

# Appendix D3. Rhode Island Coastal Zone Management Act Consistency Certification – Brayton Point

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## Rhode Island Coastal Zone Management Act Consistency Certification – Brayton Point POI

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## **Acronyms and Abbreviations**

## **Abbreviation or Acronym Definition**

BOEM	Bureau of Ocean Energy Management
CFR	Code of Federal Regulations
COP	Construction and Operations Plan
CRMC	Coastal Resource Management Council
CRMP	Coastal Resource Management Program
CZMA	Coastal Zone Management Act
ECC	Export Cable Corridor
EO	Executive Order
ft	foot/feet
GLD	Geographic Location Description
ha	hectare
HDD	Horizontal Directional Drilling
HVDC	High Voltage Direct Current
HPHC	Rhode Island Historical Preservation & Heritage Commission
km	kilometer
kV	kilovolt
m	meter
Mayflower Wind	Mayflower Wind Energy LLC
mi	mile
nm	nautical mile
NOAA	National Oceanic and Atmospheric Administration
ocs	Outer Continental Shelf
OER	Office of Energy Resources (Rhode Island)
OSP	Offshore Substation Platform
POI	Point of Interconnection
PPA	Power Purchase Agreement
RGGI	Regional Greenhouse Gas Initiative
RICR	Rhode Island Code of Regulations
SAMP	Special Area Management Plan
SAV	Submerged Aquatic Vegetation
UXO	Unexploded Ordinance
USC	United States Code
WTG	Wind Turbine Generator

## 1.0 Introduction

Mayflower Wind Energy LLC (Mayflower Wind) proposes an offshore wind renewable energy generation project (the Project) located in federal waters off the southern coast of Massachusetts in the Outer Continental Shelf (OCS) Lease Area OCS-A 0521 (Lease Area). The Project will deliver electricity to the regionally administered transmission system from the Lease Area at two points of interconnection (POI); one at Falmouth Tap in Falmouth Massachusetts, and the other at Brayton Point in Somerset Massachusetts via offshore export cables as well as onshore transmission systems extending to the respective POIs (Figure 1).

The offshore export cables for the Brayton Point POI will extend from the Lease Area in federal waters and into Rhode Island state waters (Sakonnet River), cross Aquidneck Island, and reenter Rhode Island State waters (Mount Hope Bay), before entering waters of the Commonwealth of Massachusetts and ending in Somerset, Massachusetts, at Brayton Point (Figure 2).

This Coastal Zone Consistency Certification is specific to the portions of the Brayton Point export cable corridor (ECC) within Rhode Island state waters and the crossing over Aquidneck Island in Portsmouth, Rhode Island. Construction and Operations Plan (COP) Appendix D1 (Massachusetts Coastal Zone Management Act Consistency Certification – Falmouth POI) and COP Appendix D2 (Massachusetts Coastal Zone Management Act Consistency Certification – Brayton Point POI) cover the remaining portions of the Project.

## 1.1 Project Objectives

The Project's objective is to provide Massachusetts and neighboring states, including Rhode Island, with clean, renewable wind energy in accordance with Mayflower Wind's 2019 winning bid selected by the Electric Distribution Companies that serve Massachusetts within the New England Regional Transmission Organization, and other upcoming solicitations from the region. The 2019 bid was provided by Mayflower Wind in response to the 2019 Offshore Wind Energy Generation request for proposals ("Section 83C II RFP") and has now been memorialized in executed Power Purchase Agreements (PPAs) with the Electric Distribution Companies that were approved by to the Massachusetts Department of Public Utilities in November 2020. The Section 83C II PPA is met with the Falmouth POI. In addition to the Section 83C II PPA, Mayflower Wind is actively exploring additional offtake opportunities in the region.

There are several significant economic, environmental, and social benefits to offshore wind power, including the generation of electricity that does not emit air pollutants and that can replace other more environmentally costly forms of electricity generation. The Project is expected to help achieve environmental and clean/renewable energy goals for the region, including eliminating at least 1.6 million metric tons of CO<sub>2</sub> emissions annually once in operation — the equivalent of taking 347,968 cars off the road per year<sup>1</sup>. The generation of clean renewable energy will reduce the need for greenhouse gas emitting electricity generation which will contribute to a reduction in the harmful effects of climate change such as sea level rise and ocean acidification both of which pose significant harm to the human and natural environment of the New England coastline. Additionally, the Project is expected to bring significant employment and other economic benefits to southern New England. It should be instrumental in creating a thriving, utility scale, domestic offshore wind industry.

In the "Offshore Renewable Energy and Other Offshore Development" Policy<sup>2</sup> of the Rhode Island Ocean Special Area Management Plan (SAMP), the Rhode Island Coastal Resources Management Council (CRMC) acknowledges support for increasing renewable energy production in Rhode Island provided the offshore development is consistent with the goals of the Ocean SAMP. The Project will produce a viable form of renewable energy for southern New England and be a key addition to existing energy mix of the region. The

<sup>&</sup>lt;sup>1</sup> Daymark Energy Advisors. (2021). *Massachusetts 83C-III Benefits Report: Mayflower Wind Proposal A.* Prepared for Mayflower Wind Energy, LLC. (2021, September 16).

<sup>&</sup>lt;sup>2</sup> Rhode Island Ocean Special Area Management Plan (Title 650-Coastal Resources Management Council; Chapter 20 Coastal Management Program; Subchapter 05 – Ocean Special Area Management Plan; Part 11 - Policies of the Ocean SAMP (650 RICR-20-05-11)

Rhode Island State Energy Plan "Energy 2035" (released in 2015) identifies offshore wind as one of the most significant resources for wind energy available to the State. In addition, the Project complements Rhode Island's "Lead by Example" Executive Order (EO 15-17<sup>4</sup>), in which the Governor tasked the Rhode Island Office of Energy Resources (OER) to identify opportunities to support full transition toward renewable energy sources by 2025.

The 2021 Act on Climate bill signed by Gov. Dan McKee in April 2021 sets mandatory and enforceable targets for reducing greenhouse-gas emissions and transitioning to a low carbon economy. Under the Act on Climate, the State of Rhode Island will develop a plan to incrementally reduce climate emissions to net-zero by 2050. The plan will be updated every 5 years and will address areas such as environmental injustices, public health inequities and a fair employment transition as fossil-fuel jobs are replaced by green energy jobs.

Specific environmental and socioeconomic benefits that the Project will provide include:

- 1. The Project, as planned, is expected to be the region's single greatest contributor to achieving the emissions reduction goals outlined in the Regional Greenhouse Gas Initiative (RGGI) of the Eastern States of the U.S.; both Rhode Island and Massachusetts are members of the RGGI. Further, subject to potential future negotiated PPAs, the Project may also directly support achievement of Rhode Island's greenhouse gas targets for 2035 and 2050 as laid out in the Rhode Island Greenhouse Gas Emissions Reduction Plan<sup>5</sup> (December 2016).
- The Project is expected to bring significant employment and other economic benefits to the region, including creation of more than 11,280 full time equivalent jobs in the region during the operations, maintenance, and service phases of the Project from both direct, indirect, and induced employment opportunities.<sup>6</sup>

## 1.2 Regulatory Applicability

In compliance with the Federal Coastal Zone Management Act (CZMA, 16 United States Code [USC] 1451 et seq.), Mayflower Wind has prepared this consistency certification for the Bureau of Ocean Energy Management (BOEM) to demonstrate compliance with the provisions identified as enforceable by the coastal zone management policies of the State of Rhode Island. Federal Consistency Regulations (15 Code of Federal Regulations [CFR] 930.00) require all Federal Actions that involve reasonably foreseeable effects on any land or water use or natural resource of a state's coastal zone to be consistent with all enforceable policies of the state's Coastal Zone Management Program. Federal Actions include the permitting of actions by private entities. This Project involves the installation of energy facilities on the OCS and therefore meets the definition of a Coastal Energy Activity under the CZMA (16 USC 1453 (5)(i)). The Project will require approval of the Construction and Operations Plan (COP) by BOEM and, subsequently, a Record of Decision issued by BOEM under the National Environmental Policy Act in response to a Final Environmental Impact Statement, and a permit from the United States Army Corps of Engineers pursuant to Section 404 of the federal Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899.

Within Rhode Island, the CZMA is administered within the coastal zone by the Rhode Island CRMC. The Rhode Island Coastal Zone includes the lands and waters within an area defined by the seaward limit of the state's territorial sea, to two hundred feet inland from any coastal feature, to watersheds, and to certain activities that occur anywhere within the state. In addition, consistency certification is required for federal authorizations for activities, including offshore wind facilities and underwater cables, proposed in federal waters designated as a geographic location description (GLD). National Oceanic and Atmospheric Administration (NOAA) has approved two GLDs for the State of Rhode Island, one in 2011 and the second in 2018. The 2011 GLD extends seaward 30 nautical miles (nm) from the shoreline and encompasses all waters

<sup>&</sup>lt;sup>3</sup> "Energy 2035" Rhode Island State Energy Plan. Rhode Island Division of Planning. State Guide Plan Element Report #120. October 8, 2015. (Link: <a href="http://www.planning.ri.gov/documents/LU/energy/energy15.pdf">http://www.planning.ri.gov/documents/LU/energy/energy15.pdf</a>)

<sup>4</sup> https://governor.ri.gov/documents/orders/ExecOrder15-17.pdf

<sup>&</sup>lt;sup>5</sup> Rhode Island Greenhouse Gas Emissions Reduction Plan, published in December 2016 (Link:

http://climatechange.ri.gov/documents/ec4-ghg-emissions-reduction-plan-final-draft-2016-12-29-clean.pdf)

<sup>&</sup>lt;sup>6</sup> BVG Associates. (BVGA). (2021). Economic Benefits. A Technical Report to Support Mayflower Wind's Bid for Long-Term Contracts for Offshore Wind Energy Projects. (2021, August).

<sup>&</sup>lt;sup>7</sup> State of Rhode Island, Coastal Resources Management Council, Coastal Management Program, Part 1 – Red Book (650-RICR-20-00-1) and associated applicable policies. Available URL: <a href="http://www.crmc.ri.gov/regulations.html">http://www.crmc.ri.gov/regulations.html</a>. Accessed June 30, 2021.

beyond the seaward limit of Rhode Island state jurisdiction at 3 nm from the shoreline. The 2018 GLD includes a portion of the Massachusetts Wind Energy Area, BOEM lease blocks OCS-A 0500 and 0501, and an area of federal waters south of Martha's Vineyard and immediately north of the lease blocks where Rhode Island-based commercial fisheries operate.<sup>8</sup> Project facilities to be located within the Rhode Island coastal zone, and thus within the jurisdiction of the CRMC, include the offshore export cables within the 2011 and 2018 GLD, and state waters and onshore export cables within Rhode Island (Figure 2). It should be noted that the Lease Area OCS-A 0521 falls outside of the GLD.

## 1.3 Necessary Data and Information

In addition to the enforceable policies of the State of Rhode Island identified and addressed in Section 3.0 of this report, the State considers certain background information on a proposed project in their decision-making process. This background and general Project information is summarized in this document and is described in detail within the COP developed by Mayflower Wind and submitted to BOEM. Table 1-1 below provides details on the required information outlined within the Rhode Island CRMC Federal Consistency Manual (2018), and where that information can be found within this document as well as the COP.

This document is intended to provide background information on portions of the Project relevant to the CZMA to ensure consistency with all applicable regulations of the State of Rhode Island. Applicable review procedures are set forth at 650 Rhode Island Code of Regulations (RICR) Chapter 20 (see 650-RICR-20-00-1).

**Table 1-1. Necessary Data and Information** 

Project Information	Reference Section or Description
The name and location of the project	Mayflower Wind Energy LLC; OCS Lease Area OCS-A 0521
A detailed description of the site, nature, and extent of the proposed activity and its associated facilities and services,	CZMA Consistency Certification Section 2.0 – Project Description (summary) COP Section 1.1 – Project Overview COP Section 3.0 – Description of Proposed Activities
A detailed description and analysis of the project objectives and anticipated benefits	CZMA Consistency Certification Section 1.1 – Project Objectives COP Section 1.3 – Purpose and Need
A detailed description of the physical, biological, chemical, economic, and social conditions of the project site, surroundings, and affected environment, including resource area delineations, illustrated with map(s) and site plan(s) depicting both existing and proposed conditions	COP Section 4.0 – Site Geology and Environmental Conditions COP Section 5.0 – Physical Resources COP Section 6.0 – Biological Resources COP Section 7.0 – Cultural Resources COP Section 10.0 – Socioeconomic Resources
A timetable and the methods and timing of construction and operation of the project (including types of equipment, temporary impacts associated with construction, monitoring and maintenance plans, proposed reporting schedule)	COP Section 3.2 – Proposed Project Schedule COP Section 3.3 – Project Components and Project Stages COP Section 3.4 – Summary of Impact-Producing Factors
A detailed description and assessment of the negative and positive potential coastal effects of the project	CZMA Consistency Certification Section 3.0– Rhode Island Coastal Program Policies COP Section 5.1 Air Quality COP Section 5.2 Water Quality COP Section 6.1 Coastal and Marine Birds COP Section 6.2 Bats

<sup>&</sup>lt;sup>8</sup>Rhode Island Coastal Resources Management Program, Accessed August 13, 2021: http://www.crmc.ri.gov/news/2018\_1218\_jurisdiction.html

<sup>&</sup>lt;sup>9</sup> State of Rhode Island Coastal Resources Management Program Federal Consistency Manual (December 7, 2018 (Revised)). Accessed July 28, 2021: http://www.crmc.ri.gov/regulations/Fed Consistency.pdf

Project Information	Reference Section or Description
	COP Section 6.3 Terrestrial Vegetation and Wildlife COP Section 6.4 Wetlands and Waterbodies COP Section 6.5 Coastal Habitats COP Section 6.6 Benthic and Shellfish COP Section 6.7 Finfish and Invertebrates COP Section 6.8 Marine Mammals COP Section 6.9 Sea Turtles COP Section 7.1 Marine Archaeology COP Section 7.2 Terrestrial Archaeology COP Section 7.3 Above-Ground Historic Properties
A detailed description of alternatives considered, analysis of the impacts on the resource areas, and justification as to why the preferred alternative was selected	COP Section 2.0 – Project Siting and Design Development
A description of measures taken to avoid, minimize, and mitigate adverse coastal effects and a description of how the project meets applicable coastal program policies	CZMA Consistency Certification Section 3.0– Rhode Island Coastal Program Policies Avoidance, Minimization and Mitigation Measures in the following COP Sections: COP Section 5.1 Air Quality COP Section 5.2 Water Quality COP Section 6.1 Coastal and Marine Birds COP Section 6.2 Bats COP Section 6.3 Terrestrial Vegetation and Wildlife COP Section 6.4 Wetlands and Waterbodies COP Section 6.5 Coastal Habitats COP Section 6.6 Benthic and Shellfish COP Section 6.7 Finfish and Invertebrates COP Section 6.8 Marine Mammals COP Section 6.9 Sea Turtles COP Section 7.1 Marine Archaeology COP Section 7.2 Terrestrial Archaeology COP Section 7.3 Above-Ground Historic Properties For a summary: COP Section 16.0 – Summary of Avoidance, Minimization, and Mitigation Measures
A brief assessment indicating how the activity will be undertaken in a manner consistent to the maximum extent practicable with the Coastal Resources Management Program (CRMP)	CZMA Consistency Certification Section 3.0 – Rhode Island Coastal Program Policies
A brief analysis indicating that the proposed activity, associated facilities and their effects are consistent to the maximum extent practicable with the CRMP	CZMA Consistency Certification Section 4.0 – Consistency Certification

## 2.0 Project Information

## 2.1 Project Timeline

The Project is currently in the planning and engineering design stages. For more details on the Project timeline please see the COP Section 3.2 – Proposed Project Schedule. The Project will be operational for approximately 30 years, after which time the Project will be decommissioned as per requirements in 30 CFR 585.906-910. Over the 30-year lifespan of the Project, there will be ongoing remote monitoring and maintenance of the offshore and onshore Project facilities.

## 2.2 Project Overview

The Mayflower Wind Project includes a Lease Area located in federal waters south of Martha's Vineyard and Nantucket (Figure 2). Wind turbine generators (WTGs) constructed within the Lease Area will deliver power via inter-array cables to the offshore substation platforms (OSPs). The WTG/OSP positions have been established based on a 1 x 1 nm (1.9 x 1.9 kilometer [km]) grid oriented along the cardinal directions to maintain a uniform spacing of WTGs across all the lease areas within the Massachusetts/Rhode Island Wind Energy Area. Submarine offshore export cables will be installed within offshore ECCs to carry the electricity from the OSPs within the Lease Area to the onshore transmission systems via two different ECCs. One ECC will make landfall in Falmouth, Massachusetts and the other will make landfall at Brayton Point, in Somerset, Massachusetts. As noted in Section 1.0, this Consistency Certification is specific to the Project components for the Brayton Point POI located within Rhode Island jurisdiction. Therefore, the balance of the Project description is specific to the Brayton Point ECC and Brayton Point Onshore Project Area, specifically the portion over Aquidneck Island.

The proposed Brayton Point ECC travels north and west from the Lease Area in federal waters through Rhode Island Sound to the Sakonnet River. The ECC travels north up the Sakonnet River and crosses the northern end of Aquidneck Island before returning to Mount Hope Bay. The ECC continues north into Massachusetts state waters to one of two landfall locations on Brayton Point.

Portions of the ECC travel through the 2011 and 2018 GLD and Rhode Island state waters. The offshore export cables will cross Aquidneck Island via an onshore export cable installation. The sea-to-shore transition from the Sakonnet River to Aquidneck Island will be completed using horizontal directional drilling (HDD) to avoid and minimize impacts to bottom habitats and shoreline coastal features. Mayflower Wind is considering three possible routes across Aquidneck Island. The transition from the onshore export cables on Aquidneck Island back to submarine cables in Mount Hope Bay will also be completed using HDD (Figure 3).

## 2.3 Specific Project Details

Each primary Project component is briefly described below in Table 2-1. Additional details may be found in the COP Section 3.0 – Description of Proposed Activities.

**Table 2-1. Key Project Details** 

Project Attribute	Description
Lease Area Size	127,388 acres (51,552 hectares [ha]) in federal waters (located outside the 2011 and 2018 GLD)
Offshore Export Cables	Cable Type: High voltage direct current (HVDC)
	Number of export cables: up to 6
	Up to 4 export power cables and up to 2 communication cables (to be installed in 1-2 cable bundles, where practicable)
	Nominal export cable voltage: ±320 kilovolts (kV)
	Corridor width: Up to 2,300 feet (ft) (700 miles [mi]) (may be locally narrower or wider in sensitive or constrained areas, including landfalls)
	Length per export cable beneath seabed: 97 – 124 mi (156 – 200 km)
	Length per export cable (within Rhode Island state waters): 20.4 mi (32.9 km)
	Length per export cable (within Rhode Island 2011 GLD): 27 mi (43.8 km)
	Length per export cable (within Rhode Island 2018 GLD): 22.7 mi (36.6 km)
	Cable/pipeline crossings: up to 16 (total)
	Target burial depth (below level seabed): 3.2 – 13.1 ft (1 – 4 meters [m])
Landfall Location(s)	Aquidneck Island, Portsmouth, RI
	Several locations under consideration for sea-to-shore transitions for intermediate landfall across the island
Onshore Export Cables	HVDC; Nominal underground onshore export cable voltage: ±320 kV
	Up to 4 export power cables and up to 2 communications cables
	Length: Up to 3 mi (4.8 km) across Aquidneck Island;
Point of Interconnection	Brayton Point, Somerset, MA; Existing National Grid substation

## 2.4 Alternatives Considered

Mayflower Wind has considered numerous alternatives for various Project elements associated with the offshore and onshore Project development. COP Section 2.0 – Project Siting and Design Development provides a discussion of alternatives considered. Alternatives relevant to this CZMA consistency determination associated with the offshore export cables traversing the 2011 and 2018 GLD, Rhode Island state waters and Aquidneck Island are summarized below.

## 2.4.1 Offshore Export Cable Routing

Geologic and sea floor conditions existing within the Offshore Project Area greatly influenced the export cable corridors under consideration from the OSPs to the ultimate Brayton Point POI. As noted in Section 2.5, a number of planned and ongoing field surveys will further contribute to the understanding of the conditions along the length of the ECC. Mayflower Wind will, in its siting of the offshore export cables within the Brayton Point ECC, avoid hard or complex seabed conditions, steep slopes, ledges, extensive shallow water areas, glacial moraine, and mobile seabeds to the extent practicable. The Brayton Point ECC extending through the 2011 and 2018 GLD and up the Sakonnet River represents a route that avoids such features to the extent practicable based on existing available data.

Several alternate routes were considered for the portion of the Brayton Point ECC between the Sakonnet River and Mount Hope Bay to bring the cable through Rhode Island waters. Each of these alternatives are discussed in the COP (Section 2.0 – Project Siting and Design Development). Two were chosen for final assessment: the West Passage of Narragansett Bay and the Sakonnet River. Based on a rigorous feasibility analysis conducted by Mayflower Wind and input from the CRMC, the West Passage of Narragansett Bay alternative was de-selected, and the Sakonnet River route was selected. The selected in-water portion of the route is aligned on the east side of Aquidneck Island, in the Sakonnet River. Due to the narrow width of the Sakonnet River channel north of Route 24, and the strong currents and high volume of boating traffic in this reach, a fully in-water route was deemed unfeasible. To avoid this problematic reach of the Sakonnet River, the selected ECC route makes an intermediate landfall at and crosses the northern extent of Aquidneck Island in Portsmouth, Rhode Island. Options associated with the overland crossing of Aquidneck Island are discussed in Section 2.4.2.

Figure 4 in Attachment 1 illustrates Areas of Concern, Areas to Avoid, and Preliminary Transmission Cable Routes within the Massachusetts Coastal Zone and adjoining Rhode Island Coastal Zone along with the offshore ECC<sup>10</sup>. Locations of glacial moraine mapped for the RI Coastal Zone and GLD are illustrated in Figure 5 in Attachment 1. However, as illustrated in Figure 4 and Figure 5, complete avoidance of shallow waters and glacial moraines is not possible given the broad geographic extent of these features. The potential for the offshore export cable installation to affect Rhode Island in-water coastal features and uses including water use categories (Figure 7), archaeological resources (e.g., shipwrecks) (Figure 8), shipping lanes (Figure 9), and vessel activity (Figure 10), was also considered in initial siting of the ECC and will be factored into the final routing of the offshore export cables within the ECC as well as the cable burial and protection strategy.

## 2.4.2 Aquidneck Island Export Cable Routes

Mayflower Wind has identified three underground export cable route options across the northern end of Aquidneck Island. All routes originate at a landing near the southern end of Boyds Lane, and, where possible, follow existing roadways across the island, exiting from the northern end of the island and continuing in water through Mount Hope Bay as shown on Figure 3. The export cable including sea-to-shore transition avoids mapped coastal barrier features (Figure 6).

HDD is the planned construction method for the sea-to-shore transitions at Aquidneck Island. Using an HDD landfall method will avoid and/or minimize impacts to shoreline and coastal resources (e.g., beaches, barrier beaches, etc.) that would be otherwise impacted with an open trench installation. This method will also reduce impacts to public access to coastal areas as the installation will take place beneath the coastal beach at Island Park Beach and Montaup Country Club on Aquidneck Island.

As is best practice prior to any HDD operation, Mayflower Wind plans to obtain detailed site-specific geotechnical data at the landfall location(s) and near the HDD trajectory as part of the detailed design and engineering process.

## 2.5 Affected Environment

Mayflower Wind has conducted and is conducting terrestrial and marine surveys as well as desktop studies to determine the potentially affected resources within the Brayton Point ECC and Brayton Point Onshore Project Area within Rhode Island. The findings of these surveys and assessments are documented in technical reports provided in appendices to the COP and are summarized in relevant COP Sections (see Table 1-1).

Ongoing or planned marine surveys include benthic infaunal sea floor habitat field studies, geophysical and geotechnical (G&G) surveys, and marine archaeological surveys along the offshore export cable corridor. No eelgrass has been mapped by the Rhode Island Department of Environmental Management, CRMC or the Massachusetts Department of Environmental Protection in the vicinity of Brayton Point ECC; therefore, no eelgrass surveys are currently planned. However, surveys may be conducted, if necessary, to support permitting and/or if results of the ongoing benthic surveys reveal evidence of eelgrass beds within the Brayton Point ECC. In addition to field surveys, a number of desktop studies have been completed to further

characterize sensitive marine resources in the Brayton Point ECC including: Essential Fish Habitat (EFH) (COP Appendix N), submerged aquatic vegetation (COP Appendix K, Seagrass and Macroalgae), offshore designated protected areas (COP Appendix L1, Designated Protected Areas) and water quality (COP Appendix H, Water Quality). These surveys and studies were used to evaluate and minimize impacts to sensitive resources within the Brayton Point ECC.

Mayflower Wind also completed desktop analysis to characterize existing conditions and the potential effect of onshore Project activities (including onshore export cable installation across Aquidneck Island) on terrestrial vegetation and wildlife, including wetlands (COP Appendix J, Terrestrial Vegetation and Wildlife Assessment), protected lands (COP Appendix L2, Onshore Protected Lands), bats (COP Appendix I2, Bat Risk Assessment) and water quality (COP Appendix H, Water Quality). For areas affected by onshore construction, additional terrestrial surveys may include wetland delineations for both federal- and state-regulated wetlands, waterways, and waterbodies, as necessary. Mayflower Wind also expects to complete a Terrestrial Archaeological Resources Assessment in support of the COP, including a Phase 1A Terrestrial Archaeology Reconnaissance Survey and Phase 1B intensive survey, if required, based on the findings of the Phase 1A survey and input received from the Historic Preservation and Heritage Commission (HPHC). In-air acoustic modeling will evaluate the potential impact of HDD construction activities on sensitive receptors. On completion, the results of this assessment will also be provided as an appendix to the COP (Appendix U1, In-Air Acoustic Assessment).

## 2.6 Potential Project Impacts

Potential Project-related impacts to coastal areas of Rhode Island, including the 2011 and 2018 GLD, may be caused by the installation of the offshore export cables as well as landfall of the export cables, and the installation of the underground onshore export cables. A discussion of Project-related impacts can be found in the COP within the sections identified below:

- COP Section 5.1 Air Quality
- COP Section 5.2 Water Quality
- COP Section 6.1 Coastal and Marine Birds
- COP Section 6.2 Bats
- COP Section 6.3 Terrestrial Vegetation and Wildlife
- COP Section 6.4 Wetlands and Waterbodies
- COP Section 6.5 Coastal Habitats
- COP Section 6.6 Benthic and Shellfish
- COP Section 6.7 Finfish and Invertebrates
- COP Section 6.8 Marine Mammals
- COP Section 6.9 Sea Turtles
- COP Section 7.1 Marine Archaeology
- COP Section 7.2 Terrestrial Archaeology
- COP Section 7.3 Above-Ground Historic Properties
- COP Section 8.0 Visual Resources
- COP Section 9.1 In-Air Acoustics
- COP Section 9.2 Underwater Acoustic Environment
- COP Section 10.1 Demographics, Employment, and Economics
- COP Section 10.2 Environmental Justice and Minority and Lower Income Groups
- COP Section 10.3 Recreation and Tourism

- COP Section 11.0 Commercial and Recreational Fisheries and Fishing Activity
- COP Section 12.0 Zoning and Land Use
- COP Section 13.0 Navigation and Vessel Traffic
- COP Section 14.0 Other Marine Uses

In addition to the public outreach conducted as part of the National Environmental Policy Act process, notification to Rhode Island property owners abutting the Project alignment and features, and others requiring notice, will be made during the permitting phase of the Project, as required by the CRMP.

## 2.7 Avoidance, Minimization, and Mitigation Measures

Through design and planning, construction-related impacts to the coastal environment will be minimized to the greatest extent practicable. Many of the remaining Project-related impacts will be isolated or temporary in nature. Temporary impacts to the coastal and nearshore area will include the installation of the export cables as well as facilities at the landfall location(s). The COP provides additional details on avoidance, minimization, and mitigation measures for specific resources. They are summarized in COP Section 16.0 – Summary of Avoidance, Minimization, and Mitigation Measures of Potential Impacts and discussed in these COP sections:

- COP Section 5.1 Air Quality
- COP Section 5.2 Water Quality
- COP Section 6.1 Coastal and Marine Birds
- COP Section 6.2 Bats
- COP Section 6.3 Terrestrial Vegetation and Wildlife
- COP Section 6.4 Wetlands and waterbodies
- COP Section 6.5 Coastal Habitats
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- COP Section 7.1 Marine Archaeology
- COP Section 7.2 Terrestrial Archaeology
- COP Section 7.3 Above-Ground Historic Properties
- COP Section 8.0 Visual Resources
- COP Section 9.1 In-Air Acoustics
- COP Section 9.2 Underwater Acoustic Environment
- COP Section 10.1 Demographics, Employment, and Economics
- COP Section 10.2 Environmental Justice and Minority and Lower Income Groups
- COP Section 10.3 Recreation and Tourism
- COP Section 11.0 Commercial and Recreational Fisheries and Fishing Activity
- COP Section 12.0 Zoning and Land Use
- COP Section 13.0 Navigation and Vessel Traffic
- COP Section 14.0 Other Marine Uses

## 3.0 Rhode Island Coastal Program Policies

Table 3-1 details the enforceable policies of the State of Rhode Island that relate to the Project, and demonstrates how the Project, as proposed, is fully consistent with each of these policies and their underlying authorities. The enforceable policies and guidelines are found in the CRMP Red Book (650-RICR-20-00-1) and associated guidance document, as well as the Special Area Management Plans and Energy Amendments Policy Guide published October 2011. Enforceable policies are discussed. General policies, which are not enforceable, are omitted. The Legal Authority for the coastal policies detailed in the CRMP Red Book include the federal Coastal Zone Management Act of 1972 (16U.S.C §§ 1451 through 1466) and Rhode Island General Laws Chapter 46-23.

The applicability of Rhode Island's coastal policies is dependent on the water area and shoreline type. The Project will be located predominantly in Type 2 - low intensity use waters; the water areas north and south of the shorelines of Aquidneck Island and the Sakonnet River are Type 2 waters. This category includes water in areas with high scenic values that support low-intensity recreational and residential uses. These waters include seasonal mooring areas where good water quality and fish and wildlife habitat are maintained. The waters north of Aquidneck Island, in Mount Hope Bay are primarily Type 4-Multi Purpose Waters in which multiple uses co-exist, including fishing, water quality, navigation, recreational uses, and other uses. A small section is of Type 6 - Industrial Waterfronts and Commercial Navigation Channels. Priority uses associated with Type 6 include commercial fisheries, berthing, loading and unloading, and servicing of commercial vessels, construction and maintenance of port facilities, navigation channels and berths, and construction and maintenance of support facilities for commercial fishing. The shoreline type at the entry and exit locations for the Brayton Point ECC on Aquidneck Island is expected to be coastal beach. The Project will require a Category B review.

Table 3-1. Enforceable Policies of the CRMP

#### Water Type Policies (Part 1.2.1)

Prepared for: Mayflower Wind Energy LLC

Type 2 Low Intensity Use Waters

Part 1.2.1(B)

Maintain and, where possible, restore the high scenic value, water quality, and natural habitat values of these areas, while providing for low intensity uses that will not detract from these values.

This policy protects waters in areas with high scenic value that support low intensity recreational and residential uses in manners that maintain good water quality and fish and wildlife habitat. Type 2 waters are present along the northern shoreline of Aquidneck Island and within the Sakonnet River south and east of the island (see Figure 7 in Attachment 1).

#### Scenic Value

By using the HDD method and restoring temporarily disturbed areas on land, there would be no impact on the scenic quality of the area, temporary impacts to water quality will be minimized and there will be no long-term effect on this resource. Submerged offshore export cables will likewise have no long-term effect on scenic value.

#### Water Quality

Offshore: Construction and installation activities associated with the Project have the potential to impact coastal and marine water quality through the installation and removal of offshore export cables, as well as vessel discharges such as domestic wastewater, uncontaminated bilge water, treated deck drainage and sumps, uncontaminated ballast water, and uncontaminated fresh or seawater from vessel air conditioning. Bilge water discharges may only occur in nearshore and offshore waters provided that the effluent is processed by an approved oil and water separator and the oil content of the bilge water is less than 15 parts per million. Bilge water that cannot be discharged in compliance with regulations will be retained onboard the vessel for disposal at an approved receiving facility back in port. Generally, ballast water is pumped into and out of separate compartments and is not usually contaminated with oil. However, the same discharge criteria for oil content also applies to ballast water. All vessels will be required to comply with federal and state discharge requirements, as well as requirements for the control and prevention of accidental spills, which are detailed in the Oil Spill Response Plan developed for the Project (see COP Appendix AA, Oil Spill Response Plan). By complying with these state and federal regulations, it is anticipated that there will be no impacts to water quality.

Mayflower Wind will require all vessels to comply with applicable regulations for the prevention and control of accidental spills of fuels, oils, and other hazardous materials. Other wastes generated during offshore construction and operations and maintenance activities, including septage, solid wastes or other hazardous materials (chemicals, solvents, oils, greases, etc.) from equipment operation or maintenance will be temporarily stored and properly disposed of on land or otherwise disposed of in accordance with all applicable regulations (see COP Section 3.3 – Project Components and Project Stages).

Burial of the export cables will cause a temporary increase in turbidity. In addition, some dredging of highly mobile sediments along the export cable route will likely be required to allow for adequate burial of the cables to ensure safe operation. The installation of scour protection as well as cable protections along the seafloor are anticipated to temporarily increase turbidity in the localized area. Sediment that will be resuspended is anticipated to settle rapidly within the local environment (see Section 5.2 – Water Quality of the COP document, and the COP Appendix H, Water Quality Report). As part of the federal and state permitting processes under the federal Clean Water Act Section 404 and Section 401 Water Quality Certification frameworks, Mayflower Wind will engage with the appropriate permitting agencies and comply with the conditions of the permit issued.

Sea to Shore Transition: Use of the HDD construction technique for installation of the export cable landfall is proposed to avoid large-scale disturbance of surface and underwater sediments that would have a more significant effect on water quality. However, the activity still has the ability to affect water quality as a result of an inadvertent release of the drilling fluid used to lubricate the drill head and help maintain the borehole during

### COP Section 2.0 – Project Siting and Design Development

- 2.1 Offshore Facilities
- 2.1.6 Offshore Export Cables
- 2.1.6.1 Offshore Export Cable Corridors Selected for PDE
- 2.2 Onshore Facilities
- 2.2.2 Sea-to-Shore Transition
- 2.2.2.1 Sea-to-Shore Transition Selected for PDE
- 2.2.4 Onshore Substation
- 2.2.4.1 Onshore Substation Sites Selected for PDE

#### COP Section 3.0 – Description of Proposed Activities

- 3.1 Proposed Project Location
- 3.3 Project Components and Project Stages
- 3.3.5 Offshore Export Cables
- 3.3.5.3 Cable Lay Preparation
- 3.3.5.4 Cable Transportation, Installation, and Burial
- 3.3.6 Sea-to-Shore Transition
- 3.3.6.6 HDD Locations on Aquidneck Island (Intermediate Landfall)
- 3.3.6.7 Construction and Installation
- 3.3.8 Onshore Substation and HVDC Converter Station
- 3.3.8.3 HVDC Converter Station
- 3.3.16 Waste Generation and Disposal
- 3.3.17 Chemical Use and Management
- 3.4 Summary of Impact-Producing Factors
- 3.4.1 Seabed (or Ground) Disturbance
- 3.4.1.1 Offshore Export Cable and Inter-Array Cable Installation
- 3.4.1.1.1 Seabed Disturbance Seabed Preparation and Cable Burial
- 3.4.1.1.1 Seabed Disturbance Horizontal Directional Drilling
- 3.4.1.3 Vessel Anchoring-Construction, Operation, and Decommissioning
- 3.4.5 Planned Discharges
- 3.4.6 Accidental Events
- 3.4.6.1 Construction and Decommissioning
- 3.4.6.2 Operations and Maintenance
- 3.4.6.2.2 Onshore Substation and HVDC Converter Station Operation
- 3.4.6.2.3 Vessel Operations
- 3.4.7 Altered Visual Conditions
- 3.4.9 Activities that may Displace or Impact Fishing, Recreation, and Tourism

#### COP Section 5.0 – Physical Resources

- 5.2 Water Quality
  - 5.2.1 Affected Environment
  - 5.2.1.4 Offshore and Coastal Existing Conditions
  - 5.2.2 Sediment Chemistry
  - 5.2.3 Potential Effects
  - 5.2.3.1 Seabed or Ground Disturbance
  - 5.2.3.2 Planned Discharges
  - 5.2.3.3 Accidental Events
  - 5.2.3.4 Natural Hazards

#### COP Section 6.0 – Biological Resources

- 6.4 Wetlands and Waterbodies
- 6.4.1 Affected Environment

AECOM

drilling activities. The drill fluid is composed of non-hazardous compounds and typically consists of mixture of bentonite mud and water. Regardless, any inadvertent release of this drilling fluid to coastal waters has the ability to negatively impact water quality. Mayflower Wind will develop and implement an HDD drill fluid management and contingency plan to avoid inadvertent returns before they occur, and to clean up any drill fluid that is released through an inadvertent return to the ground surface. Provisions of this plan will be a requirement that the Project constantly monitor fluid pressures within the borehole and reassess conditions and potentially re-align the bore path any time there is a drop-in fluid pressure that could indicate the loss of drill fluid to an inadvertent return.

#### Natural Habitat Value

Offshore: Export cable installation will temporarily alter the seabed habitat, resulting in some effects associated with mortality and displacement during construction and some effects associated with recovery time from the areas affected by the cable placements. In areas characterized by more heterogeneous, complex habitats a longer period (estimated one to three years) to recover may be required (see COP Appendix M, Benthic and Shellfish Resources Characterization Report. Construction related impacts are expected to be temporary. Seafloor disturbance is not anticipated to significantly affect habitat values in the longer-term.

Sea to Shore Transition: To avoid impacts to nearshore areas and other coastal landforms, Mayflower Wind will use an HDD method for the cable landfall, which is a trenchless installation method that will allow the Project to avoid directly impacting sensitive coastline areas. An HDD landfall method will allow for the export cables to make landfall through a horizontal tunnel bored several meters underneath these nearshore areas and coastline features. The horizontal tunnel boring will be completed by a drill rig set up on shore within previously disturbed land, where possible, with the drill exiting approximately 1,640 ft (500 m) from shore, where the direct burial of the export cables through State waters will end and the cables will be pulled to shore through the HDD borehole. Any temporarily disturbed areas on land will be restored to existing conditions.

The installation of the offshore export cables and HDD sea-to-shore transition may temporarily affect low intensity uses in the immediate vicinity of construction. Long term operation of the offshore export cables will not detract from low intensity uses.

6.4.1.1 - Wetlands

6.4.1.1.8 - Estuarine Emergent

6.4.1.1.9 - Marine/Estuarine Unconsolidated Shore

6.4.1.1.10 - Marine/Estuarine Rocky Shore

6.4.1.1.11 - Coastal Bank Bluff or Sea Cliff

6.4.2 – Potential Effects

6.5 - Coastal Habitats

6.5.1 – Affected Environment

6.5.2 – Potential Effects 6.6 – Benthic and Shellfish

6.6.1 – Affected Environment

o.o. i – Allected Environment

6.6.1.4 – Brayton Point Export Cable Corridor

6.6.1.6 - Benthic Seafloor Substrate Classifications

6.6.1.6.4 – Brayton Point Export Cable Corridor

6.6.2 - Potential Effects

6.6.2.2 – Disturbance of Softbottom Habitat and Species

6.6.2.3 – Introduction of Novel Hardbottom Habitat

6.6.2.5 – Planned Discharges

6.6.2.6 – Accidental Events

COP Section 8.0 - Visual Resources

8.1 – Affected Environment

8.2 - Potential Effects

COP Section 10.0 - Socioeconomic Resources

10.3 - Recreation and Tourism

COP Appendix F3 – Sediment Plume Impacts from Construction Activities – Brayton Point ECC (pending)

COP Appendix H – Water Quality Report

COP Appendix K – Seagrass and Macroalgae Report

COP Appendix M - Benthic and Shellfish Resources Characterization Report

COP Appendix T – Visual Impact Assessment (pending)

COP Appendix X - Navigation Safety Risk Assessment

COP Appendix AA - Oil Spill Response Plan

Type 4 Multipurpose Waters

Part 1.2.1(D)

Maintain a balance among the diverse activities that must coexist in Type 4 waters. The changing characteristics of traditional activities and the development of new water dependent uses shall, where possible, be accommodated in keeping with the principle to preserve and restore ecological systems. Good water quality shall be promoted, with water quality improvement shall be supported.

This policy aims to maintain good water quality and to protect ecosystem functions while accommodating varied water uses. Multipurpose waters are present north of the Aquidneck Island shoreline and extending north to the State boundary with Massachusetts, as well as State waters south of Little Compton and extending into offshore waters within the GLD (see Figure 7 in Attachment 1). Allowable and non-allowable uses for these areas will be measured against the degree to which they impair other activities such as fishing, water quality, navigation and recreational uses.

Offshore: Installation of the export cables in nearshore and offshore areas within State waters and the offshore GLD will result in minor changes to the seabed associated with the burial of the cables and are not anticipated to significantly affect the water use, water quality or habitat values. Water users would be temporarily affected during construction; however, there is no anticipated impact during the operational phase of the Project. See additional details provided under the response for Type 2 Low Intensity Use Waters Part 1.2.1(B).

COP Section 2.0 – Project Siting and Design Development

2.1 – Offshore Facilities

2.1.6 – Offshore Export Cables

2.1.6.1 - Offshore Export Cable Corridors Selected for PDE

2.2 – Onshore Facilities

2.2.2 – Sea-to-Shore Transition

2.2.2.1 - Sea-to-Shore Transition Selected for PDE

COP Section 3.0 - Description of Proposed Activities

3.1 – Proposed Project Location

3.3 – Project Components and Project Stages

3.3.5 – Offshore Export Cables

3.3.5.3 – Cable Lay Preparation

3.3.5.4 - Cable Transportation, Installation, and Burial

3.3.6 – Sea-to-Shore Transition

3.3.6.6 - HDD Locations on Aquidneck Island (Intermediate Landfall)

3.3.6.7 – Construction and Installation

3.3.16 - Waste Generation and Disposal

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- 3.3.17 Chemical Use and Management
- 3.4 Summary of Impact-Producing Factors
- 3.4.1 Seabed (or Ground) Disturbance
- 3.4.1.1 Offshore Export Cable and Inter-Array Cable Installation
- 3.4.1.1.1 Seabed Disturbance Seabed Preparation and Cable Burial
- 3.4.1.1.1 Seabed Disturbance Horizontal Directional Drilling
- 3.4.1.3 Vessel Anchoring-Construction, Operation, and Decommissioning
- 3.4.5 Planned Discharges
- 3.4.6 Accidental Events
- 3.4.6.1 Construction and Decommissioning
- 3.4.6.2 Operations and Maintenance
- 3.4.6.2.2 Onshore Substation and HVDC Converter Station Operation
- 3.4.6.2.3 Vessel Operations
- 3.4.9 Activities that may Displace or Impact Fishing, Recreation, and Tourism

#### COP Section 5.0 – Physical Resources

- 5.2 Water Quality
- 5.2.1 Affected Environment
- 5.2.1.4 Offshore and Coastal Existing Conditions
- 5.2.1.6 Onshore Surface Water and Groundwater Existing Conditions
- 5.2.2 Sediment Chemistry
- 5.2.3 Potential Effects
- 5.2.3.1 Seabed or Ground Disturbance
- 5.2.3.2 Planned Discharges
- 5.2.3.3 Accidental Events
- 5.2.3.4 Natural Hazards

### COP Section 6.0 – Biological Resources

- 6.4 Wetlands and Waterbodies
- 6.4.1 Affected Environment
- 6.4.1.1 Wetlands
- 6.4.1.1.8 Estuarine Emergent
- 6.4.1.1.9 Marine/Estuarine Unconsolidated Shore
- 6.4.1.1.10 Marine/Estuarine Rocky Shore
- 6.4.1.1.11 Coastal Bank Bluff or Sea Cliff
- 6.4.2 Potential Effects
- 6.5 Coastal Habitats
- 6.5.1 Affected Environment
- 6.5.2 Potential Effects
- 6.6 Benthic and Shellfish
- 6.6.1 Affected Environment
- 6.6.1.4 Brayton Point Export Cable Corridor
- 6.6.1.6 Benthic Seafloor Substrate Classifications
- 6.6.1.6.4 Brayton Point Export Cable Corridor
- 6.6.2 Potential Effects
- 6.6.2.2 Disturbance of Softbottom Habitat and Species
- 6.6.2.3 Introduction of Novel Hardbottom Habitat
- 6.6.2.5 Planned Discharges
- 6.6.2.6 Accidental Events

#### COP Section 10.0 - Socioeconomic Resources

10.3 – Recreation and Tourism

COP Appendix H – Water Quality Report

COP Appendix X - Navigation Safety Risk Assessment

Prepared for: Mayflower Wind Energy LLC AECOM

Type 6 Industrial Waterfronts & Commercial Navigation Channels.

Part 1.2.1(F)

Encourage and support modernization and increased commercial activity related to shipping and commercial fisheries.

This policy seeks to promote commercial activities, primarily shipping and fishing industries. The navigation channel in Mount Hope Bay is designated as Type 6 waters (see Figure 7 in Attachment 1). Priority uses associated with Type 6 include commercial fisheries, berthing, loading and unloading, and servicing of commercial vessels, construction and maintenance of port facilities, navigation channels and berths, and construction and maintenance of support facilities for commercial fishing.

Installation of the export cables will be done in a manner to minimize effects on commercial uses in Type 6 waters during construction. The Brayton Point ECC avoids the mapped federally maintained navigation channel in Mount Hope Bay. Therefore, the long-term operation of the offshore export cables will not adversely impact maintenance of the navigation channels.

COP Section 2.0 – Project Siting and Design Development

- 2.1 Offshore Facilities
- 2.1.6 Offshore Export Cables
- 2.1.6.1 Offshore Export Cable Corridors Selected for PDE
- 2.2 Onshore Facilities
- 2.2.2 Sea-to-Shore Transition
- 2.2.2.1 Sea-to-Shore Transition Selected for PDE

COP Section 3.0 - Description of Proposed Activities

- 3.1 Proposed Project Location
- 3.3 Project Components and Project Stages
  - 3.3.5 Offshore Export Cables
  - 3.3.5.3 Cable Lay Preparation
  - 3.3.5.4 Cable Transportation, Installation, and Burial
  - 3.3.6 Sea-to-Shore Transition
  - 3.3.6.6 HDD Locations on Aguidneck Island (Intermediate Landfall)
- 3.4 Summary of Impact-Producing Factors
- 3.4.1 Seabed (or Ground) Disturbance
- 3.4.1.1 Offshore Export Cable and Inter-Array Cable Installation
- 3.4.1.1.1 Seabed Disturbance Seabed Preparation and Cable Burial
- 3.4.1.1.1 Seabed Disturbance Horizontal Directional Drilling
- 3.4.1.3 Vessel Anchoring-Construction, Operation, and Decommissioning
- 3.4.6 Accidental Events
- 3.4.6.1 Construction and Decommissioning
- 3.4.6.2 Operations and Maintenance
- 3.4.6.2.2 Onshore Substation and HVDC Converter Station Operation
- 3.4.6.2.3 Vessel Operations
- 3.4.9 Activities that may Displace or Impact Fishing, Recreation, and Tourism
- 3.3.14 Vessels, Vehicles, and Aircrafts
- 3.3.14.1 Construction and Installation
- 3.3.14.2 Operation and Maintenance
- 3.3.14.3 Decommissioning

COP Section 11.0 – Commercial and Recreational Fisheries and Fishing Activity

COP Section 13.0 – Navigation and Vessel Traffic

COP Section 14.0 – Other Marine Uses (Military Uses, Aviation, Offshore Energy, and Cables and Pipelines)

COP Appendix L1- Offshore Designated and Protected Areas Report

COP Appendix X - Navigation Safety Risk Assessment

COP Appendix AA - Oil Spill Response Plan

#### **Shoreline Feature Policies (Part 1.2.2)**

**Coastal Beaches** /Barrier Islands

Part 1.2.2 (A) /(B)

those beaches which are an important recreational resource.

Prevent activities that will significantly disrupt longshore and/or onshore offshore beach processes.

Preserve the qualities or, and public access to The shoreline of Aquidneck Island in Portsmouth, RI where the onshore portion of the Brayton Point ECC will cross the island is characterized by narrow beaches. At the south side, a paved public road (Park Ave) parallels the adjacent Island Park Beach; this area has characteristics of a manmade shoreline. On the north side, the beach is adjoined by Montaup Country Club.

> The Project will not alter the scenic or ecological values of beaches along Aquidneck Island. As described previously, the export cables onto and off of the island will be installed via HDD methods. In addition, the cables will be installed underground across the island and will not change the visual character of the beaches or adjacent areas.

COP Section 2.0 – Project Siting and Design Development

- 2.2 Onshore Facilities
- 2.2.1 Landfall Location
- 2.2.1.1 Landfall Locations Selected for PDE
- 2.2.2 Sea-to-Shore Transition
- 2.2.2.1 Sea-to-Shore Transition Selected for PDE
- 2.2.3 Onshore Export Cable Route
- 2.2.3.1 Onshore Cable Routes Selected for PDE

COP Section 3.0 – Description of Proposed Activities

Prevent construction in high hazard areas

Alterations to beaches adjacent to Type 2 waters are prohibited (except for preservation or enhancement of natural habitat).

On developed barriers, the goal is to ensure that the risks of storm damage and erosion are minimized, that activities that may reduce the barrier island's effectiveness as a storm buffer are avoided, and that wetlands and ponds are protected.

On moderately developed barriers, the policies prohibit new development and allow only maintenance of existing structures.

There will be no change to the effectiveness of the island's storm buffering capacity. and protect the scenic and ecological value of Because all onshore and nearshore Project features will be subsurface, the features will not be affected by storms.

> The Project, as proposed, will not interfere with water circulation or pose a threat to the integrity of downcoast areas.

Onshore: Mayflower Wind will be constructing onshore portions of the Project within previously disturbed or developed areas to the extent practicable. Once landfall is made, the onshore export cables will be installed within an underground duct bank buried beneath existing roadways. Construction activities will conform to current state and local requirements for work in the vicinity of wetlands and waterbodies, including strict adherence to erosion and sediment control best management practices to prevent sediment transport from uplands to wetlands or waterbodies.

- 3.1 Proposed Project Location
- 3.3 Project Components and Project Stages
- 3.3.6 Sea-to-Shore Transition
- 3.3.6.6 HDD Locations on Aguidneck Island (Intermediate Landfall)
- 3.3.6.7 Construction and Installation
- 3.3.7 Onshore Underground Export Cable
- 3.4 Summary of Impact-Producing Factors
- 3.4.1 Seabed (or Ground) Disturbance
- 3.4.1.4 Onshore Cable and Infrastructure
- 3.4.7 Altered Visual Conditions
- 3.4.9 Activities that may Displace or Impact Fishing, Recreation, and Tourism

COP Section 4.0 - Site Geology and Environmental Conditions

- 4.1 Site Geology
  - 4.1.4 Affected Environment
  - 4.1.4.3 Brayton Point Export Cable Corridor
  - 4.1.5 Potential Effects
  - 4.1.5.1 Seabed Disturbance

COP Section 6.0 – Biological Resources

- 6.3 Terrestrial Vegetation and Wildlife
- 6.3.1 Affected Environment
- 6.3.1.1 Terrestrial Habitats
- 6.3.1.1.4 Aquidneck Island Intermediate Landfall
- 6.3.1.2 Terrestrial Wildlife and Plants
- 6.3.2 Potential Effects
- 6.3.2.1 Ground Disturbance
- 6.3.2.5 Operation of Equipment and Heavy Machinery
- 6.4 Wetlands and Waterbodies
- 6.4.1 Affected Environment
- 6.4.1.1 Wetlands
- 6.4.1.2 Stream and Ponds
- 6.4.1.3 Wetlands and Waterbodies in the Onshore Project Area
- 6.4.2 Potential Effects
- 6.4.2.1 Ground Disturbance

COP Section 10.0 - Socioeconomic Resources

10.3 – Recreation and Tourism

COP Appendix F3 - Sediment Plume Impacts from Construction Activities -Brayton Point ECC (pending)

#### Activities Under Council Jurisdiction in Tidal and Coastal Pond Waters, On Shoreline Features and Their Contiguous Areas (Part 1.3.1)

Planning for **Energy Facilities** (Part 1.3.1(H)

Planning polices applicable to offshore renewable energy facilities are covered in the Ocean SAMP.

Siting of energy facilities – facilities for the production of electrical power provide services necessary to support and maintain the public welfare and the state's economy.

Refer to Ocean SAMP Regulatory Standards.

The offshore WTGs and OSPs have been sited within the available OCS lease area (OCS-A 0521). Export cables and onshore facilities have been located to minimize impact to natural resources and the human environment to the extent practicable. An existing substation at Brayton Point in Somerset, Massachusetts has been identified for the Brayton Point POI.

COP Section 2.0 – Project Siting and Design Development

- 2.1 Offshore Facilities
- 2.1.6 Offshore Export Cables
- 2.1.6.1 Offshore Export Cable Corridors Selected for PDE
- 2.2 Onshore Facilities
- 2.2.1 Landfall Location
- 2.2.1.1 Landfall Locations Selected for PDE
- 2.2.2 Sea-to-Shore Transition
- 2.2.2.1 Sea-to-Shore Transition Selected for PDE
- 2.2.3 Onshore Export Cable Route
- 2.2.3.1 Onshore Cable Routes Selected for PDE

COP Section 3.0 - Description of Proposed Activities

Policy #	Policy Requirement	Mayflower Wind Response	COP Section Reference
			<ul> <li>3.1 – Proposed Project Location</li> <li>3.3 – Project Components and Project Stages</li> <li>3.3.5 - Offshore Export Cables</li> <li>3.3.6 - Sea-to-Shore Transition</li> <li>3.3.7 - Onshore Underground Export Cable</li> <li>3.4 – Summary of Impact-Producing Factors</li> <li>3.4.1 – Seabed (or Ground) Disturbance</li> <li>3.4.1.1 – Offshore Export Cable and Inter-Array Cable Installation</li> <li>3.4.1.1.1 – Seabed Disturbance – Seabed Preparation and Cable Burial</li> <li>3.4.1.1.1.1 – Seabed Disturbance – Horizontal Directional Drilling</li> <li>3.4.1.4 - Onshore Cable and Infrastructure</li> </ul>
Submerged Aquatic Vegetation and Aquatic Habitats of Particular Concern Part 1.3.1(R)	Submerged Aquatic vegetation (SAV) shall be preserved, protected, and where possible, restored. Mitigation for SAV disturbance is required.	There are no mapped eelgrass beds or other SAV beds within the Brayton Point ECC. The HDD transitions of the offshore export cables onto and off of Aquidneck Island will avoid impact to near shore SAV, if present.  Benthic sampling is being conducted along the Brayton Point ECC in Summer, 2021 to confirm that impacts to these sensitive habitats have been avoided and/or minimized. In addition to sediment profile imaging/plan view (SPI/PV) images and grab cam videos, video transects will be collected from the Aquidneck Island landing sites and Brayton Point landing sites. The video images and all other images collected during the survey will be analyzed to confirm the presumed absence of seagrass in these areas. No comprehensive eelgrass surveys are currently planned for the landfall sites at Aquidneck Island or Brayton Point. Should any eelgrass be seen during the Summer 2021 benthic survey, these areas will be addressed during the permitting process.	COP Section 6.0 – Biological Resources  6.5 – Coastal Habitats 6.5.1 – Affected Environment 6.5.1.1.1 – Seagrass 6.5.1.1.2 – Macroalgae 6.5.1.1.3 – Submerged Aquatic Vegetation Beds 6.5.2 – Potential Effects 6.5.2.1 – Seabed (or Ground) Disturbance 6.5.2.2 – Changes in Ambient Lighting 6.5.2.3 – Changes in Ambient EMF 6.5.2.4 – Actions that may Displace Biological Resources (Eelgrass and Macroalgae) 6.5.2.5 – Actions that may Cause Direct Injury or Death 6.5.2.6 – Planned Discharges 6.5.2.7 – Accidental Events
	This policy seeks to preserve, protect, and where possible, restore the scenic value of the coastal region. Significant views to and across the water are to be safeguarded from obstruction. Vegetative screening of structures along the water's edge is required.	All nearshore and onshore Project features will be subsurface. The offshore Project features will not be visible from the Rhode Island shoreline or State waters. There will be no impact to the scenic value of the coastal region.	COP Section 8.0 – Visual Resources  8.1 – Affected Environment  8.1.1 – Offshore Project Area  8.1.2 – Onshore Project Area  8.2 – Potential Effects  8.2.1 – Altered Visual Conditions  COP Appendix T – Visual Impact Assessment
Protection and Enhancement of Public Access to the Shore Part 1.3.6	Public access to the shore shall be protected, maintained, and where possible, enhanced for the benefit of all.	The Project will make landfall utilizing an HDD method that will avoid impacting the public's use and recreation in coastal areas. During the installation of the export cables there will be a temporary, short-term prohibition on access to the waterfront within the immediate construction work areas and HDD path for safety reasons. However, it is anticipated that the installation of the export cables and overland construction will take place outside of peak tourism season so as to not interfere with public access to waterfront areas. Additionally, there will be no long-term impacts to waterfront areas or to public access to the water's edge resulting from the Project.	COP Section 10.0 - Socioeconomic Resources  10.3 - Recreation and Tourism  10.3.1 - Affected Environment  10.3.1.1 - Land-based and Near-shore-based Recreation and Tourism Resources  10.3.1.1.2 - Brayton Point Onshore Project Area 10.3.1.2 - Water-based Recreation and Tourism Resources 10.3.2 - Potential Effects 10.3.2.1 - Construction Areas and Traffic 10.3.2.2 - Saturation of Tourism-related Services (Boat Rentals, Outfitters, etc.)  COP Section 15.0 - Public Health and Safety

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15.1 - Affected Environment

15.1.1 - Health and Safety Regulations Related to the Proposed Project

15.1.2 - Communities Health and Safety

15.2 – Potential Effects

15.2.1 – Unplanned Events

#### **Ocean SAMP Regulatory Standards**

Standards

Part 11.10.1 (A)

Overall Regulatory Offshore renewable energy development in the state waters of the Ocean SAMP. regardless of size are subject to policies and standards outlined in Part 11.10.

The Project meets the definition of Offshore Development under 11.10.1 (A)(3) Underwater Cables.

COP Section 3.0 – Description of Proposed Activities

3.1 – Proposed Project Location

3.3 – Project Components and Project Stages

3.3.5 - Offshore Export Cables

3.3.6 - Sea-to-Shore Transition

3.3.7 - Onshore Underground Export Cable

Standards

Part 11.10.1 (B &C)

Overall Regulatory The most suitable area for offshore renewable energy development in the state waters of the Ocean SAMP is the renewable energy zone, designated Type 4E waters.

> Offshore development shall not have a significant adverse impact on natural the Rhode Island marine economic sector.

The Project involves the installation of a commercial-scale array of offshore WTGs within an established federal lease area for wind energy generation, which will produce clean, renewable energy for the ISO New England regionally administered electric grid. The generation capacity from the Project would be available for future Power Purchase Agreements (PPAs) that maybe negotiated with other New England states, including Rhode Island.

resources or existing human uses, particularly Offshore: The federal Lease Area proposed for the Project is outside of Rhode Island state waters and is also beyond the 2011 and 2018 GLD areas. The Brayton Point ECC crosses the 2011 and 2018 GLD and enters State waters within Type 4E waters. Crossing of other water types (Types 2, 4 and 6) is necessary and unavoidable in order to connect to onshore infrastructure.

> The federal lease areas were previously subject to an alternatives analysis by BOEM during establishment of the Massachusetts/Rhode Island Wind Energy Area, in which the Project is located. This analysis was conducted as a portion of the Commercial Wind Lease Issuance and Site Assessment Activities on the Atlantic Outer Continental Shelf Offshore Rhode Island and Massachusetts: Environmental Assessment which received a Finding of No Significant Impact in May 2013.

> To transmit electricity generated from the offshore WTG array to the onshore administered electrical grid, the shortest practicable path to shore will be utilized while considering engineering feasibility and environmental constraints and regulatory concerns. This path to transmit the generated electricity will naturally cross through the coastal areas of Rhode Island and Massachusetts, and Mayflower Wind has assessed multiple alternative routes for the export cables, as well as potential landfall locations. The evaluation of these alternatives is detailed within the COP Section 2.0 – Project Siting and Design Development.

> Mayflower Wind completed these efforts to site the Project in a way that would ensure minimal displacement of water dependent industries and minimize environmental impact to the extent practicable. Therefore, the Project is fully consistent with this policy requiring the assessment of siting project facilities within alternative coastal locations.

COP Section 2.0 – Project Siting and Design Development

2.1 – Offshore Facilities

2.1.6 – Offshore Export Cables

2.1.6.1 – Offshore Export Cable Corridors Selected for PDE

2.2 – Onshore Facilities

2.2.1 – Landfall Location

2.2.1.1 - Landfall Locations Selected for PDE

2.2.2 - Sea-to-Shore Transition

2.2.2.1 - Sea-to-Shore Transition Selected for PDE

COP Section 3.0 - Description of Proposed Activities

3.1 – Proposed Project Location

3.3 – Project Components and Project Stages

3.3.5 - Offshore Export Cables

3.3.6 – Sea-to-Shore Transition

3.3.6.6 – HDD Locations on Aguidneck Island (Intermediate Landfall)

3.3.6.7 – Construction and Installation

3.3.6.8 - Operation and Maintenance

3.3.6.9 – Decommissioning

3.4 – Summary of Impact-Producing Factors

3.4.1 – Seabed (or Ground) Disturbance

3.4.1.1 – Offshore Export Cable and Inter-Array Cable Installation

3.4.1.1.1 – Seabed Disturbance – Seabed Preparation and Cable Burial

3.4.1.1.1 - Seabed Disturbance - Horizontal Directional Drilling

3.4.9 – Activities that may Displace or Impact Fishing, Recreation, and Tourism

COP Section 10.0 – Socioeconomic Resources

COP Section 11.0 - Commercial and Recreational Fisheries and Fishing Activity

COP Section 13.0 – Navigation and Vessel Traffic

COP Section 14.0 – Other Marine Uses (Military Uses, Aviation, Offshore Energy, and Cables and Pipelines)

COP Appendix L1- Offshore Designated and Protected Areas Report

COP Appendix V – Commercial and Recreational Fisheries Technical Report

COP Appendix X - Navigation Safety Risk Assessment

Prepared for: Mayflower Wind Energy LLC **AECOM** 

Standards

Part 11.10.1 (D through G)

Board (FAB), the applicant and CRMC is required to discuss potential fishery impacts.

Uses or activities that would result in significant long-term impacts (i.e., more than 1 or 2 seasons) to commercial or recreational fisheries are prohibited.

Mitigation is required for potential adverse impacts on fisheries.

Overall Regulatory A meeting between the Fisherman's Advisory Mayflower will schedule the requisite meeting with CRMC and the FAB in the near future to COP Section 6.0 – Biological Resources discuss potential fishery impacts.

> As part of the ongoing studies, an EFH assessment has been conducted. The EFH Assessment concluded that when Project activities are considered together with the existing EFH in the Offshore Project Area, the potential for negative effects associated with the construction, operation, and decommissioning of the Project on EFH are limited in scale and considered to be very low to low. The Project is not expected to cause population level changes to EFH species or resident, migratory, and/or or protected fish species. The Project would not prohibit fish movements, present an obstacle to migration, and/or displace large populations of fish. The Project will not cause long-term or permanent negative impacts to EFH or Habitat Areas of Particular Concern available to support fish of recreational and/or commercial importance.

Correspondingly, the Project is not anticipated to cause long-term or permanent negative impacts to commercial or recreational fisheries.

Mayflower Wind continues to coordinate with local stakeholders and the commercial fishing industry and has developed a Fisheries Communication Plan for the Project (see COP Appendix W, Mayflower Wind Fisheries Communication Plan), which included hiring of an on-staff fisheries liaison officer, conducting outreach to the commercial and recreational fishing industry, and holding regular "port hours" at key ports where the public can communicate and interact with a Mayflower Wind representative and ask questions about the Project or discuss any concerns related to potential impacts to fisheries.

Offshore: The offshore export cable corridor is located in areas that may contain shellfish and SAV. The Brayton Point ECC has been evaluated for technical feasibility and environmental considerations, , as well as the amount of dredging required. The ECC crosses some areas mapped as Areas of Concern and Areas to Avoid for Transmission Cables, as well as Glacial Moraines and Fishing Areas (see Figure 4 and Figure 5 in Attachment 1). The Bravton Point ECC will be up to 2300 ft (700 m) in width (and may be locally narrower or wider in sensitive or constrained areas, including at landfalls) and is intended to allow maximum flexibility to refine siting to avoid sensitive habitats and resources. Not all sensitive habitat and resource areas can be avoided. Mayflower Wind has selected a preferred cable corridor to avoid impacts to these areas to the greatest extent practicable. Export cable installation will temporarily alter the seabed habitat, resulting in some effects associated with mortality and displacement during construction and some effects associated with recovery time from the areas affected by the cable placement. Disturbance of the benthic communities with complex bottom habitat conditions are expected to require from one to three years to recover (COP Appendix M1, Benthic and Shellfish Resources Characterization Report and COP Appendix M3, Summer 2021 Benthic Survey Reports). Construction related impacts are expected to be temporary.

- 6.6 Benthic and Shellfish
- 6.6.1 Affected Environment
- 6.6.1.4 Brayton Point Export Cable Corridor
- 6.6.1.6 Benthic Seafloor Substrate Classifications
- 6.6.1.6.4 Brayton Point Export Cable Corridor
- 6.6.2 Potential Effects
- 6.6.2.1 Introduced Sound into the Environment (in-Air or Underwater)
- 6.6.2.2 Disturbance of Softbottom Habitat and Species
- 6.6.2.3 Introduction of Novel Hardbottom Habitat
- 6.6.2.4 Change in Ambient EMF
- 6.6.2.5 Planned Discharges
- 6.6.2.6 Accidental Events
- 6.7 Finfish and Invertebrates
- 6.7.1 Affected Environment
- 6.7.2 Species in the MA/RI WEA and the Offshore Project Area
- 6.7.3 Invertebrates in the Offshore Project Area
- 6.7.4 Potential Effects
- 6.7.4.1 Introduced Sound into the Environment (In-air or Underwater)
- 6.7.4.2 Seabed (Or Ground) Disturbance
- 6.7.4.3 Habitat Disturbance and Modification
- 6.7.4.4 Change in Ambient Lighting
- 6.7.4.5 Change in Ambient EMF
- 6.7.4.6 Planned Discharges
- 6.7.4.7 Accidental Events

COP Section 11.0 – Commercial and Recreational Fisheries and Fishing Activity

- 11.1 Affected Environment
- 11.1.2 Summary of Commercial Fishing in the Offshore Project Area
- 11.1.3 Recreational Fishing
- 11.1.4 Fisheries Outreach
- 11.1.5 Proposed Fisheries Monitoring Research and Activities
- 11.2 Potential Effects
- 11.2.1 Vessel Activity and Presence of Infrastructure
- 11.2.3 Gear Interactions

COP Appendix M - Benthic and Shellfish Resources Characterization Report

COP Appendix N – Essential Fish Habitat Assessment and Protected Fish Species Assessment

COP Appendix V – Commercial and Recreational Fisheries Technical Report

COP Appendix W, Mayflower Wind Fisheries Communication Plan

Standards

Part 11.10.1 (H, I and J)

Overall Regulatory Moraine edges, spawning and nursery areas and marine resources and habitats are sensitive and important habitats that shall be protected and impacts to these areas avoided. Coordination with the Habitat Advisory Board (HAB) and the CRMC is required.

Mayflower Wind has designed the Project to avoid impacts to ecologically sensitive areas to the maximum extent practicable, including moraine edges, spawning and nursery areas and marine resources and habitats. Figure 4 through Figure 5 in Attachment 1 show the Brayton Point ECC in relation to areas of concern or sensitive ocean habitat for consideration in siting transmission cables. Figure 6 through Figure 7in Attachment 1 show locations of coastal and marine habitats in the vicinity of the export cable landfall locations. Selection of the preferred landfall location and use of HDD will help to avoid impacts to sensitive habitats.

COP Section 2.0 – Project Siting and Design Development

- 2.1 Offshore Facilities
- 2.1.6 Offshore Export Cables
- 2.1.6.1 Offshore Export Cable Corridors Selected for PDE
- 2.2 Onshore Facilities
- 2.2.1 Landfall Location
- 2.2.1.1 Landfall Locations Selected for PDE
- 2.2.2 Sea-to-Shore Transition
- 2.2.2.1 Sea-to-Shore Transition Selected for PDE

COP Section 3.0 – Description of Proposed Activities

The Project has been designed to avoid impacts to coastal and marine habitats to the maximum extent practicable, and those impacts that cannot be avoided will be mitigated in accordance with applicable federal, state, and local regulations.

The Project is not an aquaculture development, nor will it adversely affect any current aquaculture facilities or local shellfishing areas. As detailed in the COP Section 11.0 – Commercial and Recreational Fisheries and Fishing Activity, commercial and recreational fishing areas will not be permanently impacted by the Project nor will access to these areas be significantly affected.

Sea to Shore Transition: The Project will utilize an HDD method for the export cable landfall which will limit impacts to both nearshore areas as well as coastal landforms (see Figure 6 through Figure 7 in Attachment 1). The HDD construction method will avoid or significantly limit impacts to sensitive habitats, including eelgrass beds (if present), shellfish beds, SAV, dunes, beaches, tidal flats, and rocky shores.

- 3.1 Proposed Project Location
- 3.3 Project Components and Project Stages
  - 3.3.5 Offshore Export Cables
  - 3.3.6 Sea-to-Shore Transition
  - 3.3.6.6 HDD Locations on Aguidneck Island (Intermediate Landfall)
  - 3.3.6.7 Construction and Installation
  - 3.3.6.8 Operation and Maintenance
  - 3.3.6.9 Decommissioning
- 3.4 Summary of Impact-Producing Factors
- 3.4.1 Seabed (or Ground) Disturbance
- 3.4.1.1 Offshore Export Cable and Inter-Array Cable Installation
- 3.4.1.1.1 Seabed Disturbance Seabed Preparation and Cable Burial
- 3.4.1.1.1 Seabed Disturbance Horizontal Directional Drilling
- 3.4.1.3 Vessel Anchoring-Construction, Operation, and Decommissioning
- 3.4.4 Changes in Ambient Electric and Magnetic Fields
- 3.4.5 Planned Discharges
- 3.4.6 Accidental Events

#### COP Section 6.0 Biological Resources

- 6.5 Coastal Habitats
- 6.5.1 Affected Environment
  - 6.5.1.1.1 Seagrass
  - 6.5.1.1.2 Macroalgae
  - 6.5.1.1.3 Submerged Aquatic Vegetation Beds
- 6.5.2 Potential Effects
- 6.5.2.1 Seabed (or Ground) Disturbance
- 6.5.2.2 Changes in Ambient Lighting
- 6.5.2.3 Changes in Ambient EMF
- 6.5.2.4 Actions that may Displace Biological Resources (Eelgrass and Macroalgae)
- 6.5.2.5 Actions that may Cause Direct Injury or Death
- 6.5.2.6 Planned Discharges
- 6.5.2.7 Accidental Events
- 6.6 Benthic and Shellfish
- 6.6.1 Affected Environment
- 6.6.1.4 Brayton Point Export Cable Corridor
- 6.6.1.6 Benthic Seafloor Substrate Classifications
- 6.6.1.6.4 Brayton Point Export Cable Corridor
- 6.6.1.7 Benthic Epifauna and Infauna
- 6.6.2 Potential Effects
- 6.6.2.1 Introduced Sound into the Environment (in-Air or Underwater)
- 6.6.2.2 Disturbance of Softbottom Habitat and Species
- 6.6.2.3 Introduction of Novel Hardbottom Habitat
- 6.6.2.4 Change in Ambient EMF
- 6.6.2.5 Planned Discharges
- 6.6.2.6 Accidental Events

COP Appendix L1 – Offshore Designated Protected Areas Report

COP Appendix M - Benthic and Shellfish Resources Characterization Report

COP Appendix N – Essential Fish Habitat Assessment and Protected Fish Species Assessment

Prepared for: Mayflower Wind Energy LLC
AECOM

Policy #	Policy Requirement	Mayflower Wind Response	COP Section Reference
Overall Regulatory Standards Part 11.10.1 (K, L, and M)	Cultural and Historic Resources.  Potential impacts to these resources will be evaluated per the National Historic Preservation Act and Antiquities Act, and the Rhode Island Historical Preservation Act and Antiquities Act, as applicable.	A comprehensive assessment of potential Project impacts to both terrestrial and marine cultural and historic resources is planned as part of the Project studies and assessments. Coordination with the Rhode Island and Massachusetts Historic Preservation Offices, and Tribal representatives will be conducted to ensure that impacts are evaluated, and, if necessary, mitigated for, in accordance with applicable federal and state regulations. The Project has been sited to avoid direct and indirect impact to cultural and historic resources to the extent practicable.	COP Section 7.0  7.1 - Marine Archaeology 7.1.1 - Affected Environment 7.1.1.1 - Shipwrecks and Obstructions 7.1.1.2 - Paleolandscape 7.1.2 - Potential Effects 7.1.2.1 - Seabed (or Ground) Disturbance 7.1.2.2 - Sediment Suspension and Deposition 7.2 Terrestrial Archaeology 7.2.1 - Affected Environment 7.2.1.2 - Intermediate Landfall 7.2.1.2.1 - Aquidneck Route 1 7.2.1.2.2 - Aquidneck Route 2 7.2.1.2.3 - Aquidneck Route 3 7.2.2 - Potential Effects 7.2.2.1 - Ground Disturbance 7.2.2.2 - Accidental Events 7.3 - Above-Ground Historic Properties 7.3.1 - Affected Environment 7.3.1.1 - Offshore APE 7.3.2 - Potential Effects 7.3.2 - Potential Effects 7.3.1 - Altered Visual Conditions  COP Appendix Q - Marine Archaeological Resources Assessment COP Appendix S - Analysis of Visual Effects to Historic Properties
Overall Regulatory Standards Part 11.10.1 (N and O)	relation to potential impacts on cultural or	All Project features within the State of Rhode Island are below ground or below the seabed. The offshore WTGs will not be visible from Rhode Island. There will be no visual impacts to cultural or historic resources, or scenic views, as a result of the Project.	COP Section 8.0 – Visual Resources  8.1 – Affected Environment  8.1.1 – Offshore Project Area  8.1.2 – Onshore Project Area  8.2 – Potential Effects  8.2.1 – Altered Visual Conditions  COP Appendix T – Visual Impact Assessment
Areas of Particular Concern Part 11.10.2	All offshore development shall be presumptively excluded from Areas of Particular Concern (APCs) unless the applicant demonstrates that there are no practicable alternatives that are less damaging outside the APC or that the project will not result in significant alteration to the values and resources of the APC. Avoidance measures must be demonstrated, and mitigation may be required.	<ul> <li>APCs in the Ocean SAMP include:</li> <li>historic shipwrecks, archaeological or historical sites and their buffers,</li> <li>offshore dive sites,</li> <li>glacial moraines,</li> <li>navigation, military and infrastructure areas</li> <li>areas of high fishing activity</li> <li>seasonal heavily used recreational boating and sailboat racing areas</li> <li>naval fleet submarine transit lanes</li> <li>other areas as identified during pre-application review</li> <li>The Project has been routed to avoid and minimize disturbance to APCs. Final routing within the Brayton Point ECC will further reduce potential impacts. Additional details for each type of APC are provided below.</li> <li>Shipwrecks - Numerous wrecks are mapped in state and federal waters off the coast of Rhode Island. Additional details on wrecks of cultural/historical significance identified within</li> </ul>	COP Section 4.0 - Site Geology and Environmental Conditions  4.1 - Site Geology  4.1.4 - Affected Environment  4.1.4.3 - Brayton Point Export Cable Corridor  4.1.5 - Potential Effects  4.1.5.1 - Seabed Disturbance  COP Section 7.0 - Cultural Resources  7.1 - Marine Archaeology  7.1.1 - Affected Environment  7.1.1.1 - Shipwrecks and Obstructions  7.1.2 - Paleolandscape  7.1.2 - Potential Effects  7.1.2.1 - Seabed (or Ground) Disturbance  7.1.2.2 - Sediment Suspension and Deposition  COP Section 10.0 - Socioeconomic Resources

AECOM 3-11 Prepared for: Mayflower Wind Energy LLC

Policy # Policy Requirement Mayflower Wind Response

the Offshore Project Area will be addressed in the Marine Archaeological Resources Assessment for the Project (COP Appendix Q). As with all APCs, disturbance to shipwrecks and other submerged historic resources will be avoided to the extent practicable and mitigated if avoidance is not feasible. Ongoing G&G surveys will provide additional supporting data to refine the Brayton Point ECC to avoid shipwrecks.

Dive Sites: The two closest offshore dive sites to the Brayton Point ECC are the T.C. Teti site located adjacent to but outside the ECC, and the Neptune site located approximately 4 mi (6 km) southwest of the ECC The Brayton Point ECC will not cross directly through any designated offshore dive sites.

Glacial Moraines: Based on an initial review in support of the Summer 2021 benthic habitat survey and geophysical and acoustic survey, the Brayton Point ECC will cross through blocky, boulder, and bounder/cobble/sand moraines mapped in the Ocean SAMP area (Figure 5, Attachment 1). Glacial moraines are broadly distributed within the Ocean SAMP area, as such complete avoidance of glacial moraines is not possible. The Brayton Point ECC seeks to avoid moraine edges to the extent practicable. Seafloor features such as moraines will be mapped in more detail using acoustic data as part of the cable route planning process (COP Appendix E, Marine Site Investigation Report [MSIR]). These maps will define the limits and topography of the moraines in more detail and will be used to optimize the routing of cables within the Brayton Point ECC to reduce disturbance and protect the cables.

Navigation: The Brayton Point ECC will cross through two designated shipping lanes and one ferry route (Quonset Point to Martha's Vineyard Fast Ferry Route) within the Ocean SAMP area. The Brayton Point ECC avoids all other mapped navigation, military, and infrastructure areas in the Ocean SAMP area.

Unexploded Ordnance (UXO): The Brayton Point ECC will pass in the vicinity of known UXO locations and within 29 miles (47 km) of a UXO disposal site.

High Fishing Activity: Areas of high fishing activity will be discussed with the CRMC and the FAB during the requisite meeting with those entities.

Boating/Racing Areas: The Brayton Point ECC does not pass through any designated boating and sailboat racing areas.

Naval Fleet Submarine Transit lanes: The U.S. Navy has designated Submarine Transit Lanes for submerged transit. One of these lanes overlaps with the southern border of the Ocean SAMP area. Based on this description, the Brayton Point ECC does not cross a designated transit lane. Detailed information on submarine transits through the SAMP area is unavailable as this information is classified.

10.3 – Recreation and Tourism

COP Section 11.0 - Commercial and Recreational Fisheries and Fishing Activity

**COP Section Reference** 

- 11.1 Affected Environment
- 11.1.2 Summary of Commercial Fishing in the Offshore Project Area
- 11.1.3 Recreational Fishing
- 11.1.4 Fisheries Outreach
- 11.1.5 Proposed Fisheries Monitoring Research and Activities
- 11.2 Potential Effects
- 11.2.1 Vessel Activity and Presence of Infrastructure
- 11.2.3 Gear Interactions

COP Section 13.0 – Navigation and Vessel Traffic

COP Section 14.0 – Other Marine Uses (Military Uses, Aviation, Offshore Energy, and Cables and Pipelines)

COP Appendix E - Marine Site Investigation Report (MSIR)(pending)

COP Appendix L1 – Offshore Designated Protected Areas Report

COP Appendix Q –Marine Archaeological Resources Assessment

COP Appendix V - Commercial and Recreational Fisheries Technical Report

COP Appendix X - Navigation Safety Risk Assessment

Prohibitions and Areas Designated for Preservation

Part 11.10.3

Areas designated for preservation are designated for the purpose of preserving them for their ecological value. Large-scale offshore development that is in conflict with the intent and purpose of these areas is prohibited. Underwater cables are exempt from this prohibition.

Areas designated for preservation in the Ocean SAMP include:

- Sea duck foraging habitat
- Critical Habitat under the Endangered Species Act

The Ocean SAMP designates sea duck foraging habitat in water depths less than or equal to 65.6 ft (20 m) as an area designated for protection due to the ecological value of these foraging areas to avian species. In lieu of more detailed information on bottom substrate and bivalve density, CRMC preemptively designated all areas within the 65.6 ft (20 m) contour as an area designated for protection until further research allows for a more refined determination (CRMC, 2010). The Brayton Point ECC does not pass through designated sea duck foraging habitat, and as an underwater cable, would be exempt from the prohibition for crossing these areas.

Critical habitat for the North Atlantic Right Whale is located along the Atlantic coast, north and west of the Mayflower Wind Lease Area. The Brayton Point ECC crosses a corner of

COP Section 6.0 – Biological Resources

- 6.1 Coastal and Marine Birds
- 6.1.1 Affected Environment
- 6.1.1.2 Marine Birds
- 6.1.1.2.5 Sea Ducks
- 6.1.2 Potential Effects
- 6.1.2.1 Seabed (or Ground) Disturbance
- 6.1.2.2 Introduced Sound
- 6.1.2.3 Changes to Ambient Lighting
- 6.1.2.4 Vessel Operations
- 6.1.2.5 Presence of Structures
- 6.1.2.6 Planned Discharges
- 6.1.2.7 Accidental Events
- 6.8 Marine Mammals
- 6.8.1 Affected Environment

Prepared for: Mayflower Wind Energy LLC

Policy #	Policy Requirement	Mayflower Wind Response	COP Section Reference	
		the North Atlantic Right Whale Seasonal Management Area. Given the abundance and distribution of these whales in the area, there is the potential for North Atlantic Right Whales to co-occur with activities in the Project Area, particularly in the proposed export cable corridor during the winter and spring. However, little, if any, effects to North Atlantic Right Whale critical habitat are anticipated given its position in relation to the Offshore Project Area.	6.8.1.2 – Endangered and Threatened Marine Mammals 6.8.2 – Potential Effects 6.8.2.1 – Introduced Sound into the Environment (In-air or Underwater) 6.8.2.2 – Vessel Operations 6.8.2.3 – Seabed (or Ground) Disturbance 6.8.2.4 – Habitat Disturbance and Modification	
	Although other Endangered Species Act listed species may be present in the Project Area, there are no other critical habitats designated within the Brayton Point ECC.		6.8.2.5 – Entanglement 6.8.2.6 – Planned Discharges 6.8.2.7 – Accidental Events	
			COP Appendix L1 - Offshore Designated Protected Areas Report	
Other Areas	Large-scale projects found to be a hazard to	Areas of high intensity commercial marine traffic in state waters, defined as 50 or more	COP Section 13.0 – Navigation and Vessel Traffic	
Part 11.10.4	commercial navigation shall avoid areas of high intensity commercial marine traffic in state waters.	vessel counts within a 1 km by 1 km grid, are identified as an "Other Area" in the Ocean SAMP – i.e., an area for which some offshore developments could represent a hazard to commercial navigation. An area running east to west along the entire coast of Rhode Island registers as high intensity based on the above definition (Figure 10). However, the area crossed by the Brayton Point ECC has relatively lower intensity use (at 50 to 250 vessel counts for commercial ship traffic) than most of the Rhode Island coast, in particular the offshore area directly approaching and entering Narragansett Bay (Figure 11).	<ul> <li>13.1 – Affected Environment</li> <li>13.2 – Potential Effects</li> <li>13.2.2 - Activities that may Displace or Impact Fishing and Recreation and Tourism</li> </ul>	
			COP Section 14.0 – Other Marine Uses 14.1 – Affected Environment	
		Mayflower Wind conducted a Navigation Safety Risk Assessment for the Brayton Point ECC, which is included in COP Appendix X.	<ul> <li>14.1.4 – Cables and Pipelines</li> <li>14.2 – Potential Effects</li> <li>14.2.2 – Installation and Maintenance of Infrastructure</li> <li>14.2.3 – Presence of Infrastructure</li> </ul>	
			COP Appendix X – Navigation Safety Risk Assessment	

## 4.0 Consistency Certification

Mayflower Wind has evaluated all applicable enforceable policies of the Rhode Island CRMP for the Project to determine if the activities are consistent with those policies. Mayflower Wind believes the Project and related activities comply with the enforceable policies of Rhode Island's approved CRMP and will be conducted in a manner fully consistent with that program.

## **Attachment 1 – Figures**

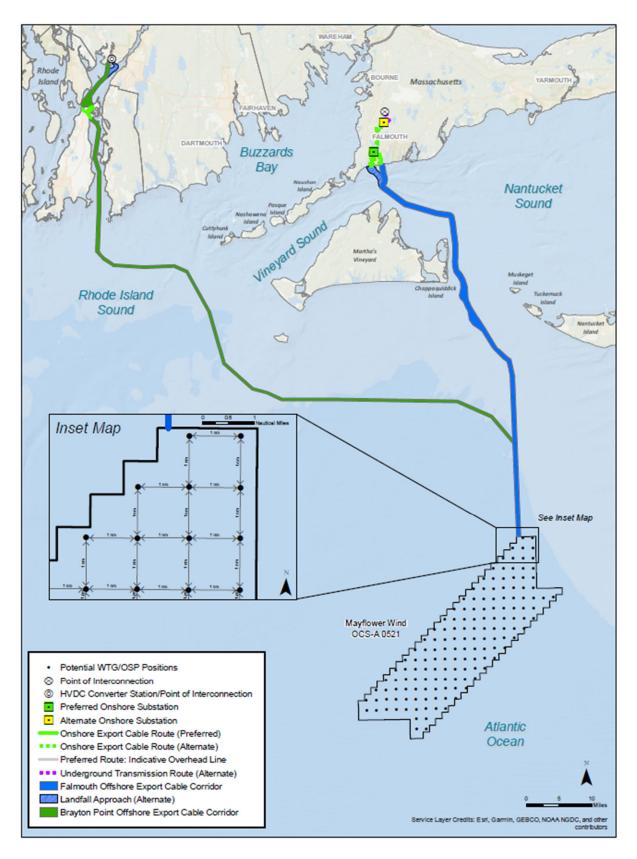


Figure 1. Overview of Mayflower Wind Offshore Renewable Energy Generation Project

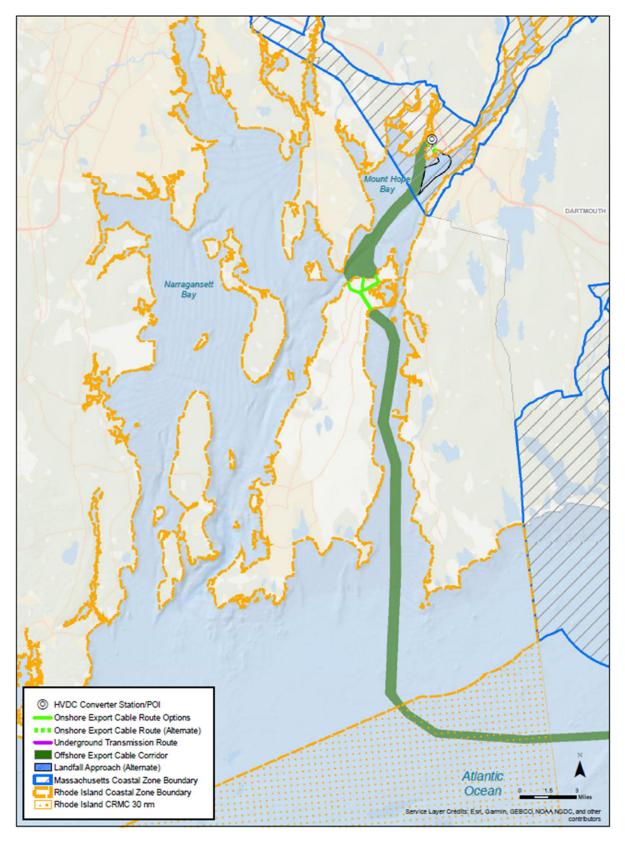


Figure 2. Location of the Brayton Point ECC within the Rhode Island and Massachusetts CZM Boundaries



Figure 3. Location of Mayflower Wind Onshore Project Elements – Aquidneck Island Crossing<sup>11</sup>

<sup>&</sup>lt;sup>11</sup> Source for Wetlands on Figure 3: Generalized Coastal and Inland Wetlands. RIGIS/URI Environmental Data Center. Published 1993. Accessed July 14, 2021.

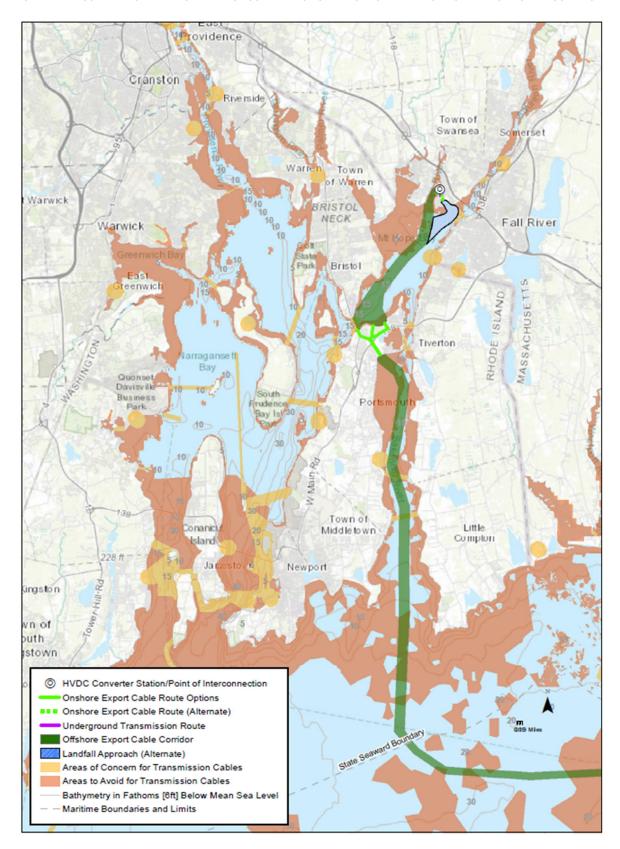


Figure 4. Areas of Concern, Areas to Avoid, and Preliminary Transmission Cable Routes within Rhode Island and Massachusetts Coastal Zone Boundaries<sup>12</sup>

http://maps.massgis.state.ma.us/czm/moris/metadata/moris\_om\_areas\_to\_avoid\_cables\_poly.htm

<sup>&</sup>lt;sup>12</sup> Source: Areas to Avoid and Areas of Concern for Siting of Potential Offshore Wind Transmission Cables Corridors, 2015 Massachusetts Ocean Management Plan

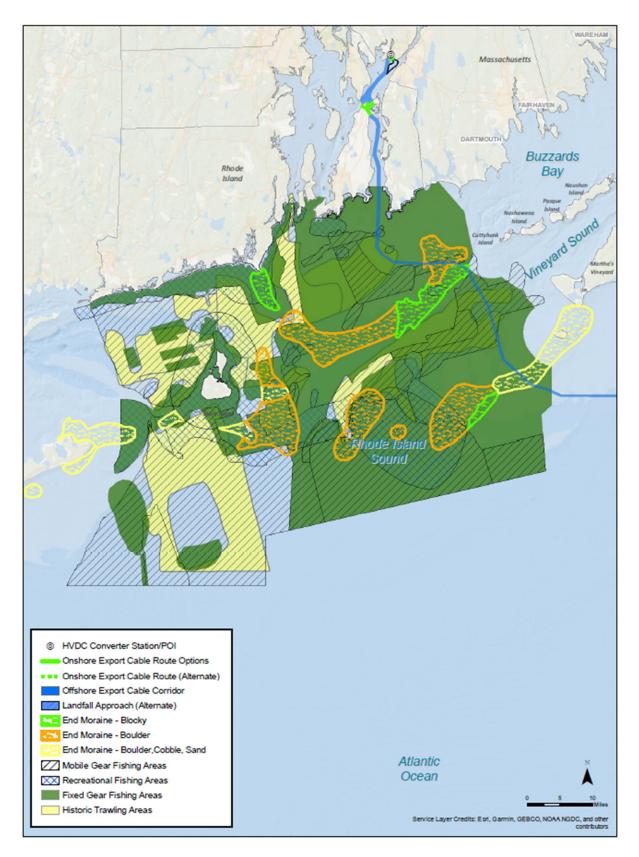


Figure 5. Glacial Moraines and Fishing Areas within the Rhode Island Coastal Zone Boundary<sup>13</sup>

<sup>&</sup>lt;sup>13</sup> Fishing Areas (Commercial Fixed and Mobile Gear; Recreational). URI Environmental Data Center/RIGIS. Updated October 2009. Accessed July 14, 2021. <a href="http://www.narrbay.org/d\_projects/oceansamp/gis\_fisheries.htm">http://www.narrbay.org/d\_projects/oceansamp/gis\_fisheries.htm</a> and Glacial Geology



Figure 6. Coastal Barrier Features within the Rhode Island Coastal Zone Boundary

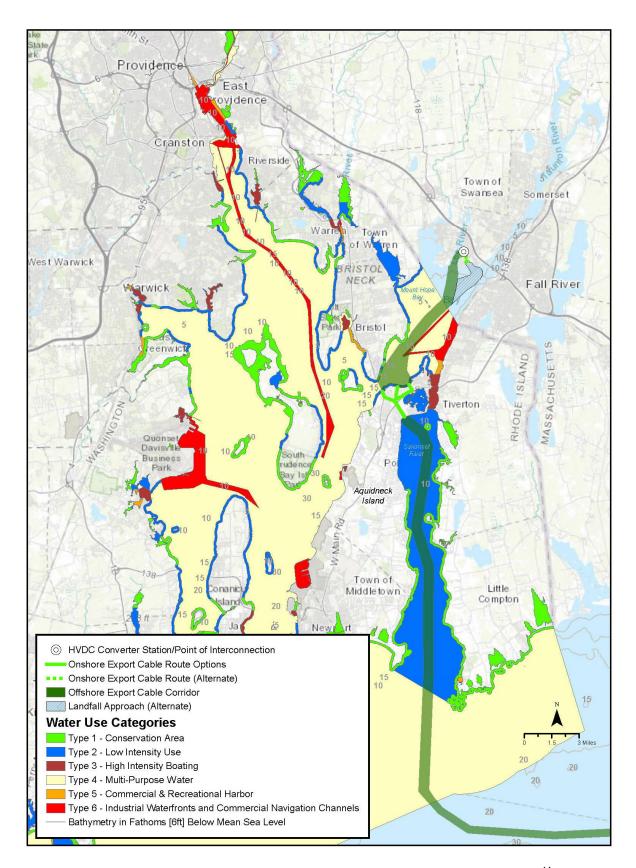


Figure 7. Water Use Category within the Rhode Island Coastal Zone Boundary<sup>14</sup>

<sup>&</sup>lt;sup>14</sup> Water Use Categories. URI Environmental Data Center/RIGIS. Published May 28, 2021. Accessed July 14, 2021. https://www.rigis.org/datasets/edc::water-use-categories/about

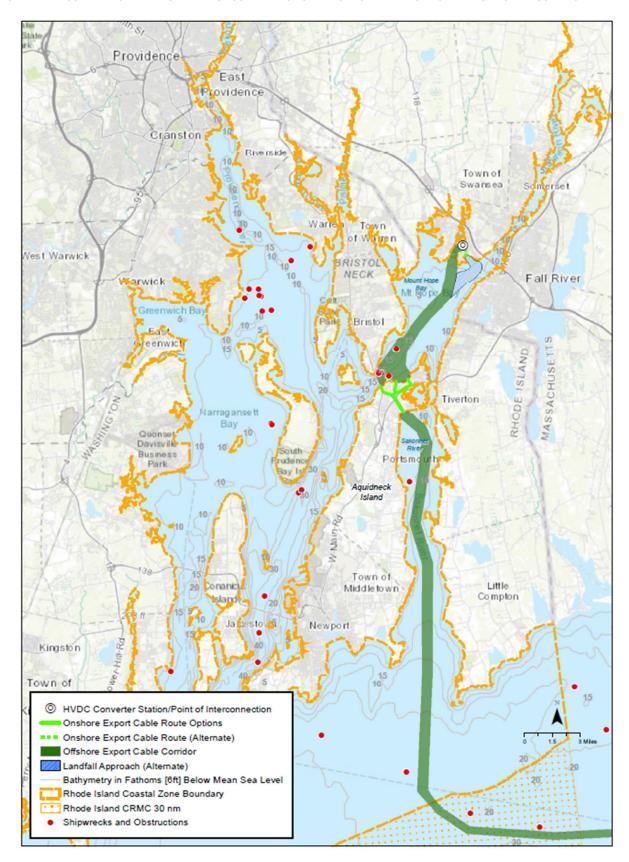


Figure 8. Marine Archaeology (Shipwrecks and Obstructions) within the Rhode Island Coastal Zone Boundary<sup>15</sup>

<sup>&</sup>lt;sup>15</sup> RICMC and RICZM credits, NOAA. Public Wrecks and Obstructions. 2016. Accessed July 14, 2021. https://nauticalcharts.noaa.gov/data/wrecks-and-obstructions.html

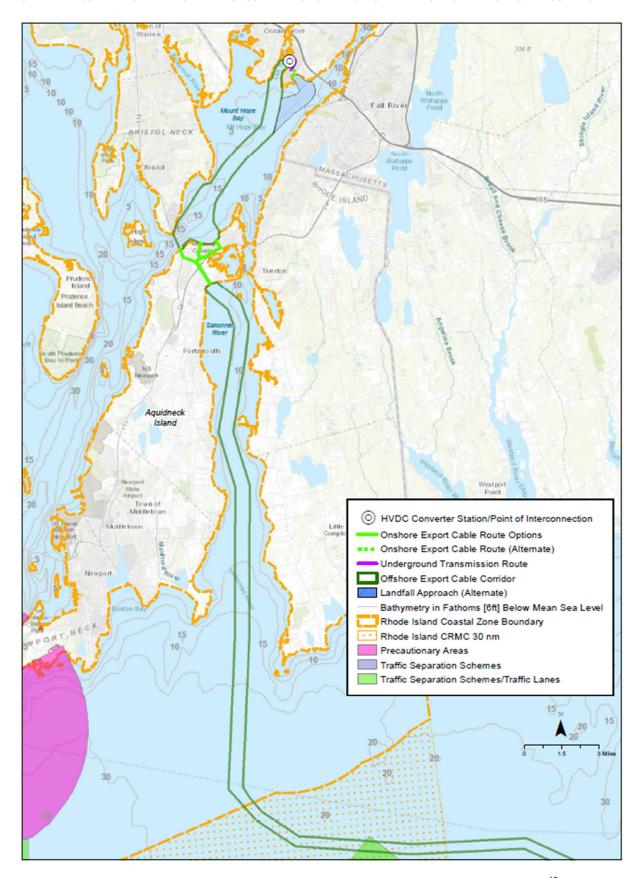


Figure 9. Shipping Lanes within the Rhode Island Coastal Zone Boundary <sup>16</sup>

<sup>&</sup>lt;sup>16</sup> Shipping Fairways, Lanes, and Zones for US waters. NOAA. Published 12/4/2015. Accessed July 14, 2021. https://nauticalcharts.noaa.gov/data/gis-data-and-services.html#enc-direct-to-gis

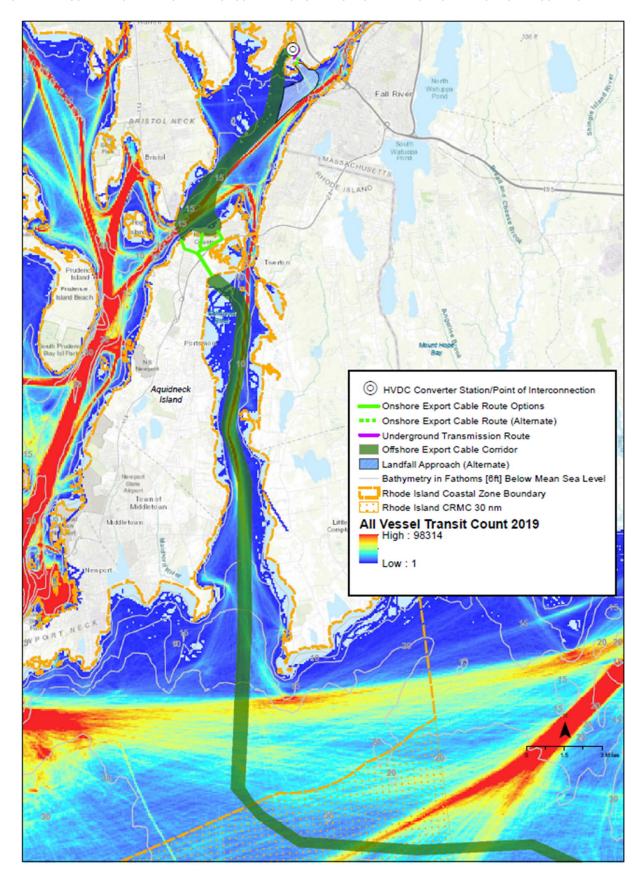
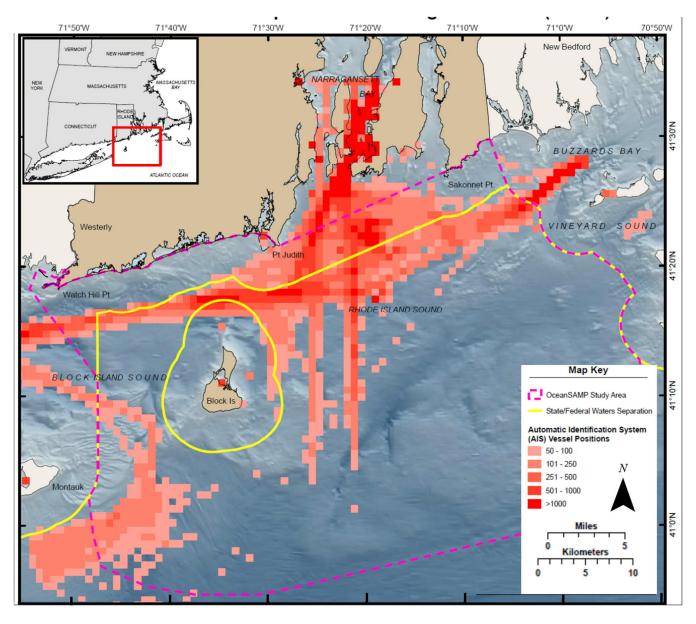


Figure 10. Vessel Activity in the Rhode Island Coastal Zone Boundary<sup>17</sup>

<sup>&</sup>lt;sup>17</sup> All Vessel Transit Counts from - 2019 AlS Northeast and Mid-Atlantic United States. Northeast Regional Ocean Council Northeast Ocean Data. Published April 2020. Accessed July 14, 2021, https://portal.midatlanticocean.org/visualize



Source: Adapted from the Rhode Island Ocean Special Area Management Plan (CRMC, 2010)

Figure 11. Commercial Ship Traffic in the Rhode Island Coastal Zone Boundary