re-detection of the sea turtle(s) by the lead PSO. Additionally if shutdown is called for but the Lessee determines shutdown is not technically feasible due to human safety concerns or to maintain installation feasibility reduced hammer energy must be implemented when the lead engineer determines it is technically feasible to do so Measure Name: Description: Previously Applied as a COP T&C: Category: ACP Comment: Measure ID:MMST-5Measure Name: PSO coverage of expanded clearance/shutdown zones Description: Lessees must ensure that if the clearance and/or shutdown zones are expanded PSO coverage is sufficient to reliably monitor the expanded clearance and/or shutdown zones. Additional observers must be deployed on additional platforms for every 4921 feet (1500 meters) that a clearance or shutdown zone is expanded beyond the distances modeled prior to verification. Previously Applied as a COP T&C: Check Category: BACP Comment: This measure requires PSOs be deployed on additional platforms when exclusion zones are expanded beyond expected levels by 1500 meters which creates unnecessary hazards to human health and safety and is contrary to the goals of the MMPA and ESA (increasing the amount of operating vessels in the wind farm increases the risk of vessel strike). Additionally PSOs are capable of conducting visual monitoring at distances much greater than 1500 meters thus this	Thank you for your comment. Both MMST-4 and MMST-5 have been updated in the Final PEIS for clarity.

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	<p>distance should be increased to reduce the amount of vessel traffic in the area. While it is understood that coordination and overlapping of visual monitoring within the expanded zones is necessary for situational awareness of all protected species adding additional platforms for every increase of the EZ by 1500 meters is overly conservative and creates undue burden and potential harm to humans and protected species. This is particularly important as developers begin to utilize vibratory hammers which while less impactful to marine mammals when modeled using the NOAA Fisheries definition for the Level B harassment threshold for non-impulsive sound (120 dB 1 uPa) requires monitoring and mitigation for much larger exclusion zones. Ambient ocean noise measures at a similar threshold to the NOAA Fisheries definition for the Level B harassment threshold for non-impulsive sound which increases the risk for other anthropogenic noise sources to interfere with the accurate in situ measurement to the Level B harassment threshold for vibratory hammer use and could potentially require a large fleet of PSO support vessels operating around the piling platform.</p>	
BOEM-2024-0001-0450-0063	<p>Measure ID and Name:MMST-7:PSO coverage and training requirements Proposed Changes to Measure Description (underlined text indicates addition; strikethrough text indicates deletion):"Lessees must ensure that PSO coverage is sufficient to reliably detect whales and sea turtles at the surface in clearance and shutdown zones to execute any pile-driving delays or shutdown requirements...A sufficient number of PSOs must be deployed to record data in real time and effectively monitor the affected area for the project including visual surveys in all directions around a pile PAM and continuous monitoring of sighted NARWs in the area to meet the number of PSOs required for enhanced seasonal monitoring requirements.[Underline: During pile-driving monitoring of the visual clearance and exclusion zones should be undertaken by vessel-based PSOs stationed at the pile driving site and on additional vessels circling the pile driving site as needed. On each vessel there must be a minimum of four PSOs following a two-on two- off rotation each responsible for scanning no more than 180 of the horizon per pile driving location. To effectively monitor the full exclusion zone multiple PSOs should be stationed at several vantage</p>	<p>Thank you for your comment. MMST-7 has been updated in the Final PEIS for clarity. Generally, the number of PSOs needed is dependent on several variables, including protected species monitoring plans. Specific numbers of PSOs will be determined fully at the project-specific COP NEPA stage.</p>

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	points at the highest level to allow each to continuously scan a section of the exclusion zone.] PSOs must not be on watch for more than 4 consecutive hours with at least a 2-hour break after a 4-hour watch. PSOs must not work for more than 12 hours in any 24-hour period (Baker et. Al 2013) unless an alternative schedule is approved by BOEM..."Notes: We generally support MMST-7 which requires sufficient PSO coverage during pile-driving activities. We recommend that at each pile-driving location during pile-driving activities BOEM require a minimum of four PSOs following a two-on two-off rotation with each PSO responsible for scanning no more than 180 of the horizon.	
BOEM-2024-0001-0450-0052	<p>1) Design floating offshore wind turbines to avoid entanglement risk:</p> <p>a) Design and maintain mooring lines and inter-array cables in configurations that minimize the potential for entanglement of marine species by:</p> <p>i) Ensuring that lines and cables remain under tension and avoiding catenary moorings; [Footnote 31: Marine species are more likely to become entangled in slack lines. "Taut mooring configurations are preferable because less slack in lines is likely to reduce entanglement potential (Benjamins et al. 2014). Highest relative risk may occur with catenary moorings given that the lines are not taut. Chains and nylon ropes are thought to have higher snagging potential as do accessory buoys." Maxwell Sara M. et al. 2022.]</p> <p>ii) Burying inter-array cables or establishing a minimum depth of 200 m for free floating inter- array cables (where burial of cables is not possible);</p> <p>iii) Using large diameter (approximately 2 m) accessory buoys to stabilize catenary mooring lines and free-floating inter-array cables; andiv)</p> <p>Employing large diameter wire rope or cable and avoiding chains and synthetic fiber ropes due to higher snagging potential.</p> <p>b) Design infrastructure to facilitate visual or acoustic detection of ensnared marine debris by monitoring equipment and personnel for example by using lighter coloration or for acoustic detection textures to contrast with marine debris at depths where light is limited.</p>	BOEM has reviewed the suggested AMMM measure and determined that it is out of scope for this PEIS because the RPDE does not consider floating offshore wind structures.

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	i) Infrastructure includes for example platforms substations mooring lines inter-array cables and anchors as well as monitoring technology docking stations.	
BOEM-2024-0001-0450-0053	<p>2) Conduct monitoring for entanglement that combines continuous and automated monitoring technologies with regular inspections and surveys of all floating offshore wind infrastructure throughout construction and operations:</p> <p>a) Conduct continuous monitoring for strains on mooring lines and inter-array cables resulting from ensnarement of marine debris or entanglement of an animal.</p> <p>i) Outfit all mooring lines with load cells [Footnote 32: "the Kincardine Floating Offshore Wind Farm in Scotland has integrated load cells with the mooring lines to periodically monitor line performance and potentially detect the entanglement of floating marine debris including derelict fishing gear." SEER Educational Research Brief on Risk to Marine Life from Marine Debris &amp; Floating Offshore Wind Cables Systems (p.5). <a href="https://tethys.pnnl.gov/sites/default/files/summaries/SEER-Educational-Research-Brief-Entanglement-Considerations.pdf">https://tethys.pnnl.gov/sites/default/files/summaries/SEER-Educational-Research-Brief-Entanglement-Considerations.pdf</a>.] with sufficient detection resolution to detect significant accumulations of secondary entanglement hazards and for entanglement events. Outfit all inter-array cables with vibration and fault sensors as well as load cells at all floating offshore wind turbine attachment points and potentially at accessory buoy attachment points if present.</p> <p>b) Conduct monitoring underneath each floating offshore wind platform sufficient to detect accumulated secondary entanglement hazards and marine species presence in and around the array. Install multibeam systems with automatic detection capabilities like the Biosonics Omnidirectional Marine Life Observer installed facing down underneath each individual floating offshore wind turbine.</p> <p>i) Multibeam systems used should operate at peak frequencies above the range of marine mammal audibility and with no or minimal leakage of sound within the range of marine mammal audibility.</p> <p>c) Conduct daily remote visual inspection of infrastructure for ensnarement of marine debris or entanglement of an animal[Footnote 33: Visual inspection at least once during each 24-</p>	BOEM has reviewed the suggested AMMM measure and determined that it is out of scope for this PEIS because the RPDE does not consider floating offshore wind structures.

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	<p>hour period may provide an alert of an entangled marine mammal or sea turtle or diving or plunging marine bird at an early enough point in time that rescue efforts can be made and the animal can be released alive.]at depths where marine debris is most likely to occur which is usually zero to five meters from the surface.</p> <p>i) Current suitable technologies for monitoring include cameras and remote aerial surveys.</p> <p>d) Conduct monthly inspection of the full length of submerged infrastructure (including platforms substations mooring lines inter-array cables and anchors as well as monitoring technology docking stations or other infrastructure as appropriate) for ensnared marine debris or entanglement of an animal.</p> <p>i) Vessel deployed underwater autonomous vehicles (AUV) and remotely operated vehicles (ROV) can be outfitted with side-scan and multi-beam sonar transponders and video cameras.[Footnote 34: ROVs may also be an important tool for marine debris removal at depth. The Kincardine Floating Offshore Wind Farm also "will use remotely operated vehicles and vessel-mounted sensors (such as multibeam sonar) to periodically survey floating cable systems which could also monitor for the presence of derelict fishing gear." SEER Educational Research Brief on Risk to Marine Life from Marine Debris &amp; Floating Offshore Wind Cables Systems (p.5). <a href="https://tethys.pnnl.gov/sites/default/files/summaries/SEER-Educational-Research-Brief-Entanglement-Considerations.pdf">https://tethys.pnnl.gov/sites/default/files/summaries/SEER-Educational-Research-Brief-Entanglement-Considerations.pdf</a>. See also Federal Energy Regulatory Commission (FERC) Environmental Assessment for Hydropower License for the PacWave South Project (April 2020) at p. xvi. <a href="https://www.boem.gov/sites/default/files/documents/regions/pacific-ocs-region/environmental-analysis/PacWave%20South%20EA.pdf">https://www.boem.gov/sites/default/files/documents/regions/pacific-ocs-region/environmental-analysis/PacWave%20South%20EA.pdf</a>; and "The Atlantic Testing Platform for Maritime Robotics." <a href="https://www.atlantis-h2020.eu/">https://www.atlantis-h2020.eu/</a>.]</p> <p>e) Outfit operations and maintenance vessels with equipment capable of locating and removing an entanglement hazard.</p> <p>i) Vessels should be of sufficient size (40 feet or greater in length) have winches or cranes with load capacities suitable for commercial fishing have equipment necessary to support both SCUBA and</p>	

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	<p>surface-supply air diving and be able to accommodate launching operating and retrieving a working-class ROV.</p> <p>f) Integrate floating offshore wind arrays into reporting systems tracking lost fishing gear in order to improve response time to remove entanglement risks.</p>	
BOEM-2024-0001-0450-0054	<p>3) Adaptive use of inspection results.</p> <p>a) Project proponents may propose an adaptive approach to scheduling inspections in COP submittals. Monthly inspections should be used to validate continuous monitoring approaches by confirming the location of ensnarement or entanglement events detected by a continuous monitoring system or identifying events that were missed by such a system during early application of the technology. If marine debris ensnarements or marine life entanglements are observed during these monthly inspections within the first 12 months of an offshore windproject's operation the frequency of full-infrastructure inspections should be increased. If monthly inspections detect no marine debris ensnarements or marine life entanglements during the first year of an offshore wind project's operation the frequency of full-infrastructure inspections may be decreased.</p>	BOEM has reviewed the suggested AMMM measure and determined that it is out of scope for this PEIS because the RPDE does not consider floating offshore wind structures.
BOEM-2024-0001-0450-0055	<p>4) Protocol when ensnarement and/or entanglements are identified: [Footnote 35: Protocol is adapted from the Federal Energy Regulatory Commission (FERC) Environmental Assessment for Hydropower License for the PacWave South Project (April 2020). <a href="https://www.boem.gov/sites/default/files/documents/regions/pacific-ocs-region/environmental-analysis/PacWave%20South%20EA.pdf">https://www.boem.gov/sites/default/files/documents/regions/pacific-ocs-region/environmental-analysis/PacWave%20South%20EA.pdf</a>.]</p> <p>a) If monitoring shows that marine debris has become ensnared on any project structure or that sharks and/or diving or plunging marine birds are entangled in marine debris ensnared on any project structure the lessee must notify the National Marine Fisheries Service (NMFS) or U.S. Fish and Wildlife Service (USFWS) as appropriate the U.S. Coast Guard and the relevant state agency as soon as possible and within 6 hours of detection. If the appropriate federal and state agencies determine that the lessee should remove the marine debris and any entangled sharks or diving or plunging marine birds or any other species the lessee shall take such action as</p>	BOEM has reviewed the suggested AMMM measure and determined that it is out of scope for this PEIS because the RPDE does not consider floating offshore wind structures.

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	<p>soon as is possible to do so in a manner that does not jeopardize human safety property or the environment.</p> <p>b) If monitoring shows that marine mammals or sea turtles are entangled in marine debris ensnared on any project structure the lessee shall immediately follow the Reporting Protocol for Injured or Stranded Marine Mammals or the sea turtle reporting protocol developed by the Sea Turtle Disentanglement Network; and provide the federal and relevant state agencies with all available information on the incident.[Footnote 36: See National Marine Fisheries Service Large Whale Entanglement Response Program for whale entanglement reporting protocol Greater Atlantic region: <a href="https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-life-distress/marine-mammal-entanglement-greater-atlantic-region">https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-life-distress/marine-mammal-entanglement-greater-atlantic-region</a>; Sea Turtle Disentanglement Network for sea turtle reporting protocol: <a href="https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-life-distress/sea-turtle-disentanglement-network">https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-life-distress/sea-turtle-disentanglement-network</a>].]</p>	
BOEM-2024-0001-0450-0057	<p>6) Require transparent reporting of ensnarement and entanglement data.</p> <p>a) All incidences of observed ensnarements of marine debris on floating offshore wind infrastructure and entanglements of marine life shall promptly be made publicly available.</p>	BOEM has reviewed the suggested AMMM measure and determined that it is out of scope for this PEIS because the RPDE does not consider floating offshore wind structures.
BOEM-2024-0001-0450-0032	<p>2) Require diel restrictions on site assessment and characterization activities:</p> <p>a) Site assessment and characterization activities must not be initiated within 1.5 hours of civil sunset or in times of low visibility when the visual clearance zones and exclusion zones (defined in Section II(3) below) cannot be visually monitored as determined by the lead Protected Species Observer (PSO) on duty.</p>	Thank you for your comment. BOEM has reviewed the suggested AMMM measure and will not require it at this time. Exclusion zones are small and, in the event of low visibility, Reduced Visibility Monitoring Plan/Nighttime Pile Driving Monitoring Plans are required.
BOEM-2024-0001-0439-0092	<p>Measure ID: ST-1 Measure Name: Monitoring zone for sea turtles for pile-driving Description: Lessees must monitor the full extent of the area where noise would exceed the 175 dB re 1 Pa received level behavioral threshold for sea turtles for the full duration of all pile-driving activities and for 30 minutes following the cessation of pile-driving activities. Lessees must record all observations to ensure that all take that occurs is documented (see MUL-32 and MUL-34).Previously Applied as a COP T&amp;C: Category: T/EACP Comment: A sea turtle clearance and monitoring measure is acceptable however</p>	Thank you for your comment. ST-1 has been removed from the Final PEIS. BOEM agrees that the distance of the monitoring zones should be determined through acoustic modeling during project-specific analysis. This is now captured in MMST-4.

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	<p>it may not be achievable at night as thermal camera tools are not effective for sea turtles. This issue is recognized by NOAA NMFS and should not be a barrier to night-time piling. The language in this and related AMMMs should be modified to account for limitations of observation in nighttime conditions or at minimum deferred to project specific analysis.</p>	
<p>BOEM-2024-0001-0451-0006</p>	<p>ST-2 Monitoring for sea turtles and reporting</p> <p>a. Between June 1 and November 30 the Lessees must have a trained lookout posted on all vessel transits during all phases of the project to observe sea turtles. The trained lookout must communicate any sightings in real-time to the captain so that the requirements in (e) below can be implemented. This condition is not considered reasonable or feasible to have a dedicated lookout on all vessels. Some vessels such as tugs and barges are small and will have a limited field of view.</p> <p>b. The trained lookout must maintain a vigilant watch and monitor a Vessel Strike Avoidance Zone (1640 feet [500 meters]) at all times to maintain minimum separation distances from ESA-listed species. Alternative monitoring technology (e.g. night vision thermal cameras) will be available to ensure effective watch at night and in any other low visibility conditions. If the trained lookout is a vessel crew member this must be their designated role and primary responsibility while the vessel is transiting. Any designated crew lookouts must receive training on protected species identification vessel strike minimization procedures how and when to communicate with the vessel captain and reporting requirements. This language requires a dedicated observer (crew member with no other duties) on all vessels (regardless of size or vessel speed) south of NC/VA and north of NC/VA from June 1-Nov 30 to monitor for sea turtles. This is overly burdensome and is also ineffective as observers rarely see turtles.</p> <p>d. "Vessel captains/operators must avoid transiting through areas of visible jellyfish aggregations or floating sargassum lines or mats. If operational safety prevents avoidance of such areas vessels will slow to 4 knots (7.4 kilometers per hour) while transiting through such areas. "This is not feasible with the large construction vessels. It is impractical to expect that a PSO will see a jellyfish and that the</p>	<p>Thank you for your comment. ST-2 was incorporated into MMST-14 and removed from the Final PEIS. Operators would have to respond to observed jellyfish aggregations or floating Sargassum lines or mats if they can be avoided safely and in time, which is now included in MMST-14.</p>

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	vessel can slow to avoid the jellyfish. By the time the jellyfish is spotted it will be too late.	
BOEM-2024-0001-0439-0093	Measure ID: STF-1 Measure Name: Monitoring on strategically placed WTGs Description: Lessees are encouraged to incorporate technologies for detecting tagged (e.g. Innovasea) sea turtles and highly migratory fish in their project to monitor the effect of increases in habitat use and residency around WTG foundations. The Lessees are encouraged to share monitoring results and propose new or additional mitigation measures and/or monitoring methods if appropriate. Previously Applied as a COP T&C: Category: VACP Comment: The PEIS indicates that this measure is voluntary. Voluntary measures should not be included in AMMMs.	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts. Furthermore, these RPs are also not part of the Proposed Action, Alternative C, which analyzes only AMMM measures previously applied as T&Cs and AMMM measures not previously applied as T&Cs.
BOEM-2024-0001-0347-0004-i	STF-1: Monitoring on strategically placed wind turbines We support incorporation of technologies to detect tagged marine life within the wind project areas and sharing of the associated data. However we question if this AMMM measure serves a meaningful purpose given that it is phrased as encouragement but not a requirement.	Based on comments received on the Draft PEIS, BOEM has reviewed all draft measures and categorized them as 1) AMMM measures previously applied as T&Cs or through other mechanisms such as a Biological Opinion or Memorandum of Agreement, 2) AMMM measures not previously applied as T&Cs, and 3) RPs.
BOEM-2024-0001-0439-0094	Measure ID: STF-5 Measure Name: Trailing suction hopper dredge mitigation Description: If a trailing suction hopper dredge is used offshore operators must disengage dredge pumps when the dragheads are not actively dredging and therefore working to keep the draghead firmly on the bottom in order to prevent impingement or entrainment of ESA-listed fish and sea turtle species. Pumps must be disengaged when lowering dragheads to the bottom to start dredging turning or lifting dragheads off the bottom at the completion of dredging. Previously Applied as a COP T&C: Category: ACP Comment: The definition of "firmly" requires clarification. Drag arms have jets that mobilize the soil which is then pumped into the dredge hopper. The drag arm is never fully resting on the bottom because of this.	STF-5 was updated in response to this comment as follows: "A state-of-the-art solid-faced deflector that is attached to the draghead must be used on all hopper dredges at all times." Please see Section 3.1, <i>Hopper dredge requirements</i> in Appendix B, <i>2020 SARBO General PDCs</i> (HOPPER.2, page 530) of SARBO 2020 (found here: <a href="https://media.fisheries.noaa.gov/dam-migration/sarbo_acoustic_revision_6-2020-opinion_final.pdf">https://media.fisheries.noaa.gov/dam-migration/sarbo_acoustic_revision_6-2020-opinion_final.pdf</a> ).
BOEM-2024-0001-0528y	With respect to the AMMM measures proposed in Appendix G, we're very happy to see the inclusion of a number of proposed voluntary mitigation measures that have never been required before. For example, the AMMM measures that encourage facility planning to use nature-inclusive design and favor the selection of	Thank you for your comment. The RPDE for the PEIS includes a range of representative parameters of offshore wind development in the NY Bight, as described in Section 2.1.2.1. Each COP submitted within the NY Bight will be required to identify the proposed spacing, turbine height, rotor diameter,

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	<p>low-noise foundation types. But it's not entirely clear how the project design envelope approach, which considers the maximum potential impacts, squares up with BOEM's encouragement of quiet foundations. So, we encourage BOEM to include approaches that incentivize the use of quiet foundations and designs that benefit biodiversity.</p> <p>We'd also really like to understand better how the proposed voluntary mitigation measures are intended to apply or inform construction operation plans.</p>	<p>and other parameters of the project. Regarding the wide range of parameters, the RPDE <i>was developed with input from the six NY Bight lessees</i>, American Clean Power, National Renewable Energy Laboratory, and the States of New York and New Jersey. Because the RPDE covers six lease areas of differing sizes and was developed before lessees submitted their COPs, a wide range of potential parameters was used to ensure the maximum potential impacts from development in the NY Bight could be assessed. This RPDE was used for the analysis in Alternative B and Alternative C. BOEM has clarified that Alternative B serves to compare how impacts would change with the AMMM measures identified in Alternative C.</p> <p>Based on comments on the Draft PEIS, BOEM has reviewed all AMMM measures, which resulted in many revisions, including separating AMMM measures that have and have not been previously applied; BOEM believes these are all feasible. In addition, several AMMM measures were reclassified as RPs in the Final PEIS. These RPs are not part of the Proposed Action. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impact. Project-specific NEPA analysis for individual COPs could apply revised, additional, or different AMMM measures as needed.</p> <p>MUL-12 and MUL-6 have been reclassified as RPs. Details regarding ecological design elements and foundations are project-specific and will be analyzed at the subsequent COP-specific NEPA stage if proposed as part of the COP. MUL-6 has been updated to include submission of a report providing rationale for why non-pile-driving foundations are not possible, if non-pile-driving foundations are not used.</p>
BOEM-2024-0001-0310m	<p>So, BOEM, for your next document I looked through your mitigations and I see you're very weakly handling -- you identify a lot of things you want to mitigate, but not -- you don't really say force them to be mitigated. So you're still not protecting us.</p>	<p>The purpose of the PEIS, as described in Chapter 1, <i>Purpose and Need</i>, is to analyze the effects from potential development activities in the six NY Bight lease areas and to identify and analyze AMMM measures that could reduce those effects. The PEIS does not approve any projects. Each individual COP submitted by a developer to BOEM will be separately analyzed as required under NEPA and will disclose the full impacts of the</p>

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		<p>construction and installation, O&amp;M, and conceptual decommissioning of the project, including cumulative effects. BOEM has modified the PEIS language describing the Proposed Action and has refined the language throughout the PEIS to make clear that this PEIS is not imposing any AMMM measures. It is not establishing or imposing any substantive obligations at this programmatic stage. Instead, it is identifying those AMMMs that BOEM may impose at the COP-specific NEPA stage. By identifying and analyzing those AMMMs now, the expectation is that the analysis at the COP-specific NEPA stage can be more streamlined and efficient.</p>

## P.5.24 Cumulative Impacts

**Table P.5-24. Responses to Comments on Cumulative Impacts**

Comment No.	Comment	Response
BOEM-2024-0001-0309-0004	<p>Indeed the PEIS process by BOEM gives short shrift to the mitigation and analysis process of the offshore coasts and cumulative impacts by only providing summary estimates of impacts and providing no plans[Footnote 5: "Each lease holder is [Bold: likely] to submit at least one COA but it is not required. Emphasis added.] for any of the six NY Bight projects in opposition to its own acknowledgement of the cumulative impacts that this project will have combined with BOEM's other lease areas. Appendix C of the PEIS provides for how the Project will be used; however the qualified impact does not act the way the Project was designed. [Footnote 6: PEIS Appendix C: Tiering Guidance provides for evaluation of impacts that could result from wind energy development in the NY Bight lease areas as well as the AMMM reasons for a nebulous Construction and Operations (COP) Plan analysis perhaps in the future.] The PEIS is faster for the federal government but at the same time its vagueness is giving the wind industry a free pass at the expense of the local environment New Jersey's local economies the health and welfare of its human marine avian and other coastal inhabitants and ocean floor - all of which will be exposed to and have their ecosystems severely disrupted because of BOEM's inefficiencies in the PEIS process. Further the Atlantic City area disproportionally will bear the effects of the six NY Bight lease areas' cumulative effects on an already overburdened population. [Footnote 7: See PEIS at Table D1-9 3.6.4 at C-11 and C-12; see also N.J.S.A. 13:1D-157 et seq.; <a href="https://dep.nj.gov/ej/law/">https://dep.nj.gov/ej/law/</a>.; Atlantic Shores Federal Consistency Certification Request published by New Jersey Department of Environmental Protection September 19 2023 (overburdened communities include Brigantine NJ in Atlantic County NJ).]The Council on Environmental Quality ("CEQ") and NEPA define cumulative impacts as "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." [Footnote 8: 40 C.F.R. 1508.7.]</p>	<p>The CEQ NEPA Implementing Regulations require the impact analysis for NEPA documents to include cumulative effects, defined as the effects on the environment that result from the incremental effects of the action when added to other past, present, and reasonably foreseeable actions. The cumulative impact analysis for the No Action Alternative considers the impacts of ongoing activities and other reasonably foreseeable planned activities, excluding the Proposed Action, as described in Appendix D, <i>Planned Activities Scenario</i>. The cumulative impacts analysis for the Proposed Action considers the full buildout of the six NY Bight lease areas in combination with other reasonably foreseeable planned activities, including offshore wind activities, within the geographic analysis area for each Chapter 3 resource topic.</p> <p>Ongoing activities that would contribute to baseline conditions, including offshore wind activities but excluding the Proposed Action, are described under the No Action Alternative. Offshore wind activities that have already been constructed (e.g., Block Island Wind Farm offshore Rhode Island and Coastal Virginia Offshore Wind [CVOW] Pilot Project offshore Virginia) or that have an approved COP (e.g., Vineyard Wind 1, South Fork Wind Farm, Revolution Wind, Ocean Wind 1) are considered ongoing activities and have been included in the No Action Alternative. Further, during project-specific COP NEPA reviews for the NY Bight lease areas, BOEM would conduct cumulative impact analyses again, but those analyses would be based on project-specific information and any new information on past, present, and reasonably foreseeable actions that are available at that time. BOEM notes that this PEIS does not approve any projects in the NY Bight lease areas.</p>

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BOEM-2024-0001-0309-0005	<p>BOEM has acknowledged the cumulative effects of their offshore wind program going back to 2007 with their PEIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf. [Footnote 9: Bureau of Ocean Energy Management United States Department of the Interior Guide to the OCS Alternative Energy Final Programmatic Environmental Impact Statement <a href="https://www.boem.gov/renewable-energy/guide-ocs-alternative-energy-final-programmatic-environmental-impact-statement-is">https://www.boem.gov/renewable-energy/guide-ocs-alternative-energy-final-programmatic-environmental-impact-statement-is</a>.] With this PEIS for the NY Bight Project BOEM intends to provide a "baseline analysis that helps to satisfy the requirements of NEPA for offshore renewable energy leasing" [Footnote 10: Id; PEIS 2.1.1 at 2-2.] because "many wind energy projects will have similar environmental impacts." [Footnote 11: Id.] This PEIS does not satisfy NEPA's cumulative impacts requirement today because BOEM has significantly altered and expanded their offshore wind program not only over the years but even in the past nine months making the PEIS's "analysis of cumulative environmental impacts inaccurate and outdated and requiring a supplemental or new Environmental Impact Statement analyzing the current program as it now exists." [Footnote 12: Complaint Cape May v. U.S. Dept. of the Interior BOEM et al. No. 23-cv-21201 (D.N.J. Oct. 17 2023).] These are legitimate concerns that many longstanding and respected environmental groups have expressed. For example at the last virtual public hearing for the PEIS held on February 13 2024 the Nature Conservancy expressed concern about the lack of plans among other things. [Footnote 13: Public comments from the February 13 2024 virtual hearing for BOEM Docket No. 2024-0001 are pending.] This is a global environmental conservation group in existence for over 73 years. [Footnote 14: See Comments by The Nature Conservancy BOEM Hearing February 13 2024; see also Turbine Reefs Technical Report The Nature Conservancy November 2021 <a href="https://www.nature.org/content/dam/tnc/nature/en/documents/TurbineReefReport_Nature-BasedDesignsOffshoreWindStructures_Final2022.pdf">https://www.nature.org/content/dam/tnc/nature/en/documents/TurbineReefReport_Nature-BasedDesignsOffshoreWindStructures_Final2022.pdf</a> (admitting knowledge and "informational gaps exist regarding documented benefits to marine environments where NBD has been implemented around offshore wind infrastructure" at 1.4).] So too did Clean</p>	<p>Please refer to responses to comments BOEM-2024-0001-0309-0004, BOEM-2024-0001-0331-0011, and BOEM-2024-0001-0319-0001.</p> <p>The CEQ NEPA Implementing Regulations require the impact analysis for NEPA documents to include cumulative effects, defined as the effects on the environment that would result from the incremental effects of the action when added to other past, present, and reasonably foreseeable actions. The Final PEIS has been updated as appropriate to reflect changes to projects included in the cumulative impact analysis.</p>

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	<p>Ocean Action publicly comment a 40-year old local New Jersey Shore organization advocating for the environment. [Footnote 15: Id. BOEM Public Hearing held on February 13 2024.]Why the rush? "Reduce Redundancies" and "Timely" are the hallmarks of the PEIS process to make it efficient and streamlined for the government but not for the environment or the public. [Footnote 16: See PEIS ES.2 at ES-3.] It comes off as political expediency and industrializing the oceans rather than saving the environment from harm. The truth is the clock is ticking for BOEM from the presumptive time limit of two years for completing the EIS in accordance with the CEQ implementing regulations effective May 20 2022. [Footnote 17: See PEIS at ES-2.] Rather than reasoned analysis BOEM's failure to analyze the cumulative environmental impacts of its offshore wind program is arbitrary and capricious and violates NEPA. [Footnote 18: 5 U.S.C. 706.]</p>	
BOEM-2024-0001-0309-0007	<p>Mitigation of the cumulative effects of the projects situated behind overlapping projects are not even shown in the PEIS [Footnote 22: See PEIS at 3.6.6-28.] in violation of NEPA. [Footnote 23: 42 U.S.C. 4332(2)(C) (NEPA further requires that the Environmental Impact Statement provide a "detailed statement . . . on . . . alternatives to the proposed action . . ."). ] For example more studies are needed to show that the noise from the pile driving and sonar activities are not certainly confusing the mammals and leading to localized stranding such as the baby seal pup only days ago ending up a quarter mile from the ocean right in the middle of a commercial street nearby along the New Jersey Shore in Ocean City. [Footnote 24: "Rescued Gray Seal Pup from Ocean City Dies Despite Treatment Efforts Shore Local February 22 2024. <a href="https://shorelocalnews.com/rescued-grey-seal-pup-from-ocean-city-dies-despite-treatment-efforts/#~:text=The%20Marine%20Mammal%20Stranding%20Center%20mile%20down%2042nd%20Street">https://shorelocalnews.com/rescued-grey-seal-pup-from-ocean-city-dies-despite-treatment-efforts/#~:text=The%20Marine%20Mammal%20Stranding%20Center%20mile%20down%2042nd%20Street</a> . ("The Marine Mammal Stranding Center reported that the male grey seal pup rescued last week from the streets in Ocean City has died. The pup was stranded <sup>on</sup> February 7 after hauling out from the bay and traveling a quarter of a mile down 42nd Street.")] Appendix D shows old studies based on 2019 five years ago not considering the cumulative impacts of the</p>	<p>Please refer to responses to comments BOEM-2024-0001-0309-0004 and BOEM-2024-0001-0331-0011.</p> <p>Analysis of the impacts of the Proposed Action and alternatives on listed species can be found in Section 3.5.1, <i>Bats</i>; Section 3.5.3, <i>Birds</i>; Section 3.5.6, <i>Marine Mammals</i>; Section 3.5.7, <i>Sea Turtles</i>; and Section 3.5.5, <i>Finfish, Invertebrates, and Essential Fish Habitat</i>. Analysis of the increase in vessel traffic can be found in Section 3.6.6, <i>Navigation and Vessel Traffic</i>.</p> <p>In addition, BOEM must comply with ESA Section 7 to ensure that its action of approving offshore wind projects does not jeopardize the continued existence of any federally threatened or endangered species; this includes a cumulative effects analysis per requirements under ESA regulations. BOEM completes Section 7 consultation with the USFWS and the NMFS prior to the approval of any COP for offshore wind projects. BOEM will continue to consult with the USFWS and NMFS for future actions that may affect federally threatened and endangered species to ensure compliance with ESA Section 7.</p>

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	<p>additional BOEM lease sites thus nullifying the mitigation measures. [Footnote 25: See PEIS at D2-1.] One can only imagine the cumulative effects of thousands of vessel traffic [Footnote 26: See PEIS at 3.6.1.1.] and noise then layering the six lease projects in the NY Bight plus the additional BOEM lease areas all being worked on at once. The effects of which will result in not only thousands of "Takes" that BOEM estimated before the cumulative impacts of the NY Bight leases [Footnote 27: See BOEM 2023-0030.] likely only a starting number with additional EMFs sound noise and ill effects on humans as well. [Footnote 28: See NOAA-2024-00008 Jan. 5 2024 <a href="https://www.federalregister.gov/documents/2024/01/05/2024-00008/takes-of-marine-mammals-incidental-to-specified-activities-taking-marine-mammals-incidental-to">https://www.federalregister.gov/documents/2024/01/05/2024-00008/takes-of-marine-mammals-incidental-to-specified-activities-taking-marine-mammals-incidental-to</a>. Defend Brigantine Beach Inc. and Down beach's research team prepared a comprehensive 34 page Public Comment to NOAA dated February 5 2024 regarding Atlantic Shores new Take request to harass harm or injure more marine mammals with underground sound from their wind surveys discussing among other things the striking correlation between the more survey vessels there are the more whale deaths there are as a result at 9-11. See also PEIS at 3.5.2.2 et seq. and BOEM PEIS Docket No. 2023-0030.]</p>	
BOEM-2024-0001-0313-0007	<p>1.7 Methodology for Assessing the Representative Project Design Envelope Page 1-9 states "In general the maximum values in the RPDE represent the maximum scenario of development that could occur in the NY Bight lease areas. For example it is not expected that any of the NY Bight lease areas would contain more than 280 WTGs which is the upper end of the RPDE. Additionally the RPDE is not meant to be prescriptive or to establish limits for future development as new and emerging offshore wind technologies that have not yet been proposed in existing COPs or analyzed in the RPDE may be part of the development scenario for the NY Bight lease areas."</p> <p>Comment one of the most serious concerns is the lack of meaningful analysis of cumulative impacts and larger plan of scale of the offshore wind direct and indirect impacts. It appears that the PEIS acknowledges the lack of understanding and technologies and studies needed to perform the long term impacts of these projects</p>	<p>Please refer to responses to comments BOEM-2024-0001-0309-0004 and BOEM-2024-0001-0331-0011 for a description of the methodology and scope of the cumulative impacts analysis used in the PEIS.</p> <p>The RPDE was developed in coordination and with input from the six NY Bight lessees, American Clean Power, National Renewable Energy Laboratory, and the States of New York and New Jersey. BOEM has prepared the PEIS to (1) identify and analyze AMMM measures that could avoid, minimize, mitigate, and monitor impacts on the resources in the six NY Bight lease areas and (2) focus project-specific environmental analyses. Potential project-specific impacts will be considered in detail in a COP-specific NEPA analysis.</p>

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	which is extremely problematic and in effect prevents any conclusion that there is not an irreversible potential impacts from this project that could be more environmentally deleterious than any projected climate impacts the project is intended to mitigate.	
BOEM-2024-0001-0313-0010	Cumulative impacts of all offshore wind impacts are of paramount concern. Page 2-5 states "Spacing for OCS-A 0544 would be informed by lease stipulations which require either two common lines of orientation or a 2-nautical mile setback from the neighboring lease area OCS-A 0512. For the purposes of analysis two common lines of orientation based on the proposed spacing in the COP for OCS-A 0512 were assumed resulting in a spacing of approximately 0.68 x 0.68 nautical miles for OCS-A 0544 only." All environmental impacts especially pertaining to OCS-A 0512 which is substantially contiguous to OCS-A 0544 should be evaluated above just visual impacts as described later in the associated sections of the PEIS and Appendices. Additional comments on this issue are detailed later in this comment letter.	Please refer to response to comment BOEM-2024-0001-0331-0011. Impacts from OCS-A 0512 are described throughout the PEIS as part of the cumulative impacts analysis for each resource area. In addition, BOEM approved the COP for OCS-A 0512 (Empire Wind) on November 21, 2023; the full impact analysis, including cumulative impacts, can be found in the Empire Wind EIS: <a href="https://www.boem.gov/renewable-energy/state-activities/empire-wind-final-eis">https://www.boem.gov/renewable-energy/state-activities/empire-wind-final-eis</a> .
BOEM-2024-0001-0313-0015	As was the case in ORECRFP22-1 to help ensure the long-term viability of projects Proposals may include a price structure where the project's price would be subject to a one-time adjustment to reflect changes in certain price indices subsequent to the Proposal Submission Deadline. Proposals may also include a price structure that contemplates an Interconnection Cost Sharing approach. Proposals including these adjustments will be evaluated as described in Section 4 of the RFP. The public versions of the ORECRFP23-1 proposals are included below: Community Offshore Wind LLC - Community Offshore Wind 2 Empire Offshore Wind LLC Empire Wind 1 Sunrise Wind LLC Sunrise Wind As these changes would appear to impact the cumulative impact analysis the final PEIS should be updated to accurately reflect the changes including project timeline and construction impacts (short-term) and long- term impacts.	Thank you for your comment. The Final PEIS has been updated as appropriate to reflect changes to projects included in the cumulative impact analysis.
BOEM-2024-0001-0313-0066	There are a number of references to ongoing and planned projects some of which have been updated since publishing of this draft PEIS in so far as cumulative impact analysis is dependent on the accuracy of the planned projects all relevant sections of the PEIS should be thoroughly and comprehensively updated to reflect the ongoing and	Please refer to response to comment BOEM-2024-0001-0313-0015. The PEIS describes the impacts from construction and operation of onshore components generally and largely defers the analysis of onshore components to the COP-specific NEPA review because

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	<p>planned projects as presented and updated where additional information is now available where it may have been speculative in nature at the time of writing of the draft PEIS. This includes but is not limited to the information on the NYSEDA website as of February 2024 updates to the Empire Wind 1 and 2 projects and the environmental assessment for the Beacon NY project. The Town has reiterated concerns about segmentation of the environmental review process and would again respectfully request that all projects and project components be disclosed and considered as part of the environmental review process. As interconnection points and infrastructure associated with energy transfer and storage are clearly part of this larger plan of scale the whole project must be considered in terms of cumulative impacts as not to improperly segment the review process. It is improper to segregate the impacts of offshore wind projects and the interconnection process because such facilities will be constructed pursuant to the NYISO open access transmission tariff and the state transmission facility siting process. Even if it is anticipated the facilities will be predominantly or entirely owned and operated by the transmission provider (not Empire Beacon Wind or a NY Bight lessee) these infrastructure upgrades and new facilities are functionally dependent on these alternative energy process and thus are an integral component of the environmental impact analysis that is not being discussed as a whole project. In fact it appears that the interconnection process affords flexibility as to which entity will construct certain facilities and the specific facilities (or portions thereof) various substation locations and the loop-in / loop-out lines that will be constructed will be determined in the interconnection and state transmission facility siting processes at the expense of the environmental review process.</p>	<p>the specific locations of onshore project components are not known at this time. While the onshore components are included in BOEM's analysis in the PEIS to support the evaluation of a complete project, BOEM's authority under OCSLA extends only to the activities on the OCS. BOEM also notes that the PEIS does not approve any projects.</p>
BOEM-2024-0001-0313-0067	<p>The NYSDEC SEQR Handbook 4th Edition states "1. What is segmentation? In 617.2(ah) of 6 NYCRR segmentation is defined as the division of the environmental review of an action so that various activities or stages are addressed as though they were independent unrelated activities needing individual determinations of significance. Except in special circumstances considering only a part or segment of an overall action is contrary to the intent of SEQR. There are two types of situations where segmentation typically</p>	<p>Please refer to response to comment BOEM-2024-0001-0313-0066</p>

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	<p>occurs. One is where a project sponsor attempts to avoid a thorough environmental review (often an EIS) of a whole action by splitting a project into two or more smaller projects. The second is where activities that may be occurring at different times or places are excluded from the scope of the environmental review. By excluding subsequent phases or associated project components from the environmental review the project may appear more acceptable to the reviewing agencies and the public." The Handbook goes on to states "Reviewing the "whole action" is an important principle in SEQR; interrelated or phased decisions should not be made without consideration of their consequences for the whole action even if several agencies are involved in such decisions. Each agency should consider the environmental impacts of the entire action before approving funding or undertaking any specific element of the action (see 617.3(g) regarding "Actions")." "All known or reasonably anticipated phases of a project should be considered in the determination of significance. If later phases are uncertain as to design or timing their likely environmental significance can still be examined as part of the whole action by considering the potential impacts of total build-out (SEQR Handbook page 54) However it appears that records of decision and findings of no significant impact are being presented by BOEM prior to any analysis of the potential environmental impacts of the points of interconnection and local impacts. "8. If projects are linked but will have separate sources of funding can they be reviewed separately? No. It is common in many projects to have a mix of funding sources (for example local highway construction affordable housing or economic development). If the various funding sources support the same project or a group of projects that are part of the same overall action then they should be examined in a single environmental review." (SEQR Handbook Page 55) Notable case law Village of Westbury v. Dept. of Transportation 75 NY2d 62 (1989); DOT issued a negative declaration for the reconstruction of a highway interchange. The Court found that the interchange reconstruction was closely linked to the widening of the Northern State Parkway which was also in the planning process and ruled that the projects must be considered as one action for the purposes of conducting an environmental review since they were</p>	

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	complementary components of DOT's plan to alleviate traffic generally." (SEQR Handbook page 204)	
BOEM-2024-0001-0331-0005	The failure to disclose the environmental impacts of many key subjects such as audible turbine operating noise at the shore the failure to present the full impacts of others the extraordinary effort made to minimize the impact of others though creation of contrived baselines and scoring systems the failure to address cumulative impacts e.g. on North Atlantic right whale (NARW or "right whale") migration	The PEIS presents a description and analysis of potential impacts from ongoing activities and trends as part of the No Action Alternative analysis. The No Action Alternative provides a current baseline to analyze impacts from each of the action alternatives. Please refer to PEIS Section 3.5.6, <i>Marine Mammals</i> , for a discussion on cumulative impacts of the No Action and action alternatives on marine mammals, including the NARW.
BOEM-2024-0001-0331-0006	The offshore wind projects and lease sales should be paused until the forthcoming Government Accountability Office ("GAO") study on offshore wind development in the North Atlantic Planning Area is publicly released and federal state and local officials and agencies have an opportunity to review the report public a response and implement recommendations and there is a comprehensive offshore wind pilot program project in the New York Bight to assess the actual economic and environmental impacts of pre-construction construction operation and maintenance and decommissioning activities with independent oversight and an independent transparent investigation into marine mammal deaths off the NJ and NY coasts since December 2022 concluded with substantial evidence that offshore wind development is not a significant cause.	Two offshore wind projects, CVOW – Pilot and Block Island Wind Farm, have been in operation on the Atlantic Coast for over 3 years and 7 years, respectively. These projects have acted as pilot projects for offshore wind development in the region. Studies conducted at these offshore wind sites to evaluate actual impacts of the development, operations, and maintenance of offshore wind infrastructure have been incorporated into this Final PEIS. The Government Accountability Office study on offshore wind development in the North Atlantic Planning Area will be incorporated into the Final PEIS as appropriate if it is publicly available prior to publication of the Final PEIS.
BOEM-2024-0001-0331-0011	PEIS Lacking Regional Cumulative Analysis A major deficiency with this process is that the "regional cumulative analysis" only covers the New York Bight Area but excludes the lease areas next to it including but not limited to leases Ocean Wind 1 2 Atlantic Shores South and North and Empire Wind 12 as well as all the other projects off the east coast. How can this process be considered thorough when the cumulative impacts will be far greater than any suggested by the PEIS?	The geographic and cumulative impact analysis areas for each resource are defined by the anticipated geographic extent of impacts for the specific resource, as described in the introduction to each Chapter 3 resource section. For example, the analysis area for mobile resources—such as bats, birds, finfish and invertebrates, marine mammals, and sea turtles—includes the general range of these species. Depending on the resource, the geographic analysis area and cumulative impacts analysis may include only the NY Bight and nearby lease areas, or the full buildout of all lease areas along the U.S. Atlantic Coast.
BOEM-2024-0001-0331-0013	According to the October 2023 legal filings from Cape May County regarding offshore wind NEPA is in large measure an attempt by Congress to instill in the environmental decision making process a more comprehensive approach so that long-term and cumulative	Thank you for your comment. Please refer to the response to comment BOEM-2024-0001-0331-0011.

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	<p>effects of small and unrelated decisions could be recognized evaluated and either avoided mitigated or accepted as the price to be paid for the major federal action under consideration. ( Nat. Res. Def. Council Inc. v. Callaway 524 F.2d 79 88 (2d Cir. 1975); C.F.R. 1508.7. ) The Council on Environmental Quality defines cumulative effects as "the impact on the environment which results from the incremental impact of the action when added to other past present and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."</p>	
BOEM-2024-0001-0331-0014	<p>The United States has set a target of producing 30 Gigawatts (30000 megawatts) of Offshore Wind by 2030: To position the domestic offshore wind industry to meet the 2030 target DOI's Bureau of Ocean Energy Management . . . plans to advance new lease sales and complete review of at least 16 Construction and Operations Plans (COPs) by 2025 representing more than 19 GW of new clean energy for our nation Achieving this target also will unlock a pathway to 110 GW by 2050 (Biden Administration Fact Sheet: Biden Administration Jumpstarts Offshore Wind Energy" Projects to Create Jobs (March 29 2021) <a href="https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/">https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/</a>.) BOEM acknowledged the interrelated and cumulative effects of their offshore wind program in 2007 when they produced a Programmatic Environmental Impact Statement for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf. ( Bureau of Ocean Energy Management United States Department of the Interior Guide to the OCS Alternative Energy Final Programmatic Environmental Impact Statement <a href="https://www.boem.gov/renewable-energy/guide-ocs-alternative-energy-final-programmatic-environmental-impact-statement-is">https://www.boem.gov/renewable-energy/guide-ocs-alternative-energy-final-programmatic-environmental-impact-statement-is</a>.) Defendants intended this Programmatic Environmental Impact Statement to provide a "baseline analysis that helps to satisfy the requirements of NEPA for offshore renewable energy leasing" because "many wind energy projects will have similar environmental impacts." This Programmatic Environmental</p>	<p>Please refer to responses to comments BOEM-2024-0001-0309-0004, BOEM-2024-0001-0331-0011, and BOEM-2024-0001-0319-0001.</p> <p>The CEQ NEPA Implementing Regulations require the impact analysis for NEPA documents to include cumulative effects, defined as the effects on the environment that result from the incremental effects of the action when added to other past, present, and reasonably foreseeable actions. The Final PEIS has been updated as appropriate to reflect changes to projects included in the cumulative impact analysis.</p>

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	Impact Statement does not satisfy NEPA's cumulative impacts requirement today because Defendants have significantly altered and expanded their offshore wind program rendering the Programmatic Environmental Impact Statement's analysis of cumulative environmental impacts inaccurate and outdated and requiring a supplemental or new Environmental Impact Statement analyzing the current program as it now exists. The New York Bight PEIS repeats the substantial error in the 2007 PEIS in that it does not include the cumulative impacts of any offshore wind projects off the NJ/NY coast as well as all the projects off of the Atlantic Coast.	
BOEM-2024-0001-0331-0015	The NJ/NY PEIS fails to take a hard look at the cumulative impacts of NY Bight combined with the other offshore wind projects that have been leased and are expected to be constructed nearby and the additional offshore wind energy facilities that are expected to be built along the Atlantic coastline. BOEM thus fails to analyze the combined impacts of the thousands of proposed offshore wind turbines covering millions of acres of pristine seabed and open ocean on the human and natural environment. By segmenting their offshore wind program and analyzing the environmental impacts of the New York Bight projects in isolation BOEM unlawfully fails to analyze and consider the cumulative environmental impacts of the other multiple offshore wind projects that BOEM has approved or is considering for approval. BOEM's failure to analyze the cumulative environmental impacts of its offshore wind program as NEPA requires is arbitrary capricious and not in accordance with law and should be invalidated and set aside. ( U.S.C. 706. )	Please refer to responses to comments BOEM-2024-0001-0331-0011 and BOEM-2024-0001-0309-0004.
BOEM-2024-0001-0331-0018	The total number of wind turbines planned along the Atlantic Coast is 3636 with over 15000 miles of cabling 180000 acres of seabed disturbance 4800 acres of scour protection. Many of these statistics for the Atlantic Coast totals EXCLUDE the New York Bight Area! New York Bight Draft Programmatic Environmental Impact Statement - Appendix D (boem.gov)	Please refer to response to comment BOEM-2024-0001-0331-0011. As described in PEIS Appendix D, Attachment D2, <i>Maximum-Case Scenario Estimates for Offshore Wind Projects</i> , there is an estimated total of 3,565 wind turbine generators. This number includes planned turbines for the NY Bight Wind Energy Area.
BOEM-2024-0001-0350-0002	Upon analyzing the draft PEIS it is CFACT's position that The Bureau of Ocean Energy Management's (BOEM) first multi-site offshore wind PEIS is derisory and laughable. After numerous requests going back several years the BOEM has finally published a draft PEIS for a combination of coming offshore wind projects. In this case the PEIS is	The PEIS considers potential impacts from the full buildout of the NY Bight lease area under the "Impacts of Six Projects" analysis for Alternative B and Alternative C under each resource area considered.

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	for a cluster of six large projects in what is called the New York Bight. In principle this PEIS should identify and assess those impacts that arise from the combination of projects over and above the individual project impacts. In fact it does nothing of the sort and the result is simply ridiculous. Most of the approximate 800 pages are merely an academic discussion of the general environment listing the kinds of impacts that might or might not occur and what may or may not be done about said impacts. There is basically no discussion at all about this specific combination of projects presented in the PEIS.	BOEM notes that this PEIS does not approve any projects in the NY Bight lease areas. During project-specific COP NEPA reviews for the NY Bight lease areas, BOEM would analyze each project's impact on the environment using the specific details of the proposed project; the analysis would also include cumulative effects of other offshore wind projects.
BOEM-2024-0001-0352-0011	In the context of the cumulative impacts analysis the final PEIS should update the list of ongoing vs. planned offshore wind projects to account for all COPs that have been approved by the time the PEIS is finalized. For example the draft PEIS lists the commercial scale Coastal Virginia Offshore Wind project as "planned." This should be corrected to "ongoing" in the final PEIS.	Thank you for your comment. The Final PEIS has been updated as appropriate to reflect changes to projects included in the cumulative impact analysis.
BOEM-2024-0001-0354-0004	Meaning no respect to any one BOEM official or employee I communicated the above referenced comment in order to underscore the urgent and absolute need to engage in a thorough review of the cumulative and [Underline: indirect impacts] (emphasis added) as to the currently proposed New York Bight various projects in conjunction with the previously approved and proposed past industrial projects already in various stages of implementation and construction off our coast. There are currently contemplated 900+ gigantic industrial wind turbines to be located off the valuable precious and irreplaceable New Jersey coastline. It is entirely arbitrary and capricious and environmentally unsound 'to attempt to segregate out allegedly separate and distinct wind turbine projects in this inter-related and interdependent section of the Atlantic Ocean. Though BOEM has taken one small step to recognize the above referenced point by combining six (6) wind turbine lease sites together such an action is still far too narrow and arbitrary. The pending Draft Environmental Impact review must include the inter-related and critical review of the _cumulative and [Underline: indirect impacts] (emphasis added) of all the other sites at the very least off the New Jersey/New York and Mid Atlantic coastline.	Please refer to responses to comments BOEM-2024-0001-0331-0011 and BOEM-2024-0001-0309-0004.

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BOEM-2024-0001-0354-0006	<p>As I have argued in testimony at the previously conducted BOEM hearings with respect to such inter-related lease sites it is entirely inappropriate and lacking in scientific support to limit and to separate out the review of such individual massive industrial projects off our coast without a full consideration of the overall cumulative and indirect impacts on the leasing of greater than 500000 acres of the entire Atlantic Ocean eco system. The cumulative impacts upon such an invaluable public resource in the form of the Atlantic Ocean are arbitrarily being discounted if not ignored by the ongoing all too limited bifurcating process. Migratory birds valuable commercial and recreational fisheries marine mammals ocean life and our precious ocean environment itself all deserve accumulative scientifically supportable overall review process: To carve out separate artificially drawn piece meal project sites is contrived inappropriate and unsupportable.. In fact proceeding in this manner underscores the very definition of arbitrary and capricious. The offshore expanse of the New Jersey Coast_ is one magnificent portion of our Atlantic Ocean and should not be carved up with artificially _drawn - manmade profit driven bureaucratic boundaries for individual though still massive industrial construction sites. Our ocean happens to be one of the richest most valuable environmental and economic treasures in the world. The critically endangered North Atlantic Right Whale and some of the other inhabitants of our Atlantic Ocean fisheries truly do not recognize any fabricated non-scientific boundaries. The cumulative effects and indirect impacts of the currently projected eleven (11) other projects with massive turbines off our coast have been virtually discounted if not ignored.</p>	<p>Please refer to response to comment BOEM-2024-0001-0331-0011.</p>
BOEM-2024-0001-0354-0007	<p>As such I would reject the current procedures and limited approach to fabricate and to segregate out one particular focus for a Draft Environmental Impact Statement. A cumulative scientific review is warranted. The study of the cumulative and indirect impacts of the areas of other pending projects off the New Jersey Coast and the construction of over nine hundred (900) massive turbines is absolutely necessary rather than the far too limited sole review focus of the pending draft EIS as to the "NY Bight". Absent such an overall study with a thorough review of the cumulative and indirect impacts the current proposal must be seen as arbitrary and capricious. As I</p>	<p>Please refer to response to comment BOEM-2024-0001-0319-0001 for a description of how projects are determined to be reasonably foreseeable and included in cumulative impacts analysis.</p>

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	<p>had also previously argued in various BOEM created forums as to the premature award of leases and otherwise the .above referenced exhaustive and cumulative study is essential. This critically necessary BOEM study should involve a complete review of the cumulative and indirect impacts with all the vast areas of public lands off the New Jersey Coast which have already been sold off yet have similarly not yet been fully authorized and certainly not developed. Similarly the same cumulative and indirect comprehensive review process must be applied as to all pending and approved projects and their too limited Environmental Impact Statements.</p>	
BOEM-2024-0001-0354-0008	<p>All these numerous overall Atlantic Ocean impacts should initially be thoroughly investigated before such a totally unvetted experimental technology is the subject matter of what are tantamount to be irreversible actions. Included in such a non exhaustive list of the potential impacts to be first thoroughly reviewed and studied as to the specific "NY Bight" Project itself as well as from a cumulative standpoint all the other Ocean sites at various stages of wind turbine construction certainly should be the following:</p> <ol style="list-style-type: none"> <li>1. A vital habitat for birds fish and marine mammals both in the water as well as throughout the wetlands and other coastal areas of our State.</li> <li>2. Commercial fishery sites as well as the interests of recreational fishing.</li> <li>3. Air quality and water quality and the specific effects such a massive industrial construction project itself would have as well as the on going operation of the vast wind turbines and the ultimate not even explained process of trying to decommission or dismantle this huge industrial construction once ifs useful life has ended or it has been rendered obsolete by the already ongoing development of more efficient technologies.</li> <li>4. Issues of environmental standing and environmental justice as to the Atlantic Ocean itself and the ocean environment.</li> <li>5. The cumulative effect upon navigation and ocean vessel traffic in this busy commercial corridor which is already the subject matter of numerous potentially conflicting uses.</li> <li>6. The interests of recreation and tourism.</li> </ol>	<p>The PEIS analyzes the potential impacts of the action alternatives individually and cumulatively with all reasonably foreseeable future planned activities, including future offshore wind projects. An analysis of impacts on the resources identified by the commenter can be found in the following sections of the PEIS: Section 3.5.3, <i>Birds</i>; Section 3.5.5, <i>Finfish, Invertebrates, and Essential Fish Habitat</i>; Section 3.5.6, <i>Marine Mammals</i>; Section 3.6.1, <i>Commercial Fisheries and For-Hire Recreational Fishing</i>; Section 2.4.1, <i>Air Quality</i>; Section 3.4.2, <i>Water Quality</i>; Section 3.6.4, <i>Environmental Justice</i>; Section 3.6.6, <i>Navigation and Vessel Traffic</i>; Section 3.6.8, <i>Recreation and Tourism</i>; and Section 3.6.9, <i>Visual Resources</i>.</p>

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	7. The visual effects and indeed visual resources of the coastal and the ocean setting in the vicinity of this massive industrial site. 8. Independent of the overall effects upon mammals marine and- bird wildlife this_gigantic untested industrial construction project has the potential for causing a devastating impact upon threatened endangered species including the extremely endangered North Atlantic Right Whale. The Right Whale frequents this very ocean area in question and may indeed be crowded out and pushed aside from some of the already leased ocean lands subject to the prior rapid bidding process and awards through BOEM. The undersigned hereby strenuously would argue that to limit this Draft Environmental Impact Statement and the accompanying review without consideration of the cumulative and indirect impacts must be deemed arbitrary and capricious.	
BOEM-2024-0001-0354-0009	POINT III BOEM should enter a "no action alternative" and thereby implement a pause and moratorium of the entire leasing process as to the New York Bight and as to other lease sites proposed off the New Jersey shore until such time as the above referenced thorough study of the cumulative impact of previously awarded wind turbine leases has been undertaken.	Please refer to response to comment BOEM-2024-0001-0309-0004.
BOEM-2024-0001-0354-0014	As previously argued herein BOEM has taken a first step in an overall comprehensive review of this project upon the entire Atlantic Ocean ecosystem its wealth of natural resources along with the potential impacts upon commercial and recreational fishing tourism and/or quality of life for residents and businesses along the entire New Jersey shore. By such a comment I am referring to the fact that for the first time BOEM has now incorporated in its review process six (6) lease sites in relatively close geographic proximity. Nevertheless BOEM should go much further than such an approach as previously argued herein. As such I would suggest that the record as to this draft Environmental Impact Statement include fully developed records of Environmental Impact Statements already in existence with BOEM as to the clearly interrelated previously approved sites of wind turbine construction at other locations not just off the coast of New Jersey and New York but off the entire eastern seaboard. Not the least of relevant aspects of this entire record for BOEM includes scientific opinions and testimony as to the Massachusetts approved	Please refer to responses to comments BOEM-2024-0001-0309-0004 and BOEM-2024-0001-0331-0011. Please refer to PEIS Section 3.5.6, <i>Marine Mammals</i> , for a discussion on cumulative impacts of the No Action and action alternatives on marine mammals, including the NARW. Please refer to PEIS Section 3.4.1, <i>Air Quality and Greenhouse Gas Emissions</i> , for a discussion on the impacts of the Proposed Action (Alternative C) on climate change.

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	wind turbine projects. On that record scientists already have indicated that if BOEM proceeds in approving the numbers of wind turbine projects currently proposed (not to mention additional such projects already being fast tracked before BOEM and otherwise) the North Atlantic Right Whale would be virtually condemned to extinction. Additionally the Environmental Impact Statement and any and all further documents press releases or statements from BOEM should already include BOEM's previously issued admission: "THERE WOULD BE NO COLLECTIVE IMPACT ON GLOBAL WARMING AS A RESULT OF OFFSHORE WIND PROJECTS".	
BOEM-2024-0001-0357-0003	First the BOEM does not consider the full real environmental impact to an area when it approves projects and	Please refer to the responses to comments BOEM-2024-0001-0309-0004 and BOEM-2024-0001-0331-0011.
BOEM-2024-0001-0357-0008	Neither this draft program EIS or any project specific EIS provides a cumulative assessment of the lasting effect from decommissioning of these projects which if removals are not done would leave hundreds of thousands of acres of now productive marine environment unusable for generations (See enclosure V).	Decommissioning is discussed in PEIS Section 2.1.2.1.3, <i>Conceptual Decommissioning</i> . Lessees can request that facilities remain in place in the decommissioning application submitted to BSEE (30 CFR 285.900-285.913), but BOEM approves or does not approve the request (30 CFR 585.434). Unless otherwise determined during the decommissioning application review, NY Bight lessees would be required to remove or decommission all facilities, projects, cables, pipelines, and obstructions and clear the seabed of all obstructions created. Lessees would be required to submit a decommissioning application to BSEE upon the earliest of the following dates: 2 years before the expiration of the lease, 90 days after completion of the commercial activities on the commercial lease, or 90 days after cancellation, relinquishment, or other termination of the lease (30 CFR 285.905).
BOEM-2024-0001-0357-0009	Neither this draft program EIS or any project specific EIS presents a cumulative assessment of all these projects on the cold pool and therefore no AMMM measures to mitigate that cumulative impact (See Enclosure VI).	Cumulative impacts on the Mid-Atlantic Bight Cold Pool are discussed in PEIS Section 3.4.2, <i>Water Quality</i> .
BOEM-2024-0001-0357-0012	This program EIS does not provide that cumulative look. The Notice of Intent states for the EIS states that one of the Program EIS objectives is to provide for [Bold: "focused regional cumulative analysis"]. But then it says that its AMMM measures will apply to	Please refer to response to comment BOEM-2024-0001-0357-0029. For each resource considered, the PEIS analyzes the impacts of a single representative NY Bight project, the impacts of a full

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	<p>development in the whole New York Bight area but not necessarily to BOEM's program outside of the New York Bight area even though the impacts of the New Jersey area projects contribute significantly to those cumulative impacts. This is a contradiction and the BOEM cannot have it both ways. Additionally and even more importantly the EIS does not count up cumulative impacts at all but just lists the projects as individual entities. As shown above there are significant cumulative impacts from development in both the New York Bight area and the New Jersey wind energy area. The draft program EIS also misleadingly states that: "This Draft Programmatic Environmental Impact Statement (PEIS) assesses the potential biological socioeconomic physical and cultural impacts that could result from development activities for six commercial wind energy leases in an area offshore New Jersey and New York known as the New York Bight (NY Bight) as well as the change in those impacts that could result from adopting programmatic avoidance minimization mitigation and monitoring (AMMM) measures. The six commercial leases analyzed in this Draft PEIS are OCS-A 0537 0538 0539 0541 0542 and 0544 (hereafter referred to as the NY Bight leases or lease areas) totaling over 488000 acres (197486 hectares) (Figure ES-1) which were issued by the Bureau of Ocean Energy Management (BOEM) on May 1 2022". But the draft program EIS does not provide that cumulative impact assessment at all. It still treats each project in isolation. Substantively in continuing to do so the BOEM plays a dangerous shell game with the lives of marine mammals and commercial and military vessel crews. For example by treating projects in isolation it always assumes that a migrating whale has somewhere else safe to go. But when the projects are looked at collectively as shown in Enclosure II they do not. The same is true for the safety of commercial and military vessel crews as shown in Enclosure III. The BOEM's and Marine Fisheries stubborn refusal to look at impacts collectively and cumulatively in its decision-making is therefore not only irrational arbitrary and capricious but destructive. And because of that it also cannot identify the proper more substantive AMMM measures that should be considered here (see Enclosure I). By failing to look at the total real impact the BOEM decision-making exercise itself is fatally flawed. Because of the</p>	<p>buildout of six NY Bight projects, and the cumulative impacts of offshore wind development in the NY Bight in combination with other ongoing and reasonably foreseeable activities, including offshore wind activities.</p> <p>BOEM intends for the analysis of one project to be used for tiering and incorporation by reference at the COP-specific NEPA stage, including providing context that can be used in COP-specific NEPA analyses and against which proposed actions at the COP-specific stage may be compared.</p>

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	interconnections between the projects in the NJ/NY area no serious decision maker can make rational reasoned decisions on any of these projects without benefit of a thorough quantitative if possible cumulative impact assessment of all the projects and based on that full real impact (not the fictitious impact of a single project) consider terminating or significantly changing particular projects to make that real full impact acceptable. If the BOEM chooses not to do that analysis in this program EIS then it must do so in every project specific EIS. If it does neither then it continues to engage in unreasonable decision-making.	
BOEM-2024-0001-0357-0013	To correct these flaws the scope of this program EIS or its project-specific EISs needs to expand to: - first include all projects in the same geographical area i.e. the New Jersey wind energy area projects and the NY Bight projects - next to present the cumulative impact of all the those projects in the NJ/NY areas and then finally - to treat all of these projects not as isolated fiefdoms but as variables that can be terminated or significantly changed to make that real full cumulative impact (not the fictitious impact of a single project) acceptable.	Please refer to responses to comments BOEM-2024-0001-0331-0011 and BOEM-2024-0001-0309-0004.
BOEM-2024-0001-0357-0026	Conclusions The BOEM is engaged in an inherently illogical and unreasonable decision-making process. The scope of this program EIS or its project-specific EISs should be expanded to include the New Jersey wind energy area present the cumulative impacts of all the projects in the NJ/NY area and as needed present options to terminate or significantly alter one or more projects to make the real total cumulative impact-not the fictitious impact of one project-acceptable. We expect that the BOEM will not change the scope off its EISs as we have suggested. It will likely maintain that it does not have construction and operations plans for all the projects so it cannot reasonably foresee their impacts. But this is a poor excuse because it can apparently see those impacts clearly enough to present AMMM measures for them. If some additional time is required to analyze a particular critical impact for one or more projects then decisions on all the projects in the area should be delayed to do that. No substantive benefit from these projects has been identified warranting making a decision that could have	Please refer to response to comment BOEM-2024-0001-0319-0001 for a description of how projects are determined to be reasonably foreseeable and included in cumulative impacts analysis.  BOEM notes that this PEIS does not approve any projects in the NY Bight lease areas. During project-specific COP NEPA reviews for the NY Bight lease areas, BOEM would analyze each project's impact on the environment using the specific details of the proposed project; the analysis would also include cumulative effects of other offshore wind projects.

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	disastrous consequences on the shore and marine life without that essential information.	
BOEM-2024-0001-0357-0028	Toward that end: 1.The scope of the EIS should be expanded to include projects in the New Jersey wind energy area now defined by lease areas OCS A0498 0532 A0499 and A-0549. Such an expansion is warranted for two reasons; to address cumulative impacts and as a matter of proper program definition.	Please refer to response to comment BOEM-2024-0001-0319-0001 for a description of how projects are determined to be reasonably foreseeable and included in cumulative impacts analysis. Separate NEPA reviews have either been completed or are currently underway for the lease areas mentioned in the comment, with the exception of OCS-A 0532 (Ocean Wind 2) because the lessee has ceased development of the lease area. Cumulative impacts are addressed in the NEPA documents for the other three lease areas.
BOEM-2024-0001-0357-0029	Regarding the first the Notice of Intent states that one of the PEIS objectives is to provide for "focused regional cumulative analysis". But then it says that its avoidance minimization mitigation and monitoring measures (AMMM) measures will apply to development in the whole New York Bight area but not necessarily to BOEM's program outside of the New York Bight area. This is a contradiction and the BOEM cannot have it both ways. There are significant cumulative impacts from development in both the New York Bight area and the New Jersey wind energy area and to assess those the scope of the PEIS must be expanded to include the New Jersey wind energy area. It is required that common and cumulative impacts be addressed in one place. The Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) rule 1502.4(b)(1) i says that when preparing statements on programmatic actions (including proposals by more than one agency) agencies may find it useful to evaluate the proposals "geographically including actions occurring in the same general location such as body of water region or metropolitan area". Here there are such geographical areas that will be impacted by development in both the Hudson South and the New Jersey wind energy area. Further regarding such cumulative impacts in the CEQ rulemaking of April 20 2020 the Biden Administration re-instituted the definition of cumulative effects in 1508.1(g)(3). That definition now states that cumulative impacts are "effects on the environment that result from the incremental effects of the action when added to the effects of other past present and reasonably foreseeable actions regardless of what agency (federal or non-	Please refer to responses to comments BOEM-2024-0001-0319-0001 and BOEM-2024-0001-0357-0028. The cumulative impacts of increased vessel traffic from the Proposed Action (Alternative C) in combination with reasonably foreseeable planned activities on marine mammals are discussed in Section 3.5.6, <i>Marine Mammals</i> .

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	<p>federal) or person undertakes such other actions". The actions underway by the BOEM in both the Hudson South area and in the New Jersey wind energy area are incremental in terms of certain important impacts as summarized below and explained in detail in the Enclosures here are clearly underway and therefore reasonably foreseeable. Therefore this EIS must include the impacts of all those actions. A number of those cumulative impacts are presented here for illustration. They include: (1) the impact of operational turbine noise from both areas on the primary migration corridor of the North Atlantic right whale which lies between the two areas (2) the impact of vessel surveys using high intensity noise equipment for projects in both the New York Bight and the New Jersey wind energy area acting in the same geographical area concurrently (3) the impact on migratory birds that must cross both areas to get to nesting grounds (4) the impact on the cold pool which spans both the New Jersey and the New York Bight areas (5) the impact of decommissioning including vessel activity and onshore facilities and (6) the socio-economic impact from higher electric rates that will result from development in both areas. In addition the cumulative impact of vessel strikes and construction noise on the North Atlantic right whale needs to be addressed in the PEIS. As mentioned in the Notice of Intent the development of effective AMMM measures must consider cumulative impact. Therefore the scope of the proposed EIS must be expanded to include development in the New Jersey wind energy area now defined by lease areas A0498 A-0532 A0499 and A-0549 in order to do that.</p>	
BOEM-2024-0001-0357-0031	<p>The scope of the EIS should be expanded to consider the cumulative impact of all the proposed projects in the New Jersey New York area. The Notice of Intent states that one of the PEIS objectives is to provide for "focused regional cumulative analysis". But then it says that its AMMM measures will apply to development in the whole New York Bight area but not necessarily to BOEM's program outside of the New York Bight area. This is a contradiction and the BOEM cannot have it both ways. Additionally an even more importantly the EIS does not count up cumulative impacts at all but just lists the projects as individual entities. As shown below there are significant cumulative impacts from development in both the New York Bight</p>	<p>Please refer to response to comment BOEM-2024-0001-0319-0001 and BOEM-2024-0001-0357-0028.</p>

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	area and the New Jersey wind energy area to assess those the scope of the PEIS must be expanded to include in New Jersey Wind Energy Area and to do a real cumulative impact analysis.	
BOEM-2024-0001-0357-0033	The PEIS should include more substantive programmatic avoidance minimization mitigation and monitoring (AMMM) measures. A leasee is required to conduct activities in compliance with all applicable environmental laws and rules including the Endangered Species Act (ESA) the Marine Mammal Protection Act (MMPA) the National Historic Preservation Act (NHPA) and the Coastal Zone Management Act (CZMA). NEPA rule 1508.1(s) requires that mitigation measures include: (1) avoiding the impact altogether by not taking a certain action or parts of an action and (2) minimizing impacts by limiting the degree or magnitude of the action and its implementation. In addition 30 CFR 585.105(a) requires a lessee to "Design your projects and conduct all activities in a manner that ensures safety and will not cause undue harm or damage to natural resources including their physical atmospheric and biological components" and 30 CFR 585.801(f) (1) requires the submission by the lease of "Measures designed to avoid or minimize adverse effects and any potential incidental take of the endangered or threatened species or marine mammals". Therefore the scope of the EIS should be adjusted to include the New Jersey wind energy area consider the cumulative impacts of projects and where needed terminate or significantly alter one or more projects to make the real total cumulative impact acceptable.	In response to comments on the PEIS, BOEM reviewed all AMMM measures and grouped them into AMMM measures that have been terms and conditions of previous COP approvals, measures that have not been terms and conditions of previous COP approvals, and RPs. The project-specific COP NEPA review will also review AMMM measures and may include new or different AMMM measures that are specific to the project. Please refer to responses to comments BOEM-2024-0001-0331-0011 and BOEM-2024-0001-0309-0004 regarding the scope of the cumulative impacts.
BOEM-2024-0001-0425-0005	As previously argued herein BOEM has taken a first step in an overall comprehensive review of this project upon the entire Atlantic Ocean ecosystem its wealth of natural resources along with the potential impacts upon commercial and recreational fishing tourism and/or quality of life for residents and businesses along the entire New Jersey shore. By such a comment I am referring to the fact that for the first time BOEM has now incorporated in its review process six (6) lease sites in relatively close geographic proximity. Nevertheless BOEM should go much further than such an approach as previously argued herein. As such I would suggest that the record as to this draft Environmental Impact Statement include fully developed records of Environmental Impact Statements already in existence	Please refer to response to comment BOEM-2024-0001-0354-0014.

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	with BOEM as to the clearly interrelated previously approved sites of wind turbine construction at other locations not just off the coast of New Jersey and New York but off the entire eastern seaboard. Not the least of relevant aspects of this entire record for BOEM includes scientific opinions and testimony as to the Massachusetts approved wind turbine projects. On that record scientists already have indicated that if BOEM proceeds in approving the numbers of wind turbine projects currently proposed (not to mention additional such projects already being fast tracked before BOEM and otherwise) the North Atlantic Right Whale would be virtually condemned to extinction. Additionally the Environmental Impact Statement and any and all further documents press releases or statements from BOEM should already include BOEM's previously issued admission: [Bold: "THERE WOULD BE NO COLLECTIVE IMPACT ON GLOBAL WARMING AS A RESULT OF OFFSHORE WIND PROJECTS".]	
BOEM-2024-0001-0532-0002	Cumulative impacts Analysis and Alternatives: BOEM should provide clarity on assumptions made within its Cumulative impacts Analysis regarding simultaneous construction and broaden its definition of reasonably foreseeable actions in the PEIS.	Please refer to the response to comment BOEM-2024-0001-0319-0001.
BOEM-2024-0001-0450-0003	The need for Sufficient Data: BOEM must obtain and disclose all relevant Data acknowledge Data gaps and evaluate impacts using accepted scientific methods while being cautious about making broad determinations without Sufficient data. Additionally BOEM should include further monitoring and adaptive management recommendations.	BOEM addresses the concern of data gaps and unavailable information, as required under CEQ regulations (40 CFR 1502.21), in PEIS Appendix E: <i>Analysis of Incomplete and Unavailable Information</i> . In accordance with 40 CFR 1502.21, when an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an EIS and when information is incomplete or unavailable, the agency shall make clear that such information is lacking and determine if any incomplete information is essential to a reasoned choice among alternatives. BOEM has done so in the PEIS in Appendix E. A description of mitigation and monitoring measures considered in the PEIS is provided in Appendix G, <i>Mitigation and Monitoring</i> .
BOEM-2024-0001-0450-0010	Cumulative Impacts Analysis and Alternatives The purpose of a PEIS is to provide a "[f]ocused regional cumulative analysis[]" [Footnote 21: 87 FR at 42496.] and the Council for Environmental Quality has clarified that under NEPA agencies must consider direct indirect and cumulative effects of major federal actions. [Footnote 22: 40 CFR 1508.1(g) 87 Fed. Reg. 23453 23469-70 (Apr. 20 2022).] Under 40	Please refer to response to comment BOEM-2024-0001-0319-0001 for a description of how projects are determined to be reasonably foreseeable and included in the cumulative impacts analysis. The PEIS analysis assumes construction of all six projects would occur simultaneously. Where impact levels would change if

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	<p>C.F.R. 1508.1(g)(3) "cumulative effects" has the following definition: Cumulative effects which are effects on the environment that result from the incremental effects of the action when added to the effects of other past present and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. In addition to a thorough examination of direct and indirect impacts as well as mitigation measures assessing cumulative effects is essential to understanding the overall impact of offshore wind on species and ecosystems along the coast and in the NY Bight. This PEIS presents an opportunity to look comprehensively at regionwide cumulative impacts before site-specific proposals are considered providing BOEM and other stakeholders with enhanced understanding of how various project designs may affect resources in the area. Consideration of cumulative impacts at a regional scale if done properly can ensure detailed analysis of impacts such as the region-wide effects of noise on wildlife populations the impacts of construction timing benefits offered by various alternatives like the use of quiet foundations and the design of sufficiently protective AMMM measures. The Draft PEIS states that: "This Draft PEIS assesses the impacts from both a single representative project that could be developed within any one of the NY Bight lease areas and from the totality of six projects within the NY Bight lease areas." [Footnote 23: Draft PEIS at 1-10.] The Draft PEIS also states that other past present and reasonably foreseeable impacts will be examined as part of the cumulative impacts analysis such as other offshore wind energy development activities global climate change and fisheries use management and monitoring surveys. [Footnote 24: Draft PEIS at 1-10. Appendix D Planned Activities Scenario] While the impacts listed are comprehensive the Draft PEIS is not clear whether it contemplates the construction of all six projects simultaneously which could result in impacts of greater significance than anticipated by this document. The Draft PEIS also states that "For purposes of analysis this PEIS assumes that full buildout of one NY Bight lease area is the same as one NY Bight project. While lessees may elect a phased development approach resulting in more</p>	<p>construction were to occur in a phased approach, the PEIS analysis identifies the change in impact level. While lessees may elect a phased development approach resulting in more than one project per lease, for purposes of analysis, this PEIS assumes one project per lease area. If selected, the phased development approach would be analyzed in COP-specific NEPA analysis.</p>

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	<p>than one project per lease area this PEIS analyzes the most conservative development scenario that could occur per lease area." [Footnote 25: Id.] If development scenarios arise that involve more than one project per lease area this will need to be examined not only on a site-specific basis but as part of a cumulative impacts analysis that accounts for this unexamined development. Further BOEM should consider development in potential leases within the Gulf of Maine Draft Wind Energy Area[Footnote 26: BOEM Releases Draft Wind Energy Area in the Gulf of Maine for Public Review and Comment. October 19 2023. <a href="https://www.boem.gov/newsroom/press-releases/boem-releases-draft-wind-energy-area-gulf-maine-public-review-and-comment">https://www.boem.gov/newsroom/press-releases/boem-releases-draft-wind-energy-area-gulf-maine-public-review-and-comment</a>] and Central Atlantic Final Wind Energy Areas[Footnote 27:BOEM Finalizes Wind Energy Areas in the Central Atlantic. July 31 2023. <a href="https://www.boem.gov/newsroom/press-releases/boem-finalizes-wind-energy-areas-central-atlantic">https://www.boem.gov/newsroom/press-releases/boem-finalizes-wind-energy-areas-central-atlantic</a>] as "reasonably foreseeable" actions to include in the PEIS. "Reasonably foreseeable means sufficiently likely to occur such that a person of ordinary prudence would take it into account in reaching a decision." 40 C.F.R. 1508.1(aa). Historically BOEM has not incorporated unleased areas into its Planned Activities Scenario. However wind energy development in the Gulf of Maine and Central Atlantic is reasonably foreseeable to occur during the construction and operations stages of the NY Bight offshore wind projects. BOEM recently finalized WEAs in the Central Atlantic and issued a Proposed Sale Notice[Footnote 28: 88 FR 86145] for that area two steps which immediately proceed leasing. Additionally the Biden Administration has stated its goal to hold an offshore lease sale in the Central Atlantic and Gulf of Maine in 2024. [Footnote 29: BOEM Offshore Wind Leasing Path Forward. October 2021. <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/OSW-Proposed-Leasing-Schedule.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/OSW-Proposed-Leasing-Schedule.pdf</a> <a href="https://www.reuters.com/business/energy/us-says-complete-offshore-wind-auctions-schedule-next-year-2023-09-25/">https://www.reuters.com/business/energy/us-says-complete-offshore-wind-auctions-schedule-next-year-2023-09-25/</a>] Wind energy development in the Gulf of Maine and Central Atlantic should therefore be accounted for in the PEIS. BOEM should not wait to analyze areas within the Planned Activities Scenario which the</p>	

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	administration has said it is likely to lease or it will lead to a piecemeal insufficient analysis. [Footnote 30: It is well settled law that an agency may not "divid[e] a project into multiple actions" to avoid finding its effects significant <i>Native Ecosystems Council v. Dombeck</i> 304 F.3d 886 894 (9th Cir. 2002). Agencies therefore must consider related actions in a single NEPA document. <i>Thomas v. Peterson</i> 753 F.2d 754 758 (9th Cir. 1985) (citation omitted) see also <i>Kleppe v. Sierra Club</i> 427 U.S. 390 410 (1976) (finding that related actions that will have cumulative or synergistic environmental impact upon a region should be considered together under NEPA).] A broader geographic scope is needed to ensure a more holistic review of environmental impacts stemming from leasing in the New York Bight and a broader ecological perspective of the cumulative impacts on the Atlantic Coast.	
BOEM-2024-0001-0453-0001	We believe BOEM and the Administration must follow the same environmental studies and analysis and the same sequence that it uses when doing a similar environmental review for fishing related activities. This includes cumulative impacts that will be finalized at the onset prior to leasing as well as into the future. This should encompass the entire coastal waters that can be impacted by Offshore Wind Energy Development. To do otherwise will not be a credible study. Nor will the present process capture and research fundamental data gaps. Disregarding this lack of knowledge could lead to significant harm to our coastal ecosystem and the ecological services rendered to sustain the health and productivity of the coastal waters. Additionally it could undermine the socioeconomic welfare and cultural heritage of our coastal communities.	Please refer to response to comment BOEM-2024-0001-0309-0004. The cumulative impacts analysis of the anticipated development in the six NY Bight lease areas on fisheries and socioeconomics can be found in Section 3.6.1, <i>Commercial Fisheries and For-Hire Recreational Fishing</i> , and Section 3.6.3, <i>Demographics, Employment, and Economics</i> . See response to comment BOEM-2024-0001-0450-0003 regarding data gaps.
BOEM-2024-0001-0470-0004	The amounts of installed capacity and number of Wind Turbine Generators (WTGs) in the planned projects as described in the PEIS are inconsistent and seriously misleading:--On page ES-4 the PEIS states "Based on a conservatively estimated power ratio of 3 megawatts per square kilometer BOEM estimates that full development of leases in this area has the potential to create up to 5.6 to 7 GW of offshore wind energy."--On the same page the PEIS states an estimated 1618 GW of offshore wind energy may be necessary to ensure New York State achieves its Climate Act mandates (New York State Climate Action Council 2022).--On page	Section 3.4.1.3.2, <i>Cumulative Impacts of the No Action Alternative</i> , for air quality considers the impacts of the No Action Alternative in combination with other planned non-offshore-wind activities and planned offshore wind activities (without the six NY Bight projects). The 713 WTGs considered in the text excerpt highlighted by the commenter are from the following ongoing or planned offshore wind projects: Ocean Wind 1 (OCS-A 0498), Ocean Wind 2 (OCS-A 0532), Atlantic Shores North (OCS-A 0549), Atlantic Shores South (OCS-A 0499), Empire Wind 1 (OCS-A 0512), and Empire Wind 2 (OCS-A 0512). Note that the Final PEIS has

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	<p>ES-7 of the PEIS BOEM states that "For the analysis of six NY Bight projects BOEM anticipates development of 1103 WTGs 22 offshore substations (OSSs) 44 offshore export cables totaling 1772 miles (2852 kilometers) and 1582 miles (2546 kilometers) of inter-array cables across the six NY Bight lease areas."---This assertion that the six NY Bight projects would build "up to 1103 WTGS" is repeated on PEIS page 2-16.--On page 3.4.1-8 the PEIS says the NY Bight Projects evaluated in the PEIS would construct an estimated 9922 MW of renewable power from the installation of 713 WTGs citing Table D2-1 in Appendix D.---Table D2-1 indicates only 8822 MW will be installed by the current projects and require 615 WTGs---Table D2-1 further indicates that a further 1103 WTGs are planned but fails to disclose the resulting installed MWs. (Using a ratio analysis of the data provided in Table D2-1 if 615 WTGs will produce 8822 MW of installed capacity then 1103 WTGs would constitute another 15822 MW installed).--The Table in Appendix D appears to conflict with text elsewhere in the PEIS and indicates the total planned buildout of OSW in the NY Bight leases is 26644 MW.</p>	<p>been updated with the most recent ongoing and planned offshore wind information for the Atlantic OCS, and all tables have been updated in Final PEIS Appendix D. The 713 WTGs and 9,992 MW cited in the Draft PEIS has been updated to 697 WTGs and 9,561 MW in the Final PEIS.</p> <p>As described in Appendix D, Table D2-1 and Table 2-2, the six NY Bight projects would build up to 1,103 WTGs.</p>
BOEM-2024-0001-0470-0006	<p>Inconsistent and misleading depictions of actual and planned WTG/MW in and among the main PEIS text and appendix information demonstrates project segmentation. [Underline: Appendix D: Planned Activities Scenario] of the PEIS contains summary tables that indicate the total number of "foundations" to be built for either WTGs or offshore substations (OSSs) (PEIS Table D-2) and the total number of WTGs (PEIS Table D2-1) as of November 2023. PEIS Table D2 reveals construction planning for a total of 1761 foundations in the NY Bight. PEIS Table D2-1 reveals that 1718 of the foundations are for WTGs to be constructed 615 (or 713) of which comprise the current proposed actions in the PEIS. The additional segmented projects wishfully intended to meet NY ratepayer service obligations while also complying with the CLCPA (discussed in further detail below) includes the additional 1103 WTG buildout. As excerpted in Table 1 PEIS Table D2-1 data shows that the projects comprising the Proposed Action will total 615 WTGs providing installed capacity of 8822 MW (contrasting with the 713 WTGs and 9922 figures provided on p. 2.4.1-8 of the PEIS). The undisclosed unanalyzed future projects in six other lease areas labeled as</p>	<p>Please refer to response to comment BOEM-2024-0001-0470-0004.</p>

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	<p>"planning" requiring the additional 1103 WTGs would be an increase of almost 200% over the current project total of 615. These "planned" leases and WTGs are due to begin construction between 2026 and 2030 with construction potentially extending beyond 2030.[Table 1: Summary of Current and Planned OSW Projects]Lease/Project: Atlantic Shores South; Lease Area: OCS-A 0499; Status: COP PPA SAP; Table D2-1 Turbine Number: 200; Generating Capacity (MW): 2837Lease/Project: NY/NJ Atlantic Shores North; Lease Area: OCS-A 0549; Status: COP PPA SAP; Table D2-1 Turbine Number: 157; Generating Capacity (MW): 2355Lease/Project: NY/NJ Ocean Wind 2; Lease Area: part of OCS-A 0532; Status: COP PPA SAP; Table D2-1 Turbine Number: 111; Generating Capacity (MW): 1554Lease/Project: NY/NJ Empire Wind 1; Lease Area part of OCS-A 0512; Status: COP PPA SAP; Table D2-1 Turbine Number: 57; Generating Capacity (MW): 816Lease/Project: NY/NJ Empire Wind 2; Lease Area: part of OCS-A 0512; Status: COP PPA SAP; Table D2-1 Turbine Number: 90; Generating Capacity (MW): 1260Lease/Project: NY Bight lease areas; Lease Area: OCS-A 0537 OCS-A 0538 OCS-A 0539 OCS-A 0541 OCS-A 0542 and OCS-A 0544; Status: COP PPA SAP; Table D2-1 Turbine Number: 1103; Generating Capacity (MW): Not Available[Table End]</p>	
BOEM-2024-0001-0470-0007	<p>[Bold: Source: PEIS Table D2-1]Table D2-1 in the PEIS claims the installed MW total for those additional WTGs is not available but arithmetic tells us that based on the current project figures depicted each WTG is expected to provide approximately 14.3 MW (8822 divided by 615). Multiplied against the planned 1103 additive turbines the installed capacity for the "future planned" additional projects is 15772 MW (15.7 GW) less than the estimated 16-18 additional GW needed to meet the CLCPA (assuming NY can claim all the electricity).The improper segmentation extends to energy storage goals established in both jurisdictions. Pursuant to revised energy storage deployment targets announced by NY Governor Kathy Hochul in January of 2022 that double storage capacity from 3 GW to 6 GW by 2030 NYSERDA submitted an updated "Storage Roadmap" to the NYS Public Service Commission (PUC) on December 28 2022. [Footnote 2: CASE 18-E-0130 In the Matter of Energy Storage Deployment Program December 28 2022] In the Roadmap</p>	<p>Because the analysis in this PEIS was conducted prior to the issuance of COPs for the NY Bight lease areas, energy production estimates were not included, as the final turbine size has not been selected.</p> <p>The RPDE was developed with input from the six NY Bight lessees, American Clean Power, National Renewable Energy Laboratory, and the States of New York and New Jersey. In general, the maximum values in the RPDE represent the maximum scenario of development that could occur in the NY Bight lease areas.</p>

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	<p>NYSERDA acknowledges "this nation-leading storage target is motivated by the rapid growth in renewable energy expected over the next decade and the role that electrification of transportation and buildings is expected to play in achieving New York State's future carbon neutral economy" (Roadmap page 6). The PUC case filing further discloses NYSEERDA's understanding that: To serve the needs of a carbon neutral economy analysis developed to support this Roadmap indicates that about 12 GW of energy storage by 2040 and 17+ GW by 2050 would be part of a cost-effective decarbonized electric grid offering critical benefits in terms of grid reliability and integration of renewable generation (Roadmap page 6). This 12-17 GW of storage appears to be parallel infrastructure/facility development needed on top of the Proposed Actions and the addition 16-18 GW of installed OSW planned by NYS but the PEIS fails to describe the unavoidable adverse impacts from this storage buildout. New Jersey has also set an energy storage goal of 2 GW by 2030 which the BPU is looking to implement through a series of incentives. As recently as August of 2023 the BPU was issuing [Underline: Requests for Information (RFIs) in its Storage Incentive Program (NJSIP)] in recognition that "[e]nergy storage resources are critical to increasing the resilience of New Jersey's electric grid reducing carbon emissions and enabling New Jersey's transition to 100% clean energy. "In spite of the implicit and explicit obviousness of this energy storage facility buildout as an integral part of renewable generation buildout (particularly the large volume of planned OSW projects and programming) the PEIS improperly segments out any assessment of planned storage capacity needed by renewable energy generation to meet forecast demand.[See original attachment for Table 2: NYISO Baseline Annual Energy Forecast (In GWh)]</p>	
BOEM-2024-0001-0470-0008	<p>[Italics: a) The Installed Capacity Requirements and Planning are Both Segmented and Misleading]The segmentation of projects is clearly evidenced at the outset by the misleading inconsistencies in the size and parameters of NY Bight lease and construction planning outlines above. The PEIS (p. 1-5) states that based on a conservatively applied power ratio of 3 megawatts per square kilometer BOEM estimates that full development of leases in this area has the potential to</p>	<p>Please refer to responses to comments BOEM-2024-0001-0470-0004 and BOEM-2024-0001-0470-0007.</p>

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	<p>create up to 5.6 to 7 GW of offshore wind energy. Yet the PEIS alternatively states the projects will create 8822 MW or 9922 MW and will include an additional 1103 WTGs to ostensibly satisfy the intersecting and potentially contradictory or mutually exclusive statutory and policy renewable goals established by New York and New Jersey:-NJ: 11 GW of offshore wind energy generation by 2040-NY: 9.0 GW of offshore wind energy generation by 2035-NY: 33% of downstate electric generation from OSW by 2040The PEIS indicates that the 20 GW total of OSW for the two state mandates noted above must be augmented by an additional estimated 1618 GW of offshore wind energy to ensure New York State achieves its CPCLA mandates. Other than the reference noted above to an additional 1103 WTGs being "planned" no description analysis or impact disclosure regarding the buildout of [Bold: 16-18 more GW of OSW] needed to meet the NY requirements alone is provided in the PEIS. This gap is not readily ascertainable as the Proponents have failed to inform the public regarding the known electricity demand requirements identified forecasts and trends (see data and discussion below).</p>	
BOEM-2024-0001-0470-0014	<p>[Underline: 2. Cumulative Impacts:] [Bold: The PEIS fails to identify and assess what are obvious and foreseeable Cumulative Impacts from the deployment of OSW in the NY Bight All EISs must identify describe and analyze the direct indirect and cumulative effects of the action alternatives developed to implement the proposed action and the no action alternative. Cumulative effects are defined in 40 CFR Section 1508.1 as follows: Effects on the environment that result from the incremental effects of the action when added to the effects of other past present and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time. In addition 43 CFR Section 46.30 defines "reasonably foreseeable future actions" to include "those federal and non-federal activities not yet undertaken but sufficiently likely to occur that a responsible official of ordinary prudence would take such activities into account in reaching a decision." The regulations further provide that the federal and non-federal activities BOEM must take into account in</p>	<p>Please refer to the responses to comments BOEM-2024-0001-0319-0001, BOEM-2024-0001-0309-0004, and BOEM-2024-0001-0331-0011.</p> <p>The CEQ NEPA Implementing Regulations require the impact analysis for NEPA documents to include cumulative effects, defined as the effects on the environment that result from the incremental effects of the action when added to other past, present, and reasonably foreseeable actions.</p>

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	the analysis of cumulative impacts include but are not limited to activities for which there are existing decisions funding or proposals identified by BOEM. Reasonably foreseeable planned actions do not include those actions that are highly speculative or indefinite. There is nothing speculative about the legal and policy mandates to build OSW in and near the NY Bight and other Atlantic Ocean regions to satisfy both renewable energy portfolio standards and electricity load demand. BOEM's own tables in Appendix D provide clear details as to the entire planned buildout in the NY Bight and those numbers clearly show 200% more WTGs than assessed for cumulative impacts in the PEIS. More importantly BOEM must assess the cumulative impacts of the WTG buildout actually needed to meet both the renewable mandates [bold: and] the known load growth forecasts. Therefore the PEIS must fully scope and evaluate all the OSW construction and operation needed and planned to complete the fully-scoped unsegmented Proposed Action: 33% of Downstate NY electricity produced by OSW in 2040 and beyond and compliance with NJ Executive Orders 307 and 315. Moreover the full cumulative impacts analysis must include the impacts of building the total NY and NJ energy storage capacity described in Section II.1.a of this submission.	
BOEM-2024-0001-0474-0007	Among other reasons the action is Arbitrary because the programmatic review fails to evaluate the cumulative impact of all offshore wind in the region.	Please refer to responses to comments BOEM-2024-0001-0331-0011 and BOEM-2024-0001-0309-0004.
BOEM-2024-0001-0547-0004	Indeed the PEIS process by BOEM gives short shrift to the mitigation and analysis process of the offshore coasts and cumulative impacts by only providing summary estimates of impacts and providing no plans [Footnote 5: "Each lease holder is likely to submit at least one COA but it is not required. Emphasis added.] for any of the six NY Bight projects in opposition to its own acknowledgement of the cumulative impacts that this project will have combined with BOEM's other lease areas.	Please refer to responses to comments BOEM-2024-0001-0331-0011 and BOEM-2024-0001-0309-0004. The potential change in impacts, including cumulative impacts, as the result of identifying AMMM measures is considered as part of the Alternative C analysis in this PEIS.
BOEM-2024-0001-0547-0006	The Council on Environmental Quality ("CEQ") and NEPA define cumulative impacts as "Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." [Footnote 8: 40 C.F.R. 1508.7.] BOEM has acknowledged the cumulative effects of their offshore wind program	Please refer to responses to comments BOEM-2024-0001-0309-0004, BOEM-2024-0001-0331-0011, and BOEM-2024-0001-0319-0001. The CEQ NEPA Implementing Regulations require the impact analysis for NEPA documents to include cumulative effects,

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	<p>going back to 2007 with their PEIS for Alternative Energy Development and Production and Alternate Use of Facilities on the Outer Continental Shelf. [Footnote 9: Bureau of Ocean Energy Management United States Department of the Interior Guide to the OCS Alternative Energy Final Programmatic Environmental Impact Statement <a href="https://www.boem.gov/renewable-energy/guide-ocs-alternative-energy-final-programmatic-environmental-impact-statement-is">https://www.boem.gov/renewable-energy/guide-ocs-alternative-energy-final-programmatic-environmental-impact-statement-is</a>.] With this PEIS for the NY Bight Project BOEM intends to provide a "baseline analysis that helps to satisfy the requirements of NEPA for offshore renewable energy leasing" [Footnote 10: Id; PEIS 2.1.1 at 2-2.] because "many wind energy projects will have similar environmental impacts." [Footnote 11: Id.] This PEIS does not satisfy NEPA's cumulative impacts requirement today because BOEM has significantly altered and expanded their offshore wind program not only over the years but even in the past nine months making the PEIS's "analysis of cumulative environmental impacts inaccurate and outdated and requiring a supplemental or new Environmental Impact Statement analyzing the current program as it now exists." [Footnote 12: Complaint Cape May v. U.S. Dept. of the Interior BOEM et al. No. 23-cv-21201 (D.N.J. Oct. 17 2023).] These are legitimate concerns that many longstanding and respected environmental groups have expressed. For example at the last virtual public hearing for the PEIS held on February 13 2024 the Nature Conservancy expressed concern about the lack of plans among other things. [Footnote 13: Public comments from the February 13 2024 virtual hearing for BOEM Docket No. 2024-0001 are pending.] This is a global environmental conservation group in existence for over 73 years. [Footnote 14: See Comments by The Nature Conservancy BOEM Hearing February 13 2024; see also Turbine Reefs Technical Report The Nature Conservancy November 2021 <a href="https://www.nature.org/content/dam/tnc/nature/en/documents/TurbineReefReport_Nature-BasedDesignsOffshoreWindStructures_Final2022.pdf">https://www.nature.org/content/dam/tnc/nature/en/documents/TurbineReefReport_Nature-BasedDesignsOffshoreWindStructures_Final2022.pdf</a> (admitting knowledge and "informational gaps exist regarding documented benefits to marine environments where NBD has been implemented around offshore wind infrastructure" at 1.4).] So too did Clean Ocean Action publicly comment a 40-year old local New Jersey Shore</p>	<p>defined as the effects on the environment that result from the incremental effects of the action when added to other past, present, and reasonably foreseeable actions. The Final PEIS has been updated as appropriate to reflect changes to projects included in the cumulative impact analysis.</p>

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	<p>organization advocating for the environment. [Footnote 15: Id. BOEM Public Hearing held on February 13 2024. ] Why the rush? "Reduce Redundancies" and "Timely" are the hallmarks of the PEIS process to make it efficient and streamlined for the government but not for the environment or the public. [Footnote 16: See PEIS ES.2 at ES-3.] It comes off as political expediency and industrializing the oceans rather than saving the environment from harm. The truth is the clock is ticking for BOEM from the presumptive time limit of two years for completing the EIS in accordance with the CEQ implementing regulations effective May 20 2022. [Footnote 17: See PEIS at ES-2.] Rather than reasoned analysis BOEM's failure to analyze the cumulative environmental impacts of its offshore wind program is arbitrary and capricious and violates NEPA. [Footnote 18: 5 U.S.C. 706.]</p>	
BOEM-2024-0001-0547-0008	<p>Mitigation of the cumulative effects of the projects situated behind overlapping projects are not even shown in the PEIS [Footnote 22: See PEIS at 3.6.6-28.] in violation of NEPA. [Footnote 23: 42 U.S.C. 4332(2)(C) (NEPA further requires that the Environmental Impact Statement provide a "detailed statement . . . on . . . alternatives to the proposed action . . .").] For example more studies are needed to show that the noise from the pile driving and sonar activities are not certainly confusing the mammals and leading to localized stranding such as the baby seal pup only days ago ending up a quarter mile from the ocean right in the middle of a commercial street nearby along the New Jersey Shore in Ocean City. [Footnote 24: "Rescued Gray Seal Pup from Ocean City Dies Despite Treatment Efforts Shore Local February 22 2024. <a href="https://shorelocalnews.com/rescued-grey-seal-pup-from-ocean-city-dies-despite-treatment-efforts/#:~:text=The%20Marine%20Mammal%20Stranding%20Center%20mile%20down%2042nd%20Street">https://shorelocalnews.com/rescued-grey-seal-pup-from-ocean-city-dies-despite-treatment-efforts/#:~:text=The%20Marine%20Mammal%20Stranding%20Center%20mile%20down%2042nd%20Street</a> . ("The Marine Mammal Stranding Center reported that the male grey seal pup rescued last week from the streets in Ocean City has died. The pup was s<sup>tr</sup>anded on February 7 after hauling out from the bay and traveling a quarter of a mile down 42nd Street.")] Appendix D shows old studies based on 2019 five years ago not considering the cumulative impacts of the additional BOEM lease sites thus nullifying the mitigation measures.</p>	Please refer to response to comment BOEM-2024-0001-0309-0007.

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	[Footnote 25: See PEIS at D2-1.] One can only imagine the cumulative effects of thousands of vessel traffic [Footnote 26: See PEIS at 3.6.1.1.] and noise then layering the six lease projects in the NY Bight plus the additional BOEM lease areas all being worked on at once. The effects of which will result in not only thousands of "Takes" that BOEM estimated before the cumulative impacts of the NY Bight leases[Footnote 27: See BOEM 2023-0030.] likely only a starting number with additional EMFs sound noise and ill effects on humans as well. [Footnote 28: See NOAA-2024-00008 Jan. 5 2024 <a href="https://www.federalregister.gov/documents/2024/01/05/2024-00008/takes-of-marine-mammals-incident-to-specified-activities-taking-marine-mammals-incident-to">https://www.federalregister.gov/documents/2024/01/05/2024-00008/takes-of-marine-mammals-incident-to-specified-activities-taking-marine-mammals-incident-to</a> . Defend Brigantine Beach Inc. and Downbeach's research team prepared a comprehensive 34 page Public Comment to NOAA dated February 5 2024 regarding Atlantic Shores' new Take request to harass harm or injure more marine mammals with underground sound from their wind surveys discussing among other things the striking correlation between the more survey vessels there are the more whale deaths there are as a result at 9-11. See also PEIS at 3.5.2.2 et seq. and BOEM PEIS Docket No. 2023-0030.]	
BOEM-2024-0001-0547-0010	That there would be such dangerous environmental and health effects because of installation and operation of the Project as proposed - adding cumulative effects to the other BOEM leases starting only 9 miles offshore - shows that these projects' effects are not fully mitigated and not discussed by BOEM in the PEIS.	Please refer to responses to comments BOEM-2024-0001-0331-0011 and BOEM-2024-0001-0309-0004.

## P.5.25 Programmatic Approach to Tiering

**Table P.5-25. Responses to Comments on Programmatic Tiering**

Comment No.	Comment	Response
BOEM-2024-0001-0346-0010	The Draft PEIS Should Set the Stage for Site-Specific Analyses to Grapple With the Difficult Issues Relating to the Protection of Fisheries and Fishing Grounds That Will Need To Be Considered Before Development Can Occur As explained above the Draft PEIS's commercial fisheries AAAMs do not go far enough to materially increase protection of fishing grounds from offshore wind	The M-Opinion cited concludes that "subsection 8(p)(4) of OCSLA imposes a general duty on the Secretary to act in a manner providing for the subsection's enumerated goals. ...[S]he retains wide discretion to determine the appropriate balance between two or more goals that conflict or are otherwise in tension." Neither the M-Opinion nor the Draft PEIS claims that the

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	<p>development. While NEPA requires agencies to conduct analyses rather than achieve any particular outcome the Draft PEIS is not being conducted in a vacuum. Offshore wind development is not governed by NEPA alone but also by OCSLA which does impose substantive affirmative duties on agency decision-making relating to offshore renewable energy leasing and development. More specifically under the subsection entitled "Requirements" OCSLA mandates that "the Secretary shall ensure that any activity under this subsection is carried out in a manner that provides for (A) safety;(B) protection of the environment; (D) conservation of the natural resources of the outer Continental Shelf; and(I) prevention of interference with reasonable uses ." 43 U.S.C. 1337(p)(4).</p> <p>[Footnote 3: In M-Opinion 37067 this Administration's Interior Department Solicitor General construed 43 U.S.C. 1337(p)(4)'s list of secretarial obligations to confer essentially unchecked discretion on the Secretary of the Interior and this conclusion is referenced in the Draft PEIS. (1-7) However one example of the statutes on which M-Opinion 37067 was based is the Magnuson-Stevens Fishery Conservation and Management Act ("MSA"). The MSA has ten national standards. 16 U.S.C. 1851(a). While these standards may require balancing see Lovgren v. Locke 701 F.3d 5 32 (1st Cir. 2012) (cited in M-Opinion 37067 at 3) many courts have held that the Secretary of Commerce has violated one or more national standards in particular cases. See e.g. Southern Offshore Fishing Ass'n v. Daley 995 F. Supp. 1411 1437 n.35 (M.D. Fla. 1998). While the Secretary may have considerable discretion under Section 1337(p)(4) it is an over-statement to claim that discretion is essentially unlimited as the Draft PEIS does.] Protecting scallop beds and their continued productivity protects the environment and conserves natural resources. Establishing an offshore regime that allows for safe and orderly offshore wind development and commercial fishing provides for safety and prevents interference with reasonable uses.</p> <p>Ultimately the COPs that New York Bight windfarm developers will prepare will need to comply with OCSLA's affirmative requirements and site-specific EIS' s will need to support those COPs. The Draft PEIS aspires to be a document from which subsequent site-specific NEPA analyses can be tiered. The Draft PEIS should thus address the</p>	<p>Secretary has unfettered discretion. Her discretion is bounded by the language of OCSLA and a rule of reasonableness.</p> <p>Regarding the request to address fisheries impact minimization and pelagic habitat impact minimization, BOEM considered but did not analyze in detail a fisheries impact minimization alternative and a pelagic habitat impact minimization alternative, as described in Table 2-3 of Chapter 2. BOEM dismissed these as alternatives as it is analyzing several AMMM measures to minimize effects on these resources, including requirements for a Fisheries Compensation Plan and a Fisheries and Benthic Monitoring Plan, and because additional minimization measure or project-specific alternatives are more appropriate to evaluate during the COP-level NEPA review.</p>

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	issues fisheries impact minimization and pelagic habitat impact minimization that OCSLA will require developers to address to prepare a legally defensible COP. Conversely BOEM's failure to recognize the intersection of NEPA and OCSLA requirements at this Draft PEIS stage will not be facilitating the development of site-specific analyses that will meet legal requirements.	
BOEM-2024-0001-0354-0003	POINT II The currently proposed bifurcated narrow review process of separating the six (6) New York Bight leases from the remaining lease sites off the New Jersey and New York coasts must be rejected in favor of a thorough scientific review of the cumulative and indirect impacts (emphasis added) as to the at least ten (10) other currently proposed wind turbine projects with 900+ additional turbines proposed to be constructed off the New Jersey coastline. I truly appreciate that BOEM's higher-up officials have seemingly agreed with my numerous past comments at least in part that a cumulative review process should be conducted as to all the closely inter-related sites for wind turbines off the New Jersey coast. As such BOEM has by inference agreed with my position in that BOEM has now combined the six (6) New York Bight wind turbine lease sites into one overall draft environmental impact statement. While such a stance is preferable to the previously implemented entirely arbitrary process of reviewing each nearby lease site separately such an approach does not go far enough.	<p>The purpose of the PEIS is the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts. The analysis within Alternatives B and C of the overall impacts of a full buildout of six projects in the NY Bight lease areas evaluated comprehensive cumulative impacts by examining offshore wind activities within the NY Bight region as a whole.</p> <p>Cumulative impacts for each resource were analyzed and are discussed in each Chapter 3 resource section. The cumulative impact analysis considers the impact of the No Action Alternative and Alternatives B and C in combination with other ongoing and planned non-offshore-wind activities and offshore wind activities. The ongoing and planned offshore wind activities considered in the cumulative impacts analysis includes other proposed projects off the New Jersey and New York coast. The ongoing and planned offshore wind activities and the planned non-offshore-wind activities that may affect resources are discussed in Appendix D. BOEM has already initiated or completed COP-specific NEPA review for several projects off of the New Jersey shore (Ocean Wind 1, Atlantic Shores South, and Atlantic Shores North); therefore, it is inappropriate to delay those projects to incorporate them into the NY Bight PEIS as doing so would jeopardize the financial viability of those projects. BOEM included the six NY Bight leases in the PEIS because the leases are close to one another and were all leased at the same time, allowing BOEM to initiate the PEIS well in advance of the COP-level NEPA review.</p>
BOEM-2024-0001-0354-0010	With particular emphasis on the lease already awarded to the Atlantic Shores project and related New Jersey wind turbine sites I would ask BOEM to reexamine their prior Environmental Impact Statements as to all such actions previously enacted. Any and all	Refer to response to comment BOEM-2024-0001-0354-0003. BOEM's project-specific NEPA document for each COP includes a cumulative impacts analysis that considers the impact of project alternatives in combination with other planned non-offshore-

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	actions including but not limited to those taken by BOEM as to the Atlantic Shores Project must be thoroughly reviewed in conjunction with the within nearby six (6) leases in the "NY Bight" DEIS as to cumulative and indirect impacts upon the entire Atlantic Ocean eco system. The lack of such a review process as to cumulative and indirect impacts with respect to the already awarded lease sites calls into question the entire process and each and every such lease and construction activity already authorized by BOEM including but not limited to any and all approvals associated with the Atlantic Shores Project which is in close proximity.	wind activities and planned offshore wind activities. In the Atlantic Shores EIS, the planned offshore wind projects in the NY Bight were included in the cumulative impacts analysis.
BOEM-2024-0001-0357-0030	There are also programmatic reasons for including the New Jersey wind energy area in the PEIS. First the CEQ NEPA rule 1501.9(e)(1)iii calls for actions that are interdependent parts of a larger action to be dealt with in the same impact statement. Likewise CEQ NEPA rule 1502.4(a) requires that agencies "shall evaluate in a single environmental impact statement proposals or parts of proposals that are related to each other closely enough to be in effect a single course of action". With regard then to the scope of this EIS the New York Bight areas provide opportunities to serve the two well-defined State programs that enable the development through power purchases the New Jersey State program for 7500 megawatts of power by 2035 and the New York State program for 9000 megawatts as mentioned in the Notice of Intent. In fact development in one lease area may supply energy to both programs. Therefore the Program EIS should address those two programs and for each New Jersey lease area (A-0498 A-0532 A-0499 and A-0549) and each current New York Bight potential lease area (A-0537 A-0538 A-0539 A-0541 A-0542 A-0544 and A-0512) estimate and show the amount of power destined to go to each State. Regarding the New Jersey program due to the relative proximity of the Hudson South area to New Jersey versus New York and its beneficial environmental factors versus the extremely close to shore New Jersey area development in the Hudson South area should contribute substantially to the New Jersey program and therefore must be considered with the current New Jersey lease areas together in this Program EIS document.	Refer to response to comment BOEM-2024-0001-0354-0003. The purpose of the PEIS is the identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts. The PEIS does disclose the cumulative effects of buildout of other ongoing and planned offshore wind projects on the OCS within the geographic area of analysis for each resource. Each of the six NY Bight lease areas is required to undergo project-specific environmental analyses through the development and submittal of an SAP and the COP. The purpose and need further states that the PEIS supports federal and state goals, but it is not intended to meet state obligations. The developer for each lease is responsible for obtaining offshore renewable energy credits (ORECs) and determining where power from each lease area will go. BOEM's leasing process for offshore wind is entirely independent of state goals and solicitations. BOEM is required to assess COPs as submitted by developers; its role is not to design projects to meet state goals.

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BOEM-2024-0001-0423-0032	<p>Appendix C: Tiering Guidance</p> <p>The tiering guidance is not very useful and very high level BOEM should provide additional detail here on specifically how it will tier the project-specific EIS from the PEIS and how this will save time. The Draft PEIS permits lease areas to "tier or incorporate by reference [the] PEIS" in order to "provide for greater efficiency and reduce duplication of analyses in complying with NEPA requirements." It is hard to imagine how a PEIS at this stage in the project development process especially one as flawed as the one before us could offer an opportunity for meaningful "tiering" by lessees. It is certainly possible that some of the material in the PEIS could indeed be "incorporated by reference" in the NEPA documents for NY Bight lease area project(s) particularly the affected environment sections however Appendix C indicates that essentially all of the impact analysis must be done at the project-specific review stage using the information that leaseholders will provide in their COPs. The need to conduct the impact analysis during the project-specific review to assess the applicability of AMMMs proposed in the PEIS to the specific project and to compare and analyze project-specific COPs to the RPDE in the PEIS adds new and additional complexities and is certainly very unlikely to save time.</p>	<p>Appendix C is intended to provide high-level information regarding the type of information BOEM anticipates could be incorporated by reference and the additional analysis that is expected at the COP-level NEPA review. However, each COP will need to be evaluated once it is received to determine what type of activities are proposed and to what extent the PEIS can be incorporated by reference.</p>
BOEM-2024-0001-0436-0003	<p>A well-crafted programmatic NEPA review provides the basis for future decisions such as identifying broad mitigation and conservation measures that can be applied to subsequent tiered reviews. This is a practice undertaken in other PEISs by the Department of the Interior. [Footnote 3: E.g. the Draft Utility-Scale Solar Energy Development Programmatic Environmental Impact Statement (Draft Solar Programmatic EIS) has been proposed to update the Bureau of Land Management (BLM) 2012 Western Solar Plan to support current and future national clean energy goals long-term energy security climate resilience and improved conservation outcomes 2023/2024 Solar Programmatic EIS Information Center (anl.gov) <a href="https://blmsolar.anl.gov/solar-peis-2023/">https://blmsolar.anl.gov/solar-peis-2023/</a>.] These documents provide guidelines and considerations for future actions based on best practice and lessons learned from past precedent. The New York Bight PEIS should similarly be reframed with this high-level process orientation. Rather than adding to site-specific analytical</p>	<p>BOEM recognizes the value of programmatic NEPA reviews for purposes of supporting tiered, project-level reviews and for identifying mitigation measures. Appendix C, <i>Tiering Guidance</i>, summarizes the affected environment, impact analysis, and AMMM measures discussed in the PEIS and identifies the additional analysis that BOEM anticipates may be required in the COP-specific NEPA analysis for each lease area to support the development of AMMM measures specific to each proposed project. However, each COP will need to be evaluated once it is received to determine what type of activities are proposed and to what extent the PEIS can be incorporated by reference. Based on comments received on the Draft PEIS, BOEM has revised Alternative C to group AMMM measures into sub-alternatives (see Final PEIS Chapter 2): Sub-alternative C1 and Sub-alternative C2. Sub-alternative C1 analyzes the AMMM measures that BOEM has required as conditions of approval for</p>

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	requirements the PEIS should provide guidelines and analysis to support decision making for individual projects and outline a process for project-specific deviations that may result from factors such as improved technology innovation and project-specific circumstances. BOEM should make revisions throughout the PEIS to support this appropriate framing of a programmatic NEPA review.	<p>previous activities proposed by lessees in COPs submitted for the Atlantic OCS or through related consultations. Sub-alternative C2 analyzes the AMMM measures under Sub-alternative C1 plus AMMM measures that have not previously been applied. These AMMM measures that have not been previously applied may be less familiar to the offshore wind industry but could further avoid and minimize impacts on resources if applied. BOEM may require some or all of these measures as conditions of approval for activities proposed by lessees in COPs submitted for the six NY Bight lease areas.</p> <p>BOEM will conduct project-specific NEPA analysis of the COP for each lease area. This analysis will focus on providing site- and project-specific analyses that were not already addressed by the PEIS. Project-specific alternatives will be considered by BOEM and cooperating agencies during the COP-level NEPA review.</p>
BOEM-2024-0001-0436-0018	<p>Use of PEIS to Streamline COP-specific NEPA Reviews</p> <p>The Council on Environmental Quality NEPA regulations make clear that programmatic environmental reviews like this PEIS are not simply an analytical document but the first step in a tiering relationship that is completed by incorporation into site-specific analysis. 40 CFR 1501.11. BOEM should better explain and interpret its OCSLA authorities as applied to the relationship between this PEIS and the environmental review of six New York Bight COPs. According to the Notice of Intent for the New York Bight PEIS the primary mission of the PEIS is to make COP-specific NEPA reviews easier by avoiding redundant analysis. Importantly AMMMs should not be proposed for adoption where the PEIS analysis indicates that an impact is not "ripe" due to lack of project-level information.</p>	<p>The PEIS appropriately identifies AMMM measures that may be applicable to more than one NY Bight lease area, are reasonable and enforceable, and allow for flexibility where appropriate. BOEM will conduct project-specific NEPA analysis of the COP for each lease area as part of BOEM's authority under the OCSLA. Project-specific alternatives will be considered by BOEM and cooperating agencies during the COP-level NEPA review. Refer to response to comment BOEM-2024-0001-0436-0003 regarding changes to the AMMM measures and Alternative C as a result of comments received on the Draft PEIS.</p>
BOEM-2024-0001-0436-0019	<p>Appendix C Tiering Guidance in the Draft PEIS can be a useful tool particularly with regards to tiering to the PEIS affected environment and impact analysis. Appendix C provides helpful guidance on what information from the PEIS could be incorporated by reference into the future COP-specific NEPA analyses and identifies additional analysis that BOEM anticipates would need to be performed as part of the COP-specific NEPA analysis once detailed and site-specific project information is available. Equally important however will be</p>	Comment noted.

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	BOEM's commitment to these guidelines so that the ruleset for tiering to the PEIS is not a moving target for developers.	
BOEM-2024-0001-0439-0012	<p>The PEIS should be an analytical tool for the purposes of tiering subsequent environmental reviews. A PEIS should evaluate the effects of planning level decisions including in this case the effects of implementing certain AMMMs. A PEIS is an important NEPA tool for improving efficiencies and reducing agency burden by allowing for site-specific reviews to tier from the PEIS. Indeed CEQ's recently proposed NEPA regulations[Footnote 20: While not finalized NEPA Phase II regulations will likely be finalized prior to the finalization of the PEIS. Moreover the NPRM notes that "An agency may apply the regulations in this subchapter to ongoing activities and environmental documents begun before" the effective date of the final rule. See 88 Fed. Reg. 49924 ( July 31 2023).] recognize the value of a PEIS for the purposes of tiering.[Footnote 21: 88 Fed. Reg 4992 (July 21 2023) (noting programmatic reviews are re important tools to facilitate more efficient environmental reviews and project approval).] The proposed regulations note that "agencies generally [italicized: should] tier their environmental impact statements and environmental assessments when it would eliminate repetitive discussions of the same issues focus on the actual issues ripe for decision and exclude from consideration issues already decided."[Footnote 22: Proposed 40 CFR 1501.11.] Drafted correctly the NY Bight PEIS could play the role described above and help reduce the time it takes to finalize COP review. Unfortunately the current version does not achieve this objective. Instead it appears to rely on the PEIS process to adopt wholesale all AMMMs that are identified through the PEIS process. In doing so BOEM is not only making decisions which are not appropriate this early in the process but it is also placing the burden on the lessee to show that certain AMMMs are not warranted.</p>	<p>Refer to response to comment BOEM-2024-0001-0436-0003. The COP-specific NEPA ROD for each lease area will describe the specific terms and conditions for which compliance is required (40 CFR 1505.3), including any applicable AMMM measures analyzed in the PEIS.</p>
BOEM-2024-0001-0439-0013	<p>Indeed BOEM admits that it lacks sufficient project- and site-specific information at this PEIS stage to determine which AMMMs may be appropriate stating that it "may require additional or different measures based on future site-specific NEPA analysis or the parameters of specific COPs."[Footnote 23; Draft PEIS at ES-3.] In fact as identified in Appendix C almost all impact assessments are</p>	<p>Refer to response to comment BOEM-2024-0001-0436-0003.</p>

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	<p>deferred to the individual project NEPA process. BOEM's proposal to adopt all AMMMs identified in this process at the PEIS stage [italicized: and then evaluate them again] at the site-specific stage to determine which AMMMs are appropriate (including AMMMs that were not adopted in the PEIS)[Footnote 24: See e.g. id. at ES-1 ("The project-specific analyses could incorporate additional or different AMMM measures as needed").] exposes that the adoption of AMMMs is not ripe at this PEIS stage. The premature adoption of these AMMMs undermines tiering's efficiency goals and will lead to duplication of effort and an [italicized: increase] in the data and analysis that will be necessary to prove that certain adopted AMMMs are inapplicable at the site-specific level. This is the very duplication of effort that NEPA's implementing regulations attempt to avoid. The Offshore industry provides detailed comments on the AMMMs and these issues in Attachment A. The PEIS should be an analysis of appropriate programmatic AMMMs that BOEM [italicized: may] consider as a condition of approval. BOEM should be able to rely on the analysis of the AMMMs to tier subsequent site-specific reviews. Finally to ensure the promises of efficiency under a PEIS the AMMMs considered at this stage should not only be reasonable and economically and technically feasible but they should also be [italicized: ripe] for review.</p>	
BOEM-2024-0001-0450-0008	<p><b>Tiering for Project-Specific NEPA Analyses</b>  In general the Draft PEIS proposes a transparent and smart approach and opportunity to reduce impacts region-wide while achieving efficiency gains. One of the major advantages of conducting a PEIS is to provide a roadmap for responsible development where the review at the project stage can be limited to site-specific matters not covered in the PEIS if the project proponent generally adheres to the measures examined in the PEIS. As the PEIS states: The analysis in this PEIS was developed for integration with site-specific NEPA reviews. Project- specific analyses that tier from or incorporate by reference this PEIS will evaluate whether a project would have greater equal fewer or different impacts than those that were analyzed in the PEIS by considering the level of action analyzed and the particularities of the site. Future COP-specific NEPA documents will focus on providing site- and project-specific analyses that were</p>	<p>While the PEIS provides a framework for environmental review by analyzing AMMM measures, each of the six NY Bight lease areas is required to undergo project-specific environmental analyses through the development and submittal of an SAP and the COP.</p> <p>If a lessee makes changes to the PDE after the initial submittal of the COP, a COP revision is required. Any PDE changes will be analyzed during the COP-level NEPA review prior to final approval.</p> <p>BOEM will complete a NEPA review for each COP; this review will include a detailed evaluation of potential impacts for the development of each lease area in the NY Bight, including a cumulative impacts analysis. For each resource area (including air quality, birds, bats, and marine mammals), Appendix C, <i>Tiering Guidance</i>, summarizes the affected environment, impact analysis,</p>

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	<p>not already addressed by the PEIS. [Footnote 14: Draft PEIS at ES-4.] We strongly support the ability of project-level NEPA analyses to tier to the PEIS. Tiering guidance is provided in Appendix C on the type of matters that will be examined in site specific reviews. It is critical that both site-specific impacts as well as deviations from the scope of the representative project design envelope (RPDE) be examined in separate environmental analyses on a project specific level and at the COP approval phase. If there are "significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts" [Footnote 15: 40 CFR 1502.9(d)(1)(ii).] then it is both critical and required that those be examined in a new analysis. As noted above these project-specific analyses should take the form of environmental impact statements and not environmental assessments particularly given the relatively early stage of the U.S. offshore wind industry's development. This is bolstered by the fact that many of the factors as laid out in the Draft PEIS Appendix C that would be covered in a subsequent analysis could be significant. These factors include "characterizations of air quality around onshore facilities" which is a major concern to local communities; onshore and transmission related impacts to habitat for bats and birds and other species; the occurrence of marine mammals including the severely endangered North Atlantic right whale within the lease area; and the specific impacts of noise presence of structures and traffic from the project. [Footnote 16: See Draft PEIS at App. C.] We also reiterate that a PEIS even earlier at the siting stage would help in ensuring selection of the most suitable sites for development. Siting itself can result in the substantial reduction or avoidance of impacts to species and other resources obviating the need for more expensive and sometimes less effective mitigation measures at the project level.</p>	<p>and AMMM measures discussed in this PEIS and identifies additional analysis that may be included in the COP-specific NEPA analysis for each lease area.</p> <p>Prior to the lease auction, BOEM completed extensive agency consultation and public engagement to determine the areas included in the Final Sale Notice to minimize potential environmental impacts and to avoid use conflicts (see Section 1, Table 1.1 for a summary of BOEM's planning and leasing activities for the NY Bight).</p>
BOEM-2024-0001-0452-0002	<p>Approaches to PEIS Alternatives Tiering and Analysis</p> <p>PEIS analysis should have been conducted prior to any lease auction because siting is the most effective tool to maximize avoidance minimization mitigation and monitoring efforts. This would increase flexibility and provide sufficient time to identify and implement the most effective mitigation measures. All future NEPA analysis of project-specific alternatives must continue to require an EIS not an</p>	<p>Prior to the lease auction, BOEM completed extensive agency and public engagement to determine the areas included in the Final Sale Notice (see Section 1, Table 1.1 for a summary of BOEM's planning and leasing activities for the NY Bight).</p> <p>Each of the six NY Bight lease areas is required to undergo project-specific environmental analyses through the development and submittal of an SAP and the COP. Following the</p>

Comment No.	Comment	Response
	EA because the current approach leaves the moderate to major impacts identified in the PEIS (and their associated mitigation alternatives) to only be analyzed once a COP has been submitted. The structure of the alternatives will be critical to the success of this approach. RODA has previously commented on the structure of the No Action alternative used by BOEM in Environmental Impact Statement analysis such as in our South Coast Wind DEIS comments. [Footnote 11: See <a href="https://rodafisheries.org/wp-content/uploads/2023/04/230418_Southcoast-DEIS.pdf">https://rodafisheries.org/wp-content/uploads/2023/04/230418_Southcoast-DEIS.pdf</a> .] We again highlight our concern over any conflation of the No Action alternative with a cumulative effects analysis.	completion of this PEIS, BOEM will complete a NEPA review for each COP; this review will include detailed evaluation of potential impacts for the development of each lease area in the NY Bight, including a cumulative impacts analysis. The level of NEPA review and content of the review will be determined by BOEM upon receipt and review of each COP.
BOEM-2024-0001-0547-0005	Appendix C of the PEIS provides for how the Project will be used; however the qualified impact does not act the way the Project was designed. [Footnote 6: PEIS Appendix C: Tiering Guidance provides for evaluation of impacts that could result from wind energy development in the NY Bight lease areas as well as the AMMM reasons for a nebulous Construction and Operations (COP) Plan analysis perhaps in the future.] The PEIS is faster for the federal government but at the same time its vagueness is giving the wind industry a free pass at the expense of the local environment New Jersey's local economies the health and welfare of its human marine avian and other coastal inhabitants and ocean floor - all of which will be exposed to and have their ecosystems severely disrupted because of BOEM's inefficiencies in the PEIS process. Further the Atlantic City area disproportionately will bear the effects of the six NY Bight lease areas' cumulative effects on an already overburdened population. [Footnote 7: See PEIS at Table D1-9 3.6.4 at C-11 and C-12; see also N.J.S.A. 13:1D-157 et seq.; <a href="https://dep.nj.gov/ej/law/">https://dep.nj.gov/ej/law/</a> ; Atlantic Shores Federal Consistency Certification Request published by New Jersey Department of Environmental Protection September 19, 2023 (overburdened communities include Brigantine NJ in Atlantic County NJ).]	The purpose of the PEIS includes identification of AMMM measures at the programmatic stage that could avoid, minimize, mitigate, and monitor impacts. The PEIS is an extra step in BOEM's leasing and permitting process and does not circumvent or override any requirements of COP review and approval. While the PEIS provides a framework for environmental review, each of the six NY Bight lease areas is required to undergo project-specific environmental analyses through the development and submittal of a COP. BOEM's NEPA analysis of the COP for each lease area will include detailed evaluation of impacts and assessment of AMMM measures based on site-specific data.

## P.5.26 National Environmental Policy Act/Public Involvement Process

**Table P.5-26. Responses to Comments on National Environmental Policy Act/Public Involvement Process**

Comment No.	Comment	Response
BOEM-2024-0001-0002-0001	The federal Bureau of Ocean Energy Management (BOEM) released a 1429-page Programmatic Environmental Impact Statement (PEIS) that presents impacts of offshore wind turbines in six large leases in the New York / New Jersey Bight. The public only has 45 days from 1/8/24 to 2/26/24 to review this monstrous document for offshore & onshore impacts. These lease areas totaling more than 488000 acres of the ocean were purchased at auction by private companies for more than 4.3 billion dollars in 2022. There needs to be more time for review	Publication of the Draft PEIS initiated a 45-day comment period, which was extended in response to requests from Tribal nations and stakeholders. The comment period ended on March 13, 2024. During the comment period, BOEM held five public meetings. In-person meetings were held in Massachusetts on February 5, 2024; in New York on February 7, 2024; and in New Jersey on February 8, 2024. Two virtual meetings were held on January 31, 2024 and February 13, 2024. As described in the NEPA regulations, an agency should commence preparation of an EIS as close as practicable to the time the agency received a proposal so that the Final EIS can contribute to the decision-making process (40 CFR 1502.5). After the conclusion of the comment period, BOEM assessed and considered all the comments received in preparation of the Final PEIS. BOEM is compliant with CEQ's requirement for a Draft EIS to be published for public review and comment for a minimum of 45 days.
BOEM-2024-0001-0003-0001	The public needs more time to review this monstrous document for these lease areas totaling more than 488000 acres of the ocean at the cost of 4.3 billion dollars. The current scope magnitude and speed of the industrialization for wind energy are unprecedented and will result in vast marine ecosystem destruction. Studies to determine impacts are underway but are too little too late and cumulative impacts are largely ignored.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0004-0001	Request a 90-DAY EXTENSION TO THE PUBLIC COMMENT PERIOD on BOEM'S Draft Programmatic Environmental Impact Statement for SIX Offshore Wind Lease Areas off NY/NJ Too much is at stake to rush through the industrialization of the Eastern Seaboard.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0005-0001	Please allow for a 90 day extension for public comment!	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

Comment No.	Comment	Response
BOEM-2024-0001-0007-0001	In the name of good governance due process fairness public interest and the democratic process Clean Ocean Action ("COA") respectfully and urgently requests that you extend the deadline for public comments on the New York Bight Draft Programmatic Environmental Impact Statement ("Draft PEIS") by a minimum of ninety (90) additional days. The Draft PEIS encompasses a broader area than has ever been analyzed in a single National Environmental Policy Act ("NEPA") review document for the offshore wind industry. It is over 1000 pages including appendices with important information. Therefore it is unrealistic to expect the public to be able to meaningfully review analyze and comment on such a complex and comprehensive document within the minimum 45-day period so the comment period must be extended.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0007-0002	COA is a regional broad-based coalition of conservation environmental fishing boating diving student surfing women's business civic and community groups with a mission to improve and protect the marine waters in the New York Bight. COA has been actively engaging with the Bureau of Ocean Energy Management ("BOEM") and other state and federal agencies about the development of offshore wind energy for more than a decade to ensure the protection of the marine environment and resources including submitting public comments on the offshore wind projects currently in development in the New York Bight. COA will continue to monitor and comment on any future projects proposed in the region so we have a strong vested interest in the Draft PEIS. The public has a heightened interest in offshore wind development as well especially in coastal localities in the New York Bight because they depend on the ocean's health to support commercial and recreational fishing as well as the tourism industry. The development of offshore wind projects in the region has been rapid especially relative to the state of the scientific study on the environmental effects of such widespread industrialization in the area. If approved the PEIS would speed up offshore wind development even further at the expense of site-specific study. Providing only the minimum public comment period is yet another example of BOEM unreasonably hastening the offshore wind development process.	<p>Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.</p> <p>This PEIS will not result in the approval of any activities in the NY Bight lease areas. Each lease holder is required to conduct project-specific environmental analyses through the development and submittal of a COP, as required under 30 CFR 585.628.</p> <p>For each resource area, <i>Appendix C, Tiering Guidance</i>, summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0007-0003	NEPA's implementing regulations provide that when an agency publishes a DEIS the public must be provided a minimum of forty-five (45) days to review and comment on the document [Footnote 1: 40 C.F.R. 1506.11(d)]. However BOEM is not limited to this time period which is wildly unrealistic and unjust in this instance given the unprecedented scope and highly technical nature of this document. BOEM has never before considered the region-wide effects of any and all future offshore wind projects in a single environmental impact statement. As such it is critically important for commenters to analyze whether each detail in the Draft PEIS can reasonably be applied to all individual offshore wind projects in the area. The public cannot reasonably complete this task within forty-five (45) days. NEPA is meant to provide the public with opportunities to meaningfully contribute to decisions that significantly affect the environment. To be meaningfully involved in this decision the public needs sufficient time to review and critically analyze the scientific and technical language within the Draft PEIS. COA will submit substantive comments on the Draft PEIS but our comments will be more helpful to BOEM if we can more comprehensively review the document and conduct any necessary research. In closing extending the public comment period by at least ninety (90) additional days to May 26 2024 serves the interest of good governance due process and transparency. Please contact us if you have any questions.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0010-0001	I Demand more time for review! We need more time to properly review and understand this document.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0011-0001	I request an extension to the official review period for the 1428 page PEIS concerning the ecological impacts of Off Shore Wind Industrialization for the six large lease areas abutting the NJ and NY coast.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0012-0001	Please extend comment period to protect 488000 acres of our ocean! You have six offshore wind projects- six! What is the reason for your haste to limit comments that will provide valuable consideration for your decisions today that will negatively impact our future?	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

Comment No.	Comment	Response
BOEM-2024-0001-0013-0001	I am requesting a 90-DAY EXTENSION TO THE PUBLIC COMMENT PERIOD on BOEM'S Draft Programmatic Environmental Impact Statement for SIX Offshore Wind Lease Areas off NY/NJ - The federal Bureau of Ocean Energy Management (BOEM) released a 1429-page Programmatic Environmental Impact Statement (PEIS) that presents impacts of offshore wind turbines in six large leases in the New York / New Jersey Bight. This only allows the public only 45 days from 1/12/24 to 2/26/24 to review this monstrous document for offshore & onshore impacts. These lease areas totaling more than 488000 acres of the ocean were purchased at auction by private companies for over 4.3 billion dollars in 2022. The public needs more time for review!	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0016-0001	Why is there such a rush? If the leases were sold in 2022 to give a reasonable amount of time to review over 1400 pages should not be an issue. More time to review!!!	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0017-0001	As residents of Monmouth County New Jersey who will be impacted by any effect the wind projects might have we are requesting an extension to the 90 day review period. Ninety days is not sufficient for a review of the document just released by your agency.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0018-0001	It is important to allow for an appropriate review time for a document outlining such policies and projects that may greatly impact a resource as precious as the ocean like these wind turbines. Extend the review period beyond 90 days so that a clear and helpful decision can be made by experts. Don't forgo prudent planning for corporate interest.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0019-0001	We need more time to evaluate! With the recent closure of other wind projects more time is needed to avoid another TAX PAYER disaster!!	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0020-0001	Please extend the review period for the environmental impact study for impacts of proposed wind farms off the coast of NJ. This is new technology and impacts are NOT fully known. We are running the very real risk of irreversible damage to the environment by building wind farms: doesn't it make sense to slow down and make sure we know what we are doing before we do it??? Please for the sake of our children grandchildren and all future generations extend the deadline and let there be proper review!	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

Comment No.	Comment	Response
BOEM-2024-0001-0021-0001	Please extend the period to review the Environmental Impact Statement for the six offshore wind projects planned off the coast of NJ by at least 90 days to allow adequate time to review this huge document.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0023-0001	It is important that we extend the comment period from 45 days to 90 days to give all of us enough time to review the PEIS and have a clear understanding of the impacts.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0024-0001	I am writing to express my concern and request an extension of the public review period for the recently released Programmatic Environmental Impact Statement (PEIS) on offshore wind turbines in the New York / New Jersey Bight. The current 45-day period spanning from 1/12/24 to 2/26/24 is insufficient for a comprehensive review of the substantial 1429-page document. Given the complexity and extensive nature of the PEIS it is imperative that the public be granted an extended timeframe of at least 90 days to thoroughly assess its contents. The information presented in this document has far-reaching implications for the environment particularly concerning the impacts on the ocean and marine life. The significance of the current government's plans for offshore wind necessitates a thorough and thoughtful review by the concerned public. A 90-day review period would allow for a more inclusive and informed engagement from various stakeholders ensuring that diverse perspectives and expertise are considered in the decision-making process. I urge the Department of the Bureau of Ocean Energy Management to prioritize transparency public participation and the thorough examination of potential environmental impacts. Extending the review period will contribute to a more robust and informed public commentary ultimately leading to better-informed decisions regarding the proposed offshore wind projects.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0025-0001	The federal Bureau of Ocean Energy Management (BOEM) released a 1429-page Programmatic Environmental Impact Statement (PEIS) that presents impacts of offshore wind turbines in six large leases in the New York / New Jersey Bight. Since the public was only given 45 days from 1/12/24 to 2/26/24 to review this monstrous document for offshore & onshore impacts I am requesting & demanding more time for review!	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

Comment No.	Comment	Response
BOEM-2024-0001-0026-0001	We would like a 90 day extension to the public comment for the wind energy development in ny and nj	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0027-0001	The public needs more time to review the report!!	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0028-0001	As a citizen of New Jersey and a advocate for ecology I demand more time for public opinion and retort to Offshore Wind and it's unbelievably abhorrent push to apply unnatural man made structures to our beautiful oceans. This experiment to see if Wind Turbines actually reduce global warming is slowly failing in other parts of the world; thus producing the pilot of things to come. The cooling stations (substations) alone pull in incredible amounts of water only to heat an add chemicals only to be released back into the environment at an alarming rate. The water seems to be heated to a 96 +/- degree temperature that may be unnaturally warm our ocean faster than the "Global Warming" calculations. More research must be conducted on the interruption of migratory marine animals as well as avian species. 45 days is not enough time for public out reach on these matters I think 90 days is still too short to rush these unprecedented mammoth Eco-killing machines. Please; for the love of good find a better way to produce energy that doesn't leave such a big profile on our planet. Millions of acres of sea land will be decimated for the greed of mankind. The OCEAN's ONLY enemy is MANKIND.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period. Each lease holder is required to conduct project-specific environmental analyses through the development and submittal of a COP as required under 30 CFR 585.628. For each resource area, Appendix C, <i>Tiering Guidance</i> , summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area.
BOEM-2024-0001-0029-0001	I would like you to issue an additional 90 days to the review period for the Programmatic Environmental Impact Statement (PEIS) that presents impacts of offshore wind turbines in six large leases in the New York / New Jersey Bight. The current review period from 1/12/24 to 2/26/24 is not enough time to review this 1400 page document. Please add a 90 day extension to begin on 2/27/24 so that stakeholders and the public can properly review this document.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0030-0001	while I am in favor of reducing our use of fossil fuels I think we must be prudent in our installation of off shore wind turbines and extend the review period to at least 90 days so that the public can carefully	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

Comment No.	Comment	Response
	review the ramifications of the installation especially the environmental impact.	
BOEM-2024-0001-0031-0001	considering the high stakes finances and lifespan of this project I encourage you to extend the review time of the draft Environmental Impact Statement of Wind Energy Development in the New York Bite by an additional 90 days.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0032-0001	To demand a 90 day extension to the public comment to review the lengthy document regarding NJ offshore wind leases!	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0033-0001	I demand a 90 day extension. 45 days is not nearly enough time for the public to read and understand a 1400+ page document. We deserve a say and before we can adequately speak we need to understand.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0036-0001	I request that the "comment period" be extended by 90 days.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0037-0001	AT LEAST A 90 DAY EXTENSION OF PUBLIC COMMENT PERIOD OR A LONGER EXTENSION IS ABSOLUTELY NECESSARY. Currently the public has only been provided a short 45 day period in order to review a vast 1429 page document the subject matter of which would effect the Atlantic Ocean and the entire ocean ecosystem in perpetuity. Our town any professionals with whom we may desire to consult and the public in general have been provided a woefully insufficient span of a mere 45 days to attempt even a cursory process of this voluminous document and its many attachments. The proposal will directly impact over 500000 acres of the Atlantic Ocean. Indirect impacts have lasting ramifications as to the entire ocean environment. Just a preliminary review of the gigantic draft PEIS suggests that monitoring and assessments of a pilot scale project be implemented prior to moving ahead with such an irreversible and potentially damaging proposal. Truly independent evaluation with peer reviewed science is warranted.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period. In the PEIS, BOEM considered but dismissed (Chapter 2, Table 2-3) from further consideration an alternative to build a pilot project. BOEM does not have the authority to prevent developers from submitting COPs and developing commercial-scale projects until after a pilot project is proposed and built. Data from sites that are constructed and operating (e.g., Block Island), as well as the pilot project in Virginia, were incorporated into this PEIS and will be incorporated into the development of project-specific COPs and EISs.
BOEM-2024-0001-0039-0001	The future of our oceans is too important therefore we should not be forced to rush into decisions. The public environmental scientists & our representatives need time to properly review documents &	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

Comment No.	Comment	Response
	research. THE 45 DAY DEADLINE TO REVIEW THE PEIS MUST BE EXTENDED.	
BOEM-2024-0001-0040-0001	The Bureau of Ocean Management is giving only 45 days to review and comment on the development of wind turbines off the NJ coast. This development could have devastating far-reaching and long lasting effects on our oceans. The Bureau has provided a 1429 page document for the general public to read digest and comment on in only 45 days. Shame on you! This is a horrendous breach of the compact between government and its citizens.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0040-0002	This whole process needs to be opened up to public hearings in the affected locations. Only then will our government which is expected to provide what the citizenry wants and needs will hear and see what the people of NJ really want and need. And we don't need these wind turbines shoved down our throats with a 45-day comment period. I demand that open in-person public hearings be held all along the shore communities in New Jersey (not just one place for one night which only includes an "informal open house concept") so that the Bureau and politicians can hear the reactions of the ordinary citizens on this potentially devastating environmental travesty about to happen.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0041-0001	I am a NJ coastal property owner and have grave doubts about the adequacy of Federal and NJ State environmental assessments regarding the proposed wind turbine projects in our coastal waters. There is no reason huge development projects like this in our ocean should be fast tracked risking permanent environmental damage. Please extend the comment deadline for 90 days to allow time for adequate and objective environmental assessment to be completed.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0045-0001	Please extend the comment period by 90 days so that the public has time to review. This issue is too sensitive to rush through without giving the public due time.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0046-0001	The process for this Draft PEIS and cumulative impact statement is appropriate and legal as it was prepared following the requirements of the National Environmental Policy Act (NEPA) (42 United States Code [USC] 4321 et seq.) and implementing regulations (40 CFR parts 15001508). The Council on Environmental Quality's (CEQ's) regulations at the time the Notice of Intent (NOI) for this PEIS was	Thank you for your comment.

Comment No.	Comment	Response
	issued contained a presumptive time limit of 2 years for completing environmental impact statements (EISs) and a presumptive page limit of 150 pages or fewer or 300 pages for proposals of unusual scope or complexity. BOEM has prepared this Draft PEIS in accordance with the CEQ NEPA implementing regulations effective May 20 2022. Additionally this Draft PEIS was prepared consistent with the U.S. Department of the Interior's NEPA regulations (43 CFR part 46) longstanding federal judicial and regulatory interpretations and Administration priorities and policies including Secretary's Order No. 3399 requiring bureaus and offices to not apply any of the provisions of the 2020 changes to CEQ regulations (85 Federal Register 43304-43376) "in a manner that would change the application or level of NEPA that would have been applied to a proposed action before the 2020 Rule went into effect."	
BOEM-2024-0001-0072-0001	As requested please allow for a 90 day extension for public comment!	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0101-0001	I request an extension to the official review period for the 1428 page PEIS concerning the ecological impacts of Off Shore Wind Industrialization for the six large lease areas abutting the NJ and NY coast.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0105-0001	Extend public comment for 90 days.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0167-0001	Please give the 90 days! We can't let this happen to our waters our fishing industries ! Please	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0169-0001	I echo other calls demanding an extension to this public comment period currently set to end on 2/26/24 after only 45 days. This PEIS is nearly 1500 pages long encompasses six large lease areas in the NY and NJ Bight which total over 488000 acres and were purchased for \$4.3 billion (2022). More time is needed to allow the public to review such a gargantuan document that will impact an incredible swath of the Atlantic.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

Comment No.	Comment	Response
BOEM-2024-0001-0175-0001	I write to oppose the six wind energy projects off New York/New Jersey. After attending two virtual public meetings on BOEM's programmatic Environmental Impact Statement I strongly request that more transparency and studies be made to the public [Underline: before] any further approvals or construction begins. When concerns were brought up some of the responses that stood out most were "there are data gaps". That seems like a lot of data gaps for you to have when we are looking at six offshore wind lease areas in the NY Bight which in this case totals over 488000 acres of the ocean. May I remind BOEM that your mission is to manage development of U.S. Outer Continental Shelf energy in an [Underline: environmentally and economically responsible] way.	This PEIS will not result in the approval of any activities in the NY Bight lease areas. Each lease holder is required to conduct project-specific environmental analyses, which include development and submittal of a COP, as required under 30 CFR 585.628. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include detailed evaluation of each resource area.
BOEM-2024-0001-0176-0001	Firstly I would like to request a 90 extension to the comment period due to the shear size of the PEIS.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0180-0001	I am extremely dismayed at BOEMs exercise of irresponsibility by not allowing ample review time for this 1429 PEIS regarding the impact of offshore wind turbines in the New York Bight. It is an example once again of BOEM turning a blind eye to the fact that offshore wind activity is putting coastal ecosystems at risk of collapse.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0224-0006	I urge for a more comprehensive and transparent evaluation of the environmental impact before making a final decision. Additionally I request an extension of the comment period to allow for thorough public scrutiny and informed contributions.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0225-0001	I urge you to extend the public comment period on the proposed wind farm project AT LEAST another 45 days. This project is moving forward without the public knowing the costs or more importantly the environmental and economic impact of this plan. Many knowledgeable people believe that wind energy is unduly expensive inefficient and does little to reduce climate change. You cannot just proceed without public input.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0242-0001	Need a 90 day extension to review all documentation.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

Comment No.	Comment	Response
BOEM-2024-0001-0262-0002	The scope of current off-shore wind proposals and projects is absurd. BOEM has given the public just 45 days to review a 1429 page draft "Programmatic Environmental Impact Statement (PEIS) for Expected Offshore Wind in the New York Bight." I as a tax-paying citizen of New Jersey more specifically of the Jersey Shore demand at least a 90-day extension to the public comment period to review the draft PEIS; 45 DAYS IS NOT ENOUGH to review this monstrous document for offshore & onshore impacts. This push to have offshore wind projects authorized without the public's input is completely reckless and unacceptable.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0282-0001	I want a 90 day extension to study further.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0290-0001	We need at least a 90 day extension! We have not had enough time to comment. Why can't you wait for the Government Accountability study to be completed? We have to make sure that this technology will not hurt our ocean and marine life. Too much too fast!	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0304-0001	The federal Bureau of Ocean Energy Management (BOEM) released a 1429-page Programmatic Environmental Impact Statement (PEIS) that presents impacts of offshore wind turbines in six large leases in the New York / New Jersey Bight. Since the public was only given 45 days from 1/12/24 to 2/26/24 to review this monstrous document for offshore & onshore impacts I am requesting & demanding more time for review!	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0309-0001	As a Brigantine New Jersey homeowner and stakeholder I am writing to respectfully request a 180-day extension seeking more time to submit comments to the New York Bight Draft Programmatic Environmental Impact Statement ("PEIS") for the proposed project comprising six NY Bight lease areas ("the Project") offshore New Jersey and New York.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0309-0002	In addition I am writing to record my complete disapproval of the Project including lack of adequate notice in the PEIS process resulting in loss of due process for the stakeholders and affected environmental justice communities lack of adequate mitigation analysis (aka "AMMM Measures") failure to analyze "focused regional cumulative effects" [Footnote 1: BOEM PEIS Docket No.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period. The analysis of the overall impacts of a full buildout of six projects in the NY Bight lease areas as part of Alternative B and Alternative C evaluated comprehensive cumulative impacts by examining offshore wind activities within the NY Bight area as a

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	BOEM-2024-0001 ("PEIS") at ES-4.] and other violations of NEPA and respectfully request a decision of No Action.	whole. Cumulative impacts for each resource were analyzed and are discussed in Section 3.
BOEM-2024-0001-0309-0002	In addition I am writing to record my complete disapproval of the Project including lack of adequate notice in the PEIS process resulting in loss of due process for the stakeholders and affected environmental justice communities lack of adequate mitigation analysis (aka "AMMM Measures") failure to analyze "focused regional cumulative effects" [Footnote 1: BOEM PEIS Docket No. BOEM-2024-0001 ("PEIS") at ES-4.] and other violations of NEPA and respectfully request a decision of No Action.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period. The analysis of the overall impacts of a full buildout of six projects in the NY Bight lease areas as part of Alternative B and Alternative C evaluated comprehensive cumulative impacts by examining offshore wind activities within the NY Bight area as a whole. Cumulative impacts for each resource were analyzed and are discussed in Section 3.
BOEM-2024-0001-0309-0003	There is ample precedent for the Bureau of Ocean Energy Management ("BOEM") to extend the comment period for offshore wind projects such as this Project affecting offshore New Jersey and New York based on requests from the public for less complex projects than this NY Bight's six wind farm leases where time to comment was extended. For example BOEM has recently granted comment period extensions for the Sunrise and South Coast Wind projects among others [Footnote 2: Based on requests from the public on April 3 2023 BOEM announced a 15-day comment period extension for the DEIS for the proposed South Coast Wind (formerly Mayflower Wind) project offshore Massachusetts. <a href="https://www.boem.gov/newsroom/notes-stakeholders/comment-period-extended-southcoast-wind-draft-environmental-impact">https://www.boem.gov/newsroom/notes-stakeholders/comment-period-extended-southcoast-wind-draft-environmental-impact</a> . On May 4 2022 BOEM announced the extension of the comment period by 10 days in response to stakeholder request regarding the Proposed Sale Pacific Wind Lease Sale 1. <a href="https://www.regulations.gov/document/BOEM-2022-0017-0001">https://www.regulations.gov/document/BOEM-2022-0017-0001</a> . BOEM extended the comment period to October 4 2021 for the Sunrise Wind project offshore New York. <a href="https://www.boem.gov/renewable-energy/state-activities/sunrise-wind#:~:text=On%20August%2031%2C%202021%2C%20BOEMand%20to%20make%20technical%20corrections">https://www.boem.gov/renewable-energy/state-activities/sunrise-wind#:~:text=On%20August%2031%2C%202021%2C%20BOEMand%20to%20make%20technical%20corrections</a> . BOEM extended the comment period for the Call and the NOI for North Carolina's Offshore Wind Energy project originally published in the Federal Register on December 13 2012 for a 45-day comment period that ended on January 28 2013. Notices at the request of stakeholders seeking more time to submit comments were subsequently	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

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	<p>extended to March 7 2013 <a href="https://www.boem.gov/newsroom/press-releases/boem-extends-public-comment-period-wind-energy-offshore-north-carolina.">https://www.boem.gov/newsroom/press-releases/boem-extends-public-comment-period-wind-energy-offshore-north-carolina.</a>]. Stakeholders in this Project such as myself need more than a month and a half to fully comprehend over 1000 pages[Footnote 3: Public comment letter from Clean Ocean Action dated January 12 2024 posted by BOEM on January 22 2024 Comment ID BOEM-2024-0001-0007 calling on BOEM to extend the comment period to at least 45 days for the PEIS to review and comment on over 1000 pages of the PEIS.] of this PEIS including a highly technical Appendix [Footnote 4: BOEM Docket Number: BOEM-2024-0001 New York Bight Draft Programmatic Environmental Impact Statement January 2024 Volume II: Appendices A-O.] to retrieve the information in such a large document to make a fully reasoned response for such a complex Project comprising six lease areas in the NY Bight and the cumulative effects on the other regional BOEM lease areas and for BOEM to correct defects in the notice and mitigation analysis process.</p>	
BOEM-2024-0001-0309-0010	<p>In conclusion BOEM has granted many DEIS offshore wind comment extensions for projects less complex than this. An extension of the comment period by at least 45 days is a much more equitable period of time to correct for the lack of adequate notice and denial of due process rights accommodate a reasoned parsing of the magnitude of this novel Project of such size scope and complexity [Footnote 32: See Crain's New York Business January 25 2024 Caroline Spivack "What to know about New York's nascent offshore wind industry" <a href="https://www.craigslistnewyork.com/climate/what-know-about-new-york-offshore-wind-industry">https://www.craigslistnewyork.com/climate/what-know-about-new-york-offshore-wind-industry</a>; Crain's New York Business January 29 2024 Caroline Spivack "New York's Offshore Wind Industry Faces a Financial Reckoning" <a href="https://www.craigslistnewyork.com/climate/new-yorks-offshore-wind-industry-faces-financial-reckoning">https://www.craigslistnewyork.com/climate/new-yorks-offshore-wind-industry-faces-financial-reckoning</a>.] and to fully comment on the PEIS. Considering the novel nature of the Project and large size of the DEIS its cumulative effects that are not discussed and their effects not mitigated as such in the PEIS as a stakeholder in this project I join numerous other stakeholders including local entities such as Defend Brigantine Beach Inc. and others in respectfully requesting additional time to comment.</p>	<p>Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period. The purpose of the PEIS is to identify issues, analyze potential impacts, and identify potential AMMM measures for the six NY Bight lease areas. The analysis of the overall impacts of a full buildout of six projects in the NY Bight lease areas as part of Alternative B and Alternative C evaluated comprehensive cumulative impacts by examining offshore wind activities within the NY Bight area as a whole. Cumulative impacts for each resource were analyzed and are discussed in Section 3.</p>

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BOEM-2024-0001-0313-0001	<p>While the Town of Oyster Bay appreciates the consideration of our comments on the PEIS provided herein we would also like to reiterate the numerous requests to BOEM to date from various interested parties for an extension to the comment period deadline of at least 90 days. NEPA's implementing regulations provide that when an agency publishes a DEIS the public must be provided a minimum of forty-five (45) days to review and comment on the document. Given the unprecedented scope and magnitude of the proposed action the extremely voluminous and highly technical nature of this document clearly requires a reasonable amount of time to review and provide meaningful comments to BOEM. The public cannot be reasonably expected to complete this task within forty-five (45) days. NEPA is meant to provide the public with opportunities to meaningfully contribute to decisions that significantly affect the environment. To be meaningfully involved in this decision the public needs sufficient time to review and critically analyze the scientific and technical language within the Draft PEIS. Extending the public comment would allow the public to review and provide comments to BOEM that would serve to present critical local and intuitional knowledge to the experts. While it appears evident based on the response to questions and requests to BOEM to extend the comment period during the virtual hearing in an effort by BOEM to expedite the process it is short-sighted and problematic to sacrifice meaningful consideration of potential adverse impacts of this project in pursuit of expediting ultimate construction of the NY Bight project components. As stated by BOEM on the environmental assessment "BOEM is committed to facilitating robust public engagement in the offshore leasing process." (NY Bight EA page 9 of 167 as compared to the PEIS which is over 1200 pages for which an extension was granted). Providing adequate time for the public to engage in the environmental review process would be the only reasonable way to live up to that stated commitment.</p>	<p>Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.</p>
BOEM-2024-0001-0313-0012	<p>There have been a number of recent reports on changes in ownership of offshore wind companies. For examples on November 30 2023 NYSERDA announced the launch of New York's fourth competitive offshore wind solicitation as part of New York's 10-Point Action Plan to bolster the State's growing large- scale renewable</p>	<p>BOEM's leasing process for offshore wind is entirely independent of state goals and solicitations. BOEM is required to assess COPs as submitted by developers; its role is not to design projects to meet state goals.</p>

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	<p>industry. The expedited solicitation supports progress toward achieving New York's Climate Leadership and Community Protection Act (Climate Act) goals of sourcing 70% of New York's electricity from renewable sources by 2030 and developing 9000 megawatts of offshore wind by 2035. Information paraphrased below: On January 25 2024 NYSDERDA received responses to New York's fourth offshore wind solicitation with six total bids for three projects from three offshore wind developers including Community Offshore Wind LLC with the Community Offshore Wind 2 project Empire Offshore Wind LLC with the Empire Wind 1 project and Sunrise Wind LLC with the Sunrise Wind project. On October 26 2023 NYSDERDA issued a Request for Information to solicit public comment on proposed adjustments to this Request for Proposals including an expedited timeline and streamlined evaluation process. To allow for expedited preparation and review of proposal submissions submission requirements were significantly streamlined compared with ORECRFP22-1. ORECRFP23-1 provides flexibility for a variety of proposals including for projects that currently hold contracts with NYSDERDA but commit to conditional termination. NYSDERDA's updated policy regarding OREC agreement termination and contract security is detailed in Section 2.1.1.1 of the RFP which replaces and supersedes the policy that was published on November 16 2023.</p>	
BOEM-2024-0001-0313-0016	<p>Additionally in February 2024 the U.S. Department of the Interior's Bureau of Ocean Energy Management (BOEM) prepared an Environmental Assessment (EA) to determine whether approval of additional site assessment activities as proposed by Beacon Wind LLC (Beacon Wind) within Lease Area OCS-A 0520 (Lease Area) offshore Massachusetts would lead to reasonably foreseeable significant impacts on the environment. Specifically On Feb. 1 2024 BOEM announced the publication of the Notice of Availability of a Draft Environmental Assessment (Draft EA) for Additional Site Assessment Activities on Beacon Wind LLC's Renewable Energy Lease OCS-A 0520 in the Federal Register on Feb. 2 2024. The publication opens a 30-day public comment period for the Draft EA which closes on Mar. 4 2024. Notice of Availability of a Draft Environmental Assessment (EA) for Additional Site Assessment Activities on Beacon Wind LLC's Renewable Energy Lease (Feb. 2 2024) Draft Environmental</p>	<p>Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.</p>

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	<p>Assessment for Additional Site Assessment Activities on Beacon Wind LLC's Renewable Energy Lease OCS-A 0520 (Feb. 2 2024)</p> <p>Another example is that On Nov. 21 2023 the Department of the Interior announced the approval of the construction and operation of the Empire Wind project offshore New York. Empire Wind US LLC proposes to develop two offshore wind facilities known as Empire Wind 1 and Empire Wind 2. The lease area is located about 12 nautical miles (nm) south of Long Island N.Y. and about 16.9 nm east of Long Branch N.J. Again additional relevant information paraphrased below for reference and context: The Record of Decision (ROD) documents the decision to approve the construction of 147 wind turbines within the lease area. Empire Wind ROD (Nov. 21 2023). Empire Wind Notice of Availability (Nov. 28 2023) The ROD represents the final step in the National Environmental Policy Act review process for the Empire Wind Construction and Operations Plan (COP). The lessee must still receive BOEM's final COP approval as required by its Renewable Energy Regulation and other required Federal and state authorizations. The COP approval represents the last major action by BOEM and is scheduled for Feb. 21 2024. As part of BOEM and BSEE's regulations the lessee cannot begin any construction on their lease until after review of the Facility Design Report and Fabrication and Installation Report (FDR/FIR). Location map provided for reference. SEE ORIGINAL COMMENT FOR MAP This is another reason why there is a necessity for a comment period extension BOEM has multiple voluminous documents with open comment periods for similar projects in various stages of review. The complexity of these projects and the interrelatedness are not being adequately disclosed and comprehensively evaluated. In an effort to expedite these processes the requisite comprehensive analysis is lacking and the changing parameters and segmented documents make it impossible to provide all- encompassing meaningful comments. By the time one comment period ends components in other environmental documents regarding other project components have changed or are not available for analysis and comment. Ultimately this defeats the purpose of providing these documents for public consumption analysis of cumulative impacts</p>	

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	and ensuring the accuracy and validity of the environmental review process.	
BOEM-2024-0001-0313-0063	<p>4.1 Unavoidable Adverse Impacts of the Proposed Action</p> <p>CEQ's NEPA-implementing regulations (40 CFR 1502.16(a)(2)) require that NEPA analyses evaluate the potential unavoidable adverse impacts associated with a Proposed Action. The Proposed Action is the adoption of AMMM measures (Alternative C) to reduce potential impacts of development of offshore wind in the NY Bight lease areas. SEE ORIGINAL COMMENT FOR TABLE 4.1.1: Potential unavoidable adverse impacts of the Proposed Action</p> <p>Air quality and greenhouse gas emissions fails to consider the emissions from manufacturing processing and vehicular trips associated with the proposed project. Water quality consideration fails to include consideration of emerging contaminants and water quality degradation as a direct result of loss of filter feeding benthic organisms and submerged aquatic vegetation (SAV). The table also lacks the appropriate acknowledgement of the noise impacts and that would appear to be unavoidable even with mitigation measures as a result of the proposed action.</p>	<p>Chapter 4 presents a high-level description of unavoidable adverse impacts. Please see detailed analysis for air quality and GHGs in Section 3.4.1, for water quality in Section 3.4.2, and for noise with respect to marine mammals in Section 3.5.6. Appendix G, <i>Mitigation and Monitoring</i>, lists the AMMM measures (Table G-1) that have been previously applied as terms and conditions of COP approvals for COPs proposing offshore wind activities on the Atlantic OCS.</p> <p>BOEM will conduct project-specific NEPA analysis of the COP for each lease area that will focus on providing site- and project-specific analyses that were not already addressed by the PEIS. Project-specific alternatives will be considered by BOEM and cooperating agencies during the COP-specific NEPA review.</p>
BOEM-2024-0001-0313-0065	In summation the Town of Oyster supports environmentally sustainable practices that benefit the health and safety of this and future generations and preserve our suburban quality of life but there must be an abundance of transparency reasonable amount of time to thoroughly review and comment on all potential environmental impacts of all proposed actions. We appreciate the opportunity to provide comments and trust that BOEM will take our concerns into consideration. We look forward to ongoing communication on this matter and continued participation in the NEPA process.	Thank you for your comment. Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0314-0003	There are too many concerns including aesthetics and environmental damage to rush this project forward without further input from the public beyond this public comment period.	This PEIS will not result in the approval of any activities in the NY Bight lease areas. Each lease holder is required to conduct project-specific environmental analyses through development and submittal of a COP, as required under 30 CFR 585.628. BOEM will conduct project-specific NEPA analysis of the COP for each lease area that will focus on providing site- and project-specific analyses and will include additional public engagement during scoping and the draft EIS review.

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		Appendix C, <i>Tiering Guidance</i> , summarizes the affected environment, impact analysis, and AMMM measures and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA review for each lease area.
BOEM-2024-0001-0323-0001	I respectfully request a 180 day extension to have the opportunity to review this voluminous report which discusses issues which will have a grave impact on the ocean	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0331-0002	On request by the Bureau of Ocean Energy Management (BOEM) we have prepared and are providing the comments on the draft EIS (PEIS) herein. Relative to our understanding of the criteria in those statutes and rules and other common-sense yardsticks the proposed project itself is extreme and unreasonable and the structure of the PEIS itself is not consistent with the recent NEPA rule changes of the Biden Administration. Beyond that as explained in detail herein from an environmental impact and public engagement perspective the manner in which this program is being implemented is a disgrace and makes a mockery of the NEPA and our other environmental statutes.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period and details of the public meetings held as part of the comment period.
BOEM-2024-0001-0331-0003	The amount of time available to review and comment on the PEIS is insufficient and we are formally requesting an extension of the public comment period by at least 90 days. The PEIS as 1420+ pages with approximately 100 references 15 appendices and nearly 180 tables nearly 85 figures and over 160 acronyms and abbreviations. The public meetings were not helpful in explaining any of the details of the content of the PEIS. At the very least there should have been classroom type seminars to review the contents of the PEIS so that the public has a better understanding of the subject matter.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0332-0001	First and foremost the deadline must be extended or better yet canceled altogether. The potential impacts that may result from the development of the six lease areas totaling 488000 acres offshore of the NJ and NY coastline offshore wind in the NY Bight are not well enough known and BOEM must do better to have a much better understanding of what's in jeopardy before rushing this through. So far every decision out from BOEM with regards to OSW has been approved. The speed of development is outpacing the speed of science and the needs of the sea. Top scientists are working in these topics and acknowledge vital data gaps with regards to potential	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period. Section 3.6.1 of the PEIS, <i>Commercial Fisheries and For-Hire Recreational Fishing</i> , analyzed the impacts on recreational fishing and identified AMMM measures that could reduce impacts. Additional project-specific analysis of impacts on recreational fishing in each lease area will be completed as part of the COP-specific NEPA analyses required under 30 CFR 585.628. Appendix C, <i>Tiering Guidance</i> , summarizes the affected environment, impact analysis, and AMMM measures and identifies additional

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	impacts. Please see my attached letter in regards to massive issues with regards to recreational fishing. I urge BOEM to talk with and truly engage with the recreational fishing industry. It has been many years in this process and the recreational side of the industry has been largely left out and overlooked.	analysis that BOEM anticipates may be included in the COP-specific NEPA review for each lease area.
BOEM-2024-0001-0333-0004	We are satisfied with the efforts BOEM has made to engage the public and solicit comments from stakeholders. To those who complain that the comment period is too short we say that for almost two decades offshore wind energy development in the Mid-Atlantic has been covered in the media analyzed by scientists and engineers and evaluated by State and Federal agencies.	Thank you for your comment.
BOEM-2024-0001-0334-0001	Below are a number of important discussions submitted for consideration in the PEIS. I'll provide my summary and requests upfront for your convenience:- Please extend the review period.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0344-0001	Demanding 90 day extension to comment period for these massive documents to be reviewed.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0348-0001	The National Ocean Industries Association (NOIA) respectfully requests that the Bureau of Ocean Energy Management (BOEM) extend by 60 days the comment period for the Draft Programmatic Environmental Impact Statement (Draft PEIS) for Expected Wind Energy Development in the New York Bight (BOEM-2024-0001[Embedded Link: <a href="https://www.federalregister.gov/documents/2024/01/12/2024-00512/notice-of-availability-of-a-draft-programmatic-environmental-impact-statement-for-expected-wind">https://www.federalregister.gov/documents/2024/01/12/2024-00512/notice-of-availability-of-a-draft-programmatic-environmental-impact-statement-for-expected-wind</a> ]). The current deadline of the comment period February 26 2024 does not provide sufficient time to analyze the PEIS in the context of the involved lease areas (OCS-A 0537-0544) and to adequately respond.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0348-0002	We cordially request an extension of the comment deadline by 60 days through Friday April 26 2024. This extension would enable all stakeholders to engage meaningfully ensuring that we can provide well-informed and thoughtful feedback to enhance the effectiveness of the proposed rulemaking. Thank you for considering this request NOIA and its member companies are always available to answer any questions.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

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BOEM-2024-0001-0354-0001	Also I have labeled these comments as "preliminary" with a reservation to submit other comments and materials in the event that BOEM does indeed grant my request to extend the official comment period at least ninety (90) days after the current due date of February 26 2024. POINT I I previously commented in a timely. manner with my request that BOEM extend the official time period for any and all comments submissions or expert reports for at the very least an additional ninety (90) day period. The aforesaid comments were given your official comment tracking number as lrt-dz9v-nxz7. To summarize the originally established forty-five (45) day comment period is woefully insufficient. The vast document itself is 1429 pages! There are not enough days or weeks to give even a cursory review to all of the materials presented. Similarly our town any professionals with whom we may desire to consult and the public in general deserve a reasonable time period to comment. The potential impacts of the proposal may cause irreversible impact if not harm to the Atlantic Ocean eco system commercial and recreational fisheries tourism along the Jersey Shore and our very way of life. As I had argued previously at the very least an additional ninety (90) daytime period is warranted so that thorough comments can be provided and some more in depth evaluations can be implemented.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0354-0002	I would again object to BOEM's artificial and arbitrary procedures being utilized with the scientifically unsupported consideration of such six (6) proposed lease sites in the New York Bight area being reviewed and commented upon in a vacuum and without consideration of all the vast numbers of other wind turbines proposed to be constructed off the New Jersey shore. As I referenced in my conversations with various BOEM officials at the February 8 2024 Toms River informational meeting I would ask BOEM to consider incorporating all the previously submitted comments on the record before BOEM as to the other environmental impact -statements with respect to wind turbine sites off the New Jersey/New York and _Mid-Atlantic coastline. Most importantly the focus of your review should include all such already existing records in a thorough interrelated process in full consideration of all th other New Jersey/New York and Mid-Atlantic	The purpose of the PEIS is to identify issues, analyze potential impacts, and identify potential AMMM measures for the six NY Bight lease areas. The analysis of the overall impacts of a full buildout of six projects in the NY Bight lease areas as part of Alternative B and Alternative C evaluated comprehensive cumulative impacts by examining offshore wind activities within the NY Bight area as a whole. Cumulative impacts for each resource were analyzed and are discussed in Section 3. Site-specific impacts from other projects in New Jersey, New York, and the Mid-Atlantic are outside the scope of the PEIS. Cumulative impacts from these projects will be addressed through the COP-specific NEPA analysis conducted for each lease area.

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	sites. As far ranging and large in scale as the currently proposed New York Bight project is in and of itself your current scope of review is inappropriately narrow and overly limited. As such the focus for review of the six (6) nearby combined lease sites for wind turbines is insufficiently comprehensive if not bureaucratically fabricated.	
BOEM-2024-0001-0354-0005	In particular I would argue it is arbitrary and capricious to fail to incorporate into the within Draft EIS record the entire record and all of the impacts the Atlantic Shores wind turbine project approved in close proximity to the very location of the six (6) combined lease sites currently under review.	Project-specific impacts from the Atlantic Shores project are outside the scope of this PEIS. Impacts from the Atlantic Shores project, including cumulative impacts, were addressed as part of the COP-specific NEPA analysis conducted for that project.
BOEM-2024-0001-0354-0018	POINT VII THE DEIS CONTAINS INSUFICIENT DATA AND LACK OF FULL DISCLOSURE OF ALL FUNDING SOURCES OF THE APPLICANT AND ANY GROUPS ASSOCIATED WITH THE APPLICANT WHO PROVIDED TESTIMONY. Any realistic calculations with a true cost benefit analysis of the project its funding and the cumulative and indirect impacts should include the full financial disclosure as to the project's applicants as well as the funding of all groups associated with the applicant who provided testimony. Transparency and full disclosure of all funding of the applicant is also necessary for any _realistic weighing process of alternative actions including a "no action alternative" to remain in place pending the implementation of a useful peer-reviewed pilot project. Similarly BOEM's duty to conduct even a basic credibility assessment as to the weight and value of the applicant's presentation requires such complex financial data and background. To render a determination as to the DEIS without such complete financial data and the full disclosure of all funding sources would be arbitrary and capricious.	The development of the PEIS was funded by the government (BOEM) and not an applicant. Financial disclosures related to the applicant and any group providing testimony as part of the public engagement process are outside the scope of this PEIS. In the PEIS, BOEM considered but dismissed from further consideration an alternative to build a pilot project (Chapter 2, Table 2-3). BOEM does not have the authority to prevent developers from submitting COPs and developing commercial-scale projects until after a pilot project is proposed and built.
BOEM-2024-0001-0356-0001	I am requesting a 90 extension to the public comment period. The EIS is over 1000 pages and the technical information contained within requires much more time for a quality review of such important information. Several important findings have come to light in recent weeks that need to be addressed.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0357-0004	We ask the BOEM to reconsider its process as it is the illogical and unreasonable decision making itself not necessarily the documents that are the root cause of the difficulties being encountered by the agency in the New Jersey and New York areas. The same can also be	BOEM is compliant with all regulations applicable to the NEPA process, including the required consultations under the ESA and the MMPA. Appendix A, <i>Consultation and Coordination</i> , details

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	said of the National Marine Fisheries Services and its decisions under the Endangered Species Act and the Marine Mammal Protection Act.	the ongoing coordination and formal consultation conducted for the PEIS.
BOEM-2024-0001-0357-0014	Consequences of a Full Impact Look Such an alternative project comparison would identify vast differences in the environmental impacts of different projects and is the only responsible way that the BOEM can implement a program in an environmentally responsible manner which is its charge. In fact the BOEM does these comparisons internally when it selects lease areas. it should allow the public to engage in a similar process. This approach is described in more detail in Enclosure I.	<p>The purpose of the PEIS is to identify issues, analyze potential impacts, and identify potential AMMM measures for the six lease areas by examining offshore wind activities within the NY Bight area as a whole. Additional project-specific analysis of impacts from projects proposed in each lease area will be completed as part of the COP-specific NEPA analyses required under 30 CFR 585.628.</p> <p>Section 1.2, Table 1-1, <i>History of BOEM planning and leasing activities in the NY Bight</i>, summarizes the history of BOEM's planning process and lease sale for the NY Bight, including details of the public notification and comment periods that were conducted as part of the process.</p>
BOEM-2024-0001-0357-0023	Need to Engage Expert and other Public Input on Key Decisions. At no point in its decision making process does the BOEM allow for expert and other public input into its key decisions on turbine location number power and gear drive. The result has been some particularly uninformed and flawed decisions such as placing wind projects in the migration paths of critically endangered whales. The BOEM did is a Programmatic EIS review of alternative renewable energy technologies which although now dated supported its decision to move to offshore wind energy as it's renewable energy program. Now it leapfrogs to another so-called program EIS that considers project specific mitigation measures which have not even been demonstrated to be beneficially environmentally significant and to even rise to the level of an EIS review. But most importantly in between those two events it does not do any programmatic or other environmental review to support its most important decisions on turbine location turbine number turbine power and gear drive. Nor does it include those variables in its project EISs. It selfishly blocks the public from those key decisions and covets them for itself. Removing the public from those decisions is an abuse of its authority that needs to be corrected by expanding the scope of this program EIS or of the project EISs as presented above and allowing for public comment.	<p>The evaluation of project-specific details in any of the NY Bight lease areas, such as turbine location number power and gear drive, are outside the scope of this PEIS. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include evaluation of the proposed wind turbine configuration. The NEPA process for each lease area's COP will include a public comment period during which the public can comment on any portion of the proposed project.</p>

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BOEM-2024-0001-0362-0004	Are guided by robust and inclusive stakeholder engagement including labor organizations Tribal nations historically underrepresented or disadvantaged communities low-wealth communities of color and impacted ocean users.	Publication of the Draft PEIS initiated a 45-day comment period, which was extended in response to requests from Tribal Nations and other stakeholders. During the comment period, BOEM held five public meetings. Appendix A, <i>Consultation and Coordination</i> , summarizes coordination efforts with the public, Tribal Nations, and federal, state, and local agencies leading up to the preparation and publication of the PEIS. These efforts included formal consultations, cooperating and participating agency and Cooperating Tribal Government exchanges, the public scoping comment period, and other correspondence. Additional details can be found in Appendix I, <i>NHPA Section 106 Summary</i> .
BOEM-2024-0001-0362-0022	It should also include analysis of the benefits of community consultation related to adverse impacts and methods for continued community engagement around the oversight monitoring and structuring of mitigation plans including adaptive management strategies.	BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include evaluation of AMMM measures required for project implementation. Project-specific monitoring plans for each lease area will be developed by each lease holder in accordance with requirements of the COP-specific NEPA ROD and in consultation with the applicable regulatory agency. BOEM convened a series of quarterly environmental justice forums to offer a recurring space for participants to discuss topics related to environmental justice and offshore wind in the New York and New Jersey area. Topics of these meetings included potential impacts on environmental justice and underserved communities from offshore wind development, exploration of potential AMMM measures for environmental justice, discussions of approaches to improve the engagement process, and other topic areas identified by participants. Input received during these environmental justice forums was incorporated into the development of the Final PEIS.
BOEM-2024-0001-0362-0025	BOEM should analyze the extent of needed Tribal consultation. In line with the lease stipulations developers must ensure that all impacted Tribes are properly consulted including state-recognized Tribes and non-federally recognized Tribes in a geographic analysis area that is representative of their historical presence in the region. Robust consultation with Tribes should be extended to relevant activities that take place out of the state or region. Ensuring the	BOEM is committed to upholding its Tribal trust responsibilities and fostering working relationships based on trust and meaningful consultation. BOEM is continually working to improve the consultation process to engage Tribes and assist Tribal Nations expand capacity to engage in environmental reviews and NHPA Section 106 consultations.

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	consultation of Tribes and ensuring the preservation of cultural resources is critical for advancing the environmental justice goals set by the Biden- Harris administration.	Appendix I, Section I.1.2, <i>Consultation with Tribes and Consulting Parties and Public Involvement</i> , describes the activities BOEM has undertaken with regards to coordinating with federal, Tribal, state, and local government partners, particularly with regards to identifying cultural and historic properties. Appendix A, Section A.2.2, <i>Tribal Consultation</i> , describes the process for ongoing government-to-government consultation with federally recognized tribes.
BOEM-2024-0001-0366-0001	We the undersigned environmental justice organizations in New York and New Jersey are writing to formally request a 30-day extension of the comment period for the Draft New York Bight Programmatic Environmental Impact Statement (PEIS). We appreciate the Bureau of Ocean Energy Management's (BOEM) commitment to conducting a thorough and comprehensive environmental review. However the current comment period must provide adequate time for our organizations and communities to engage meaningfully. The Draft PEIS warrants careful consideration and thorough input from all stakeholders especially those disproportionately affected by environmental injustices. Extending the comment period will allow our organizations to better analyze the potential ecological social and economic consequences detailed in this 790-page document and provide more comprehensive and thoughtful feedback. We understand that the Draft PEIS covers a wide range of issues including but not limited to ecological impacts fisheries socioeconomic effects and environmental justice considerations. Given the complexity and significance of these topics an extension of the comment period is essential to ensure that the concerns and insights of our communities are adequately addressed.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0367-0001	I am writing on behalf of Ocean Conservancy to respectfully request a 15-day extension to the comment period for the Notice of Availability of a Draft Programmatic Environmental Impact Statement for expected wind energy development in the New York Bight. 89 Fed. Reg. 2249 (January 12 2024). This would extend the comment period to 60-days closing on March 12 2024. We are grateful for the steps the Bureau of Ocean Energy Management is taking to improve offshore wind permitting and recognize the importance of this Draft PEIS as well as the significant agency effort	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

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	<p>put into its creation. Thus we want to ensure that we are able to give it the consideration and careful response that it is due. Because the issuance date of the Notice of Availability and the comment period overlapped with at least five other BOEM dockets related to offshore wind [Footnote 1: 88 FR 88107. Notice of Intent To Prepare a Programmatic Environmental Impact Statement for Future Floating Wind Energy Development Related to 2023 Leased Areas Offshore California. December 20 2023-February 20 2024.88 FR 86145. Atlantic Wind Lease Sale 10 for Commercial Leasing for Wind Power Development on the U.S. States Central Atlantic Outer Continental Shelf-Proposed Sale Notice. December 12 2023-February 12 2024.89 FR 2251. Notice of Availability of a Draft Environmental Assessment for Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Delaware Maryland and Virginia. January 12 2024-February 12 2024.89 FR 7409. Notice of Availability of a Draft Environmental Assessment for Additional Site Assessment Activities on Beacon Wind LLC's Renewable Energy Lease OCS-A 0520. February 2 2024-March 4 2024.89 FR 11313. Notice of Intent To Prepare an Environmental Assessment for Commercial Wind Leasing and Site Assessment Activities on the U.S. Outer Continental Shelf Offshore Oregon. February 14 2024- March 15 2024.] the extension would provide the time necessary for Ocean Conservancy and other stakeholders to be able to fully assess and provide comprehensive comment on the agency's Draft PEIS. As this docket represents the first opportunity for the public to provide feedback on a new application of programmatic NEPA for offshore wind which may be replicated in subsequent regions it is important that stakeholders get ample time to provide comprehensive feedback.</p>	
BOEM-2024-0001-0369-0001	<p>I'm writing on behalf of the National Wildlife Federation (NWF) and the broader eNGO community to respectfully request a 15-day extension to the comment period for the Notice of Availability of a Draft Programmatic Environmental Impact Statement (PEIS) for expected wind energy development in the New York Bight. 89 Fed. Reg. 2249 (January 12 2024). This would extend the comment period to 60- days closing on March 12 2024. Given that the issuance date of the Notice of Availability and the comment period overlapped</p>	<p>Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.</p>

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	<p>with at least five other BOEM dockets related to offshore wind [Footnote 1: 88 FR 88107. Notice of Intent To Prepare a Programmatic Environmental Impact Statement for Future Floating Wind Energy Development Related to 2023 Leased Areas Offshore California. December 20 2023-February 20 2024. 88 FR 86145. Atlantic Wind Lease Sale 10 for Commercial Leasing for Wind Power Development on the U.S. States Central Atlantic Outer Continental Shelf-Proposed Sale Notice. December 12 2023-February 12 2024. 89 FR 2251. Notice of Availability of a Draft Environmental Assessment for Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Delaware Maryland and Virginia. January 12 2024-February 12 2024. 89 FR 7409. Notice of Availability o’ a Draft Environmental Assessment for Additional Site Assessment Activities on Beacon Wind LLC’s Renewable Energy Lease OCS-A 0520. February 2 2024-March 4 2024. 89 FR 11313. Notice of Intent To Prepare an Environmental Assessment for Commercial Wind Leasing and Site Assessment Activities on the U.S. Outer Continental Shelf Offshore Oregon. February 14 2024- March 15 2024.] the extension would allow the time necessary for stakeholders to be able to fully assess the relevant documentation and comment on the agency’s Draft PEIS. As this docket represents the first opportunity for the public to provide feedback on a new application of programmatic NEPA for offshore wind which may be replicated in subsequent regions it is important that stakeholders get ample time to provide comprehensive feedback.</p>	
BOEM-2024-0001-0372-0001	<p>I am writing to respectfully request a 15-day extension to the comment period for the Notice of Availability of a Draft Programmatic Environmental Impact Statement (PEIS) for expected wind energy development in the New York Bight. 89 Fed. Reg. 2249 (January 12 2024). This would extend the close date for the comment period to March 12 2024 as opposed to February 26 2024. Given the first-of-its-kind nature of the PEIS for the NY Bight TNC is determined to provide BOEM with its best recommendations and feedback to help shape BOEM’s thinking on this important AMMM tool. A short extension would be appropriate and useful in increasing opportunity for the public to digest and comment on this document.</p>	<p>Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.</p>

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BOEM-2024-0001-0381-0001	I would like to request a 90 day extension to the public comment period to review the draft PEIS. The vastness and speed of these projects is irresponsible at least.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0383-0001	<p>Public Comment Period and Meetings: We request that BOEM refrain from continuing to issue overlapping public comment periods for offshore wind related actions. As small businesses that will be directly affected by the projects analyzed in this PEIS we do not have the bandwidth to participate in so many offshore wind public comment periods at one time especially when these comment periods overlap with Fisheries Management Council meetings. BOEM is aware of these conflicts as we have requested similar consideration before with no agency response. The NY Bight PEIS is an important action that we have not been able to meaningfully participate in due to the overload of offshore wind related meetings and overlapping comment periods. At the same time this PEIS was released for comment and public meetings being held BOEM released a Draft EA and only two public meetings for its Central Atlantic leases [Footnote 1: See <a href="https://www.boem.gov/renewable-energy/state-activities/central-atlantic">https://www.boem.gov/renewable-energy/state-activities/central-atlantic</a>.] a Draft EA and public meetings for Beacon Wind off the coast of MA [Footnote 2: See <a href="https://www.boem.gov/renewable-energy/state-activities/beacon-wind">https://www.boem.gov/renewable-energy/state-activities/beacon-wind</a>.] scheduled all of these during two simultaneous and related USCG Fairways comment periods- a Fairways Proposed Rule and Fairways PEIS- which were necessitated in part due to the NY Bight leases that this PEIS is analyzing [Footnote 3: See <a href="https://www.regulations.gov/document/USCG-2019-0279-0032">https://www.regulations.gov/document/USCG-2019-0279-0032</a> and <a href="https://www.regulations.gov/search?filter=USCG-2023-0928">https://www.regulations.gov/search?filter=USCG-2023-0928</a>.] and all of these comment periods/meetings overlapped with both the New England Fishery Management Council meeting in New Hampshire and the Mid Atlantic Fishery Management Council meeting in Virginia. [Footnote 4: See January 2024 Council Meeting - Calendar - NEFMC and February 2024 Council Meeting Mid-Atlantic Fishery Management Council (<a href="http://mafmc.org">mafmc.org</a>).]</p> <p>BOEM did not hold any meetings concerning the NY Bight PEIS in Rhode Island despite the fact that the area is utilized by vessels from our state. It scheduled one of its only two virtual meeting options during the exact time and day of the only USCG Fairways PEIS</p>	Please see response to comment BOEM-2024-0001-0002-0'01 regarding the duration and timing of the public comment period.

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	meeting in all of New England as well as simultaneously with the New England Fishery Management Council meeting in New Hampshire. This is an unacceptable level of conflict that precludes effective public participation from the commercial fishing community which is one of the primary affected entities by this action. The commercial fishing community is primarily small businesses which do not have the personnel to cover all these meetings at the same time much less read all the related documents at the same time. How does BOEM expect small businesses to effectively participate in multiple overlapping comment periods with overlapping meetings all requiring the reading of large documents for effective commenting in addition to conducting our regular business?	
BOEM-2024-0001-0392-0001	I'm very concerned about the impact of the wind turbines on marine life. Additional studies are needed especially a pilot project before this project begins. I'm asking for extension to the public comment period.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period. In the PEIS, BOEM considered but dismissed from further consideration an alternative to build a pilot project (Chapter 2, Table 2-3). BOEM does not have the authority to prevent developers from submitting COPs and developing commercial-scale projects until after a pilot project is proposed and built.
BOEM-2024-0001-0397-0001	In the limited time TRI has had to review this voluminous PDEIS we can already see how the harms from direct impacts will lead to harmful secondary and cumulative impacts that are hemispheric and global in nature and should not be underestimated. In that light this proposal if allowed to move forward in its current form could well be putting our nation's biological and cultural diversity and our wild food and medicinal security at great risk. Since time does not allow TRI to elaborate in greater detail it is incumbent upon to us to request a 90-day extension on the public comment period. If our request is not granted please let the record reflect our calling on BOEM to adopt the No Action Alternative.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0403-0001	As mayor of the Borough of Point Pleasant Beach please accept this letter expressing strong opposition to the proposed impacts and alternatives outlined in the New York Bight Programmatic Environmental Impact Statement Docket No. BOEM-2024-0001. The process for public review of this document is inherently flawed. This highly technical document containing nearly 800 pages in Volume I alone is far too complex and nuanced for the general public to	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

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	review and synthesize within the 45 days permitted for public comment. While we are grateful for the opportunity for extended comment documents of this magnitude and impact truly require more than just 90 days.	
BOEM-2024-0001-0403-0003	Due to the massive impacts and geographical area of the six lease areas not only on the environment but on navigation/security commercial and recreational fishing tourism sea floor natural resources onshore transmission EMF emission etc. this New York Bight Programmatic Environmental Impact Statement should be retracted and revised with more accurate and meaningful data on a per-lease basis. At the very minimum the public comment period should be further extended to give the public a better chance to read and digest the information contained therein and to provide meaningful feedback.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period. This PEIS will not result in the approval of any activities in the NY Bight lease areas. Each lease holder is required to conduct project-specific environmental analyses through the development and submittal of a COP, as required under 30 CFR 585.628. Appendix C, <i>Tiering Guidance</i> , summarizes the affected environment, impact analysis, and AMMM measures and identifies additional analysis that BOEM anticipates may be included in the COP-specific NEPA analysis for each lease area.
BOEM-2024-0001-0417-0001	I am writing today to urge you to extend the public comment period on the New York Bight Draft Programmatic Environmental Impact Statement (Draft PEIS) by a minimum of ninety additional days. As you are aware the Draft PEIS encompasses a broader area than has ever been analyzed and the document being reviewed is over 1400 pages. Thus more time needs to be provided so that the public can review analyze and comment on such a comprehensive document. I have represented New Jersey coastal communities for many years and my constituents are very concerned with offshore wind development. We depend on the health of the ocean and beach for our tourism industry as well as quality of life. There needs to be adequate time to review this complex document and fully consider the region-wide effects of future offshore wind projects. Therefore I urge you to extend the public comment period by at least ninety additional days to May 26 2024. Providing this additional time serves the interest of good governance due process and transparency. Thank you for your attention to this critical matter and please feel free to contact me to further discuss this issue.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0419-0001	In the name of good governance due process fairness public interest and the democratic process we respectfully and urgently request that you extend the deadline for public comments on the New York Bight Draft Programmatic Environmental Impact Statement ("Draft	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

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	<p>PEIS") by a minimum of ninety (90) additional days. The Draft PEIS encompasses a broader area than has ever been analyzed in a single National Environmental Policy Act ("NEPA") review document for the offshore wind industry. It is over 1400 pages including appendices with important information. Therefore it is unrealistic to expect the public to be able to meaningfully review analyze and comment on such a complex and comprehensive document within the minimum 45-day period; the comment period must be extended. The public has a heightened interest in offshore wind development especially in coastal localities in the New York Bight such as Ocean and Monmouth County beaches because we depend on the ocean's health to support commercial and recreational fishing as well as the tourism industry. The development of offshore wind projects in our region has been rapid especially relative to the state of the scientific study on the environmental effects of such widespread industrialization in the area. If approved the PEIS would speed up offshore wind development even further at the expense of site-specific study. Providing only the minimum public comment period is yet another example of BOEM unreasonably hastening the offshore wind development process.</p>	
BOEM-2024-0001-0419-0002	<p>Moreover there were delayed responses by BOEM to members of the public for paper copies of the necessary PEIS materials or details about the upcoming information sessions. This affected the ability to adequately prepare for public meetings and delayed the start of the review of the document. NEPA's implementing regulations provide that when an agency publishes a DEIS the public must be provided a minimum of forty-five (45) days to review and comment on the document. However BOEM is not limited to this time period which is wildly unrealistic and unjust in this instance given the unprecedented scope and highly technical nature of this document. BOEM has never before considered the region-wide effects of future offshore wind projects in a single environmental impact statement. As such it is critically important for commenters to analyze whether each detail in the Draft PEIS can reasonably be applied to all individual offshore wind projects in the area.</p>	<p>Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.</p>

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BOEM-2024-0001-0419-0003	The public cannot reasonably complete this task within forty-five (45) days. NEPA is meant to provide the public with opportunities to meaningfully contribute to decisions that significantly affect the environment. To be meaningfully involved in this decision the public needs sufficient time to review and critically analyze the scientific and technical language within the Draft PEIS. Citizen groups will be more able to share the labor of analyzing the Draft PEIS and drafting comprehensive comments but a consensus may be required to undertake and finalize comments which requires additional time. The public's written comments will be more helpful to BOEM if they can more comprehensively review the document conduct any necessary research and refine their comments after being informed at the public meetings. In closing extending the public comment period by at least ninety (90) additional days to May 26 2024 serves the interest of good governance due process and transparency. Please contact us if you have any questions.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0420-0001	On behalf of the Natural Resources Defense Council (NRDC) I am writing in support of the National Wildlife Federation's request for a 15-day extension to the comment period for the Notice of Availability of a Draft Programmatic Environmental Impact Statement (PEIS) for expected offshore wind energy development in the New York Bight. 89 Fed. Reg. 2249 (Jan. 12 2024). Please see the attached letter. Because the Draft PEIS comment period overlapped with at least five other BOEM dockets related to offshore wind an extension of the comment period would provide stakeholders and the public with the additional time needed to fully assess and provide thorough feedback on the Draft PEIS. This opportunity is especially important given that this docket represents the first opportunity to provide feedback on a new application of a programmatic NEPA analysis to offshore wind that may be repeated in other regions in the future. Thank you for your consideration of this request.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0450-0006	BOEM's Obligations Pursuant to the National Environmental Policy Act The National Environmental Policy Act (NEPA) one of the foundational U.S. environmental laws requires that BOEM consider "every significant aspect of environmental impact of a proposed action" as well as inform the public of its comprehensive	Thank you for your comment.

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	<p>consideration of these concerns in the decision making process. [Footnote 5: Baltimore Gas &amp; Elec. Co. v. Nat. Res. Def. Council (NRDC) Inc. 462 U.S. 87 97 (1983) (internal citations and quotations omitted).] A well-crafted Environmental Impact Statement (EIS) including a PEIS should include an impact analysis that is comprehensive transparent objective and quantitative accounts for uncertainty and addresses data gaps considers reasonable alternatives and mitigation assesses cumulative impacts and requires monitoring and adaptive management. NEPA regulations allow for agencies to prepare a PEIS for actions such as the adoption of new programs and conduct the analysis on a variety of scopes including geographic. [Footnote 6: 40 C.F.R. 1502.4(b)(1).] Subsequent related NEPA reviews for individual projects or actions can reference the issues discussed in the broader document and tier off the PEIS. [Footnote 7: 40 CFR 1502.4; 1501.11.] It should be mentioned that the Council on Environmental Quality (CEQ) is currently considering regulations that would further encourage the use of PEIS's and tiering for geographic thematic or technological projects like offshore wind. [Footnote 8: 88 Fed. Reg. 49924 (July 31 2023).] Assuming these proposed regulations are promulgated they should lay an even clearer path for offshore wind projects to benefit from an early-in-the-process PEIS.</p>	
BOEM-2024-0001-0450-0007	<p>NEPA reviews shall be based on a purpose and need "to which the agency is responding in proposing the alternatives including the proposed action." [Footnote 9: 40 CFR 1502.13.] The purpose for this PEIS "is to identify issues analyze [the] degree of potential impacts and adopt as appropriate AMMM measures." [Footnote 10: Draft PEIS at ES-3.] Additionally "[t]he Proposed Action is needed to help BOEM make timely decisions on COPs submitted for the six NY Bight lease areas. Timely decisions further the United States policy to make Outer Continental Shelf (OCS) energy resources available for expeditious and orderly [offshore wind] development subject to environmental safeguards and other requirements including protection of the environment ..." [Footnote 11: Draft PEIS at ES-3.] Project-specific NEPA analysis for individual COPs which given the infancy of the U.S. offshore wind industry should be conducted via a EIS not an Environmental Assessment (EA) "will tier from or</p>	Thank you for your comment.

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	incorporate by reference this PEIS and could apply additional or different AMMM measures as needed." [Footnote 12: Draft PEIS at ES-3.] The Draft PEIS lays out three alternatives: no action; an alternative B that "evaluates the impacts of (1) a single representative project developed in one NY Bight lease area without the application of any AMMM measures and (2) the overall impacts of a full build-out of six representative projects in the NY Bight lease areas without the application of any AMMM measures;" and an alternative C that is the Proposed Action which is "the adoption of AMMM measures such that the potential impacts described in Alternative B may be avoided reduced or mitigated." [Footnote 13: Draft PEIS at ES-6 9]	
BOEM-2024-0001-0532-0011	The Need for Coordination Related to Other Uses of the OCSThe Hudson Canyon the largest submarine canyon along the U.S. Atlantic coast is being considered for designation as a National Marine Sanctuary (NMS). The canyon serves as an important habitat for a variety of species of various conservation status including endangered sperm whales deep sea corals and sea turtles. [Footnote 31: National Oceanic and Atmospheric Administration (NOAA). "Hudson Canyon National Marine Sanctuary." NOAA Office of National Marine Sanctuaries. Accessed on February 25 2024. URL: <a href="https://sanctuaries.noaa.gov/hudson-canyon/">https://sanctuaries.noaa.gov/hudson-canyon/</a> ] We urge a high degree of interagency and stakeholder coordination during both the sanctuary designation and offshore wind development processes to identify and mitigate any potential conflicts as early as possible. The National Oceanic and Atmospheric Administration (NOAA) which oversees the sanctuary designation process and BOEM which presides over the offshore development process should closely coordinate and facilitate communication with developers Tribal governments and other stakeholders.	Comment acknowledged. Avoidance of major OCS features was part of BOEM's planning process to identify lease areas (Section 1.2, Table 1-1, <i>History of BOEM planning and leasing activities in the NY Bight</i> ), and none of the NY Bight lease areas are in the Hudson Canyon.  Details of other uses of the OCS considered as part of the lease area identification are summarized in the <i>New York Bight Area Identification Memorandum Pursuant to 30 C.F.R. § 585.211(b)</i> (March 2021): <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/Memorandum%20for%20Area%20ID%20in%20the%20NY%20Bight.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/Memorandum%20for%20Area%20ID%20in%20the%20NY%20Bight.pdf</a> .
BOEM-2024-0001-0452-0013	Prevention of Interference with Reasonable-Uses As noted above the AMMMs do not sufficiently mitigate impacts to commercial fisheries from offshore wind development in the NY Bight. In addition to NEPA offshore wind development is governed by the Outer Continental Shelf Lands Act which mandates that "the Secretary shall ensure that any activity under this subsection is carried out in a manner that provides for -(A) safety;(B) protection of the environment;...(D)	Appendix G, <i>Mitigation and Monitoring</i> , lists the AMMM measures for commercial fisheries. Most of the AMMM measures included in Appendix G have been previously applied as terms and conditions of COP approvals for COPs proposing offshore wind activities on the Atlantic OCS, while a smaller number of measures have not previously been required by BOEM as part of

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	conservation of the natural resources of the outer Continental Shelf;... and (I) prevention of interference with reasonable uses [Footnote 19: 43 U.S.C 1337(p)(4).]The PEIS was an opportunity to provide a comprehensive approach to environmental analysis and should have been leveraged to adhere to requirements to protect the environment natural resources and existing users. Unfortunately the AMMMs presented in the PEIS (in addition to the inappropriate timing after lease issuance) do not guarantee that the standards of OCSLA are met and ultimately minimizes the effectiveness of this programmatic analysis.	COP approvals. Table G-1 identifies these measures as “Previously Applied” and “Not Previously Applied.” In addition, BOEM has identified measures in Table G-2 in Appendix G that are RPs for the offshore wind industry. BOEM encourages lessees to analyze and consider implementing these RPs, as they may further avoid and minimize impacts on resources, but BOEM will not require them as a condition of COP approval. BOEM will conduct project-specific NEPA analysis of the COP for each lease area that will focus on providing site- and project-specific analyses that were not already addressed by the PEIS. Project-specific alternatives will be considered by BOEM and cooperating agencies at the COP-specific NEPA stage.
BOEM-2024-0001-0468-0003	We believe the proposal will help projects to move more nimbly through the permitting process in compliance with state and federal laws which will facilitate construction of responsibly built offshore wind projects and allow this industry to reach its potential as a transformational solution to the intersecting environmental public health and economic crises of our time.	Thank you for your comment.
BOEM-2024-0001-0469-0001	BOEM held two virtual public meetings and three in-person meetings one each in New Jersey New York and Massachusetts. COA staff attended both virtual meetings and the in-person meeting in New Jersey. While COA appreciates that there was a mix of in-person and virtual formats there were several issues with the way in which these meetings were conducted which undermined the public engagement process. At the first virtual meeting participants were not told how much time they would be given to speak. The meeting facilitator gave three then two minutes then allowed three again [Footnote 1: N.Y. Bight Draft PEIS Virtual Meeting 1 Tr. at 5 17 (On page 3 of the transcript there is a typographical error saying the facilitator gave 2 minutes from the beginning. This does not match COA's notes or make sense considering how the facilitator justified switching to 2 minutes on page 5.)] causing participants who had prepared remarks longer than two minutes to spend the beginning of the presentation frantically cutting prepared statements and potentially missing important information from the presentation. COA raised this issue at the in-person meeting in New Jersey where BOEM staff assured	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.

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	<p>that commenters would be given three minutes at the next virtual public meeting. COA appreciates that BOEM honored that commitment. Going forward COA urges BOEM to include a time limit for oral testimony in the public notices and that a more reasonable time would be five minutes so participants can address the full scope and complexity of these issues. The value of virtual public meetings is not only to provide oral comments but also to hear other community members' testimonies and incorporate that information into more detailed written comments. However several of BOEM's choices made it practically impossible for participants to effectively use the information provided in the virtual meeting. For example the Question and Answer opportunity is of enormous value. COA and others submitted many substantive and detailed questions pertaining to the PEIS which BOEM staff answered at the end of the virtual hearing. Unfortunately unlike previous virtual hearings the questions submitted were not visible to the public. This decreases the quality and utility of the public's written comments. Further the closed-captioned transcripts were not downloadable so participants had to wait for BOEM to post the transcripts which took several weeks from the first virtual meeting. Agency representatives stated on the record that the transcripts would be available in two weeks; however as of February 23 2024 BOEM had not posted the transcripts of either virtual meeting. [Footnote 2: BUREAU OCEAN ENERGY MGMT. New York Bight <a href="https://www.boem.gov/renewable-energy/state-activities/new-york-bight">https://www.boem.gov/renewable-energy/state-activities/new-york-bight</a> (as seen Feb. 23 2024).] BOEM did eventually post the transcript around the same time that the agency granted a fifteen-day extension to the public comment period. [Footnote 3: Id. (as seen Mar. 1 2024).] The in-person meetings took an informal approach where members of the public could have one-on-one conversations with BOEM employees and contractors and ask them questions directly. COA highly values this opportunity as well. There were multiple stations covering a range of topics as well as representatives with general knowledge of the PEIS process however BOEM did not release a list of the topic areas that would be represented or the professional backgrounds of the BOEM representatives. According to BOEM staff the topics and representatives were chosen in advance of the public meeting but</p>	

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	<p>the public was not made aware of this decision. Indicating which topics were to be represented would have been helpful for the public in preparing questions in advance. Importantly at least at New Jersey's in-person meeting there was no opportunity to provide oral statements on the official record even though the registration form and the Federal Register notice indicated that participants would be able to record official oral comments. [Footnote 4: BOEM New York Bight Draft Programmatic Environmental Impact Statement (PEIS) In-Person Public Meeting  <a href="https://docs.google.com/forms/d/e/1FAIpQLSdErZCABKuX0CXj-wEfJXofsgNO9qn-_1ETCn9ZNC9RY-sa3Q/view">https://docs.google.com/forms/d/e/1FAIpQLSdErZCABKuX0CXj-wEfJXofsgNO9qn-_1ETCn9ZNC9RY-sa3Q/view</a> form (last visited Mar. 1 2024 (registration form for the in-person public meetings); Bur. Ocean Energy Mgmt. Notice of Availability of a Draft Programmatic Environmental Impact Statement for Expected Wind Energy Development in the New York Bight 88 FR 2249 2250 (Jan. 12 2024).] BOEM provided laptops and comment cards to submit written comments but there was no oral testimony taken despite BOEM promising that this was one of the functions of the in-person public meetings. There are benefits and drawbacks to both virtual and in-person forms of commenting and together they offer important opportunities for public engagement if done meaningfully. In-person comments are best for community members with low access to or familiarity with technology. Aside from accessibility issues oral and written comments serve different purposes especially when the opportunities for oral comment are given earlier in the review process and in the context of listening to other community members give their comments. COA held a Citizen Hearing on February 20 2024 to give community members an opportunity to make oral comments in a public setting and submitted the transcript as written comments on February 26. By no means does COA intend to discourage modernizing the way in which the agency conducts public outreach but the traditional oral testimony format is essential for good governance and due process. These issues in the timing and format of public engagement call into question the efficacy of BOEM's efforts to meaningfully engage with the public. BOEM should hold another round of public engagement activities before issuing</p>	

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	the Final PEIS using what they have hopefully learned from this first instance of a PEIS process for OSW.	
BOEM-2024-0001-0474-0002	<p>I submit the following comments to BOEM's Notice published on January 12 2024 with respect to the Draft PEIS and object to the intended action as arbitrary unreasonable fundamentally unfair and scientifically corrupt. ("Arbitrary"). Among other reasons the action is Arbitrary because the time submitted for public comment is insufficient for meaningful review and participation of stakeholders. The extension of fifteen (15) days for public comments was still not sufficient. Among other reasons the action is Arbitrary because the project area is referenced and named as the New York Bight thereby misrepresenting the impact on citizen stakeholders in New Jersey. Among other reasons the action is Arbitrary because the misnaming of the project area is chilling on the participation of citizen stakeholders in New Jersey and denies such citizens equal protection of the law. Among other reasons the action is Arbitrary because if the State of New Jersey is derelict in its duties to protect its own citizens the government actors on the federal level should step up rather than exploit the weakness of the New Jersey state government actors. Among other reasons the action is Arbitrary because the State of New Jersey references and applauds the actions of BOEM as its purported federal partner such that the federal participants are aware of the dereliction of duty by the State of New Jersey to the detriment of its citizen stakeholders. Among other reasons the action is Arbitrary because the purported public meetings were not scheduled and conducted for meaningful participation of citizen stakeholders. Among other reasons the action is Arbitrary because the format of a programmatic environmental impact statement review chills comment to the detriment of citizen stakeholders and to the benefit of offshore wind developers.</p>	<p>Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.</p> <p>The NY Bight is a geologic term used to describe the coastal embayment and offshore area that extends from Montauk Point on the eastern side of Long Island, New York, southwest to Cape May, New Jersey. BOEM did not name this geologic area, but uses "NY Bight" to describe the six lease areas analyzed in the PEIS.</p>
BOEM-2024-0001-0505-0001	<p>The public review and comment period is woefully and borderline criminally inadequate for a document and project of this magnitude. The public and impacted parties must be provided with sufficient time to review and study. In the interest of complete transparency and opportunity for public input about the project this comment period must be extended lest it appear there is something to hide.</p>	<p>Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.</p>

Comment No.	Comment	Response
BOEM-2024-0001-0512-0004	It is very clear that there are still numerous unresolved issues surrounding the environmental economic and social impacts of these projects. Therefore I urge the Bureau of Ocean Energy Management to extend the comment period once again to allow for further public input and thorough consideration of the potential impacts of these projects.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0547-0001	As a Brigantine New Jersey homeowner and stakeholder I am writing to respectfully request a 180-day extension seeking more time to submit comments to the New York Bight Draft Programmatic Environmental Impact Statement ("PEIS") for the proposed project comprising six NY Bight lease areas ("the Project") offshore New Jersey and New York	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0547-0002	In addition I am writing to record my complete disapproval of the Project including lack of adequate notice in the PEIS process resulting in loss of due process for the stakeholders and affected environmental justice communities lack of adequate mitigation analysis (aka "AMMM Measures") failure to analyze "focused regional cumulative effects" [Footnote 1: BOEM PEIS Docket No. BOEM-2024-0001 ("PEIS") at ES-4.] and other violations of NEPA and respectfully request a decision of No Action.	Section ES.3 of the PEIS provides an overview of the public engagement process and activities to date. The publication of the Draft PEIS initiated a 45-day public comment period, which commenced with publication of the NOA of the Draft PEIS in the Federal Register on January 12, 2024. BOEM later extended the comment period based on requests from Tribal Nations and other stakeholders, which ended on March 13, 2024. Outreach included publication of the NOA in the Federal Register; BOEM press releases and social media announcements; email notifications to Tribal Nations, cooperating agencies, and consulting parties; and publication of legal notices in local newspapers to advertise the public comment period and solicit input on the Draft PEIS from the public and federal, Tribal, state, and local agencies. Additionally, BOEM conducted three in-person and two virtual meetings to inform interested attendees of the Draft PEIS and to provide the opportunity for the public to provide oral testimony.
BOEM-2024-0001-0547-0003	There is ample precedent for the Bureau of Ocean Energy Management ("BOEM") to extend the comment period for offshore wind projects such as this Project affecting offshore New Jersey and New York based on requests from the public for less complex projects than this NY Bight's six wind farm leases where time to comment was extended. For example BOEM has recently granted comment period extensions for the Sunrise and South Coast Wind projects among others[Footnote 2: Based on requests from the public on April 3 2023 BOEM announced a 15-day comment period	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.

Comment No.	Comment	Response
	<p>extension for the DEIS for the proposed South Coast Wind (formerly Mayflower Wind) project offshore Massachusetts.</p> <p><a href="https://www.boem.gov/newsroom/notes-stakeholders/comment-period-extended-southcoast-wind-draft-environmental-impact">https://www.boem.gov/newsroom/notes-stakeholders/comment-period-extended-southcoast-wind-draft-environmental-impact</a>. On May 4 2022 BOEM announced the extension of the comment period by 10 days in response to stakeholder request regarding the Proposed Sale Pacific Wind Lease Sale 1.</p> <p><a href="https://www.regulations.gov/document/BOEM-2022-0017-0001">https://www.regulations.gov/document/BOEM-2022-0017-0001</a>. BOEM extended the comment period to October 4 2021 for the Sunrise Wind project offshore New York.</p> <p><a href="https://www.boem.gov/renewable-energy/state-activities/sunrise-wind#:~:text=On%20August%2031%2C%202021%2C%20BOEMand%20to%20make%20technical%20corrections">https://www.boem.gov/renewable-energy/state-activities/sunrise-wind#:~:text=On%20August%2031%2C%202021%2C%20BOEMand%20to%20make%20technical%20corrections</a>. BOEM extended the comment period for the Call and the NOI for North Carolina's Offshore Wind Energy project originally published in the Federal Register on December 13 2012 for a 45-day comment period that ended on January 28 2013. Notices at the request of stakeholders seeking more time to submit comments were subsequently extended to March 7 2013 <a href="https://www.boem.gov/newsroom/press-releases/boem-extends-public-comment-period-wind-energy-offshore-north-carolina">https://www.boem.gov/newsroom/press-releases/boem-extends-public-comment-period-wind-energy-offshore-north-carolina</a>.]. Stakeholders in this Project such as myself need more than a month and a half to fully comprehend over 1000 pages [Footnote 3: Public comment letter from Clean Ocean Action dated January 12 2024 posted by BOEM on January 22 2024 Comment ID BOEM-2024-0001-0007 calling on BOEM to extend the comment period to at least 45 days for the PEIS to review and comment on over 1000 pages of the PEIS. ] of this PEIS including a highly technical Appendix [Footnote 4: BOEM Docket Number: BOEM-2024-0001 New York Bight Draft Programmatic Environmental Impact Statement January 2024 Volume II: Appendices A-O.] to retrieve the information in such a large document to make a fully reasoned response for such a complex Project comprising six lease areas in the NY Bight and the cumulative effects on the other regional BOEM lease areas and for BOEM to correct defects in the notice and mitigation analysis process.</p>	

Comment No.	Comment	Response
BOEM-2024-0001-0547-0011	Further I respectfully request No Action be taken on the Project due to the lack of adequate notice resulting in loss of due process lack of adequate mitigation in the PEIS as written and other violations of NEPA.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period.
BOEM-2024-0001-0547-0012	In conclusion BOEM has granted many DEIS offshore wind comment extensions for projects less complex than this. An extension of the comment period by at least 45 days is a much more equitable period of time to correct for the lack of adequate notice and denial of due process rights accommodate a reasoned parsing of the magnitude of this novel Project of such size scope and complexity [Footnote 32: See Crain's New York Business January 25 2024 Caroline Spivack "What to know about New York's nascent offshore wind industry" <a href="https://www.crainsnewyork.com/climate/what-know-about-new-york-offshore-wind-industry">https://www.crainsnewyork.com/climate/what-know-about-new-york-offshore-wind-industry</a> ; Crain's New York Business January 29 2024 Caroline Spivack "New York's Offshore Wind Industry Faces a Financial Reckoning" <a href="https://www.crainsnewyork.com/climate/new-yorks-offshore-wind-industry-faces-financial-reckoning">https://www.crainsnewyork.com/climate/new-yorks-offshore-wind-industry-faces-financial-reckoning</a> .] and to fully comment on the PEIS. Considering the novel nature of the Project and large size of the DEIS its cumulative effects that are not discussed and their effects not mitigated as such in the PEIS as a stakeholder in this project I join numerous other stakeholders including local entities such as Defend Brigantine Beach Inc. and others in respectfully requesting additional time to comment.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period. The purpose of the PEIS is to identify issues, analyze potential impacts, and identify potential AMMM measures for the six NY Bight lease areas. The analysis of the overall impacts of a full buildout of six projects in the NY Bight lease areas evaluated comprehensive cumulative impacts by examining offshore wind activities within the NY Bight area as a whole. Cumulative impacts for each resource were analyzed and are discussed in Chapter 3.
BOEM-2024-0001-0530a	My concerns have over the years - have been about this type of format for public participation. I believe that it's controlling the participants in the program – so - that you're reaching out to. When it comes to educating people on what the issues are, the public format is where someone can speak about their public concern, and other people in the audience can hear what that concern is. And then maybe they can also voice their concerns that build on that - that concern that's been presented. When you have a format like this, it's concentrated and really supports the development by not allowing true conversation of what the concerns are of the public. Right? So, more - more people involved is better, and hearing more people share information is better - for better - which will develop a better outcome. And this type of format here really restricts that type of sharing of	Please see response to comment BOEM-2024-0001-0002-0001 regarding the extension of the public comment period and details of the public meetings held as part of the comment period.

Comment No.	Comment	Response
	<p>information and people cumulatively coming up with answers from BOEM, and where this kind of restricts that type of free-flowing of information.</p> <p>So, stop holding - meeting - public meetings like this. It's good to have people that can answer questions, but you really want to be able to have both formats. Right? You can do this in a separate room, but also have where people can come and testify about what their concerns are. That way there's a sharing of those concerns. And then maybe people would come next door as a group to find out the answers. But by restricting public comments like this, it's counterproductive and doesn't help BOEM being successful. Thank you.</p>	
BOEM-2024-0001-0528d	COA reiterates our request for an extension of the public comment period by at least 90 days.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0528d	<p>While virtual and in person public meanings are appreciated, time will be needed to review and verify incorporate information learned into comments. With the comments due on February 26, BOEM gives people 13 days to review and respond to the information shared at today's meeting alone, and, as I said, the other, information has not even been posted yet. Most individuals do not even have the capacity due to proper review, despite their best efforts.</p> <p>Overall BOEM, provided the public with a mere 45 days to review a 1,400 page plus technical document. Finally, the area under review in the PEIS is enormous and unprecedented: totaling nearly half a million acres, which is about 2 thirds as big - I'm just summing up, thank you. In sum it is essential for the public to thoroughly review the draft PEIS for the protection of the ocean, among other reasons.</p>	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0528l	I do echo the same concern about the limited time period for the public comment at 45 days. This is far too short for the public and any interested parties to fully digest and understand the impacts it contained in this PEIS. There's no, it's not a coincidence that this statement period or the public comment period is so short given the 2020 updates to regulations implementing the procedural provisions of the NEPA Act. This is quite clearly, intentionally done to limit public participation and feedback on these projects. In addition	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.

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	<p>those regulations also limit further PEIS or FEIS per project to is it 150 pages, or fewer or 300 pages, or fewer for more complex projects. This is completely unrealistic.</p> <p>The FEIS for Ocean Wind One was 2,300 pages alone. And now we're talking about 6 additional lease areas within the New York Bight that will have a real negligible and not negligible, real and and massive impact to the surrounding communities. Both for industry, national security, energy security, and people's quality of life quite frankly, as well as the environment that it seeks to protect and preserve. Again, please. I echo all of the the pleas from everyone who's commented today. We absolutely need more time to digest this sort of material. Without that time it seems sort of seems silly to even have these comment periods or these public meetings to begin with. So again, please consider extending this comment period. And with that. Thank you.</p>	
BOEM-2024-0001-0528m	<p>In opening comments it was mentioned that this process begins with public input. If that is the case, I like several other commenters, am requesting that the public comment period for this PEIS be extended. The most educated individual would find it difficult to review the 1,429 page document in 45 days, which breaks down to more than 31 pages per day.</p>	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0528x	<p>But first I'd like to request a 45-day extension in the comment period for the sheer scope of the document.</p>	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0528z	<p>We're moving too fast. I, too, support a longer comment period 45 days isn't enough.</p>	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0528cc	<p>This requires not just skimming the PEIS, but doing a sincere and diligent review. For this we need an extension, and therefore request a 90-day extension as we requested earlier in writing. Thank you so much.</p>	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0528ee	<p>So, I would like to request one an extension on the public comment period, along with more studies prior to construction of all these wind turbines.</p>	<p>Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.</p> <p>BOEM's Environmental Studies Program develops, funds, and manages rigorous scientific research specifically to establish</p>

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		<p>information needed for assessing and managing environmental impacts of energy and mineral development on the human, marine, and coastal environments. For more information on this program, visit <a href="https://www.boem.gov/environment/how-we-do-research">https://www.boem.gov/environment/how-we-do-research</a>.</p> <p>Further, BOEM's Office of Renewable Energy Programs depends on science to meet its responsibilities under environmental laws, regulations, and standards. As such, BOEM funds and manages scientific research to inform its decision-making processes for renewable energy projects on the OCS. For more information on Office of Renewable Energy Programs studies visit <a href="https://www.boem.gov/environment/environmental-studies/renewable-energy-research">https://www.boem.gov/environment/environmental-studies/renewable-energy-research</a>.</p>
BOEM-2024-0001-0528ff	<p>And we also agree with many on this call, Indigenous and non, who have said that the comment period is just too short. We recommend that an additional minimum of 90 days be extended to the comment period so that in these other organizations, other townships, other government - governmental pieces have the ability to go through this this documentation. You know, 2,400 pages, 1,700 pages. A lot of tribal organizations as well as community organizations that may be one person that that's working this project that has to represent their community.</p> <p>That that is just a tremendous load for one individual to then have to take and disseminate amongst their community to get feedback to make sure that they can make the proper comments that represent their community.</p>	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0528gg	I support the extension of more than even a 40-day comment period. Like someone had mentioned previously, there is not enough time to read all of these pages. We need more time.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0529s	<p>COA requests an extension of the public comment period of at least 90 days, for the following reasons.</p> <p>One, BOEM provided the public with a mere 45 days to review a 1,400 plus page document with around 100 references, 15 appendices, nearly a hundred 80 tables, nearly 85 figures, and over a hundred 60 acronyms and abbreviations. This is an impossible amount of content for any one individual group to thoroughly review</p>	<p>Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.</p> <p>Section ES.3 of the PEIS provides an overview of the public engagement process and activities to date. The publication of the Draft PEIS initiated a 45-day public comment period, which commenced with publication of the NOA of the Draft PEIS in the</p>

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	<p>in a given time frame. Will take the average person hours and hours to review this document. Plus, due to the technical nature of the content, the time to carefully review, understand, evaluate, and verify, requires much longer. Then there's time needed to actually write the comments.</p> <p>Two, most individuals will not have the capacity to do the proper review, despite their best efforts, and will rely on interest groups, many of whom are volunteers with full-time jobs to review such a document. These groups often have, timeframes for approval and writing, that may exceed those 45 days.</p> <p>Three, COA is aware of public request of BOEM, for the EIS asking for paper copies and additional information about the upcoming public meetings that took longer than necessary. Clean Ocean Action received our paper copy of PEIS in the mail today.</p> <p>Four, the public meetings are appreciated, but more time will be needed to verify and incorporate lessons and information from the meetings into testimony and comments.</p> <p>Five, the subject area for the PEIS are areas labelled as the New York Bight, creating significant confusion for New Jerseyans, who are not clear if those, the PEIS applies to them and their interest.</p> <p>Six, there are several other obstruent projects and processes in the review process simultaneously, many of which should be considered in the PEIS itself.</p>	<p>Federal Register on January 12, 2024. BOEM later extended the comment period based on requests from Tribal Nations and other stakeholders, which ended on March 13, 2024. Outreach included publication of the NOA in the Federal Register; BOEM press releases and social media announcements; email notifications to Tribal Nations, cooperating agencies, and consulting parties; and publication of legal notices in local newspapers to advertise the public comment period and solicit input on the Draft PEIS from the public, Tribal Nations, and federal, state, and local agencies. Additionally, BOEM conducted three in-person and two virtual meetings to inform interested attendees of the Draft PEIS and to provide the opportunity for the public to provide oral testimony. BOEM provided hard copies of the Draft PEIS upon request, which were mailed via FedEx next day delivery.</p> <p>The New York Bight is a geologic term used to describe the coastal embayment and offshore area that extends from Montauk Point on the eastern side of Long Island, New York, southwest to Cape May, New Jersey. BOEM did not name this geologic area, but uses “New York Bight” to describe the six lease areas analyzed in the PEIS.</p> <p>BOEM is preparing this Final PEIS because of the close proximity of the six NY Bight lease areas; their similar level of development due to the leases being awarded from the same auction; the close timing of the anticipated COP submissions; and the high, near-term demand from the states of New York and New Jersey for electricity generated by offshore wind. Offshore wind activities, other than those expected in the six NY Bight lease areas, are considered as part of the cumulative analysis as either ongoing or planned offshore wind activities, depending on if there is an approved COP. These other offshore wind projects will also be considered again as part of the cumulative impact analysis at the COP NEPA stage.</p>
BOEM-2024-0001-0529t	This perfectly illustrates why Clean Ocean Action submitted our request for a 90-day extension of the comment period on the first day it opened. BOEM has never considered the environmental effects of multiple over offshore wind projects at once in this way, so	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.

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	it's crucial to evaluate every sentence, every appendix, and every reference.	
BOEM-2024-0001-0310a	So first and foremost, there must be an extension of this deadline.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0310f	I urge BOEM to extend the public comment period another 90 days beyond the February 26th deadline.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0310g	First, I ask that you extend the comment period and I ask BOEM that you listen to the comments and concerns of the citizens in this public hearing and all the written comments that you've gotten.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0310h	First, I would like to demand a 90-day extension to the comment period due to the sheer size of the PEIS.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0310j	Furthermore, it's ridiculous to allow only 45 days to review and comment on the 1429 pages of the Environmental Impact Statement for the six proposed offshore wind leases. I am requesting 90 more days for the public to review and comment.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0529dd	Thank you very much for letting me speak tonight. I will start off by saying that I did not know this, so I was on the Long Island Railroad, I had 5:39. So, you're letting people know about this event happening and marketing it, was not very well done.	<p>Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.</p> <p>Section ES.3 of the PEIS provides an overview of the public engagement process and activities to date. The publication of the Draft PEIS initiated a 45-day public comment period, which commenced with publication of the NOA of the Draft PEIS in the Federal Register on January 12, 2024. BOEM later extended the comment period based on requests from Tribal Nations and other stakeholders, which ended on March 13, 2024. Outreach included publication of the NOA in the Federal Register; BOEM press releases and social media announcements; email notifications to Tribal Nations, cooperating agencies, and consulting parties; and publication of legal notices in local newspapers to advertise the public comment period and solicit input on the Draft PEIS from the public, Tribal Nations, and federal, state, and local agencies. Additionally, BOEM conducted three in-person and two virtual</p>

Comment No.	Comment	Response
		meetings to inform interested attendees of the Draft PEIS and to provide the opportunity for the public to provide oral testimony.
BOEM-2024-0001-0310o	I'm requesting an extension of the 45-day comment period.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0310p	So I would like BOEM to extend that period where we can comment, because I'm a speed reader and I couldn't get through those 1500 pages. I need more time to digest this and come up with other comments and other questions. I would like you to be more transparent because I don't think you've been.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0529hh	I don't think it's fair, particularly the BOEM staff, that did all this work, that more time is not given to the public to be able to review the documents, both before comments are due, and before hearings like this are held.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0310u	I know this isn't universally welcome, but gives us more time to read these thousands of pages of documents and their support documents so that we can provide. You say, you claim so kindly at these virtual hearings and these faces that you care and they really want to hear from the public. Well, if you really want to hear from the public give us a chance to validate all the things that you're claiming in these vast documents and do the homework that we need to do 'cause we know you're not doing your homework. So give us an opportunity.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.
BOEM-2024-0001-0310m	So I ask for an extension. Everybody is asking for an extension 90 days. How about you give us a year? How about you give us long enough until we can demonstrate to the public that you are not watching out for us. How about you give us long enough that we can prove that you're -- that the takes, that the killing of these dying animals are as a result of what you're allowing the builders to do? That could come.	Please see response to comment BOEM-2024-0001-0002-0001 regarding the duration, timing, and extension of the public comment period.

## P.6 General Comment Summaries and Responses

### P.6.1 Purpose and Need

**Table P.6-1. General Comments on Purpose and Need**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A commenter said that BOEM should avoid approving unnecessary projects while it performs the siting for future wind projects. Another commenter expressed concern that the weather conditions within the proposed site areas are becoming increasingly hostile to any offshore development, especially WTGs. The same commenter further wrote that high winds and hurricanes would lower the efficiency of the WTGs and may render the project cost ineffective.	Thank you for your comments. An analysis of the potential impacts of extreme weather events on WTGs in the NY Bight is included in Section 2.3, <i>Non-Routine Activities and Events</i> , of the PEIS. This PEIS will not approve any projects; the decision to approve, approve with modifications, or disapprove a COP will not occur until after COPs are submitted for the NY Bight lease areas and another level of NEPA analysis is completed.	<b>Submission IDs Contributing to Comment Summary:</b> BOEM-2024-0001-0353, BOEM-2024-0001-0402.
<b>Comment Summary 2:</b> A commenter expressed concern that offshore wind would be an unreliable energy source compared to nuclear or liquid natural gas because the energy produced cannot be stored. Similarly, another commenter said that the government should pursue long-term energy that is land-based before venturing into offshore energy production. A couple of commenters stated that offshore wind projects would need to be constructed to comply with New York State's Climate Leadership and Community Protection Act, which requires a certain percentage of electricity to come from sustainable sources.	Thank you for your comments. The consideration of other land-based renewable energy sources is outside BOEM's jurisdiction and the scope of this PEIS, which is to identify issues, analyze degree of potential impacts, and identify appropriate AMMM measures that may be applied to individual projects. Section 1.3, <i>Purpose and Need for the Proposed Action</i> , outlines the policy goals of the Biden Administration to combat the climate crisis and the States of New Jersey and New York's offshore wind energy generation goals.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0075, BOEM-2024-0001-0349, BOEM-2024-0001-0234, BOEM-2024-0001-0249.
<b>Comment Summary 3:</b> A commenter warned that development of offshore wind energy would reverse efforts to clean beaches and water along the Jersey Shore. A commenter expressed concern that development of offshore wind energy would only hurt citizens and wildlife. Another commenter wrote that there have not been enough studies or transparency of information regarding wind energy development. Similarly, a commenter stated that a responsible pilot project study of offshore wind	Thank you for your comments. Two offshore wind projects, CVOW – Pilot and Block Island Wind Farm, have been in operation on the Atlantic Coast for over 3 years and 7 years, respectively. These projects have acted as pilot projects for offshore wind development in the region. Studies conducted at these offshore wind sites to evaluate actual impacts of the development, operations, and maintenance of offshore wind infrastructure have been incorporated into this PEIS. The PEIS includes extensive evaluation of potential impacts	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0246, BOEM-2024-0001-0519, BOEM-2024-0001-0035; BOEM-2024-0001-0365.

Comment	Response	Submission IDs Contributing to Comment Summary
development should be conducted before proceeding with any proposed project.	of offshore wind development on a wide range of resource areas including coastal habitat, wildlife, and citizens. In addition, BOEM continues to engage in studies of the impacts of offshore wind development to inform future environmental reviews.	

## P.6.2 Proposed Action and Alternatives

**Table P.6-2. General Comments on the Proposed Action and Alternatives**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Alternative A</b>		
<b>Comment Summary 1:</b> A commenter expressed support for adopting Alternative A, stating that money would be better spent on good paying jobs “mitigat[ing] abandoned mines, fossil fuel wells, and habitat degradation.”	Thank you for your comment. BOEM is responsible for developing the nation’s offshore resources and does not fund the construction or operations of offshore wind farms on the Atlantic OCS (including those that could occur in the NY Bight lease areas).	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0528.
<b>Alternative C</b>		
<b>Comment Summary 1:</b> Numerous commenters expressed general support for adopting Alternative C. Some of these commenters also asked BOEM to act quickly to finalize the proposed NY Bight projects.	Thank you for your comment.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0388, BOEM-2024-0001-0443, BOEM-2024-0001-0465, BOEM-2024-0001-0481, BOEM-2024-0001-0483, BOEM-2024-0001-0485, BOEM-2024-0001-0488, BOEM-2024-0001-0492, BOEM-2024-0001-0494, BOEM-2024-0001-0500, BOEM-2024-0001-0528.

Comment	Response	Submission IDs Contributing to Comment Summary
<b>AMMM Measures</b>		
<b>Comment Summary 1:</b> A commenter wrote that avoidance is the most important and most cost-effective mechanism for reducing impacts on migratory species. The commenter added that if large-scale renewable energy projects such as those proposed in the PEIS are likely to have impacts that cannot be fully mitigated, then those projects should not be pursued.	As stated in PEIS Section 1.4, BOEM’s evaluation of wind energy development is governed by various applicable federal statutes and implementing regulations, which prescribe BOEM’s responsibility for determining whether to approve, approve with modifications, or disapprove COPs submitted for lease areas within the NY Bight. BOEM’s approvals for COPs on the Atlantic OCS have included numerous terms and conditions that avoid, minimize, and mitigate impacts on the physical and natural environment. The PEIS would not result in the approval of any activities, and BOEM would not approve any COP without adoption of mitigation measures.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0358.

### P.6.3 Air Quality and Greenhouse Gases

**Table P.6-3. General Comments on Air Quality and Greenhouse Gases**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> Many commenters expressed general support for transitioning away from fossil fuels and instead developing alternative renewable energy sources such as offshore wind. Some of these commenters also reasoned that wind energy projects would secure a clean energy-based future that protects the health of future generations of children. Numerous commenters likewise expressed support for BOEM’s proposed Draft PEIS as a critical step toward achieving a 100-percent clean energy production. Some of these commenters also wrote that developing offshore wind energy could help address extreme weather events that have been worsened by climate change.	BOEM acknowledges and appreciates support for the PEIS.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0289, BOEM-2024-0001-0260, BOEM-2024-0001-0150, BOEM-2024-0001-0060, BOEM-2024-0001-0064, BOEM-2024-0001-0065, BOEM-2024-0001-0067, BOEM-2024-0001-0068, BOEM-2024-0001-0549, BOEM-2024-0001-0462, BOEM-2024-0001-0139, BOEM-2024-0001-0151, BOEM-2024-0001-0152, BOEM-2024-0001-0068,

Comment	Response	Submission IDs Contributing to Comment Summary
		BOEM-2024-0001-0486, BOEM-2024-0001-0557, BOEM-2024-0001-0364, BOEM-2024-0001-0497, BOEM-2024-0001-0258, BOEM-2024-0001-0414, BOEM-2024-0001-0455, BOEM-2024-0001-0130, BOEM-2024-0001-0102, BOEM-2024-0001-0059, BOEM-2024-0001-0351, BOEM-2024-0001-0253, BOEM-2024-0001-0430, BOEM-2024-0001-0460, BOEM-2024-0001-0155, BOEM-2024-0001-0068, BOEM-2024-0001-0489, BOEM-2024-0001-0104, BOEM-2024-0001-0156, BOEM-2024-0001-0554, BOEM-2024-0001-0528, BOEM-2024-0001-0088.
<p><b>Comment Summary 2:</b> Many commenters expressed support for the Draft PEIS, reasoning that wind energy development would reduce pollution in New Jersey and New York communities in addition to mitigating the worst effects of climate change. Several more commenters expressed support for wind energy development in New Jersey and New York, reasoning that fossil fuels are polluting the environment.</p>	BOEM acknowledges and appreciates support for the PEIS.	<p><b>Submission IDs contributing to comment summary:</b></p> BOEM-2024-0001-0258, BOEM-2024-0001-0234, BOEM-2024-0001-0233, BOEM-2024-0001-0351, BOEM-2024-0001-0556, BOEM-2024-0001-0552, BOEM-2024-0001-0551, BOEM-2024-0001-0555, BOEM-2024-0001-0043, BOEM-2024-0001-0337, BOEM-2024-0001-0085, BOEM-2024-0001-0283,

Comment	Response	Submission IDs Contributing to Comment Summary
		BOEM-2024-0001-0196, BOEM-2024-0001-0179, BOEM-2024-0001-0501, BOEM-2024-0001-0103, BOEM-2024-0001-0321, BOEM-2024-0001-0066, BOEM-2024-0001-0057, BOEM-2024-0001-0237, BOEM-2024-0001-0353.
<b>Comment Summary 3:</b> A few commenters stated that the Northeast United States contains the nation's best offshore wind resources, such that it will have a unique advantage in reaping the economic and environmental benefits of offshore wind. Similarly, another few commenters wrote that wind energy projects can provide immediate and long-term benefits to public health and the environment. A few commenters stated that offshore wind energy development would help lower carbon emissions, promote sustainability, and reduce environmental impacts compared to current fossil fuel production. A few more commenters expressed concern that the effects of climate change could be exacerbated should BOEM take no action on the PEIS.	BOEM acknowledges and appreciates support for the PEIS.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0430, BOEM-2024-0001-0235, BOEM-2024-0001-0249, BOEM-2024-0001-0059, BOEM-2024-0001-0241, BOEM-2024-0001-0044, BOEM-2024-0001-0190, BOEM-2024-0001-0192, BOEM-2024-0001-0064, BOEM-2024-0001-0233.
<b>Comment Summary 4:</b> A few commenters wrote that developing wind energy production according to the PEIS would improve air quality by reducing air pollution. A couple of commenters wrote that, by reducing fossil fuel pollution, wind energy will help reduce the prevalence and severity of respiratory disorders, strokes, and asthma. Similarly, a commenter expressed support for investment in offshore wind, as it would help those who suffer from asthma, heart disease, and other medical conditions by improving air quality.	BOEM acknowledges and appreciates support for the PEIS. BOEM agrees that offshore wind energy (to the extent that the wind projects displace fossil fuels) would lead to reduced emissions of air pollutants, which could result in health benefits.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0353, BOEM-2024-0001-0235, BOEM-2024-0001-0550, BOEM-2024-0001-0554, BOEM-2024-0001-0145, BOEM-2024-0001-0125, BOEM-2024-0001-0298, BOEM-2024-0001-0215, BOEM-2024-0001-0258, BOEM-2024-0001-0556, BOEM-2024-0001-0555, BOEM-2024-0001-0235,

Comment	Response	Submission IDs Contributing to Comment Summary
		BOEM-2024-0001-0206, BOEM-2024-0001-0068, BOEM-2024-0001-0501, BOEM-2024-0001-0508, BOEM-2024-0001-0102, BOEM-2024-0001-0196, BOEM-2024-0001-0313.
<b>Comment Summary 5:</b> A commenter asked BOEM to stop polluting the land and oceans with green energy. Similarly, a commenter expressed concern that wind energy development would yield minimal energy output while polluting the ocean. A commenter expressed opposition to the PEIS, reasoning that providing green energy is not worth the cost to the economy, tourism, views, and sea life. A couple of commenters expressed concern that the development of wind energy projects would not provide environmental or energy benefits. A commenter warned that interrupting the flow of wind would increase warming on land and cause greater air pollution in populated areas. A commenter expressed opposition to WTGs due to their negative impacts on the environment, animals, and tourism.	Impacts on the economy are discussed in Section 3.6.3, <i>Demographics, Employment and Economics</i> . Impacts on tourism are discussed in Section 3.6.8, <i>Recreation and Tourism</i> . Impacts on views are discussed in Section 3.6.9, <i>Scenic and Visual Resources</i> . Impacts on animals are discussed in the following sections: 3.5.1, <i>Bats</i> ; 3.5.3, <i>Birds</i> ; 3.5.5; <i>Finfish, Invertebrates, and Essential Fish Habitat</i> ; 3.5.6, <i>Marine Mammals</i> ; and 3.5.7, <i>Sea Turtles</i> . Impacts on climate and air quality are discussed in Section 3.4.1, <i>Air Quality</i> , and Appendix B.1, <i>Climate and Meteorology</i> .	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0074, BOEM-2024-0001-0476, BOEM-2024-0001-0229, BOEM-2024-0001-0272, BOEM-2024-0001-0480, BOEM-2024-0001-0477, BOEM-2024-0001-0521, BOEM-2024-0001-0036.
<b>Comment Summary 6:</b> A commenter discussed statistics on methane leaks throughout the natural gas supply chain in the United States. The commenter reasoned that the no action alternative would increase the use of hydraulically fractured gas and should therefore mention the pollution from hydraulically fractured gas and refer to an estimate of the potentially resultant effects, such as health impacts.	Thank you for the comment.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0528.

## P.6.4 Water Quality

**Table P.6-4. General Comments on Water Quality**

Comment	Response	Submission IDs Contributing to Comment Summary
<p><b>Comment Summary 1:</b> A commenter wrote that “sediment plumes created from wake effect” would cause irreversible damage to the water and its ability to sustain life. Similarly, a commenter stated that the glauconite, wake effect, and sediment plumes are all issues that would be affected by offshore wind projects. Another commenter said that sediment plumes originating from vibrations at the base of the WTGs would likely effect marine life and the marine food chain. Another commenter said that offshore wind development would lead to contamination of groundwater sources. A commenter said that fishermen continue to express concerns for the decrease in wind-driven coastal upwelling within the California current system by the extraction of energy from the winds responsible for the upwelling process, which results in high oceanic productivity.</p>	<p>Please see Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Discharges/intakes</i>, for the discussion of resuspension of contaminants; this section also indicates that a project-specific COP-level NEPA analysis will provide greater details of the specific NY Bight lease areas regarding sediment transport models and potential impacts. With respect to groundwater, at this programmatic stage the exact location of onshore components is not known; as such, potential impacts on groundwater sources will be included in a project-specific COP-level NEPA analysis. Section 3.4.2, <i>Water Quality</i>; Section 3.5.5, <i>Finfish, Invertebrates, and Essential Fish Habitat</i>; and Section 3.5.2, <i>Benthic Resources</i>, provide analysis of hydrodynamic effects and the Mid-Atlantic Bight Cold Pool. This PEIS addresses offshore wind projects in the NY Bight, which will have no impact on the California current system.</p>	<p><b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0073, BOEM-2024-0001-0240, BOEM-2024-0001-0477, BOEM-2024-0001-0355, BOEM-2024-0001-0453.</p>
<p><b>Comment Summary 2:</b> A commenter expressed concern that substations would use hundreds of gallons of ocean water to cool a facility while discharging billions of gallons of hot water into the ocean each day. Another commenter expressed concern that constructing thousands of offshore wind turbines would disrupt the North Atlantic current. Another commenter asked how the released water containing chlorine residuals would affect marine life.</p>	<p>Section 3.5.5, <i>Finfish, Invertebrates, and Essential Fish Habitat</i>; and Section 3.5.2, <i>Benthic Resources</i>, provide analysis of entrainment and impingement, and Section 3.4.2, <i>Water Quality</i>, provides analysis of seawater intake and discharge from HVDC converter OSSs. Section 316(b) of the CWA requires NPDES permits to ensure that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available to minimize adverse environmental impacts from impingement and entrainment of aquatic organisms. If a project is proposing open-loop systems, the project-specific COP-level NEPA analysis would analyze effects from the system, and additional mitigation may be proposed. Additionally, MUL-21 encourages the use of emerging technology, when possible, which may include using closed-loop cooling systems.</p>	<p><b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0365, BOEM-2024-0001-0504, BOEM-2024-0001-0528.</p>

Comment	Response	Submission IDs Contributing to Comment Summary
	Section 3.4.2, <i>Water Quality</i> ; Section 3.5.5, <i>Finfish, Invertebrates, and Essential Fish Habitat</i> ; and Section 3.5.2, <i>Benthic Resources</i> , also provide analysis of hydrodynamic effects and the Mid-Atlantic Bight Cold Pool.	

#### P.6.5 Bats

**Table P.6-5. General Comments on Bats**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A couple of commenters said that WTGs pose a threat to birds and bats especially in areas with high avian activity. Collisions with turbine blades can lead to fatalities, raising concerns about the impact on local bird and bat populations.	Impacts on bats and birds, including collisions with turbine blades and mortality, are addressed in PEIS Sections 3.5.1 and 3.5.3, respectively.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0122-0005, BOEM-2024-0001-0355.

#### P.6.6 Benthic Resources

**Table P.6-6. General Comments on Benthic Resources**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A commenter wrote that the underground cables that would be used in offshore wind development would be encased in metallic tubing to prevent dangerous electrical leakage. The same commenter added that cables would only be linked to onshore power grids in remote or industrial areas, and not in residential areas, recreational areas, or ocean beaches. Conversely, another commenter expressed concern that the concrete used to support WTGs could contaminate the ocean floor. Another commenter said offshore wind projects will lead to the destruction of the seabeds and natural marine ecosystem.	RP MUL-4 proposes the use of several specific cable protection measures. RP MUL-39 proposes the electric shielding on underwater cables to control the intensity of EMF. Specific cable design and landing sites will be discussed in the project-specific COP. Section 3.5.2 acknowledges the impact on benthic resources and includes mitigation strategies.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0125, BOEM-2024-0001-0229, BOEM-2024-0001-0355.

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 2:</b> A commenter expressed concern that benthic species in the lease areas could be harmed by numerous export cables crisscrossing throughout their habitat. Another commenter expressed similar concern that offshore wind projects could disturb the seabed where shellfish live.	RP MUL-23 proposes that developers adjust their project design to avoid or reduce potential impacts on important environmental resources. Interarray cable burial depth is expected to be between 3 and 9.8 feet (0.9–3 meters). Export cable burial depth is anticipated to be 3–19.6 feet (0.9–6 meters). For both interarray and export cables, 6 feet (1.8 meters) is the typical target burial depth. Depths may vary based on site-specific factors (e.g., soil type, cable/pipeline crossings, crossing of navigation channels or other federal civil work projects, other federal or state requirements). Armored cables will only be present in areas where burial is not possible. Some benthic species are expected to be temporarily affected during the construction phase of the project. Further discussion can be found in Sections 3.5.2 and 3.5.5.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0073.

## P.6.7 Birds

**Table P.6-7. General Comments on Birds**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A couple of commenters said that WTGs pose a threat to birds and bats especially in areas with high avian activity. Collisions with turbine blades can lead to fatalities, raising concerns about the impact on local bird and bat populations.	Impacts on bats and birds, including collisions with turbine blades and mortality, are addressed in PEIS Sections 3.5.1 and 3.5.3, respectively.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0122-0005, BOEM-2024-0001-0355.
<b>Comment Summary 2:</b> A commenter wrote that the potential negative impact on native bird populations would greatly outweigh any of the benefits of offshore wind development. Another commenter stated that the lease areas would be in the Atlantic flyway, which birds use for migration, such that offshore wind development could affect bird behavior, causing collisions, habitat disruption, altered flight patterns, and increased stress levels. A commenter expressed concern that offshore wind development could	As documented in PEIS Section 3.5.3, presence of birds in the offshore environment is low and, therefore, BOEM anticipates the risk to birds from offshore wind development and operations would be low. Potential collisions and disruption of behavior and flight patterns are addressed in PEIS Section 3.5.3. Potential impacts on federally listed threatened and endangered birds are addressed through the ESA Section 7 requirements. The New York Bight lease areas	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0244, BOEM-2024-0001-0463, BOEM-2024-0001-0358, BOEM-2024-0001-0240.

Comment	Response	Submission IDs Contributing to Comment Summary
endanger protected and native bird species. A commenter expressed concern that endangered birds rely on horseshoe crabs, whose spawning grounds in the lower Delaware Bay would be affected by development of the NY Bight projects.	are not in the Delaware Bay and BOEM has not proposed any future offshore wind development in the Delaware Bay.	
<b>Comment Summary 3:</b> A commenter stated that offshore wind development would place WTGs far enough offshore to avoid affecting coastal-dwelling or migrating birds. A couple of commenters wrote that climate disruption and habitat loss present a greater threat to birds than do WTGs, adding that newer turbines are designed to reduce bird strikes.	Thank you for the comment. As documented in PEIS Section 3.5.3, bird presence in the offshore environment is low. Climate change impacts on birds are also addressed in PEIS Section 3.5.3.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0125, BOEM-2024-0001-0258, BOEM-2024-0001-0351.

#### P.6.8 Coastal Habitat and Fauna

**Table P.6-8. General Comments on Coastal Habitat and Fauna**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A commenter expressed opposition to WTGs, saying that they negatively affect the environment.	See response to comment BOEM-2024-0001-0317-0009.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0036.

#### P.6.9 Finfish, Invertebrates, and Essential Fish Habitat

**Table P.6-9. General Comments on Finfish, Invertebrates, and Essential Fish Habitat**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A commenter expressed concern that the underground cables required for offshore wind farms would act like an electric fence to fluke, halibut, and other such species of fish. Additionally, a couple of commenters expressed similar concern that undersea cables would threaten sea crustaceans. Another couple of commenters warned that EMFs from offshore wind	An EMF analysis is provided in Sections 3.5.5.3.3 and 3.5.5.4.1. EMF exposure levels in the built environment are not expected to reach high enough energy levels to affect populations and there is no evidence to indicate that EMFs from undersea AC or DC power cables negatively affect commercially and recreationally important fish species (CSA Ocean Sciences Inc. and Exponent 2019; Gill and Desender	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0075, BOEM-2024-0001-0078, BOEM-2024-0001-0079, BOEM-2024-0001-0310, BOEM-2024-0001-0472,

Comment	Response	Submission IDs Contributing to Comment Summary
platforms will adversely affect sharks, skates, and electric eels, as well as the mating of flounder and other undersea habitats. Similarly, a commenter expressed concern that sound produced by offshore wind platforms could harm scallops, clams, mussels, crabs, lobster, and other such species. A commenter expressed concern that offshore cooling systems would be harmful to fish, shellfish larvae, and plankton. Another commenter wrote that scallop fishing would be affected by offshore wind development.	2020; NYSERDA 2017; SEER 2022; Taormina et al. 2018). An analysis of the potential impacts of sound is provided in Section 3.5.5.1.3. BOEM is analyzing several AMMM measures under Alternative C including measures to reduce dB levels using attenuation devices and shut-off protocols when animals are in the vicinity of sound sources. A discussion of the potential impacts of cooling system discharge and intake is provided in Section 3.5.5.3.3.	BOEM-2024-0001-0509, BOEM-2024-0001-0080, BOEM-2024-0001-0477, BOEM-2024-0001-0331, BOEM-2024-0001-0355.
<b>Comment Summary 2:</b> A commenter expressed concern that offshore wind projects would harm fish and other wildlife living in the lease areas. Another commenter wrote that wind farms should not be constructed on historical or extant fertile fishing beds. Conversely, a commenter stated that while sedentary or benthic ocean wildlife may be temporarily inconvenienced during construction, they will find adequate habitats among the artificial reefs created by the offshore wind platforms.	Thank you for your comments. The lease areas were selected after a thorough scoping process that included input from a diverse array of stakeholders (see <a href="https://www.boem.gov/sites/default/files/documents/renewable-energy/Memorandum%20for%20Area%20ID%20in%20the%20NY%20Bight.pdf">https://www.boem.gov/sites/default/files/documents/renewable-energy/Memorandum%20for%20Area%20ID%20in%20the%20NY%20Bight.pdf</a> and <a href="https://www.boem.gov/renewable-energy/state-activities/new-york-bight">https://www.boem.gov/renewable-energy/state-activities/new-york-bight</a> ). Sites excluded through the initial scoping process did not meet BOEM's requirements. The Final Scoping Report is available in Appendix O. Extensive analysis and discussion of the impacts of construction and operation of the NY Bight projects are found in Section 3.5.5.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0207, BOEM-2024-0001-0076, BOEM-2024-0001-0125, BOEM-2024-0001-0181, BOEM-2024-0001-0344, BOEM-2024-0001-0345.

## P.6.10 Marine Mammals

**Table P.6-10. General Comments on Marine Mammals**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> Several commenters said that offshore WTGs negatively affect marine mammals and result in the take of marine mammals. A few commenters discussed the correlation between offshore wind activity and increased marine mammal deaths. A commenter said that NMFS, industry, and independent agencies need to address this correlation.	There is no causal connection between recent offshore wind development and large whale mortality, and such an assumption is contrary to the scientific consensus. The overwhelming scientific consensus is that offshore wind activity is not a cause of these marine mammal mortalities. Instead, the scientific community has determined the three declared UMEs for whales in 2016 and 2017 were primarily	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0038, BOEM-2024-0001-0075, BOEM-2024-0001-0097, BOEM-2024-0001-0240, BOEM-2024-0001-0247,

Comment	Response	Submission IDs Contributing to Comment Summary
	caused by non-wind vessel strikes and fishing gear entanglements (and infectious disease for minke whales). NOAA, the Marine Mammal Commission, academic institutions (e.g., Rutgers University, University of Rhode Island, Yale), environmental organizations (e.g., Sierra Club, Natural Resources Defense Council), BOEM, and the DOE have all issued official statements that no marine mammal mortality has been attributed to offshore wind activities.	BOEM-2024-0001-0244, BOEM-2024-0001-0244, BOEM-2024-0001-0250, BOEM-2024-0001-0272, BOEM-2024-0001-0305, BOEM-2024-0001-0358, BOEM-2024-0001-0399, BOEM-2024-0001-0418, BOEM-2024-0001-0434, BOEM-2024-0001-0457, BOEM-2024-0001-0476, BOEM-2024-0001-0477, BOEM-2024-0001-0480, BOEM-2024-0001-0509, BOEM-2024-0001-0078, BOEM-2024-0001-0079, BOEM-2024-0001-0089, BOEM-2024-0001-0262, BOEM-2024-0001-0331.
<b>Comment Summary 2:</b> A few commenters said that offshore WTGs do not result in the take of marine mammals. The commenters reasoned that the recent increases in marine mammal mortality are due to climate change and increased shipping traffic.	Thank you for your comments. BOEM agrees with this determination, as it is consistent with available scientific data regarding the recent whale strandings available to date.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0085, BOEM-2024-0001-0235, BOEM-2024-0001-0125.
<b>Comment Summary 3:</b> Citing a news article, a commenter asked how the leases would affect the endangered fin whale population, which the commenter stated live in the middle of all the lease areas.	A full discussion of the potential effects of offshore wind activities is included in the PEIS for all marine mammals, including fin whales; for IPFs that may have different effects on mysticete species (which include fin whales), this is specified in the impact determinations provided in the PEIS.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0236.
<b>Comment Summary 4:</b> Citing research, including maps of whale migratory patterns, a commenter discussed the importance of migratory animals such as whales. The commenter said that wind turbine activities could pose a threat to the phenomenon of migration.	The effects of WTG noise and presence of structures on whale migratory behavior are discussed in detail in Section 3.5.6.3.3 of the PEIS.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0358.

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 5:</b> A couple of commenters expressed concern regarding how quickly wind development is moving forward and how little data there are on the potential impacts on marine mammals. A commenter said there needs to be more research done on the potential impacts of developing thousands of WTGs. A commenter stated that the proposed 1-year period to gather baseline data is unrealistic.	Thank you for your comment. BOEM will take your comment into consideration as it administers its program.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0528, BOEM-2024-0001-0528.

### P.6.11 Commercial Fisheries and For-Hire Recreational Fishing

**Table P.6-11. General Comments on Commercial Fisheries and For-Hire Recreational Fishing**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A commenter expressed concern that constructing offshore WTGs would destroy recreational fishing from beaches and from boats. Similarly, another commenter wrote that the PEIS provides inadequate data on recreational fishing catch and effort as well as inadequate spatial data collected for recreational private boat anglers. The same commenter expressed additional concern that WTGs would act as offshore fish aggregating devices, which could greatly increase fish catchability around the WTGs, leading to localized and regional depletion that may harm recreational fishermen. The same commenter also warned that a significant portion of recreational fishing activity occurs within areas that have been leased for offshore wind development.	Section 3.6.1 discusses commercial fisheries and for-hire recreational fishing. Additional discussion of private recreational fishing from shore or personal vessels can be found in Section 3.6.8, <i>Recreation and Tourism</i> . The estimates of fishing pressure were obtained from NOAA's Marine Recreational Information Program, which is currently the best publicly available source of recreational fishing data. The analysis in Section 3.6.1 differentiates between the adverse and beneficial impacts on commercial and for-hire recreational fisheries including the reef effect of the WTGs. See the response to BOEM-2024-0001-0332-0004 regarding the location of recreational fishing activity within the lease areas.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0202, BOEM-2024-0001-0310.
<b>Comment Summary 2:</b> A few commenters expressed concern that scallop, oyster, and clam beds have already been negatively affected by survey activities, which has hurt local commercial fishermen. Another commenter wrote that the planned wind turbines could likewise displace the Mid-Atlantic based clamming industry, which would disrupt the commercial and recreational fishing industry. A commenter	Section 3.5.2.1.1 discusses the population decline of Atlantic surfclams in a 2016 Northeast Fisheries Science Center stock assessment using data from 2015, prior to any work within the area (NEFSC 2017). The NY Bight lease areas were designed to avoid certain commercial fishing activities based on stakeholder input and task force meetings held from 2017 to 2021. As described in Section 2.2, because the	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0504, BOEM-2024-0001-0240, BOEM-2024-0001-0463, BOEM-2024-0001-0517, BOEM-2024-0001-0320,

Comment	Response	Submission IDs Contributing to Comment Summary
warned that installation and operation of WTGs could disrupt traditional fishing grounds or alter the marine ecosystem, requiring fishermen to adjust their routes and affecting their catch. Additionally, the same commenter also wrote that the WTGs' foundations and underwater cables could create physical barriers to fishing activities and could likewise disrupt established fishing practices. Several more commenters expressed general concern that development of offshore wind farms in the NY Bight would have a significant negative effect on commercial fishing in the area.	locations of WTGs for the six lease areas are unknown, the PEIS analyzes a hypothetical project with the closest spacing possible for the WTG layout. The PEIS includes an RP that encourages lessees to propose consistent WTG layouts across adjacent lease areas as well as increased spacing as ways to reduce impacts. Lessees may propose greater spacing in their project-specific COPs to account for these concerns. See response to comment BOEM-2024-0001-0447-0004 regarding physical barriers and impacts on gear utilization. Further analyses of the impacts on the fishing industry from anticipated development in the six NY Bight lease areas are provided in Sections 3.6.1 and 3.6.3.	BOEM-2024-0001-0509, BOEM-2024-0001-0476, BOEM-2024-0001-0075, BOEM-2024-0001-0344, BOEM-2024-0001-0355.
<b>Comment Summary 3:</b> A commenter wrote that offshore wind farms can create artificial reefs that boost fish populations and thereby help sustain New Jersey's recreational and commercial fishermen. Another commenter wrote that offshore wind farms, with 90- to 150-foot clearances between a turbine blade's lowest point and the ocean's surface, would not threaten recreational boating or local commercial fishing.	Thank you for your comment.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0258, BOEM-2024-0001-0103, BOEM-2024-0001-0125.
<b>Comment Summary 1:</b> A few commenters expressed concerns regarding the disposal and decomposition of WTGs after their useful life and byproducts required during operations. A commenter asked whether fossil fuels are required to run WTGs.	Chapter 2 describes the requirements and typical process for decommissioning wind farms. The ultimate disposition of the WTGs will depend on demand for material, other available uses, and the technology at the time of decommissioning. Fossil fuels are not used to power WTGs, but oils and lubricants are required in the operation of WTGs.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0205, BOEM-2024-0001-0202, BOEM-2024-0001-0246, BOEM-2024-0001-0426.
<b>Comment Summary 2:</b> A commenter asked whether the maintenance costs would outweigh the benefits, including who would pay for the maintenance and how it would affect consumer electric bills.	Maintenance costs do not outweigh the benefits of offshore wind, as offshore wind will produce clean renewable energy and reduce the reliance on fossil fuel-produced power. Impacts on consumer electric bills would be variable, much as an electric bill is now. Depending on the amount of wind, the output of power may vary.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0246.

## P.6.12 Demographics, Employment, and Economics

**Table P.6-12. General Comments on Demographics, Employment, and Economics**

Comment	Response	Submission IDs Contributing to Comment Summary
<p><b>Comment Summary 1:</b> Many commenters stated that offshore wind projects would benefit New York and New Jersey’s economies by spurring development, increasing energy production, and improving energy security. Another couple of commenters added that offshore wind projects would also benefit local businesses and small communities. A couple of commenters also said that wind energy would provide an estimated \$1.9 billion in state and local tax payments and land-lease payments every year. Additionally, a commenter said that new wind projects contributed \$20 billion to the U.S. economy in 2021. Another commenter likewise wrote that the offshore wind industry could provide \$25 billion to the economy by 2030. A commenter urged BOEM to continue “siting and building a steady stream” of offshore wind projects to maximize supply chain, port infrastructure, and workforce investments.</p>	<p>Thank you for your comment.</p>	<p><b>Submission IDs contributing to comment summary:</b>  BOEM-2024-0001-0145,  BOEM-2024-0001-0104,  BOEM-2024-0001-0103,  BOEM-2024-0001-0430,  BOEM-2024-0001-0351,  BOEM-2024-0001-0190,  BOEM-2024-0001-0192,  BOEM-2024-0001-0162,  BOEM-2024-0001-0059,  BOEM-2024-0001-0085,  BOEM-2024-0001-0258,  BOEM-2024-0001-0158,  BOEM-2024-0001-0102,  BOEM-2024-0001-0150,  BOEM-2024-0001-0462,  BOEM-2024-0001-0528,  BOEM-2024-0001-0088.</p>
<p><b>Comment Summary 2:</b> Many commenters wrote that because wind is free, the cost of wind energy would be consistent once WTGs are built whereas fossil fuels remain subject to price swings. A couple of commenters similarly said that offshore wind projects would reduce energy costs and other related expenses. Conversely, several commenters expressed concern that offshore wind projects would cost taxpayers more money than they would save in energy use. Similarly, a commenter expressed opposition to offshore wind energy, reasoning that offshore wind projects would increase energy costs for coastal residents while decreasing property values, tourism, and jobs. A commenter likewise expressed concern that offshore wind would</p>	<p>The price of the power generated by the NY Bight projects will be determined by offtake agreements, also known as power purchase agreements, negotiated between the offshore wind companies and electric distribution companies, subject to each state’s offshore wind procurement laws and regulations. The exact cost cannot be known at this time, as electricity rates are affected by myriad factors including current demand for electricity, the mix and price of other generation sources (e.g., other offshore wind projects, natural-gas power plants), and other factors, including natural events like high summertime temperatures. COP NEPA documents will be better able to conduct analyses concerning costs and rates when projects</p>	<p><b>Submission IDs contributing to comment summary:</b>  BOEM-2024-0001-0104,  BOEM-2024-0001-0497,  BOEM-2024-0001-0235,  BOEM-2024-0001-0154,  BOEM-2024-0001-0429,  BOEM-2024-0001-0153,  BOEM-2024-0001-0138,  BOEM-2024-0001-0102,  BOEM-2024-0001-0059,  BOEM-2024-0001-0125,  BOEM-2024-0001-0457,</p>

Comment	Response	Submission IDs Contributing to Comment Summary
increase electrical bills. Another commenter stated that the offshore wind industry remains in financial turmoil.	are defined and power purchase agreements are in place. Refer to response to comment BOEM-2024-0001-0357-0059.	BOEM-2024-0001-0477, BOEM-2024-0001-0097, BOEM-2024-0001-0244, BOEM-2024-0001-0390, BOEM-2024-0001-0310, BOEM-2024-0001-0240, BOEM-2024-0001-0036, BOEM-2024-0001-0526.
<b>Comment Summary 3:</b> Several commenters expressed support for offshore wind, reasoning that it would bring well-paying jobs in construction, manufacturing, and maintenance. Similarly, a couple of commenters said that offshore wind projects would create union jobs in coastal communities. Another commenter stated that wind turbine technician is the fastest growing job in the U.S., as it is projected to grow by 44% in the next decade. Similarly, a couple of commenters stated that the offshore wind industry could create at least 80,000 new jobs by 2030.	Thank you for your comment.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0364, BOEM-2024-0001-0257, BOEM-2024-0001-0145, BOEM-2024-0001-0103, BOEM-2024-0001-0430, BOEM-2024-0001-0351, BOEM-2024-0001-0258, BOEM-2024-0001-0234, BOEM-2024-0001-0162, BOEM-2024-0001-0070, BOEM-2024-0001-0104, BOEM-2024-0001-0059, BOEM-2024-0001-0102, BOEM-2024-0001-0150, BOEM-2024-0001-0528, BOEM-2024-0001-0523, BOEM-2024-0001-0526.
<b>Comment Summary 4:</b> A commenter opposed wind energy because offshore wind and commercial fisheries cannot coexist, and the project will result in thousands of jobs lost.	The six NY Bight lease areas were designed to avoid certain fishing activity based on stakeholder input and task force meetings held from 2017 to 2021. The Final Lease Sale Decision Memorandum explains that areas were removed from the leases to avoid conflict with fishing grounds. Section 3.6.1 provides a complete discussion of the existing fisheries, the potential impacts, and the AMMM measures that will minimize or mitigate potential impacts.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0176.

### P.6.13 Environmental Justice

**Table P.6-13. General Comments on Environmental Justice**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A commenter wrote that environmental justice communities would be disproportionately burdened by the nearby presence of wind energy projects. Another commenter stated that Black, Indigenous, and other minority communities experience increased rates of cancer, asthma, and post-traumatic stress disorder from natural gas–related pollution. Similarly, several commenters said that communities of color often suffer disproportionately worse health impacts from pollution due to systemic racism and historically living closer to power plants. The same commenters added that investing in offshore wind would help these communities by reducing air pollution.	Thank you for your comment. The PEIS does not contain the specificity required to make determinations regarding disproportionate and adverse impacts on communities with environmental justice concerns, but location-specific impacts will be assessed by the COP-level NEPA documents. These NEPA documents will also be available for public comment. The application of AMMM measure EJ-1 (now EJ-1a in the Final PEIS), the Environmental Justice Communications Plan, could help minimize impacts on communities with environmental justice concerns. Benefits of offshore wind related to air emissions are included in the environmental justice analysis.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0044, BOEM-2024-0001-0235, BOEM-2024-0001-0385, BOEM-2024-0001-0508, BOEM-2024-0001-0553, BOEM-2024-0001-0145.

### P.6.14 Navigation and Vessel Traffic

**Table P.6-14. General Comments on Navigation and Vessel Traffic**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A commenter warned that New York and New Jersey frequently experience strong storms and weather conditions including nor’easters, hurricanes, and tropical storms that pose navigational risks to ships. Another commenter expressed general concern that offshore wind development could present major navigational issues for ships including commercial and recreational vessels. Conversely, a commenter wrote that USCG has determined that offshore wind farms would not affect the three existing shipping lanes in the Ny Bight area.	Comprehensive regional vessel traffic surveys were conducted for this PEIS. Additional studies will be conducted for each site-specific EIS. The placement of all wind farm–associated structures will be based on the current guidance provided by the appropriate agencies, and each structure will be properly lit and charted. The use of prudent seamanship to ensure safe transit in the area of wind farm structures or any other navigational hazard is paramount.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0310, BOEM-2024-0001-0244, BOEM-2024-0001-0125.
<b>Comment Summary 2:</b> A commenter warned that offshore WTGs could interfere with navigational systems, preventing	The PEIS addresses the adverse impacts of WTG structures on radar in Section 3.6.7.4.1, <i>Radar Systems</i> . Please refer to	<b>Submission IDs contributing to comment summary:</b>

Comment	Response	Submission IDs Contributing to Comment Summary
larger ships from detecting smaller fishing, charter, and recreational vessels. Another commenter expressed similar concern that radar and navigational systems could be affected by offshore wind projects, reducing visibility. A commenter wrote that WTGs interfere with radar.	OU-1, OU-2, and OU-3 in Table 3.6.7-6 for radar mitigation measures.	BOEM-2024-0001-0247, BOEM-2024-0001-0504; BOEM-2024-0001-0509.
<b>Comment Summary 3:</b> A commenter asked several questions: <ul style="list-style-type: none"> <li>How does BOEM intend to address requirements of the Merchant Marine Act of 1920 (Jones Act) regarding the shipping of construction materials, O&amp;M, and accessibility?</li> <li>Were the American Maritime Officers Union, Seafarers International Union of North America, Marine Engineer Beneficial Association, Master Mates and Pilots, and Sandy Hook Pilots Association notified as part of the Jones Act?</li> <li>Has BOEM addressed the accessibility of the lease areas with regard to ships?</li> </ul>	Compliance with the Jones Act is the responsibility of the offshore wind developer that will be commissioning ships to support the construction and installation, O&M, and decommissioning of offshore wind farms. Comprehensive regional vessel traffic surveys were conducted for this PEIS. Additional studies will be conducted for each site-specific EIS. The placement of all wind farm-associated structures will be based on the current guidance provided by the appropriate agencies, and each structure will be properly lit and charted.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0222.

#### P.6.15 Other Uses (Marine Minerals, Military Use, Aviation, and Scientific Research and Surveys)

**Table P.6-15. General Comments on Other Uses**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Military</b>		
<b>Comment Summary 1:</b> A commenter warned that reliance on WTGs for electricity would present a national security threat.	In the unlikely event of a national security threat, coordination with USCG would provide clear instructions regarding procedures to be followed during emergency incident scenarios. The effects of a national security threat would depend on the magnitude and location of the attack; given the dispersed nature of the potential offshore facilities, it is unlikely that an attack would affect all offshore structures. Specific responses to such incidents will be discussed at the COP-specific NEPA EIS stage.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0229.

Comment	Response	Submission IDs Contributing to Comment Summary
	BOEM is continuing to work with the DoD and the Military Aviation and Installation Assurance Siting Clearinghouse to determine potential conflicts with DoD activities from impacts on military uses. Coordination with USCG is ongoing and will be continued at the COP-specific NEPA EIS stage. The PEIS addresses the adverse impacts of WTG structures on radar in Section 3.6.7.4.1, <i>Radar Systems</i> . Please refer to OU-3 in Table 3.6.7-6 for radar mitigation measures.	
<b>Research Activities</b>		
<b>Comment Summary 1:</b> A commenter said that more research is required about the effects on marine life resulting from sea floor mapping using sonar and radar before any proposed project can be built or operated.	Appendix C, <i>Tiering Guidance</i> , summarizes the affected environment, impact analysis, and AMMM measures discussed in this PEIS and identifies additional analysis that will be included in the COP-specific NEPA EIS analysis for each resource area, including surveys and research activities. Each lease area will undergo project-specific environmental analyses through the development and submittal of a SAP and a COP. BOEM will conduct project-specific NEPA analysis of the COP for each lease area, which will include detailed evaluation of impacts and will consider the best available data and information that reflect the state of the science at the time of publication.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0311.

## P.6.16 Recreation and Tourism

**Table P.6-16. General Comments on Recreation and Tourism**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A commenter expressed concern that offshore wind development would adversely affect the pleasure boat industry. Another commenter likewise warned that installing WTGs off the coast could deter tourism. Conversely, another commenter wrote that the 90- to 150-foot clearances between a WTG blade's lowest point and the ocean's surface would prevent it from threatening recreational boating in its vicinity.	There are boaters who avoid offshore wind projects and there are new industries developing to take tourists to view the offshore WTGs. Offshore wind projects might be visible to some pleasure boaters. However, the closest lease area is over 20 nautical miles (37 kilometers) from shore, which is farther than most recreational boats travel. Interested boaters will be able to safely travel in areas near the WTGs.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0125, BOEM-2024-0001-0036.

## P.6.17 Scenic and Visual Resources

**Table P.6-17. General Comments on Scenic and Visual Resources**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> Several commenters expressed general concern that the proposed offshore wind projects could adversely affect the scenic view from the coastline. A commenter expressed concern with the proposed height of the WTGs would render the WTGs an “eyesore.” Another commenter asked if the WTGs would be left in view if the facilities were shut down.	The visibility of the WTGs from coastal areas would be variable depending on meteorological, moonlight, and sunlight conditions. In views seaward from the shoreline there would be periods of high, moderate, low, and no visibility. Please refer to Section 3.6.9.4, <i>Impacts of Alternative B – Identification of AMMM Measures at the Programmatic Stage - Scenic and Visual Resources</i> , and Appendix H, <i>Seascape, Landscape, and Visual Impact Assessment</i> , for specific visual impact findings. The future COPs for individual leases and the associated EISs will address decommissioning WTGs.	BOEM-2024-0001-0477; BOEM-2024-0001-0463; BOEM-2024-0001-0457, BOEM-2024-0001-0168, BOEM-2024-0001-0250, BOEM-2024-0001-0311.
<b>Comment Summary 2:</b> A couple of commenters expressed support for visible offshore wind farms, reasoning that this would show that the government is addressing issues. Another commenter wrote that it would be beneficial to construct WTGs farther from land, so they are not visible from the shoreline.	Thank you for your comment. PEIS Section 3.6.9, <i>Scenic and Visual Resources</i> , concludes that the visibility of the WTGs from coastal areas would be variable depending on meteorological, moonlight, and sunlight conditions. In views seaward from the shoreline there would be periods of high, moderate, low, and no visibility. The six lease areas analyzed in the PEIS are between 20 nautical miles (37 kilometers) and 41 nautical miles (76 kilometers) offshore.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0231, BOEM-2024-0001-0234, BOEM-2024-0001-0382.

## P.6.18 Cumulative Impacts

**Table P.6-18. General Comments on Cumulative Impacts**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A commenter expressed support for the cumulative impacts analysis included in Appendix D to the PEIS. Conversely, another commenter wrote that impact statements and mitigation reports cannot adequately describe the cumulative detrimental effects that the NY	Thank you for your comment. The CEQ NEPA Implementing Regulations require the impact analysis for NEPA documents to include cumulative effects, defined as the effects on the environment that result from the incremental effects of the action when added to other past, present, and reasonably foreseeable actions.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0192, BOEM-2024-0001-0498.

Comment	Response	Submission IDs Contributing to Comment Summary
Bight projects will have on the shorelines of New York, New Jersey, and Maryland.		

#### P.6.19 Programmatic Approach to Tiering

**Table P.6-19. General Comments on Programmatic Tiering**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A commenter expressed support for facilitating the timely approval of COPs. Similarly, a commenter urged BOEM to complete all the proposed wind energy projects in a timely fashion and asked BOEM to employ all possible environmental constraints. Another commenter asked BOEM to determine how it could streamline the permitting process for the proposed offshore wind projects in a way that would make these projects less expensive to build compared to offshore fossil fuel projects.	BOEM is committed to timely and complete review of each COP submitted by a developer. This PEIS was developed to assist in streamlining COP development and NEPA review for each lease area by identifying AMMM measures that BOEM may require as conditions of approval for activities proposed by lessees in COPs. Completing agency coordination and public engagement through this PEIS will allow lease holders to perform site investigations, data collection, and project design in the SAP and COP development phases that will streamline the NEPA review, agency consultation, and COP-approval processes.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0249, BOEM-2024-0001-0084, BOEM-2024-0001-0237.

#### P.6.20 National Environmental Policy Act/Public Involvement Process

**Table P.6-20. General Comments on National Environmental Policy Act/Public Involvement Process**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> A commenter requested that BOEM extend the comment period by at least 90 days. Similarly, another commenter requested that BOEM extend the comment period to allow people to fully absorb the information in the PEIS. Another couple of commenters requested that BOEM extend the comment period without providing a specific timeframe.	Thank you for your comments. On February 29, 2024, BOEM announced that the comment period would be extended to March 13, 2024.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0223, BOEM-2024-0001-0240, BOEM-2024-0001-0310, BOEM-2024-0001-0445, BOEM-2024-0001-0528.
<b>Comment Summary 2:</b> A commenter expressed concern that BOEM would not provide extra time for the public to	Thank you for your comments. On February 29, 2024, BOEM announced that the comment period would be extended to	<b>Submission IDs contributing to comment summary:</b>

Comment	Response	Submission IDs Contributing to Comment Summary
read the Draft PEIS. Similarly, another commenter expressed concern that BOEM intends to follow through on the PEIS regardless of the public input provided. A couple of commenters expressed concern that BOEM has not conducted an adequate number of environmental impact studies to support the PEIS.	March 13, 2024. The Final PEIS has been revised to incorporate and address public comments as appropriate. This Final PEIS establishes a framework for subsequent environmental documents related to activities proposed by lessees in COPs for lease area-specific actions and identifies and analyzes possible AMMM measures to be used programmatically across the NY Bight lease areas. Where appropriate, analysis from previously completed environmental impact statements has been incorporated into the Final PEIS.	BOEM-2024-0001-0247, BOEM-2024-0001-0340, BOEM-2024-0001-0461-0069, BOEM-2024-0001-0548, BOEM-2024-0001-0432.
<b>Comment Summary 3:</b> A commenter requested an extension to the public comment period to allow for more time to conduct research on the potential impacts on marine life.	Thank you for your comments. On February 29, 2024, BOEM announced that the comment period would be extended to March 13, 2024.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0528.
<b>Comment Summary 4:</b> A commenter said that tribal cultural monitoring should be required for offshore wind and requested an extension to the comment period to allow for adequate tribal consultation.	Thank you for your comments. On February 29, 2024, BOEM announced that the comment period would be extended to March 13, 2024. Tribal consultation is ongoing. Monitoring requirements are included in the following cultural resources AMMM measures: CUL-3 and CUL-5.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0528.

### P.6.21 General Support or Opposition

**Table P.6-21. Responses to General Support or Opposition Comments**

Comment	Response	Submission IDs Contributing to Comment Summary
<b>Comment Summary 1:</b> Some commenters expressed opposition to WTGs, reasoning that WTGs would negatively affect marine life, the seafloor, the fishing industry, tourism, and coastal property values. A few commenters stated that WTGs would not reduce pollution on a global scale and may result in the United States purchasing more oil from other countries. A few commenters expressed opposition to the use of taxpayer money for WTG development. A few commenters expressed concern over radar interference,	Thank you for your comments. BOEM acknowledges your opposition to offshore wind based on these concerns. Detailed comments were provided on many of these topics and have been addressed within those responses.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0009, BOEM-2024-0001-0014, BOEM-2024-0001-0022, BOEM-2024-0001-0028, BOEM-2024-0001-0034, BOEM-2024-0001-0071, BOEM-2024-0001-0077, BOEM-2024-0001-0081,

Comment	Response	Submission IDs Contributing to Comment Summary
defense capabilities, food security, and hurricane survivability.		BOEM-2024-0001-0090, BOEM-2024-0001-0097, BOEM-2024-0001-0099, BOEM-2024-0001-0098, BOEM-2024-0001-0100, BOEM-2024-0001-0143, BOEM-2024-0001-0165, BOEM-2024-0001-0170, BOEM-2024-0001-0172, BOEM-2024-0001-0177, BOEM-2024-0001-0178, BOEM-2024-0001-0200, BOEM-2024-0001-0209, BOEM-2024-0001-0224, BOEM-2024-0001-0309, BOEM-2024-0001-0381, BOEM-2024-0001-0453, BOEM-2024-0001-0474, BOEM-2024-0001-0514, BOEM-2024-0001-0528e, BOEM-2024-0001-0528u, BOEM-2024-0001-0528gg, BOEM-2024-0001-0529p, BOEM-2024-0001-0529q, BOEM-2024-0001-0310a, BOEM-2024-0001-0310d, BOEM-2024-0001-0310f, BOEM-2024-0001-0310i, BOEM-2024-0001-0310k, BOEM-2024-0001-0529bb, BOEM-2024-0001-0310n, BOEM-2024-0001-0310o, BOEM-2024-0001-0529ff, BOEM-2024-0001-0310r, BOEM-2024-0001-0529dd, BOEM-2024-0001-0529ii

Comment	Response	Submission IDs Contributing to Comment Summary
<p><b>Comment Summary 2:</b> Some commenters expressed support for WTGs, reasoning that WTGs would reduce pollution, mitigate climate change, create well-paying jobs, benefit environmental justice communities, and help achieve regional offshore wind goals and objectives. A few commenters expressed their support for the adoption of AMMM measures.</p>	<p>Thank you for your comments. BOEM acknowledges your support of offshore wind.</p>	<p><b>Submission IDs contributing to comment summary:</b>  BOEM-2024-0001-0015,  BOEM-2024-0001-0048,  BOEM-2024-0001-0050,  BOEM-2024-0001-0058,  BOEM-2024-0001-0061,  BOEM-2024-0001-0062,  BOEM-2024-0001-0065,  BOEM-2024-0001-0069,  BOEM-2024-0001-0085,  BOEM-2024-0001-0092,  BOEM-2024-0001-0094,  BOEM-2024-0001-0135,  BOEM-2024-0001-0144,  BOEM-2024-0001-0150,  BOEM-2024-0001-0160,  BOEM-2024-0001-0164,  BOEM-2024-0001-0166,  BOEM-2024-0001-0206,  BOEM-2024-0001-0211,  BOEM-2024-0001-0468,  BOEM-2024-0001-0496,  BOEM-2024-0001-0506,  BOEM-2024-0001-0525,  BOEM-2024-0001-0528a,  BOEM-2024-0001-0528b,  BOEM-2024-0001-0528g,  BOEM-2024-0001-0528i,  BOEM-2024-0001-0528k,  BOEM-2024-0001-0528n,  BOEM-2024-0001-0528o,  BOEM-2024-0001-0528p,  BOEM-2024-0001-0528q,  BOEM-2024-0001-0528s,  BOEM-2024-0001-0528t,</p>

Comment	Response	Submission IDs Contributing to Comment Summary
		BOEM-2024-0001-0529a, BOEM-2024-0001-0529b, BOEM-2024-0001-0529c, BOEM-2024-0001-0529d, BOEM-2024-0001-0529e, BOEM-2024-0001-0529g, BOEM-2024-0001-0529h, BOEM-2024-0001-0529i, BOEM-2024-0001-0529j, BOEM-2024-0001-0529l, BOEM-2024-0001-0529m, BOEM-2024-0001-0528dd, BOEM-2024-0001-0528hh, BOEM-2024-0001-0529r, BOEM-2024-0001-0529u, BOEM-2024-0001-0310e, BOEM-2024-0001-0529v, BOEM-2024-0001-0529w, BOEM-2024-0001-0529x, BOEM-2024-0001-0529y, BOEM-2024-0001-0529z, BOEM-2024-0001-0529aa, BOEM-2024-0001-0529ee, BOEM-2024-0001-0528v
<b>Comment Summary 3:</b> A commenter asked whether WTGs produce any heat that would affect the warming of ocean water.	Thank you for your comment. Information on potential heat generation associated with open-loop cooling systems is included in Section 3.4.2.3.2, <i>Cumulative Impacts of the No Action Alternative; Discharges/intakes</i> .	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0086.
<b>Comment Summary 4:</b> Multiple commenters expressed support for the PEIS because it would lower program costs by creating regulatory efficiencies and reducing redundancies and lessen burdens on communities and affected ocean users by identifying significant impacts earlier in project development.	Thank you for your comment.	<b>Submission IDs contributing to comment summary:</b> BOEM-2024-0001-0317, BOEM-2024-0001-0333, BOEM-2024-0001-0347, BOEM-2024-0001-0422, BOEM-2024-0001-0441.

## P.7 Form Letters

Table P.7-1. Form Letter 1

Form Letter 1
<p>I urge you to proceed with the offshore wind leases in the New York Bight. It is critical to center community engagement and prioritize the advancement of this project that will help reduce pollution, mitigate against the worst impacts of climate change, and bring family-sustaining jobs to the area.</p> <p>This project will lead to beneficial health outcomes while reducing air pollution, especially in communities of color that bear the brunt of emissions from fossil-fuel burning power plants and suffer disproportionate health impacts like asthma.</p> <p>Please commit to this project and reject efforts to slow it down or block it, so that New Jersey communities and the environment can be protected from harmful pollution and the worst effects of fossil- fuel driven climate change.</p>
<b>Response:</b> BOEM acknowledges support for reduction of air quality impacts, climate change impacts, and positive economic impacts.
<b>Number of Submissions associated with Form Letter 1:</b> 512

Table P.7-2. Form Letter 2

Form Letter 2
<p>The NY EIS should be discarded as submitted. There are numerous instances where knowledge gaps exist that are dismissed as inconsequential to the project. Examples include gaps in knowledge of EMF emissions impacting benthic layers, and the authors suggest that ongoing studies taking place at Block Island Wind Farm, which has consistently operated at a fraction of its stated capacity, or not at all, should suffice as evidence that the project should forge ahead. This is IRRESPONSIBLE!</p> <p>Other problems include the referencing of work submitted by organizations that have benefitted directly from Orsted, such as Montclair State University, Woods Hole Oceanographic Institute and others. There are numerous instances where impacts that would result in most any commercial endeavor taking place in the ocean waters, in the case of this EIS for offshore wind, have been dismissed as negative or minimal impact. In the case of marine mammals this is at best irresponsible.</p>
<b>Response:</b> BOEM has worked diligently to provide as much information as possible, under current regulatory guidance, using the best available data and information that reflect the state of the science at the time of publication of the EIS. More detailed and specific responses to the comments within this letter were addressed within Section P.5.6 <i>Benthic Resources</i> and Section P.5.10 <i>Marine Mammals</i> .
<b>Number of Submissions associated with Form Letter 2:</b> 2

Table P.7-3. Form Letter 3

Form Letter 3
<p>The only way to protect and sustain our communities and our environment is the safe and responsible transition to 100 percent clean energy and the development of clean energy sources like offshore wind.</p>
<b>Response:</b> BOEM acknowledges support for clean energy sources.
<b>Number of Submissions associated with Form Letter 3:</b> 2

**Table P.7-4. Form Letter 4**

Form Letter 4
Wind energy boosts U.S. economic growth and creates local union jobs. As wind energy grows, so do the positive economic impacts. In 2021, new wind projects added \$20 billion to the country's economy. Wind turbine technician is the fastest growing job in the U.S. and is projected to grow by 44% in the next decade.
<b>Response:</b> BOEM acknowledges support for positive economic impacts.
<b>Number of Submissions associated with Form Letter 4:</b> 3

**Table P.7-5. Form Letter 5**

Form Letter 5
I support offshore wind development off the Jersey coast because a strong offshore wind industry will create thousands of well-paying union jobs. Transitioning to a clean energy future isn't just a win for the environment - it's a win for local businesses, the many union members who will be put to work and to New Jersey's overall economy. New Jersey's highly trained workforce is ready to step up to the plate and deliver clean, offshore wind to millions of families across our region. I commend BOEM for its efforts to support economic development so far and ask you to proceed quickly to ensure that New Jersey workers and communities see the benefits.
<b>Response:</b> BOEM acknowledges support for positive economic impacts.
<b>Number of Submissions associated with Form Letter 5:</b> 5

**Table P.7-6. Form Letter 6**

Form Letter 6
<p><u>Climate &amp; Environment</u></p> <ul style="list-style-type: none"> <li>As we know all too well, the climate crisis poses an imminent threat to coastal communities and states across the entire Northeast. We've continued to experience inland flooding, sea level rise, severe rain, historic snowfalls, devastating hurricanes, and other extreme weather events, and as the climate crisis worsens, so will the weather.</li> <li>To achieve the necessary carbon emission reductions to protect our communities from the climate crisis, we need a major transition in our energy sector now. The only way to protect and sustain our communities and our environment is the safe and responsible transition to 100 percent clean energy and the development of clean energy sources like offshore wind.</li> <li>Wind energy is clean energy. Unlike energy from sources like coal or methane gas, wind energy does not require burning fossil fuels and does not release harmful, climate-destabilizing pollution.</li> <li>By cutting our fossil fuel reliance, offshore wind will help alleviate the impacts of climate change statewide. Our communities have already faced the impacts of inland flooding, severe rain and weather events. This can go on no more.</li> </ul> <p><u>Jobs &amp; Economy</u></p> <ul style="list-style-type: none"> <li>Transitioning to a clean energy future isn't just a win for the environment — it's a win for local businesses, the many union members who will be put to work, and to New Jersey's overall economy.</li> <li>The cost of wind energy is stable. Wind is free, so the cost of energy is consistent once wind energy installations are built. In contrast, fossil fuels are subject to volatile price swings and global events that create unwelcome surprises on energy bills.</li> <li>Wind energy boosts U.S. economic growth and creates local union jobs. As wind energy grows, so do the positive economic impacts. In 2021, new wind projects added \$20 billion to the country's economy. Wind turbine technician is the fastest growing job in the U.S. and is projected to grow by 44% in the next decade.</li> <li>Wind energy supports local communities. Wind can power our homes and our way of life. Wind provides a stable source of tax revenue, delivering an estimated \$1.9 billion in state and local tax payments and land-</li> </ul>

Form Letter 6
lease payments every year. This is extra revenue that communities can put towards schools, reducing tax-burdens for homeowners, and boosting local infrastructure projects.
<u>Health</u>
<ul style="list-style-type: none"> <li>• Production and combustion of fossil fuels releases dangerous pollutants into the air. These pollutants result in a wide range of health impacts including early death, heart attacks, respiratory disorders, stroke, and exacerbation of asthma. Communities of color often suffer a disproportionate burden of these health impacts due to systemic racism and historically living closer to power plants.</li> <li>• Investing in offshore wind won't just fight climate change, it will also help communities and urban residents breathe easier by lessening air pollution.</li> <li>• BOEM must act quickly to secure our clean energy future to protect the health of an entire generation of children.</li> </ul>
<b>Response:</b> BOEM acknowledges support for a reduction impacts due to climate change, positive economic impact, and positive health outcomes.
<b>Number of Submissions associated with Form Letter 6:</b> 58

**Table P.7-7. Form Letter 7**

Form Letter 7
A recent report based on NOAA research confirms it: NJ is the fastest warming state in the country. And while extreme weather may be the most publicized impact of climate change, it's heat that kills the most people. We need to replace fossil fuels with renewable energy as soon as possible in order to protect the health and welfare of everyone who lives in New Jersey.
I support offshore wind development because a transition to clean energy won't just fight climate change, it will also help improve the air New Jerseyans breathe. While our state's air has improved in recent decades, it still ranks among the worst in the nation. We need to invest in offshore wind to bring relief to people who suffer from asthma, heart disease and other medical conditions. The transition to cleanly produced offshore wind will bring particular benefits to those most at risk of heart and lung conditions: children and seniors. I'm calling on BOEM to act quickly to secure our clean energy future to protect the health of an entire generation of children.
<b>Response:</b> BOEM acknowledges support for clean energy sources.
<b>Number of Submissions associated with Form Letter 7:</b> 25

**Table P.7-8. Form Letter 8**

Form Letter 8
The construction of wind turbines in the New York Bight poses a significant threat to the marine ecosystem, particularly affecting numerous whale and fish species that frequent this area, as reported by Gotham Whales. This includes several endangered species, highlighting the critical nature of the threat. The use of sonar for seabed mapping in the region generates noise levels up to 226 decibels at the source, falling into the low-frequency range (LFI), which is within the hearing range of many whale and dolphin species. Analysis of NOAA data reveals a stronger correlation between the recent surge in whale mortalities and sonar mapping activities than with cargo ship traffic, challenging the notion that increased ship traffic is the primary cause of these deaths.
Statistical evidence further supports this argument. From 2020 to 2021, despite an 18.46% increase in ship traffic, whale deaths astonishingly fell by 92.31 %. The following year saw a 25.15% rise in ship traffic, yet whale deaths still decreased by 53.85%. However, a pivotal shift occurred from 2022 to 2023; ship traffic declined by 18.56%, but whale deaths skyrocketed by 216.67%. This period coincides with a fourfold increase in surveying activities related to wind farm development, leading to an alarming spike in whale fatalities in the New York/New Jersey area. Specifically, 21 humpback whales perished, which, according to Gotham Whales' August 2022 count of 280 humpbacks in the region, represents a significant loss of 7.5% of the population. Moreover,

Form Letter 8
<p>NOAA's estimation that only one-third of whale deaths are detected suggests the actual impact could be even more devastating.</p> <p>These findings starkly contradict the argument that increased ship traffic is to blame for the rise in whale deaths. Instead, they implicate the intensification of surveying traffic, linked to wind farm development, as a significant factor. Given that a substantial 7.5% of the humpback whale population in this region was lost in a single year, and considering NOAA's admission that we may only be observing a fraction of the true number of fatalities, it's clear that the environmental implications of proceeding with wind turbine construction in this sensitive area are profound. This data mandates immediate, comprehensive research and a cautious approach by both the Bureau of Ocean Energy Management (BOEM) and NOAA before any further development is considered.</p>
<p><b>Response:</b> More detailed and specific responses to comments within this letter were addressed within Section P.5.10 <i>Marine Mammals</i>.</p>
<p><b>Number of Submissions associated with Form Letter 8: 8</b></p>

**Table P.7-9. Form Letter 9**

Form Letter 9
<p>Climate &amp; Environment</p> <p>As we know all too well, the climate crisis poses an imminent threat to coastal communities and states across the entire Northeast. We've continued to experience inland flooding, sea level rise, severe rain, historic snowfalls, devastating hurricanes, and other extreme weather events, and as the climate crisis worsens, so will the weather.</p> <p>To achieve the necessary carbon emission reductions to protect our communities from the climate crisis, we need a major transition in our energy sector now. The only way to protect and sustain our communities and our environment is the safe and responsible transition to 100 percent clean energy and the development of clean energy sources like offshore wind.</p> <p>Wind energy is clean energy. Unlike energy from sources like coal or methane gas, wind energy does not require burning fossil fuels and does not release harmful, climate-destabilizing pollution.</p> <p>By cutting our fossil fuel reliance, offshore wind will help alleviate the impacts of climate change statewide. Our communities have already faced the impacts of inland flooding, severe rain and weather events. This can go on no more.</p> <p>We support the NY Bight Projects!</p> <p>Thank you, BOEM.</p>
<p><b>Response:</b> BOEM acknowledges support for a reduction impacts due to climate change.</p>
<p><b>Number of Submissions associated with Form Letter 9: 7</b></p>

**Table P.7-10. Form Letter 10**

Form Letter 10
<p>We support the NY Bight wind projects. We support Alternative C.</p> <p>Thank you!</p>
<p><b>Response:</b> BOEM acknowledges your support for Alternative C.</p>
<p><b>Number of Submissions associated with Form Letter 10: 6</b></p>

**Table P.7-11. Form Letter 11**

Form Letter 11
We support the NY Bight wind projects. Thank you!
<b>Response:</b> BOEM acknowledges your support for the New York Bight wind projects.
<b>Number of Submissions associated with Form Letter 11:</b> 34

**Table P.7-12. Form Letter 12**

Form Letter 12
<p>Transitioning to a clean energy future isn't just a win for the environment- it's a win for local businesses, the many union members who will be put to work, and to New Jersey's overall economy.</p> <p>The cost of wind energy is stable. Wind is free, so the cost of energy is consistent once wind energy installations are built. In contrast, fossil fuels are subject to volatile price swings and global events that create unwelcome surprises on energy bills.</p> <p>Wind energy boosts U.S. economic growth and creates local union jobs. As wind energy grows, so do the positive economic impacts. In 2021, new wind projects added \$20 billion to the country's economy. Wind turbine technician is the fastest growing job in the U.S. and is projected to grow by 44% in the next decade.</p> <p>Wind energy supports local communities. Wind can power our homes and our way of life. Wind provides a stable source of tax revenue, delivering an estimated \$1.9 billion in state and local tax payments and land-lease payments every year. This is extra revenue that communities can put towards schools, reducing tax-burdens for homeowners, and boosting local infrastructure projects.</p>
<b>Response:</b> BOEM acknowledges support for positive economic impacts.
<b>Number of Submissions associated with Form Letter 12:</b> 9

**Table P.7-13. Form Letter 13**

Form Letter 13
<p>I am submitting these comments on behalf of 2,873 individuals who signed the following statement through the Sierra Club:</p> <p>I applaud the Biden administration's efforts to build 30 Gigawatts (GW) of offshore wind by 2030. Not only will responsibly sited and equitably developed offshore wind power help fight the climate crisis, but it will also allow us to create thousands of local, family-supporting jobs, as well as support cleaner, healthier, and more sustainable communities by transitioning off expensive fracked gas.</p> <p>Timely and thorough environmental review for the six offshore wind projects in the New York Bight will go a long way toward meeting the 30GW goal and fulfilling clean energy goals for New York, New Jersey and Massachusetts. Our region is already taking the lead with the first two commercial-scale offshore wind farms, Vineyard Wind 1 and South Fork Wind, in operation.</p> <p>We are poised to become a hub for offshore wind, and I encourage any steps to remove barriers while protecting our marine ecosystem and supporting robust, union jobs. To maximize the supply chain, port infrastructure, and workforce investments, we must continue siting and building a steady stream of projects.</p> <p>We have the solutions to fight the climate crisis and transition our country to 100% clean energy -- offshore wind must play a central role in that effort if we are to make this transition a reality.</p> <p>Attached to this submission, you will find the contact information of all 2,873 signers as well as personalized comments that 1,086 of the 2,873 signers wrote to this submission.</p>
<b>Response:</b> BOEM acknowledges support for offshore wind projects.
<b>Number of Submissions associated with Form Letter 13:</b> 2,973

**Table P.7-14. Form Letter 14**

Form Letter 14
I support offshore wind development because the transition to clean energy is key to combating the systemic racism that has forced low-income communities and families of color to disproportionately bear the brunt of pollution for generations. Communities of color and low-wealth communities suffer higher rates of asthma, heart disease, and cancer because they are located close to power plants that burn dirty fossil fuels. Investing in offshore wind won't just fight climate change, it will also help people of color and urban residents breathe easier. I call on BOEM to do whatever it can to accelerate our transition to a clean energy future to protect the health and welfare of New Jersey's most vulnerable communities.
<b>Response:</b> BOEM acknowledges support for clean energy sources.
<b>Number of Submissions associated with Form Letter 14:</b> 166

## P.8 List of Commenters by Commenter Type and Submission Number

**Table P.8-1. Federal Agencies**

Submission No.	Agency
BOEM-2024-0001-0342	MMC
BOEM-2024-0001-0370	U.S. Coast Guard
BOEM-2024-0001-0371	NOAA National Marine Fisheries Service
BOEM-2024-0001-0400	U.S. Fish and Wildlife Service
BOEM-2024-0001-0435	U.S. Environmental Protection Agency
BOEM-2024-0001-0466	National Park Service

**Table P.8-2. Tribes and Native Organizations**

None

**Table P.8-3. State Agencies**

Submission No.	Agency
BOEM-2024-0001-0317	NYS Agencies
BOEM-2024-0001-0319	Massachusetts Office of Coastal Zone Management
BOEM-2024-0001-0417	New Jersey General Assembly, Sean Kean
BOEM-2024-0001-0437	New Jersey Board of Public Utilities
BOEM-2024-0001-0448	NJDEP

**Table P.8-4. Local Government/Agencies**

Submission No.	Agency
BOEM-2024-0001-0313	Town of Oyster Bay, Department of Environmental Resources
BOEM-2024-0001-0444	New Bedford Port Authority

**Table P.8-5. Elected Official**

Submission No.	Agency
BOEM-2024-0001-0403	Doug Vitale
BOEM-2024-0001-0419	New Jersey State Legislature, James Holzapfel et al
BOEM-2024-0001-0421	New Jersey State Assembly
BOEM-2024-0001-0425	Mayor Peterson Borough of Seaside Park, Mayor John Peterson

**Table P.8-6. Lessee**

None

**Table P.8-7. Businesses and Organizations**

Submission No.	Agency
BOEM-2024-0001-0007	Clean Ocean Action
BOEM-2024-0001-0122	Bat Conservation International
BOEM-2024-0001-0181	ECONcrete
BOEM-2024-0001-0255	NJ Council of Divers and Clubs
BOEM-2024-0001-0259	Projects for Environmental Health, Knowledge, & Action, Inc.
BOEM-2024-0001-0322	The American Waterways Operators
BOEM-2024-0001-0324	North American Submarine Cable Association
BOEM-2024-0001-0331	Defend Brigantine Beach Inc., and Downbeach
BOEM-2024-0001-0333	New Jersey Environmental Lobby
BOEM-2024-0001-0345	Citizens Campaign for the Environment
BOEM-2024-0001-0346	Fisheries Survival Fund
BOEM-2024-0001-0347	American Saltwater Guides Association
BOEM-2024-0001-0348	National Ocean Industries Association
BOEM-2024-0001-0350	CFACT
BOEM-2024-0001-0352	Mid-Atlantic Fishery Management Council and New England Fishery Management Council
BOEM-2024-0001-0357	Save Long Beach Island, Inc
BOEM-2024-0001-0362	BlueGreen Alliance
BOEM-2024-0001-0366	New Jersey Environmental Justice Alliance, et al, Brooke Helmich
BOEM-2024-0001-0367	Ocean Conservancy
BOEM-2024-0001-0369	National Wildlife Federation
BOEM-2024-0001-0372	The Nature Conservancy
BOEM-2024-0001-0383	Seafreeze Shoreside and Seafreeze Ltd.
BOEM-2024-0001-0397	The Rewilding Institute
BOEM-2024-0001-0406	Community Offshore Wind
BOEM-2024-0001-0420	Natural Resources Defense Council (NRDC), Becca Loomis
BOEM-2024-0001-0422	Attentive Energy
BOEM-2024-0001-0423	Ocean Winds North America, LLC
BOEM-2024-0001-0426	Shoreline Energy Advisors
BOEM-2024-0001-0433	Sierra Club, NJ Chapter, Jackie Greger
BOEM-2024-0001-0436	Invenergy (Leading Light Wind)
BOEM-2024-0001-0438	PSEG Renewable Transmission LLC
BOEM-2024-0001-0439	American Clean Power
BOEM-2024-0001-0440	Shell New Energies US LLC
BOEM-2024-0001-0441	New Jersey Association of Women Business Owners (NJAWBO)
BOEM-2024-0001-0447	Garden State Seafood Assoc
BOEM-2024-0001-0450	National Wildlife Federation, Natural Resources Defense Council, National Audubon Society, et al.
BOEM-2024-0001-0451	Equinor Wind US LLC
BOEM-2024-0001-0452	Responsible Offshore Development Alliance
BOEM-2024-0001-0453	West Coast Pelagic Conservation Group
BOEM-2024-0001-0467	New York City Environmental Justice Alliance
BOEM-2024-0001-0468	NJ Work Environment Council

Submission No.	Agency
BOEM-2024-0001-0522	Greensmart, Inc., Roy Grimes

**Table P.8-8. Individuals**

Submission No.	Agency
BOEM-2024-0001-0002	A Z
BOEM-2024-0001-0304	AJ Caruso
BOEM-2024-0001-0512	AJ Conte
BOEM-2024-0001-0171	Alejandro Meseguer
BOEM-2024-0001-0547	Ann M. Zaneski
BOEM-2024-0001-0036	Anna Maksic
BOEM-2024-0001-0024	Anthony Blanco
BOEM-2024-0001-0101	April Miller
BOEM-2024-0001-0002	Ashley Donahue
BOEM-2024-0001-0505	Beverly Frantz
BOEM-2024-0001-0373	Bradley Krueger
BOEM-2024-0001-0040	Brendan Eccleston
BOEM-2024-0001-0004	Carl van Warmerdam
BOEM-2024-0001-0284	Carol Miller
BOEM-2024-0001-0176	Carrie Buchanan
BOEM-2024-0001-0282	Dan Thormann
BOEM-2024-0001-0478	Danielle Pla
BOEM-2024-0001-0017	Dennis and Margaret Nitkaa
BOEM-2024-0001-0169	Devin Waldron
BOEM-2024-0001-0003	Diane Snelson
BOEM-2024-0001-0025	Diane West
BOEM-2024-0001-0167	Donna VanCleve
BOEM-2024-0001-0381	Dorothy Westhead
BOEM-2024-0001-0334	Douglas Crawford
BOEM-2024-0001-0326	Drew Reindel
BOEM-2024-0001-0029	Edwin Barnes
BOEM-2024-0001-0045	Eileen Lowry
BOEM-2024-0001-0005	Elena Tillman
BOEM-2024-0001-0262	Elizabeth Gannon
BOEM-2024-0001-0010	Elizabeth king
BOEM-2024-0001-0046	Fred Akers
BOEM-2024-0001-0332	Gregory Cudnik
BOEM-2024-0001-0033	Heather Rafanello
BOEM-2024-0001-0023	Hunter Smith
BOEM-2024-0001-0011	Jacqueline Delario
BOEM-2024-0001-0019	James Dooley
BOEM-2024-0001-0041	Jeffrey Wald
BOEM-2024-0001-0105	Joan Reil
BOEM-2024-0001-0037	John A. Peterson, Jr.
BOEM-2024-0001-0089	John Nistad
BOEM-2024-0001-0354	John Peterson, Jr.
BOEM-2024-0001-0027	Judy Dye
BOEM-2024-0001-0523	Julie Leopold

Submission No.	Agency
BOEM-2024-0001-0039	K Federico
BOEM-2024-0001-0018	Karin Jervert
BOEM-2024-0001-0021	Katherine Cauley
BOEM-2024-0001-0020	Kathleen Merwin
BOEM-2024-0001-0071	Keith Uzzell
BOEM-2024-0001-0016	Kris Kraman
BOEM-2024-0001-0290	Lee Evans
BOEM-2024-0001-0323	Mary Haynes
BOEM-2024-0001-0516	Michael Dean
BOEM-2024-0001-0392	Michele Prestininzi
BOEM-2024-0001-0356	Michele Viventi
BOEM-2024-0001-0314	Nancy Difazio
BOEM-2024-0001-0030	Pat Digiacomo
BOEM-2024-0001-0225	Patricia Carniglia
BOEM-2024-0001-0013	Regina Littwin
BOEM-2024-0001-0180	Renee Waters
BOEM-2024-0001-0028	Richard Suer
BOEM-2024-0001-0217	Rob Gardella
BOEM-2024-0001-0355	Sherri Lilienfeld
BOEM-2024-0001-0368	Steve Ullmer
BOEM-2024-0001-0328	Sue Liebross
BOEM-2024-0001-0026	Susan DePalma
BOEM-2024-0001-0473	Sylvia Lockwood
BOEM-2024-0001-0063	Teresa Silletti
BOEM-2024-0001-0506	Theodore Chase Jr
BOEM-2024-0001-0031	Thomas Emerson
BOEM-2024-0001-0524	Trina Garrett

**Table P.8-9. Anonymous**

Submission No.	Agency
BOEM-2024-0001-0012	Anonymous
BOEM-2024-0001-0032	Anonymous
BOEM-2024-0001-0072	Anonymous
BOEM-2024-0001-0093	Franklin Township Environmental Commission Chair
BOEM-2024-0001-0242	Anonymous
BOEM-2024-0001-0308	Anonymous
BOEM-2024-0001-0344	Anonymous
BOEM-2024-0001-0394	WhoPoo App
BOEM-2024-0001-0395	Anonymous
BOEM-2024-0001-0408	Anonymous
BOEM-2024-0001-0442	Anonymous
BOEM-2024-0001-0474	Anonymous
BOEM-2024-0001-0479	Anonymous
BOEM-2024-0001-0482	Anonymous
BOEM-2024-0001-0487	Anonymous
BOEM-2024-0001-0493	Anonymous
BOEM-2024-0001-0495	Anonymous

Submission No.	Agency
BOEM-2024-0001-0496	Anonymous
BOEM-2024-0001-0514	Anonymous
BOEM-2024-0001-0525	Anonymous

**Table P.8-10. February 13 Virtual Public Meeting Transcript (BOEM-2024-0001-0528)**

Submission No.	Commenter
BOEM-2024-0001-0528a	Casey Petrashek
BOEM-2024-0001-0528b	Douglas Schmid
BOEM-2024-0001-0528c	Cindy Zipf
BOEM-2024-0001-0528d	Kari Martin
BOEM-2024-0001-0528e	Annie Licata
BOEM-2024-0001-0528f	Toni Groet
BOEM-2024-0001-0528g	Walter Korfmacher
BOEM-2024-0001-0528h	Meghan Lapp
BOEM-2024-0001-0528i	Drew Tompkins
BOEM-2024-0001-0528j	Walter Etter
BOEM-2024-0001-0528k	Anjuli Ramos
BOEM-2024-0001-0528l	Kristen O'Rourke
BOEM-2024-0001-0528m	Sylvia Lockwood
BOEM-2024-0001-0528n	Nivo Rovedo
BOEM-2024-0001-0528o	Dan Quinlan
BOEM-2024-0001-0528p	Chris Farschon
BOEM-2024-0001-0528q	Debra Coyle
BOEM-2024-0001-0528r	Heidi Yeh
BOEM-2024-0001-0528s	Jackie Greger
BOEM-2024-0001-0528t	Anthony Taddeo
BOEM-2024-0001-0528u	Carl van Warmerdam
BOEM-2024-0001-0528v	Jordan Christensen
BOEM-2024-0001-0528w	Erika Bosack
BOEM-2024-0001-0528x	Bonnie Brady
BOEM-2024-0001-0528y	Tricia Jedeke
BOEM-2024-0001-0528z	Rose Willis
BOEM-2024-0001-0528aa	Mark Suer
BOEM-2024-0001-0528bb	Angel Garcia
BOEM-2024-0001-0528cc	Swarna Muthukrishnan
BOEM-2024-0001-0528dd	George Povall
BOEM-2024-0001-0528ee	Trisha DeVoe
BOEM-2024-0001-0528ff	Jason Hansana
BOEM-2024-0001-0528gg	Kathy Miklosey
BOEM-2024-0001-0528hh	Philip Falcone

**Table P.8-11. January 31 Virtual Public Meeting Transcript (BOEM-2024-0001-0529)**

Submission No.	Commenter
BOEM-2024-0001-0529a	Betsy Longendorfer
BOEM-2024-0001-0529b	Brian Russo
BOEM-2024-0001-0529c	Donna Criscuolo
BOEM-2024-0001-0529d	Sharonda Allen
BOEM-2024-0001-0529e	Peter Furcht
BOEM-2024-0001-0529f	Kathleen Harper
BOEM-2024-0001-0529g	Carolyn Rush
BOEM-2024-0001-0529h	Michael Skelly
BOEM-2024-0001-0529i	Ben Dziobek
BOEM-2024-0001-0529j	Hana Katz
BOEM-2024-0001-0529k	Cindy Zipf
BOEM-2024-0001-0529l	Steven Yafet
BOEM-2024-0001-0529m	Zach Boyer
BOEM-2024-0001-0529n	Rose Willis
BOEM-2024-0001-0529o	Toni Groet
BOEM-2024-0001-0529p	Annie Licata
BOEM-2024-0001-0529q	Carl Van Warmerdam
BOEM-2024-0001-0529r	Margaret Ortiz
BOEM-2024-0001-0529s	Kari Martin
BOEM-2024-0001-0529t	Erika Bosack
BOEM-2024-0001-0529u	Anthony Taddeo
BOEM-2024-0001-0529v	Heidi Yeh
BOEM-2024-0001-0529w	James Thompson
BOEM-2024-0001-0529x	David Case
BOEM-2024-0001-0529y	Cindy Moore
BOEM-2024-0001-0529z	Tanya Lobo
BOEM-2024-0001-0529aa	Ben Gilbarg
BOEM-2024-0001-0529bb	Leslie Mangold
BOEM-2024-0001-0529cc	Bonnie Brady
BOEM-2024-0001-0529dd	Kathleen Sullivan
BOEM-2024-0001-0529ee	Ellen Pedersen
BOEM-2024-0001-0529ff	Kathleen Miklosey
BOEM-2024-0001-0529gg	Adrienne Esposito
BOEM-2024-0001-0529hh	Mike Dean
BOEM-2024-0001-0529ii	Mike Jacobs
BOEM-2024-0001-0529jj	Christina Kramer
BOEM-2024-0001-0529kk	Shoshana Osofsky

**Table P.8-12. February 8 In-Person Public Meeting Comments (BOEM-2024-0001-0530)**

Submission No.	Commenter
BOEM-2024-0001-0530a	Brick Wenzel
BOEM-2024-0001-0530b	Greg Cudnik
BOEM-2024-0001-0530c	Gus Lovgren

**Table P.8-13. February 20 Clean Ocean Action Meeting Transcript (BOEM-2024-0001-0310)**

Submission No.	Commenter
BOEM-2024-0001-0310a	Jacqueline Walling
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