

2021 Massachusetts Ocean Management Plan

Volume 1
Management and Administration



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Charles D. Baker
GOVERNOR

Karyn E. Polito
LIEUTENANT GOVERNOR

Kathleen A. Theoharides
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1081
<http://www.mass.gov/envir>

December 30, 2021

Dear Fellow Massachusetts Residents:

The Baker-Polito Administration affirms the Commonwealth's dedication to the responsible stewardship of the ocean resources that are so critical to our prosperity and way of life and to the protection and sustainable use of state ocean waters. To support the continued protection and preservation of Massachusetts' precious ocean resources, the Administration is pleased to publish the 2021 Massachusetts Ocean Management Plan.

The first ocean plan was issued by the Executive Office of Energy and Environmental Affairs (EEA) in 2009, marking Massachusetts as a national leader in comprehensive ocean planning and management. This significant milestone, launched with the signing of the Oceans Act in 2008, was the culmination of an extensive planning process. EEA, in collaboration with a range of stakeholders, worked to collect and analyze the best available science and data on ocean resources and uses and to identify efficient and effective management options. The resulting ocean plan created a pragmatic management structure that enables the Commonwealth to proactively balance current and future uses of ocean waters while protecting critical ocean habitats and promoting sustainable economic development.

The Oceans Act recognizes the need for the ocean plan to be revisited and revised as conditions change and management needs evolve, and therefore requires the ocean plan to be reviewed every five years and amended as necessary. This document is the formal amendment of the 2015 ocean plan. While continuing the management framework of the two previous versions, the 2021 ocean plan also builds on experience in plan implementation since 2015 and makes important revisions that reflect changes in science and technologies, economic and policy priorities, and environmental conditions. It also provides a robust foundation for management of ocean resources and uses that will allow tremendous progress on priority science and data needs while encouraging engagement with communities and stakeholders to guide ongoing ocean management work in Massachusetts.

The 2021 ocean plan would not have been possible without the dedication and contributions of many individuals and organizations. The Office of Coastal Zone Management led the planning process, with critical contributions from other EEA agencies, as well as other state and regional entities. The Ocean Advisory Commission provided sound guidance and important policy recommendations, and the Ocean

Science Advisory Council gave expert advice on the science and technical aspects of the ocean plan. Many representatives of ocean interests and other members of the public participated in work groups, provided important input during the planning process, and made thoughtful comments on proposed plan revisions. I would like to personally thank all of these contributors for their commitment to ensuring that the Massachusetts Ocean Management Plan meets the needs of the Commonwealth's citizens, today and into the future.

Sincerely,

A handwritten signature in dark ink that reads "K. Theoharides". The signature is written in a cursive, slightly slanted style.

Kathleen A. Theoharides
Secretary
Executive Office of Energy and
Environmental Affairs

Table of Contents

Introduction	1
Chapter 1 - Summary of Revisions to the 2015 Ocean Plan	5
Chapter 2 - Management	10
Chapter 3 - Administration	41
Appendix 1 - The Oceans Act of 2008	55
Appendix 2 - 301 CMR 28.00 Implementing Regulations for the Ocean Management Plan	63
Appendix 3 - Ocean Development Mitigation Fee	76
Appendix 4 - Ocean Resources and Waterways Trust Fund Implementation Guidelines	80
Volume 1 - Figures	84

Introduction

The Massachusetts Ocean Management Plan (ocean plan) promotes the sustainable use of state ocean waters and protects critical marine habitat and important water-dependent uses by establishing siting and management standards for new ocean-based projects. In response to the Oceans Act of 2008, the Executive Office of Energy and Environmental Affairs (EEA) published the first ocean plan in December 2009. The ocean plan is intended to be an evolving document—revised periodically to adapt as better information and science is developed, policy goals evolve, and experience in applying the management and administrative framework is gained. To achieve this goal, the ocean plan regulations at 301 CMR 28.00 require EEA to review the ocean plan at least once every five years, a process that is led by EEA’s Office of Coastal Zone Management (CZM). The original ocean plan was reviewed and an amendment was issued in 2015. In accordance with the ocean plan regulations, the 2015 ocean plan and its implementation were recently the subject of another formal review, resulting in this 2021 ocean plan document. The review and amendment process and an overview of this document are described below.

Ocean Plan Review and Amendment Process

The ocean plan regulations (301 CMR 28.00) allow for periodic “updates” or “amendments” to the ocean plan. Ocean plan updates are minor revisions necessary for the effective and efficient administration of the ocean plan and include clarifications of the management framework or administration, updated geospatial data related to special, sensitive, or unique (SSU) areas or protected water-dependent uses (WDUs), and minor shifts in management area boundaries. Ocean plan amendments are more significant changes and include the creation of new management areas or significant boundary changes; the creation of new, or substantial revision to, existing management standards; and the identification of new, or the removal of existing, SSU resources or WDUs. Amendments require scoping coordination between the EEA Secretary, Ocean Advisory Commission (OAC), and Ocean Science Advisory Council (SAC); a 60-day comment period; public hearings; filing of the amended ocean plan with the Massachusetts House of Representatives and Senate clerks; and any necessary revisions to the ocean plan regulations.

The ocean plan review process informs whether an ocean plan update or amendment is warranted. The review of the 2015 ocean plan was conducted in 2020 and included: an assessment of the ocean-based projects that had been subject to the ocean plan to date, review by the six technical work groups of the geospatial extent of the sensitive coastal resources and maritime uses protected through the ocean plan, evaluation of science priorities and data actions as presented in the previous Science Framework, an update to the Baseline

Assessment of the status and trends in Massachusetts ocean waters, public input through a survey and technical/stakeholder meetings, development of a draft ocean plan review document, and public review of the draft document through a 30-day comment period.

The six technical work groups consisting of over 100 technical and scientific experts provided significant input to the review process. These technical work groups—which include Habitat, Fisheries, Transportation and Navigation, Sediment and Geology, Cultural Heritage and Recreational Uses, and Energy and Infrastructure—met in 2019 and 2020 to discuss and review the 2015 ocean plan. Work group members were tasked with reviewing the management framework, mapped resources, and science and data priorities associated with their work group’s expertise. Specifically, the scope of the work group reviews was to: 1) identify changes since 2015 to the SSU areas and WDUs mapped in the ocean plan; 2) identify trends in resources or uses addressed by the ocean plan that may require an ocean plan update or amendment; 3) propose new science or data sources that would inform the ocean plan; and 4) review the science and data priorities in the 2015 ocean plan and make recommendations for updated science and data priorities. Recommendations from each of the technical work groups included the development of new or additional data, revisions to existing analysis methods, revisions of mapping approaches, or a combination of these. The technical work groups developed reports of their findings, which are available on the 2021 Massachusetts Ocean Plan web page.¹ The reports are also summarized in the *Review of the 2015 Massachusetts Ocean Management Plan*.²

Public input was also an important component of the ocean plan review process. In early 2019, CZM sent a 16-question survey to the OAC, SAC, and interested public to gather feedback on the 2015 ocean plan and its implementation. Of the almost 900 people who received the survey, 86 responded (about 10%). Survey respondents included those with varying degrees of familiarity with the ocean plan, but 79% indicated that they were either very familiar or somewhat familiar with the ocean plan. Respondents provided suggestions to be considered in the ocean planning framework:

- Offshore aquaculture, oil and gas exploration, and artificial reefs were the top three ocean uses not currently addressed by the ocean plan noted by respondents.
- White shark habitat, cultural sites, and aquaculture/shellfish areas were the top three areas within the scope and geographic boundary of the Massachusetts Ocean Management Planning Area (planning area) that respondents indicated needed additional protection.
- WDUs not currently covered under the ocean plan noted by respondents were offshore aquaculture and commercial and recreational intertidal shellfishing sites.

¹ <https://www.mass.gov/service-details/2021-massachusetts-ocean-management-plan>

² <https://www.mass.gov/files/documents/2021/01/08/ocean-plan-review-2020.pdf> (PDF, 3 MB)

- New geospatial data that respondents suggested should be generated and used in ocean planning were the locations of aquaculture leases, fisheries management areas, lobster and crab fleet fishing, sand deposition, and cultural sites.
- Interest was expressed in completing seafloor mapping across all of Massachusetts coastal waters.
- Areas of research that respondents indicated should be science priorities included shellfish propagation/restoration, monitoring for contaminants of emerging concern, ocean acidification, medicinal uses of ocean products, and the impacts of sand extraction.

The results of the ocean plan survey were used by the technical work groups to inform their review of relevant topic areas.

Lastly, involvement of the OAC and SAC was a significant component of the review process. The SAC met in January and May 2020 to review recommendations for new data and analysis related to protected resources and uses and provided valuable feedback to CZM. In September 2020 and April 2021, the OAC and SAC had joint meetings to discuss both management and administration recommendations for the amended ocean plan.

On September 22, 2021, EEA issued the Draft 2021 Massachusetts Ocean Management Plan for public review, hearings, and a 60-day public comment period, including four virtual public hearings focused on: North Shore, Boston Harbor and South Shore, Cape Cod and Islands, and South Coast. After the public comment period, CZM compiled and reviewed the comments, brought recommended adjustments to the draft ocean plan amendment to the OAC and SAC for their input, and finalized the 2021 ocean plan.

Overview of this Document

This document, the 2021 ocean plan, represents the most recent formal amendment to the ocean plan and supersedes the 2015 ocean plan. Volume 1 covers ocean plan management and administration, with Chapter 1 summarizing the revisions to the 2015 ocean plan, Chapter 2 describing the management goals of the ocean plan, and Chapter 3 covering ocean plan administration. Volume 2 contains the Baseline Assessment update and the Science Framework. The Baseline Assessment update characterizes the current condition, status, and trends in the physical environment, cultural and natural resources, human uses, and economic value of Massachusetts ocean waters. The Science Framework provides an update on the progress made toward the science priorities of the 2015 ocean plan and presents the new vision for science and data development that will achieve the management goals of the 2021 ocean plan. The Science Framework is organized by five classes of management goals: advance data and information to support the sustainable use of shared ocean resources with existing and emerging uses in the development of offshore wind; further characterize

offshore sand resources; further characterize sensitive cultural and recreational areas; continue seafloor and habitat mapping; and adapt the management framework in response to the most recent science and geospatial data, including climate change.

Chapter 1 - Summary of Revisions to the 2015 Ocean Plan

The 2021 Massachusetts Ocean Management Plan makes several substantive changes to the 2015 ocean plan, which are briefly summarized below.

Management Areas

The ocean plan combines elements of both designated areas and performance standards in its management framework. The ocean plan establishes two management categories within the Ocean Management Planning Area (planning area) (see Figure 1 for the planning area and Figure 2 for the designated management areas).³ The vast majority of the planning area is designated as a Multi-Use Area, open to all uses, activities, and facilities as allowed under the Ocean Sanctuaries Act, subject to siting and management standards defined in the ocean plan, including renewable energy development. There is also a Prohibited Area, coincident with the Cape Cod Ocean Sanctuary, where under the Ocean Sanctuaries Act certain uses, activities, and facilities are prohibited (e.g., activities and facilities associated with the generation, transmission, and distribution of electric power). No changes were made to the Multi-Use and Prohibited Areas in the 2021 ocean plan.

The previous ocean plans (2009, 2015) had also designated two Wind Energy Areas, the Gosnold Wind Energy Area and the Martha's Vineyard Wind Energy Area, which constituted two percent of the planning area, and were designated as the only locations in the planning area suitable for commercial-scale wind energy facilities. Due to several factors, the 2021 ocean plan removes the Gosnold and Martha's Vineyard Wind Energy Areas. The 2015 ocean plan called for an evaluation of their status as designated Wind Energy Areas, in part because the 2012 Wind Energy Plan for Dukes County designated exclusionary areas within large sections of the Gosnold and Martha's Vineyard Wind Energy Areas. The Martha's Vineyard Commission (MVC) has legal authority under the Oceans Act to define the appropriate scale of offshore renewable energy projects within its jurisdiction. Given the restrictions of the MVC's county wind plan, the availability of new data and information, and stakeholder concerns expressed during the review of the 2014 draft ocean plan, the 2015 ocean plan acknowledged that commercial-scale wind energy projects are not suitable for these areas. In addition, advances in offshore wind technology have made it possible to site large and efficient turbines farther from land where they can capture greater wind resources at longer durations than at locations closer to shore. While wind energy is unlikely to be developed within Massachusetts state waters, the offshore wind energy industry is rapidly

³ For production purposes, all figures are placed at the end of the document.

developing within adjacent federal waters (Figure 3). Thus, the 2021 ocean plan does not include the Gosnold and Martha’s Vineyard Wind Energy Areas.

Protected Ocean Resources and Uses

The performance-based approach in the ocean plan identifies and maps special, sensitive, or unique (SSU) resources and water-dependent uses (WDUs). It also protects these high value resources and uses through siting and performance standards that direct specific development activities away from these areas. As discussed in the Introduction, six technical work groups, comprised of over 100 subject matter experts from state and federal agencies, academia, nonprofits, and the private sector, were convened to review the best available scientific data and geospatial information and identify and characterize important trends in ocean resources and uses. The technical work groups provided recommendations to CZM on new data that should be used to update these resources and uses and the preferred methods for updating the ocean plan maps. Based on the recommendations of the technical work groups, changes have been made to eight of the 12 SSU resource maps identified in the ocean plan (Table 1-1). Most of the map updates reflected the use of more recent data. For Roseate Terns (Figure 7) and Special Concern Terns (Figure 8), however, the updates included a change in the methodology used for mapping, which resulted in significant changes to the mapped spatial extent.

Table 1-1. Changes to mapped areas of special, sensitive, or unique resources

SSU resource	Mapped area change?
North Atlantic Right Whale Core Habitat (Figure 4)	Yes
Humpback Whale Core Habitat (Figure 5)	Yes
Fin Whale Core Habitat (Figure 6)	Yes
Roseate Tern Core Habitat (Figure 7)	Yes
Special Concern (Arctic, Least, and Common) Tern Core Habitat (Figure 8)	Yes
Sea Duck Core Habitat (Figure 9)	No
Leach’s Storm-Petrel Important Nesting Habitat (Figure 10)	No
Colonial Waterbirds Important Nesting Habitat (Figure 11)	No
Hard/Complex Seafloor (Figure 12)	Yes
Eelgrass (Figure 13)	Yes
Intertidal Flats (Figure 14)	No
Important Fish Resource Areas (Figure 15)	Yes

Based on the recommendations of the technical work groups, changes were made to the spatial area maps for three of the five of the concentrations of water-dependent uses identified and mapped in the 2015 ocean plan (Table 1-2). In addition, at the recommendation of the Fisheries Work Group, a new Fixed Fishing Facilities WDU was added to the management framework. The specific details on the data sources, mapping methods, and reasoning can be found in the individual technical work group reports, which are available on the 2021 Massachusetts Ocean Plan web page.⁴

Table 1-2. Changes to mapped concentrations of water-dependent uses

Concentrations of water-dependent use	Mapped area change?
High Commercial Fishing Effort and Value (Figure 16)	Yes
Concentrated Recreational Fishing (Figure 17)	No
Concentrated Commerce Traffic (Figure 18)	Yes
Concentrated Commercial Fishing Traffic (Figure 19)	Yes
Concentrated Recreational Boating (Figure 20)	No
Fixed Fishing Facilities (Figure 21)	New WDU

Siting and Performance Standards

Under the management framework developed by the 2009 ocean plan and codified in regulations at 301 CMR 28.00, proposed activities within the Ocean Management Planning Area that are allowed under the Ocean Sanctuaries Act and required to file an Environmental Impact Report (EIR) under the Massachusetts Environmental Policy Act (MEPA) are subject to ocean plan siting and performance standards. No changes to the siting or performance standards were made in the 2021 ocean plan.

Management of Allowed Uses in the Planning Area

The ocean plan describes specific management standards and measures for uses, activities, and facilities allowed under the Ocean Sanctuaries Act, as amended by the Oceans Act, including: renewable energy, sand borrow sites for beach nourishment and shore protection, cables and pipelines, and aquaculture. No changes were made to these specific management standards in the 2021 ocean plan, although aquaculture standards are still in development.

⁴ <https://www.mass.gov/service-details/2021-massachusetts-ocean-management-plan>

Ocean Development Mitigation Fee

The ocean management plan regulations at 301 CMR 28.06 call for the Secretary of the Executive Office of Energy and Environmental Affairs (EEA) to develop a fee schedule that reflects differences in terms of the scale and effects of ocean development projects. The fee schedule describes three classes of ocean development projects, based on their size and the expected temporal and spatial extent of their impacts, and sets out guidance for financial mitigation to the Commonwealth for these impacts. Given that fee values had not been updated for several years, EEA consulted with an advisory working group with representatives from the regulated community (energy industry and its consultants), commercial fishing, environmental interests, and EEA agencies to update the fee schedule to take into account inflation and recent experiences with permitting for offshore wind export cables. Chapter 3 of this ocean plan describes the updates to the mitigation fee class descriptions and provisions for the determination and administration of the fee.

Baseline Assessment

A key component of the original 2009 ocean plan was the Baseline Assessment, which was developed to characterize the current condition, status, and trends in the physical environment, cultural and natural resources, human uses, and economic value of Massachusetts ocean waters. The Oceans Act requires the review and update of the Baseline Assessment at least every five years. Based on findings from the six technical work groups, and in coordination with the Ocean Science Advisory Council (SAC), an update to the Baseline Assessment was developed—contained in Volume 2 of this ocean plan—that describes changes from the 2009 “baseline.” The seven chapters in the Baseline Assessment update are: Water Column Features, Seabed Features, Habitat, Archaeological Landscape and Cultural Heritage, Human Uses, Economic Impact of the Marine Sector, and Climate Change.

Science Framework

To ensure that the ocean plan remains current and relevant, the Oceans Act requires a review of the ocean plan at least once every five years and a realignment of its priorities, as necessary, after consultation with the Ocean Advisory Commission (OAC), SAC, and the public. One outcome of this extensive review is a list of scientific and geospatial data recommendations collectively called the Science Framework—contained in two sections in Volume 2 of the ocean plan. The first section describes the progress made on the 2015 ocean plan science priorities and the partners that worked with CZM to achieve these results. The second section outlines the five new science priorities that will help further the management goals of the 2021 ocean plan. The priorities include supporting sustainable offshore wind development in Massachusetts and New England, further characterizing offshore sand resources, further characterizing cultural and recreational sites, continuing

seafloor and habitat mapping, and adapting the ocean plan's management framework based on new science and data, including climate change. These priorities derive from recommendations made by the six technical work groups that were convened to review the ocean plan and make recommendations on science and management actions to keep the ocean plan current and relevant, as well as from public comments received during the ocean plan review process. In addition, the proposed science priorities were presented to and approved by the OAC and SAC.

Chapter 2 - Management

The Massachusetts Ocean Management Plan (ocean plan) establishes a management framework to address the goals of the Oceans Act and improve stewardship and management of the ocean resources and uses in and beyond Massachusetts marine waters. In the development of the original ocean plan released in 2009, several management options and alternatives were considered. The management approach ultimately adopted combines elements of both designated area-based and performance standards-based management. This approach uses existing regulatory frameworks to maximize integration and coordination among agencies, with robust protections for important marine habitats and strong support for maritime water-dependent uses. This chapter describes the following ocean plan components: management areas, protected ocean resources and uses, and siting and performance standards. Specific management approaches for the activities allowed in the Ocean Management Planning Area pursuant to the Ocean Sanctuaries Act (renewable energy, offshore sand for beach nourishment, cables and pipelines, and aquaculture) are also included.

Management Areas

As defined by the Oceans Act, the Massachusetts Ocean Management Planning Area (planning area) is the water and submerged lands of the ocean lying between a line designated as the “Nearshore Boundary of the Ocean Management Planning Area” and the seaward boundary of the Commonwealth (Figure 1).⁵ Within the planning area, the ocean plan originally established three categories of management areas: Prohibited, Wind Energy, and Multi-Use. As discussed below, the Wind Energy Areas have been eliminated in the 2021 ocean plan. With this change, the management areas governed by the 2021 ocean plan include Prohibited and Multi-Use Areas (Figure 2).

Prohibited Area

The ocean plan designates a Prohibited Area, which is coincident with the Cape Cod Ocean Sanctuary, within which a variety of uses, activities, and facilities are expressly prohibited by the Ocean Sanctuaries Act (e.g., activities and facilities associated with the generation, transmission, and distribution of electric power), and are therefore prohibited under the ocean plan.

Multi-Use Area

The majority of the planning area is designated as a Multi-Use Area (Figure 2). As

⁵ For production purposes, all figures are placed at the end of the document.

such, it is open to all uses, activities, and facilities allowed under the Ocean Sanctuaries Act,⁶ including but not limited to:

- Transient, vessel-based activities
- Commercial and recreational fishing
- The operation and maintenance of existing municipal, commercial, or industrial facilities
- A new or modified discharge of municipal wastewater
- Discharges from vessels, except sewage
- Dredging for navigational purposes
- The extraction of sand and gravel for beach nourishment
- The harvesting and propagation of fish and shellfish in all forms
- Temporary educational and scientific activities
- The construction and operation of offshore or floating renewable energy generating facilities, except in the Cape Cod Ocean Sanctuary
- The laying of cables approved by the Department of Public Utilities or the Department of Telecommunications and Cable
- Channel and shore protection projects
- Navigational projects and aids
- Projects authorized under M.G.L. c. 91 and 310 CMR 9.00⁷ deemed to be of public necessity and convenience, including but not limited to natural gas lines, water mains, and wastewater and stormwater pipes

Management of allowed activities in the Multi-Use Area is based on an approach that directs new development away from both critical marine ecosystem habitats and areas important for water-dependent uses that were identified and mapped in the planning process. As described in the Protected Ocean Resources and Uses section below, these resources and concentrations of water-dependent uses serve as the basis for the ocean plan management approach and the planning and siting of projects in the Multi-Use Area.

Wind Energy

The 2009 and 2015 ocean plans designated two Wind Energy Areas—the Gosnold Wind Energy Area and the Martha’s Vineyard Wind Energy Area—that were presumptively suitable for commercial-scale or community-scale wind energy projects. Due to several factors, the 2021 ocean plan eliminates these Wind Energy

⁶ <https://www.mass.gov/service-details/massachusetts-ocean-sanctuaries>

⁷ <https://www.mass.gov/regulations/310-CMR-900-the-massachusetts-waterways-regulation>

Areas. The 2015 ocean plan called for an evaluation of the status of these areas, in part because the 2012 Wind Energy Plan for Dukes County designated exclusionary areas within large sections of the Gosnold and Martha's Vineyard Wind Energy Areas. The Martha's Vineyard Commission (MVC) has legal authority under the Oceans Act to define the appropriate scale of offshore renewable energy projects within its jurisdiction. Given the restrictions of the MVC's Wind Energy Plan, the availability of new data and information, and stakeholder concerns expressed during the review of the 2014 draft ocean plan, the 2015 ocean plan acknowledged that commercial-scale wind energy projects are not suitable for these areas. In addition, since 2015, advances in offshore wind technology have made it possible to site larger and more efficient turbines further from land where they may capture greater wind resources for longer durations than at locations closer to shore. It is for these reasons that the Gosnold and Martha's Vineyard Wind Energy Areas have been eliminated in the 2021 ocean plan.

To address heightened interest in offshore wind development outside the planning area, the 2021 ocean plan's maps have been updated to more accurately reflect the status of planning, siting, and leasing of federal waters for offshore wind development (Figure 3). In contrast to the wind energy development in state waters, interest in the development of offshore wind has increased and significant progress has been made in the planning for potential offshore wind in federal waters since the 2015 ocean plan. States along the Atlantic coast have committed to ambitious clean energy goals. In 2021, Executive Order 14008⁸ set out a goal of doubling offshore wind, up to 30 gigawatts, by 2030. To advance the national and state procurement goals, the federal government will delineate new lease areas, review and permit projects, and invest in transmission and port infrastructure. The broad interest and demand for suitable areas for wind energy infrastructure has led to the formal designation by the Bureau of Ocean Energy Management (BOEM) of lease areas along the Atlantic coast from North Carolina to Massachusetts, as well as initial planning for wind energy areas along the Pacific Coast, off Hawaii, in the Gulf of Mexico, and in the Gulf of Maine. These planning initiatives, along with the ongoing permitting of projects within existing lease areas, will support the capacity to meet both federal and state offshore wind goals.

Since 2015, the Commonwealth has solidified its commitment to a renewable energy future with a goal to reach zero emissions by 2050. Offshore wind will play a key role in meeting this goal and bringing clean energy to Massachusetts ratepayers at a competitive price. On August 8, 2016, Governor Baker signed the Act to Promote

⁸ <https://www.federalregister.gov/documents/2021/02/01/2021-02177/tackling-the-climate-crisis-at-home-and-abroad>

Energy Diversity,⁹ allowing for the procurement of up to 1,600 megawatts (MW) of offshore wind energy by 2027. On June 29, 2017, the Massachusetts Electric Distribution Companies, in coordination with the Massachusetts Department of Energy Resources, issued a Request for Proposals (RFP) for long-term contracts for offshore wind energy projects. On May 23, 2018, the 800 MW Vineyard Wind project was announced as the winning bid of the first procurement. Located in Lease Area OCS-A-0501 (Figure 3), Vineyard Wind 1 will be the first offshore wind project to bring energy through the planning area to Massachusetts, making landfall in Barnstable. On August 9, 2018, Governor Baker signed An Act to Advance Clean Energy,¹⁰ requiring the Department of Energy Resources to investigate the necessity, benefits, and costs of requiring distribution companies to conduct additional offshore wind generation solicitations of up to 1,600 MW. In January 2020, a second procurement process resulted in the selection of the 804 MW Mayflower Wind proposal located in Lease Area OCS-A-0521 (Figure 3) to provide clean energy to Massachusetts residents. Mayflower Wind proposes to bring energy through the planning area to Massachusetts with a landing in either Falmouth or Somerset. A third project, Park City Wind, an 804 MW project selected by Connecticut to meet its renewable energy goals and located in New England Wind Lease Area OCS-A-0534, would be the third project to bring offshore wind energy through the planning area, making landfall in Barnstable. In April 2021, Massachusetts issued a third solicitation for up to 1,600 MW of offshore wind. In December 2021, Vineyard Wind and Mayflower Wind were selected to provide 1,200 and 400 MW, respectively, of offshore wind energy to Massachusetts ratepayers. The offshore energy export cables for these projects will pass through the ocean planning area to make landfall in Barnstable for the Vineyard Wind project and either Falmouth or Somerset for the Mayflower Wind project.

Planning has also begun for the delineation of additional offshore wind areas off Northeast states to support offshore wind demand in Maine, New Hampshire, and Massachusetts. In December of 2019, BOEM hosted the initial Gulf of Maine Intergovernmental Renewable Energy Task Force meeting. This meeting was convened at the request of New Hampshire and with the support of Maine and Massachusetts to facilitate coordination and consultation among federal, state, local, and tribal governments regarding the sustainable siting and leasing of offshore wind energy in the Gulf of Maine. The next meeting is anticipated for the spring of 2022. Depending on the selected point of interconnection, offshore wind energy may connect through the planning area. Also, the state of Maine began a separate siting process in 2020 to establish a floating offshore wind research array in the Gulf of

⁹ <https://malegislature.gov/Bills/189/House/H4568>

¹⁰ <https://malegislature.gov/Bills/190/H4857>

Maine. The research array, proposed for 20 to 40 miles offshore with no more than 12 wind turbines, would inform the development of commercial floating offshore wind technologies in the Gulf of Maine and elsewhere. Maine’s application to BOEM for the research array was submitted in the fall of 2021.

Protected Ocean Resources and Uses

As directed by the Oceans Act, the ocean plan identifies and establishes siting and performance standards to protect special, sensitive, or unique (SSU) resources and areas of concentrations of water-dependent use (WDU). The 2021 ocean plan includes changes to eight of the 12 spatial area maps for SSU resources, changes to three of the five WDUs and proposes a new WDU describing the location of Fixed Fishing Facilities (permitted aquaculture and fishing weirs) in the planning area. The changes made are summarized in Tables 2-1 and 2-2 and the updated maps are contained in Figures 4 through 21.

Table 2-1. List of special, sensitive, or unique resources and summary of changes in the 2021 ocean plan

SSU resource	Mapped area change?	Summary of change
North Atlantic Right Whale Core Habitat (Figure 4)	Yes	North Atlantic right whale core habitat was updated using more recent effort-corrected sightings data from 1998-2018 (data from 1998-2014 were used to delineate the SSU resource in the 2015 ocean plan). The updated North Atlantic right whale core habitat increased to include more area in western Massachusetts Bay from Duxbury to Gloucester.
Humpback Whale Core Habitat (Figure 5)	Yes	Humpback whale core habitat was updated using more recent effort-corrected sightings data from 1998-2018 (data from 1998-2014 were used to delineate the SSU resource in the 2015 ocean plan). The updated humpback whale core habitat increased a small amount in Western Massachusetts Bay from Scituate to Marblehead.
Fin Whale Core Habitat (Figure 6)	Yes	Fin whale core habitat was updated using more recent effort-corrected sightings data from 1998-2018 (data from 1998-2014 were used to map the SSU resource in the 2015 ocean plan). The updated fin whale core habitat expanded in western Massachusetts Bay from Hull to Swampscott.

SSU resource	Mapped area change?	Summary of change
Roseate Tern Core Habitat (Figure 7)	Yes	Roseate Tern core habitat was updated by replacing the 2015 maps from the Natural Heritage and Endangered Species Program (NHESP) with NHESP's most recent core habitat maps. The update resulted in a significant increase in mapped habitat in Cape Cod Bay, Nantucket Sound, around Nantucket and Martha's Vineyard Islands, and Buzzards Bay.
Special Concern (Arctic, Least, and Common) Tern Core Habitat (Figure 8)	Yes	Special concern (Arctic, Least, and Common) tern core habitat was updated by replacing the 2015 maps from NHESP with their most recent core habitat maps. The update resulted in a significant increase in mapped habitat in Cape Cod Bay, Nantucket Sound, around Nantucket and Martha's Vineyard Islands, and Buzzards Bay.
Sea Duck Core Habitat (Figure 9)	No	Sea duck core habitat was not updated because no new and/or higher quality data were identified. As in 2015, sea duck core habitat includes regionally critical habitat for Long-tailed Duck, Common Eider, Black Scoter, Surf Scoter, and White-winged Scoter. Sea duck core habitat was mapped using effort-corrected sightings data from 2008-2012 and Long-tailed Duck telemetry data from 2008-2009.
Leach's Storm-Petrel Important Nesting Habitat (Figure 10)	No	Leach's Storm-Petrel important nesting habitat was not updated because no new and/or higher quality data were identified. As in the 2015 ocean plan, SSU resources were mapped without adjustments.
Colonial Waterbirds Important Nesting Habitat (Figure 11)	No	Colonial waterbirds important nesting habitat was not updated because no new and/or higher quality data were identified. As in the 2015 ocean plan, SSU resources were mapped without adjustments.
Hard/Complex Seafloor (Figure 12)	Yes	Hard/complex seafloor is seabed characterized singly or by any combination of hard seafloor, complex seafloor, artificial reefs, biogenic reefs, or shipwrecks and obstructions. For the 2021 ocean plan, hard/complex seafloor was mapped using updated surficial seafloor sediment data and the same complex seafloor data used in the 2015 ocean plan. The locations of artificial reefs, biogenic reefs, and shipwrecks and obstructions to navigation were added to the SSU resource area. The change in the area of hard/complex seafloor was minor (a decrease of <2%).

SSU resource	Mapped area change?	Summary of change
Eelgrass (Figure 13)	Yes	Eelgrass was updated by incorporating new data on the locations of eelgrass beds from 1995 to 2019 and applying a 100-meter buffer around all eelgrass beds to account for interannual changes in boundaries (the 2015 ocean plan used unbuffered data from 1995, 2001, 2006/2007, 2010, 2012, and 2013). The changes between the mapped 2015 and 2021 SSU resource areas were minor.
Intertidal Flats (Figure 14)	No	The intertidal flats SSU map was not updated because no new and/or higher quality data were identified.
Important Fish Resource Areas (Figure 15)	Yes	Important fish resource areas were updated using trawl survey data from 2008-2018 because this data set better represents current areas of high biomass (trawl surveys from 1978-2012 were analyzed in the 2015 ocean plan). The SSU resource area for the 2021 ocean plan changed significantly with no representation in Nantucket Sound and increased area in deeper strata of the outer Cape, Massachusetts Bay, and Ipswich Bay.

Table 2-2. List of concentrations of WDUs and summary of changes in the 2021 ocean plan

Concentrations of WDUs	Mapped area change?	Summary of change
High Commercial Fishing Effort and Value (Figure 16)	Yes	High commercial fishing effort and value was updated using state trip-level and catch reports, federal vessel trip reports, and dealer transaction reports. Truncated data from 2010-2019 were used because the most recent decade best reflects existing uses in the planning area (reports from 1988-2012 were used in the 2015 ocean plan). The updated area increased off Outer Cape Cod and the North Shore and decreased around Martha's Vineyard.
Concentrated Recreational Fishing (Figure 17)	No	Concentrated recreational fishing was not updated because no new and/or higher quality data were identified.
Concentrated Commerce Traffic (Figure 18)	Yes	Concentrated commerce traffic was mapped using more recent Automatic Identification System (AIS) data from 2018 and 2019 (AIS data from 2011 and 2012 were used in the 2015 ocean plan). The change in the updated map was minimal.

Concentrations of WDUs	Mapped area change?	Summary of change
Concentrated Commercial Fishing Traffic (Figure 19)	Yes	Concentrated commercial fishing traffic was updated using 2015 and 2016 Vessel Monitoring System (VMS) data (the 2015 areas were mapped using VMS data from 2006-2010). The updated area shows increased vessel traffic near several ports (Gloucester, Boston, Scituate, Provincetown, Chatham, and Barnstable) and depicts routes through Cape Cod Bay, Buzzards Bay, Vineyard Sound, and Nantucket Sound.
Concentrated Recreational Boating (Figure 20)	No	Concentrated recreational boating was not updated because no new and/or higher quality data were identified.
Fixed Fishing Facilities (Figure 21)	New	The addition of this new WDU was a recommendation of the Fisheries Work Group and is comprised of permitted aquaculture facilities and fishing weirs with 94 mapped locations mapped covering 227 acres.

Siting and Performance Standards

Under the ocean plan management framework, proposed activities within the Ocean Management Planning Area that are allowed under the Ocean Sanctuaries Act and required to file an Environmental Impact Report (EIR) under the Massachusetts Environmental Policy Act (MEPA) are subject to the siting and performance standards listed below. These standards are meant to ensure that all practicable measures to avoid, minimize, and mitigate impacts are applied to projects and that the public benefits of a project outweigh its detriments.

Because activities have different potential impacts on SSU resources and concentrations of WDUs, the protected resources and uses that must be addressed vary according to the type of activity. The specific SSU resources and concentrations of WDUs that must be addressed for each allowed activity are detailed in the Management of Uses in the Planning Area section below.

Projects that exceed MEPA Environmental Notification Form (ENF) thresholds are required to document any potential impacts to SSU resources and/or concentrations of WDUs to allow agencies and the public to inform the Secretary of the Executive Office of Energy and Environmental Affairs (EEA) whether additional review in a discretionary EIR is warranted. Projects that exceed EIR review thresholds are presumed to have more potential for significant impacts and are subject to the siting and performance standards of the ocean plan. Under the ocean plan, the following standards apply to allowed activities that are subject to

MEPA review through the preparation of an EIR:

- Activities proposed in the planning area are presumptively excluded from specific SSU resource areas listed in the Management of Uses in the Planning Area section below. The SSU resource area maps in the ocean plan represent the best available information regarding the spatial extent of SSU resources at the time of ocean plan publication. Pursuant to an EIR scope issued by the EEA Secretary, the development of project-specific information may require additional site characterization to confirm the presence/absence of an SSU resource. This presumption may be overcome by the demonstration that:
 1. The maps delineating the SSU resource do not accurately characterize the resource based on substantial site-specific information collected in accordance with data standards and processes described in the last bullet below; or
 2. No less environmentally damaging practicable alternative exists. For the purposes of this standard, an alternative is practicable if it is available and capable of being implemented after taking into consideration cost, existing technology, and logistics with respect to the purpose of the activity; and
 3. The project proponent has taken all practicable measures to avoid damage to SSU resources, and the activity will cause no significant alteration to SSU resources. Demonstration of compliance with this standard may include the incorporation of measures to avoid resources and impacts to resources through time of year (TOY) controls such that the construction, operation, or removal of the project will not occur when the SSU resource is present or may be adversely affected; and
 4. The public benefits associated with the proposed activity outweigh the public detriments to the SSU resource.
- To the maximum extent practicable, project proponents must avoid, minimize, and mitigate impacts to concentrations of water-dependent use areas listed in the Management of Uses in the Planning Area section below.
- As part of the MEPA review process, the EEA Secretary shall use maps and information from the ocean plan to inform scoping for impact and/or alternatives analysis and may require additional project-specific characterization of existing uses and potential impacts as deemed appropriate.

- The following data standards apply to project proponents that seek to demonstrate that the maps contained in the ocean plan do not accurately characterize the protected resource or use:
 1. Consultation with the EEA Secretary, the Office of Coastal Zone Management (CZM), and other agencies with expertise, management responsibilities, and/or regulatory authority is advised to obtain their review of any proposed effort to map or otherwise characterize protected resources or uses.
 2. Information presented must be based on site-specific investigation or characterization that conforms with contemporary and accepted standards.

The SSU resources and concentrations of WDUs identified, mapped, and protected in the ocean plan are not intended to represent the exclusive subject matter of MEPA review and agency permitting action. Rather, based on the direction of the Oceans Act, they have been identified as critically important ocean resources and uses that warrant particular attention through the regulatory review process. The ocean plan does not supersede any existing laws and regulations, including those that require the assessment of potential impacts to resources and uses not listed above. The EEA Secretary retains discretion under the MEPA statute and regulations to scope a project for any issue deemed necessary and appropriate, based on information presented by the project proponent and agency or public comment.

Overall, management in the Multi-Use Area represents an effort to balance the protection of significant existing uses and important environmental resources with the flexibility needed to allow the development of necessary infrastructure, sustainable uses, and new activities and technologies, in the context of the public trust and within the limitations of existing data. As discussed in the Science Framework in Volume 2, ongoing analysis of existing data, future data development, and increased understanding of the marine environment and patterns of human uses, will continue to result in refined ocean plan maps. This continual, adaptive approach to management ensures the best, most current information is available to support informed decision-making and improved ocean stewardship.

Management of Allowed Uses in the Planning Area

This section provides further detail on the management of the following uses, activities, and facilities allowed under the Ocean Sanctuaries Act, as amended by the Oceans Act: renewable energy (including both community-scale wind energy and commercial-scale tidal energy), offshore sand for beach nourishment, and cables and pipelines. While aquaculture is an allowed use under the Ocean Sanctuaries Act as amended by the Oceans Act, there are currently no siting or performance standards under the ocean plan beyond the existing state and federal regulatory processes. To address this potential need, a management priority for

the next five years is to work with other state agencies to explore if siting and performance standards for aquaculture is warranted in the planning area.

Renewable energy

The 2008 Oceans Act amended the Ocean Sanctuaries Act to modify a long-standing prohibition on electric generating facilities to allow the development of renewable energy facilities of appropriate scale as defined by, and consistent with, the ocean plan. The Oceans Act recognized the importance of providing an opportunity to achieve significant public benefits from the development of marine-based renewable energy in balance with other social values.

Also in 2008, two other landmark laws were enacted in the Commonwealth: 1) the Green Communities Act, which mandated that 15% of the Massachusetts electric load be served by renewable energy by 2020, and 2) the Global Warming Solutions Act, which required steep, economy-wide reductions in greenhouse gas emissions. Building on this strong foundation, the Energy Diversity Act was passed in 2016 to allow for the solicitation of 1,600 MW of offshore wind (located at least 10 nautical miles from shore), which led to the successful procurement of the Vineyard Wind 1 project in 2018. Additional legislation passed in 2018 doubled the amount of offshore wind energy solicitation to 3,200 MW. And in March of 2021, comprehensive climate change legislation codified into law the Commonwealth's commitment to achieve Net Zero emissions by 2050. The legislation updates the greenhouse gas emissions limits related to the 2008 Global Warming Solutions Act, commits Massachusetts to achieve Net Zero emissions in 2050, and authorizes the EEA Secretary to establish an emissions limit of no less than 50% for 2030, and no less than 75% for 2040. The legislation also authorizes the Commonwealth to procure an additional 2,400 MW of offshore wind, bringing the state's total authorized procurement to 5,600 MW. Key frameworks lay groundwork for how to achieve these emissions reductions targets. The Commonwealth's Clean Energy and Climate Plan (CECP) for 2025/2030 and the 2050 Decarbonization Roadmap together outline strategies, policies, and actions to help the Commonwealth achieve interim emissions limits for the net zero greenhouse gas emissions goal by 2050.

To meet these ambitious emissions reduction goals, Massachusetts has developed and implemented numerous strategies and incentives to spur the growth of renewable energy and clean energy technology and to advance other complementary efforts to reduce greenhouse gases, including major progress in energy efficiency improvements and the expansion of programs that support solar energy development. As discussed previously, responsibly sited, developed, and operated offshore wind will be key to meeting these carbon emission reduction targets. Additionally, opportunities to site

community-scale wind energy and tidal projects could play a role in the Commonwealth’s renewable energy portfolio. Where appropriate, community-scale wind and commercial-scale tidal energy may be sited in the planning area as discussed in the following sections.

The following renewable energy management approaches are covered below: appropriate scale of energy facilities, management standards for community-scale wind energy, management standards for commercial-scale tidal energy, and wave energy considerations.

Appropriate scale

The Oceans Act amended the Ocean Sanctuaries Act to allow for the development of renewable energy facilities “of appropriate scale,” provided that these facilities were otherwise consistent with the ocean plan. The Act delineated seven factors to be addressed in the appropriate-scale test, and the ocean plan describes how the analysis, compatibility assessment, application of screening criteria, and development of siting and performance standards address the values and concerns in the appropriate-scale test (summarized in the table below).

Table 2-3. Appropriate-scale factors for the development of renewable energy facilities

Factor	As addressed by the ocean plan
Protection of the public trust	The siting and performance standards associated with renewable energy facilities allowed in the Multi-Use Area were designed to avoid, minimize, and mitigate impacts to activities associated with fishing, fowling, and navigation, in reasonable balance with the siting requirements of renewable energy.
Public health, safety, and welfare	The siting and performance standards associated with renewable energy facilities allowed in the Multi-Use Area address public safety by locating renewable energy facilities away from concentrations of human activities, including shipping and commercial navigation, commercial and recreational fishing, and recreational boating, to the maximum extent practicable.
Compatibility with existing uses	The performance standards associated with renewable energy facilities allowed in the Multi-Use Area were designed to avoid, minimize, and mitigate impacts to existing uses while not unduly limiting opportunity for renewable energy development.
Proximity to the shoreline	If a proponent pursues a renewable energy project in the Multi-Use Area, the determination of proximity will be a factor in community support for the project, as required below under “community benefit.”

Factor	As addressed by the ocean plan
Environmental protection	The siting and performance standards associated with renewable energy facilities allowed in the Multi-Use Area are designed to avoid, minimize, and mitigate impacts to important resources.
Community benefit	For any renewable energy project proposed in the Multi-Use Area, the project is required to demonstrate that the host community or communities formally support the project and—for projects other than test or demonstration-scale projects ¹¹ —must provide an economic benefit to the community.
Appropriateness of technology and scale	“Appropriateness” is a function of the environmental, social, and economic interests assessed above and guides the distinction between community-scale or pilot renewable energy projects (small and therefore able to be located in busier, more visible waters) and commercial-scale projects (larger and therefore sited to minimize conflicts).

As described above in the Management Areas section, an important provision related to the determination of appropriate scale for renewable energy facilities was added via the Oceans Act. The language specifies that a Regional Planning Agency (RPA) with regulatory authority shall define the appropriate scale of offshore renewable energy projects within its jurisdiction and review such projects as developments of regional impact.

In October 2011, the Cape Cod Commission approved the *Cape Cod Ocean Management Plan*, describing the commission’s regional definition of appropriate scale for renewable energy facilities. This plan also contains guidance on the siting for cables, pipelines, and sand and gravel extraction, including minimum performance standards for the commission’s development of a regional impact review process. The *Cape Cod Ocean Management Plan* delineates wind energy conversion facility prohibited areas, which include a 2-nautical mile landward buffer and a series of SSU resources and concentrations of WDUs as defined and mapped by the 2009 ocean plan. The prohibited area excludes large areas of Cape Cod Bay, the Cape Cod Ocean Sanctuary, and Nantucket Sound from wind energy facilities.

In October 2012, the Martha’s Vineyard Commission adopted a *Wind Energy Plan for Dukes County* that delineated exclusionary areas and areas of special concern for offshore wind projects. Exclusionary areas are defined as “highly critical areas where no turbines or infrastructure shall be located.” The commission formally defined a

¹¹ Test or demonstration-scale renewable energy projects are wind, tidal, or wave energy projects of a limited scale designed to pilot, test, and demonstrate renewable energy technology.

wind energy facility of appropriate scale as a facility that conforms to the *Wind Energy Plan for Dukes County*.

The ocean plan definition of “appropriate scale” therefore accounts for the roles and authority of the RPAs. Under this definition, a renewable energy project is of appropriate scale if the facility is capable of being sited in a given location such that the factors in Table 2-3 are addressed at a level of detail for the EEA Secretary to make a determination of adequacy on an EIR, the Massachusetts Department of Environmental Protection (MassDEP) to authorize such facility under the Chapter 91 and Water Quality Certificate regulations, and an RPA with regulatory authority to determine such facility’s consistency with its definition of appropriate scale. These reviews should ensure that:

- Public trust rights are protected.
- Public safety is protected.
- Significant incompatibilities with existing uses are avoided.
- Proximity to shoreline avoids and minimizes conflicts with existing uses and minimizes visual impact to the maximum extent feasible.
- Impacts to environmental resources are avoided, minimized, and mitigated to the maximum extent practicable.
- For community-scale wind and wave or tidal projects, the host community¹² (or communities) must formally support the project and, for projects other than test or demonstration-scale projects,¹³ must receive an economic benefit from the renewable energy facility. Further, other conditions described in the Management Standards section below apply to community-scale wind projects.
- The technology and scale of the facility are appropriate to the proposed location as demonstrated by consistency with the first six bullets above.

Management standards for community-scale wind energy

Community-scale wind energy projects are an allowed use in the planning area, if they are of appropriate scale. In addition to the requirements discussed in the Management Areas section and the Appropriate Scale section above, community-scale wind energy projects must comply with the following management standards.

¹² Host community means any town or city in which all or part of a renewable energy project’s energy generating facilities (i.e., turbines not cables) are located.

¹³ Test or demonstration-scale renewable energy projects are wind, tidal, or wave energy projects of a limited scale designed to pilot, test, and demonstrate renewable energy technology.

In the Multi-Use Area, community-scale wind energy facilities are allowed subject to the siting and performance standards for SSU resources and for concentrations of WDUs described in the Management Areas section above, additional standards detailed below, and other applicable law. The SSU resources and concentrations of WDUs to be addressed for community-scale wind facilities are contained in Table 2-4 and Figure 22.

It is important to note that the electric transmission cabling component of renewable energy projects is considered a cable project and must meet the siting and performance standards described in the Cables section below.

Table 2-4. SSU resources and concentrations of WDUs to be addressed for community-scale wind energy facilities (see Figure 22)

Allowed use	SSU resource
Community-scale wind energy facilities	<ul style="list-style-type: none"> • North Atlantic right whale core habitat • Humpback whale core habitat • Fin whale core habitat • Roseate Tern core habitat • Special concern (Arctic, Least, and Common) tern core habitat • Sea duck core habitat • Leach’s Storm-Petrel important nesting habitat • Colonial waterbirds important nesting habitat • Eelgrass • Intertidal flats
	Concentrations of WDUs
	<ul style="list-style-type: none"> • High commercial fishing effort and value • Concentrated recreational fishing • Concentrated commerce traffic • Concentrated commercial fishing traffic • Concentrated recreational boating • Fixed fishing facilities

In addition to the siting and performance standards, additional management standards apply to community-scale wind facilities, as follows:

1. Community-scale wind energy facilities are projects at a scale smaller than that of commercial-scale wind energy facilities, such that their size and energy generation levels are more suited to the needs of a community (e.g., ~10-50 MW) rather than production and distribution to the regional grid. Community-scale wind projects are characterized by strong local

participation in and support for the project. Community-scale projects may serve more than one community.

2. Working with the Massachusetts Association of Regional Planning Agencies (Figure 23), a methodology was developed for allocating the maximum number of allowed turbines for community-scale wind projects on the basis of each RPA's offshore territory within the planning area, linear distance along the nearshore boundary of the planning area, number of municipalities, and total wind energy potential. Based on the methodology, an allocation of the maximum number of turbines that may be approved within each coastal area represented by an RPA was developed (Table 2-5). The maximum allocation may be increased by the EEA Secretary based on a demonstration by an RPA that the existing cap for community-scale wind energy facilities is not economically viable, or that increasing the allocation will not affect the appropriate-scale determination described above.
3. Community-scale wind projects are subject to review under the ocean plan via a mandatory EIR.
4. Project proponents must demonstrate that the host community formally supports the project. Such support may be demonstrated by a letter from the town's Board of Selectman or the city's Mayor or City Council.
5. For a project not subject to review by an RPA as a Development of Regional Impact, the appropriate scale determination shall be made by the EEA Secretary in consultation with the host community.

Table 2-5. Allocation of turbines for community-scale wind projects based on methodology developed with Massachusetts Association of Regional Planning Agencies

Regional planning agency	Maximum number of allowed turbines
Merrimack Valley Planning Commission	7
Metropolitan Area Planning Council	22
Old Colony Planning Council	9
Southeastern Regional Planning and Economic Development District	10
Cape Cod Commission	24
Nantucket Planning and Economic Development Commission	11
Martha's Vineyard Commission	17
TOTAL	100

Management standards for commercial-scale tidal energy

A limited number of areas in Massachusetts waters have been identified as having potential for tidal renewable energy (also known as marine hydrokinetic energy). Technologies for capturing tidal energy are still developing, with pilot projects and a few commercial-scale projects underway in Europe and recently in New Brunswick, Canada. The only tidal energy proposal in Massachusetts—the Muskeget Channel Tidal Energy Project—was a pilot project that received some funding and permits but was never built. There is also a tidal turbine test facility on the Cape Cod Canal, called the Bourne Tidal Test Facility, that is managed by the Marine Renewable Energy Collaborative and where the efficiency, reliability, and potential biological impacts of new tidal energy technologies can be measured.

Pilot tidal energy projects that: 1) are licensed under the Federal Energy Regulatory Commission (FERC) pilot project process, 2) fulfill the community benefit standards of the ocean plan, and 3) are in compliance with other existing regulatory standards are presumed to be of appropriate scale under the ocean plan.

In the Multi-Use Area, commercial-scale tidal energy facilities are allowed subject to the siting and performance standards for SSU resources and for concentrations of WDUs described in the Management Areas section above, additional standards detailed below, and other applicable law. The SSU resources and concentrations of WDUs to be addressed for commercial-scale tidal energy facilities are contained in Table 2-6 and Figure 24.

Table 2-6. SSU resources and concentrations of WDUs to be addressed for commercial-scale tidal energy facilities (see Figure 24)

Allowed use	SSU resource
Commercial-scale tidal energy facilities	<ul style="list-style-type: none"> • North Atlantic right whale core habitat • Eelgrass • Intertidal flats • Important fish resource areas
	<p style="text-align: center;">Concentrations of WDUs</p> <ul style="list-style-type: none"> • High commercial fishing effort and value • Concentrated recreational fishing • Concentrated commerce traffic • Concentrated commercial fishing traffic • Concentrated recreational boating • Fixed fishing facilities

In addition to the siting and performance standards, additional management standards apply to tidal and wave energy facilities, as follows:

1. Commercial-scale tidal energy facilities are projects at a scale greater than could be authorized by FERC as a pilot project under its Hydrokinetic Pilot Project Licensing Process.
2. Pilot tidal and wave energy facilities are projects at a scale that could be authorized by FERC as a pilot project under its Hydrokinetic Pilot Project Licensing Process.
3. Commercial-scale tidal energy facilities are subject to review under the ocean plan via a mandatory EIR.
4. Pilot-scale projects are subject to review if they exceed existing MEPA thresholds for a mandatory EIR or if the EEA Secretary requires a discretionary EIR based on review of an ENF. If subject to review, using the siting and performance standards for commercial-scale tidal energy facilities in Table 2-6 as guidance, the EEA Secretary will determine the SSU resources and concentrations of WDUs that apply in the MEPA scope.
5. Project proponents must demonstrate that the host community formally supports the project. Such support may be demonstrated by a letter from the town's Board of Selectman or the city's Mayor or City Council.
6. For projects not subject to review by RPAs with regulatory authority as developments of regional impact, appropriate scale shall be determined by the EEA Secretary in consultation with the host community.

Wave energy

The 2015 ocean plan stated that while small, pilot-scale wave energy projects have been proposed, the prospect for commercial-scale wave energy is limited in Massachusetts. Based on input from the Energy and Infrastructure Work Group and others in the industry, this assessment has not changed. There may be opportunities for better wave energy resources farther offshore in federal waters. There has been consideration of a nearshore wave energy pilot project in the planning area, but to date no projects have moved to the permitting phase. Management standards for wave energy may be developed in future iterations of the ocean plan if deemed necessary and appropriate.

Offshore sand for beach nourishment

Coastal shorelines shift continuously in response to a variety of factors. Wind, waves, tides, seasonal variations, human alterations, and sea level rise influence the movement of sediment within shoreline systems. Areas of the Massachusetts coast are vulnerable to erosion and flooding, which can lead to damage to property and infrastructure, as well as diminished habitat and recreational values. In developed areas, especially where coastal engineering structures are used to stabilize shorelines, natural sediment transport processes can be interrupted, and under conditions of reduced sediment, the ability of coastal resource areas such as dunes and beaches to provide storm damage prevention and flood control benefits is continually reduced.

Climate change has and will continue to exacerbate these issues—higher sea levels and future storm events will result in greater erosion and flooding impacts over time. Under accelerated rates of sea level rise, low-lying coastal areas will be particularly vulnerable to increased erosion, flooding, and inundation. In addition, these impacts are currently and will continue to extend farther inland, resulting in greater loss of land and damage to development and natural resources along the coast of Massachusetts.

Many Massachusetts communities are currently facing critical erosion issues that present threats to and are having adverse effects on public infrastructure and services, recreational opportunities, maritime heritage resources, and natural habitats. As options for addressing erosion and flooding issues are considered and strategies developed, interest in utilizing ocean sand resources for beach and dune nourishment is expected to increase. Offshore sand resources are one of several alternatives for projects seeking to restore beaches and dunes by adding compatible material, the others being sand sourced from upland locations and from coastal navigational and other dredging projects. While the beneficial re-use of sand from nearshore dredging projects and the use of upland sand sources is common in Massachusetts (Figure 25), offshore sand has been used in only a small number of projects. While there are considerable sand resources in certain offshore areas in both state and federal waters, the extraction of this material for beach nourishment must be balanced with the protection of marine ecosystems—especially impacts on habitat for commercial and other important fish species, underwater archaeological sites and culturally important areas, and water-dependent uses.

Policy initiatives supporting management of offshore sand for beach nourishment

This section provides important contextual information on policy initiatives that inform and support the management of offshore sand for beach nourishment through the ocean plan.

- Massachusetts Climate Change Adaptation Report** - The state's 2008 Global Warming Solutions Act (GWSA) directed the EEA Secretary to convene an advisory committee to analyze strategies for adapting to the predicted changes in climate and develop a report. Prepared by EEA and its Climate Change Adaptation Advisory Committee, the *2011 Massachusetts Climate Change Adaptation Report*¹⁴ is the first broad overview of climate change for the Commonwealth. The report describes the predicted impacts of a changing climate and the vulnerabilities of multiple sectors including natural resources, infrastructure, public health, and the economy. It also provides an analysis of potential strategies that could better prepare Massachusetts for anticipated changes. Work on implementation of many of the elements of the *2011 Massachusetts Climate Change Adaptation Report* continues through programs and efforts across state agencies and by municipalities, non-governmental organizations, and the private sector. Under a coordinated plan for climate preparedness across the Commonwealth, launched in 2014, investments are being made to reduce risk associated with coastal storms and sea level rise. Through CZM's Coastal Community Resilience Grants Program, financial and technical assistance is being made available for community-based efforts to advance new and innovative projects to reduce risks associated with coastal storms, erosion, and sea level rise and increase community resilience (i.e., the ability to endure impacts associated with coastal storms and the effects of erosion, flooding, and sea level rise and to respond, recover, and adapt to consequences). Beginning in 2018, EEA's Municipal Vulnerability Preparedness Program also provides funding for Massachusetts municipalities to identify climate hazards, assess vulnerabilities, and develop action plans to improve resilience to climate change.
- State Hazard Mitigation and Climate Adaption Plan** - The State Hazard Mitigation and Climate Adaptation Plan¹⁵ (SHMCAP) of 2018 builds on the previous planning efforts of the Commonwealth's *2011 Massachusetts Climate Change Adaptation Report* and the 2013 State Hazard Mitigation Plan. The SHMCAP accounts for projected changes in precipitation, temperature, sea level rise, and extreme weather events to position the Commonwealth to effectively reduce the risks associated with natural hazards and the effects of climate change. A key priority of the SHMCAP is to make current projections available through the Climate Change Clearinghouse¹⁶ to facilitate adaptation planning across the state. The SHMCAP also establishes the Resilient Massachusetts Action Team (RMAT), an inter-agency team led by EEA and Massachusetts Emergency

¹⁴ <https://www.mass.gov/service-details/2011-massachusetts-climate-change-adaptation-report>

¹⁵ <https://resilientma.org/shmcap-portal/index.html>

¹⁶ <https://resilientma.org/>

Management Agency (MEMA) that includes representatives from each Secretariat, called Climate Change Coordinators, who are supported by agency staff, stakeholders, and subject-matter experts. The RMAT is tasked with monitoring and tracking the SHMCAP implementation process, making recommendations to and supporting agencies on plan updates, and facilitating coordination across state government and with stakeholders. Together the recommendations of the SHMCAP as implemented by the RMAT support the Commonwealth's objective to better assess and plan for future climate-related impacts, including those associated with coastal communities.

- **Coastal Erosion Commission** - The Coastal Erosion Commission was established in 2013 to investigate and document the levels and impacts of coastal erosion in the Commonwealth and to develop strategies and recommendations to reduce, minimize, or eliminate the magnitude and frequency of coastal erosion and its adverse impacts on property, infrastructure, public safety, and beaches and dunes. The recommendations of the commission provided a framework that continues to inform the 2021 ocean plan. The commission's report¹⁷ contained a set of recommendations and identified a few key, high-level themes. These themes include: 1) the critical need to factor in the effects of climate change and sea level rise throughout planning, management efforts, project design, and regulatory review; 2) support for the sensible use of pilot projects to advance new and creative solutions and encourage innovation in shoreline management approaches; 3) the importance of improving the understanding of coastal and nearshore sediment dynamics; and 4) a call for strengthening provisions to require that clean, compatible sediment that is dredged for navigational maintenance and improvement projects be placed on public beaches. In the report, the commission assessed the status and trends of coastal erosion by examining the information and results of the Massachusetts Shoreline Change Project¹⁸ and then providing a summary assessment of past shoreline change and rates. Launched in 1989, the Shoreline Change Project develops and analyzes data from historical and modern sources, mapping the local high-water line and developing shoreline change rates and statistics at 50-meter intervals along the exposed shoreline of Massachusetts. The commission's report provided both the long-term (~150-year period) and short-term (~30-year period) average change rates for each community. The ~30-year rates were updated with ~50-year rates for this ocean plan (Table 2-7).

¹⁷ <https://www.mass.gov/service-details/massachusetts-coastal-erosion-commission>

¹⁸ <https://www.mass.gov/service-details/massachusetts-shoreline-change-project>

CZM continues to track and monitor trends in shoreline change to understand and inform shoreline management and policy. Average erosion rates for these top-20 locations range from 9.8 feet/year in Yarmouth along the Cape Cod Bay shoreline to 0.6 feet/year in Tisbury (Table 2-7). It is important to note that while the shoreline change averages are provided on a municipal basis, within every coastal city or town there are areas with greater and lesser erosion rates. Long- and short-term shoreline change information from the Shoreline Change Project is available through the Massachusetts Coastal Erosion Viewer.¹⁹ To augment the information derived from the Shoreline Change Project, coastline and storm damage reports collected by the Massachusetts Rapid Response Coastal Storm Damage Assessment Team were reviewed to identify several “hot spot” locations where the combination of erosion, storm surge, flooding, and waves have caused significant damage to buildings and/or infrastructure during coastal storm events (Table 2-8).

Table 2-7. Communities with the highest erosion rates over the past ~50 years

Community	Short-term rate (ft/yr)
Yarmouth*	-9.8
Orleans**	-6.8
Chatham	-5.2
Eastham**	-4.0
Wellfleet**	-3.7
Truro**	-2.7
Edgartown	-2.4
Nantucket	-2.2
Ipswich	-1.9
Wellfleet*	-1.7
Chilmark	-1.4
Eastham*	-1.3
Salisbury	-1.1
West Tisbury	-1.0
Westport	-1.0
Lynn	-0.8
Swampscott	-0.7
Fairhaven	-0.7
Truro*	-0.7
Tisbury	-0.6
* Location on Cape Cod Bay	
** Location on Outer Cape Cod	

¹⁹ <https://mass-eoea.maps.arcgis.com/apps/MapSeries/index.html?appid=80fc0c7ef5e443a8a5bc58096d2b3dc0>

Table 2-8. Erosion “hot spot” areas, listed from north to south

Community	Location
Salisbury	Salisbury Beach
Newburyport	Plum Island
Newbury	Plum Island
Hull	Nantasket Beach
Hull	Crescent Beach
Scituate	Glades
Scituate	Oceanside Drive
Scituate	Lighthouse Point
Scituate	Peggotty Beach
Scituate	Humarock Beach (northern half)
Marshfield	Fieldston to Brant Rock
Marshfield	Bay Ave.
Plymouth	Saquish
Plymouth	Long Beach (southern end)
Plymouth	White Horse Beach
Plymouth	Nameloc Heights
Sandwich	Town Neck Beach
Dennis	Chapin Beach
Nantucket	Siasconset
Edgartown	Wasque Point
Oak Bluffs	Inkwell Beach
Gosnold	Barges Beach
Westport	East Beach

Planning and analysis to support development of potential offshore sand resource areas

The dredging of offshore sand for the purpose of beach nourishment or shore protection is an allowed use under the Ocean Sanctuaries Act and the ocean plan. Several high-level policy blueprints—including the 2007 Coastal Hazards Commission report,²⁰ the 2011 Massachusetts Climate Change Adaptation Report,²¹ the 2015 ocean plan, and the 2015 Coastal Erosion Commission Draft Report²²—have called for further work to advance the proactive planning, analysis, and identification of potential areas with suitable sand resources for beach nourishment

²⁰ <https://www.mass.gov/service-details/massachusetts-coastal-hazards-commission>

²¹ <https://www.mass.gov/service-details/2011-massachusetts-climate-change-adaptation-report>

²² <https://www.mass.gov/service-details/massachusetts-coastal-erosion-commission>

that do not present significant adverse impacts to natural and cultural resources and existing water-dependent uses.

Since 2009, CZM has continued its long-term partnership with the U.S. Geological Survey (USGS) and other partners on a cooperative seafloor mapping program. As of December 2021, the cooperative has mapped 1,678 square miles of state marine waters and has published these data as USGS Open-File Reports. Geophysical data, including bathymetry, acoustic backscatter (a measure of seafloor hardness and roughness), and seismic-reflection profiles (pictures of sub-surface sediment layers), have been collected in these areas. In addition, seafloor sediment samples and photographs/videos of the seafloor were gathered to validate the geophysical data. These data have been used to create interpretive data products such as maps of surficial seafloor sediments, seafloor sediment depth to bedrock, and physiographic zones (a term used by geologists to define regions of the seafloor based on morphology and sediment types). CZM, with guidance from and in close consultation with the USGS Woods Hole Science Center, identified areas of sand deposits based on geologic mapping by USGS, other published geologic maps, and available information from seismic data and sediment cores. Figure 26 depicts the potential sand resources identified in this process and serves as the basis for future steps in investigating opportunities to use these areas to support sand nourishment needs along the coastline.

Management standards for offshore sand for beach nourishment

Pursuant to the Ocean Sanctuaries Act, dredging of offshore sand for beach nourishment and shore protection is an allowed activity. As with other allowed activities, under the ocean plan, offshore sand projects in the Multi-Use Area are subject to the siting and performance standards for SSU resources and for concentrations of WDUs described in the Management Areas section above, additional standards detailed below, and other applicable laws and regulations. The SSU resources and concentrations of WDUs to be addressed for offshore sand projects for beach nourishment are contained in Table 2-9 and Figure 27.

Table 2-9. SSU resources and concentrations of WDUs to be addressed for offshore sand projects for beach nourishment (see Figure 27)

Allowed use	SSU resource
Offshore sand projects for beach nourishment	<ul style="list-style-type: none"> • North Atlantic right whale core habitat • Humpback whale core habitat • Fin whale core habitat • Roseate Tern core habitat • Hard/complex seafloor • Eelgrass • Intertidal flats • Important fish resource areas
	Concentrations of WDUs
	<ul style="list-style-type: none"> • High commercial fishing effort and value • Concentrated recreational fishing • Fixed fishing facilities

In addition to the siting and performance standards, additional management standards apply to offshore sand projects for beach nourishment, as follows:

1. Public benefits associated with the proposed project must outweigh public detriments, such that:
 - The proponent shall demonstrate that sand resources from public tidelands will be utilized for a properly designed and constructed nourishment project that has a documented critical erosion problem and will protect public infrastructure, natural resources, and other public interest factors, such as increased access and recreation; and
 - Alternative, compatible sand sources from beneficial re-use associated with navigational or other dredging projects or from upland sources are not reasonably practicable, taking into consideration cost, geographic proximity, timing, logistics, and other reasonable factors.

2. Project proponents must develop and implement a biological and physical monitoring plan for the sand source area and beach nourishment site, in consultation with EEA agencies and subject to the EEA Secretary’s approval. Comprehensive documentation and evaluation of the project’s performance—both in terms of the impacts to and recovery of the offshore source location as well as the functioning of the nourished beach/dune system—shall be undertaken.

Cables and pipelines

Cables and pipelines are important infrastructure components for the transmission and distribution of electricity, fuels, and telecommunications. The provision of these particular goods and services is connected to national energy, communication supply, and security matters. With the development of high-bandwidth, fiber-optic cables, these technologies are replacing traditional wire cabling for communications networks. Several installations of this linear infrastructure already exist in Massachusetts waters, including electric and telecommunication connections between both Nantucket and Martha's Vineyard and the mainland (Cape Cod), as well as the GTT Atlantic (formerly Hibernia) cross-Atlantic communications cable system connected in Lynn. A combined fiber-optic communications and electric cable bundle from Falmouth to Tisbury by Comcast and NSTAR was installed in spring 2014. This project was the first to complete review and permitting and found to be consistent with the ocean plan. Between 2019 and 2021, the Amitie fiber-optic communications cable from Europe to Lynn was reviewed under the framework of the ocean plan and is proposed to transit 34 miles within the planning area. Existing cable infrastructure within the planning area is depicted in Figure 28.

On the fuel side, the transport of liquefied natural gas (LNG) through pipeline systems has also greatly increased the range and delivery of this energy resource. There are currently three pipeline installations in Massachusetts marine waters, including the HubLine high-pressure gas pipeline that transits around Boston Harbor from Beverly to Weymouth and connections to the HubLine from the two deepwater LNG ports of Northeast Gateway and Neptune located southeast of Gloucester. In July 2012, the U.S. Department of Transportation's Maritime Administration (MARAD) approved a request from Neptune LNG LLC to amend its federal Deepwater Port License to include a five-year temporary suspension of port operations. Neptune's request indicated that recent conditions within the Northeast region's natural gas market had significantly impacted the Neptune Port's operational status and its ability to receive a consistent supply of natural gas imports. The current authorized suspension of operations expires June 25, 2022. MARAD has indicated that if Neptune intends to either resume operations, or seek extension of the suspension, ENGIE (Neptune's owner) would have to submit a request no less than 180 days before that date. At the time of this writing, ENGIE has not made a decision on whether or not to request an additional port operations suspension. Existing pipeline infrastructure within the planning area is depicted in Figure 28.

The ocean plan addresses cables and pipelines through siting and performance standards. For both cables and pipelines, the intent of the ocean plan is to minimize the cumulative impact of future development by requiring that linear infrastructure

be co-located within common or adjacent corridors to the maximum extent practicable, with allowances for sufficient space between projects for necessary operations and maintenance, generally according to industry standards. As with other allowed activities, cable and pipeline projects in the Multi-Use Area are subject to the siting and performance standards for SSU resources and for areas of concentrations of WDUs described in the Management Areas section above, additional standards detailed below, and other applicable regulations. The SSU resources and concentrations of WDUs to be addressed for cable projects are contained in Table 2-10 and Figure 29 and for pipeline projects in Table 2-11 and Figure 30.

Table 2-10. SSU resources to be addressed for cables (see Figure 29)

Allowed use	SSU resource
Cable projects	<ul style="list-style-type: none"> • North Atlantic right whale core habitat • Humpback whale core habitat • Fin whale core habitat • Hard/complex seafloor • Eelgrass • Intertidal flats
	Concentrations of WDUs
	<ul style="list-style-type: none"> • Fixed fishing facilities

In addition to the siting and performance standards, additional management standards apply to cable projects, as follows:

1. Cable projects proposed in the preliminary areas for offshore wind transmission cables are in presumptive compliance with the siting standards of the ocean plan, provided that:
 - Surveys confirm the predominance of soft-bottom seafloor (i.e., the general absence of hard-bottom substrate) within the preliminary areas for offshore wind transmission cables such that sufficient burial depths for cables can be reasonably expected. The presence of relatively small areas of hard-bottom substrate, such that the cable route cannot be practicably located without going through these areas of hard-bottom substrate, within acceptable limits, is permissible, based on review and determination by EEA in consultation with its agencies.
 - TOY controls are in place such that operations and dredging will avoid damage and cause no significant alteration to the following SSU resources:
 - North Atlantic right whale core habitat,
 - Humpback whale core habitat, and

- Fin whale core habitat.
2. Cable projects proposed in the preliminary areas for offshore wind transmission cables must develop and implement a biological and physical monitoring plan, in consultation with EEA agencies and subject to the EEA Secretary’s approval.

The ocean plan does not preclude potential project proponents from exploring and advancing transmission cable projects outside of the designated preliminary areas for offshore wind transmission cables (Figure 30). Any proposed cable project would need to meet the siting and performance standards for SSU resources and for concentrations of WDUs described in the Management Areas section above, the management standards detailed above, and other applicable laws and regulations.

Table 2-11. SSU resources and concentrations of WDUs to be addressed for pipelines (see Figure 31)

Allowed use	SSU resource
Pipeline projects	<ul style="list-style-type: none"> • North Atlantic right whale core habitat • Humpback whale core habitat • Fin whale core habitat • Hard/complex seafloor • Eelgrass • Intertidal flats • Important fish resource areas
	Concentrations of WDUs
	<ul style="list-style-type: none"> • High commercial fishing effort and value • Concentrated recreational fishing • Fixed fishing facilities

Aquaculture

As directed by the Oceans Act, the ocean plan reflects the importance of commercial and recreational fishing by identifying areas of high commercial fishing activity and concentrations of recreational fishing activity.

Aquaculture is licensed by municipalities, the Massachusetts Division of Marine Fisheries (DMF), and the U.S. Army Corps of Engineers (USACE). Additionally, the Massachusetts Department of Agricultural Resources (DAR) provides a variety of services aimed at the promotion and development of Massachusetts aquaculture. DAR’s Aquaculture Program, located within the Division of Agricultural Conservation and Technical Assistance, fosters development of the Massachusetts

aquaculture industry through efforts aimed at implementation of the Commonwealth's 1994 Aquaculture Strategic Plan.²³

In addition to other applicable regulatory authorities, aquaculture projects are subject to review and permitting by DMF (322 CMR 15.00). The regulations control the siting and operation of five categories of aquaculture. Facilities most likely to occur within the planning area are bottom-anchored cages for finfish and bottom-anchored long-line systems for shellfish. The ocean plan does not affect existing municipal and state jurisdictions regarding the granting of licenses and permits for aquaculture. The use of ocean plan maps and information and consultation between project proponents, DMF, and other EEA agencies in the siting of proposed facilities will provide a mechanism to identify issues that proponents should address in their project development process.

In the Oceans Act, one of the goals outlined was to “identify appropriate locations and performance standards for activities, uses and facilities allowed under the Ocean Sanctuaries Act, including but not limited to renewable energy facilities, aquaculture, sand mining for beach nourishment, cables, and pipelines.” In 2014, the Fisheries Work Group proposed addressing new offshore aquaculture in a similar manner as sand mining, cables, and pipelines. Although siting and performance standards for aquaculture were not developed for incorporation into the 2015 ocean plan, an aquaculture working group was established to determine how to best address aquaculture in a future ocean plan.

Since the 2015 ocean plan, several shellfish-related initiatives were undertaken, including the Massachusetts Shellfish Initiative (MSI) and the Massachusetts Aquaculture Permitting Plan (MAPP). MSI involved EEA agencies, academics, shellfishermen, and environmental advocacy groups working together to create a strategic plan to maximize the economic, environmental, and social benefits of shellfish in Massachusetts.²⁴ The MAPP project, assisted by ocean planning leadership and momentum, drew together multiple agencies to clarify the environmental permitting process for aquaculture in Massachusetts, resulting in a website outlining the permitting process and identifying important standards.²⁵ The next steps of the MAPP project include determining best practices to minimize impacts and laying out a framework to assess cumulative impacts of aquaculture projects.

²³ <https://www.mass.gov/service-details/massachusetts-aquaculture-white-paper-and-strategic-plan>

²⁴ <http://www.massshellfishinitiative.org/documents.html>

²⁵ <https://www.massaquaculturepermitting.org/>

To advance the goal to develop siting and performance standards for aquaculture and drawing on the knowledge and lessons learned from the MSI and MAPP processes, the Fisheries Work Group recommended that EEA continue to develop the MAPP project and rely on the MSI process to address issues relevant to the siting of aquaculture. The Fisheries Work Group further recommended that the MAPP should seek to identify performance standards for aquaculture. Each of these components could be considered for inclusion in the next ocean plan, as applicable. Lastly, based on recommendations from the Fisheries Work Group, a fixed fishing facilities WDU was included in the ocean plan, requiring that community-scale wind, commercial-scale tidal, offshore sand, cable, and pipeline projects address this use in their MEPA filings.²⁶

Other uses, activities, and facilities allowed under the Ocean Sanctuaries Act

Other categories of projects that are allowed under the Ocean Sanctuaries Act and may be of a scale to have potentially significant impacts include:

- Projects authorized under Chapter 91 and deemed to be of public necessity and convenience;
- Municipal wastewater treatment discharges and facilities;
- Operation and maintenance of existing municipal, commercial, or industrial facilities and discharges;
- Channel and shore protection projects; and
- Improvements not specifically prohibited by the Oceans Sanctuaries Act.

A significant amendment to the Oceans Sanctuaries Act in 2014 (Chapter 259 of Acts of 2014, §§28-45) allowed new or modified discharges from municipal wastewater treatment plants to an ocean sanctuary provided a series of 10 conditions are met. In recognition of this change and within the context of regional comprehensive wastewater planning—including the Cape Cod Commission’s Section 208 Water Quality Management Plan, which focuses on a watershed-based approach to addressing significant nutrient impacts to estuaries—future revisions to the ocean plan may be necessary to ensure that the planning and siting of new or modified discharges are consistent with the goals of both the Ocean Sanctuaries Act and the Oceans Acts of 2008.

The EEA Secretary retains discretion under the MEPA statute and regulations to

²⁶ The new fixed fishing facilities WDU includes individual aquaculture lease areas (94), Aquaculture Development Areas (3), and fishing weirs (30), the latter of which are permitted separately from aquaculture sites.

review activities proposed within the planning area that are not specifically addressed by the ocean plan but are allowed under the Ocean Sanctuaries Act for any issue(s) deemed necessary and appropriate, based on information presented by the project proponent and agency or public comment. If a project is subject to review under the ocean plan through the EEA Secretary's MEPA certificate, the scope shall indicate the applicable siting and performance standards. Reviewing agencies shall use the ocean plan and maps as the guidance for their review.

Chapter 3 - Administration

The administration of the Massachusetts Ocean Management Plan (ocean plan) is a complex and collaborative effort by several government agencies and stakeholders across various sectors to ensure effective stewardship and protection of marine ecosystems and to support sustainable uses and services. Embracing the principles of adaptive management, the ocean plan is reviewed at least once every five years, as required by the Oceans Act of 2008, to assess its effectiveness and provide opportunity for continued evolution. This chapter describes key ocean plan administrative elements, provides an overview of the ocean plan review and revision process, discusses mechanisms for continued robust stakeholder engagement, and explains the monitoring and evaluation framework and performance assessment for the ocean plan.

Key Administrative Elements

This section describes the following key components of ocean plan implementation and administration: Secretarial functions and responsibilities, implementing regulations for the ocean plan, incorporation into the Massachusetts coastal program, coordinated project review, the Ocean Development Mitigation Fee, the Ocean Resources and Waterways Trust, and the Massachusetts Ocean Resource Information System.

Secretarial functions and responsibilities

The Oceans Act confers the oversight, coordination, and planning authority over the Commonwealth's ocean waters, resources, and development to the Secretary of the Executive Office of Energy and Environmental Affairs (EEA). The Act further stipulates that all state agency authorizations for activities or projects in state waters must be consistent with the ocean plan. In addition to coordinated agency review of projects, it is important to ensure that other agency actions related to ocean management—including policy development, scientific research, and regulatory decision-making—are in harmony with and advance the goals of the ocean plan.

To ensure coordination and effective implementation of the ocean plan, the EEA Secretary has designated an interagency ocean management team, chaired by the Office of Coastal Zone Management (CZM) and comprised of personnel from CZM, the Department of Environmental Protection's Wetlands and Waterways Program, the Department of Fish and Game's Natural Heritage and Endangered Species Program and Division of Marine Fisheries, and the Massachusetts Environmental Policy Act (MEPA) Office. The interagency team offers assistance and advice to the EEA Secretary on the administration of the ocean plan, especially

related to policy and regulation development and the use of funds from the Ocean Resources and Waterways Trust.

Implementing regulations for the ocean plan

The Oceans Act requires the EEA Secretary to promulgate regulations to implement and administer the ocean plan. The ocean management plan regulations at 301 CMR 28.00²⁷ were first published in August 2013 and were revised in 2017 to reflect the 2015 ocean plan amendment. Specifically, the changes to section 28.04 included provisions for the establishment of Management Standards for Sand and Gravel Extraction Activities, as well as Management Standards for Cable Activities (see Appendix 2 for the 2017 version of the regulations). EEA will review the existing implementing regulations to determine if any changes are necessary based on the 2021 ocean plan amendment. If revisions are needed, EEA will seek stakeholder input during the development of proposed changes to regulatory language prior to formal rule-making processes.

Incorporation into the Massachusetts coastal program

The Massachusetts coastal program was created to manage coastal and ocean resources in response to the federal Coastal Zone Management Act (CZMA) of 1972. The program was subsequently approved by the National Oceanographic and Atmospheric Administration (NOAA) in 1978, and in 1983, the Massachusetts legislature established the CZM office within EEA to be the lead policy and planning agency on coastal and ocean issues in Massachusetts. The CZMA gives states the authority to review projects that require federal licenses and permits (and other federal activities) to ensure that they abide by state-defined enforceable coastal policies. This process is called federal consistency review. The ocean plan and its enforceable policies were formally approved as part of the Massachusetts coastal program in September 2011 to allow CZM to apply ocean plan standards in federal consistency review. The enforceable standards of the ocean plan are listed in an appendix in the *Massachusetts Office of Coastal Zone Management Policy Guide - October 2011*, which is the official record of the state's coastal program policies and legal authorities as of the release of the 2021 ocean plan.

Coordinated project review

As discussed fully in Chapter 2, the ocean plan's management framework includes two types of management areas (i.e., Prohibited and Multi-Use) and describes

²⁷ <https://www.mass.gov/regulations/301-CMR-28-ocean-management-plan>

management standards to protect special, sensitive, or unique (SSU) natural resources and important existing water-dependent uses (WDUs). Under this framework, ocean plan performance standards are implemented through the administration of the Massachusetts Environmental Policy Act. Through MEPA review, the project proponent assembles information necessary to characterize potentially affected resources and uses, evaluates siting alternatives, and describes measures taken to avoid, minimize, and mitigate potential project impacts. Because jurisdiction over SSU resources and concentrations of WDUs often falls under multiple agencies, the interagency team described in Secretarial functions and responsibilities (above) coordinates on the review of projects subject to the ocean plan.

Since the promulgation of the 2015 ocean plan, there have been several proposed and permitted projects subject to the ocean plan's siting and management standards:

- *Dredging as part of the Boston Harbor Federal Navigation Improvement project* - Work in the Broad Sound North Entrance Channel, which was deepened to -50 feet mean lower low water (MLLW), and the lower Main Ship Channel through President Roads, which was deepened to -48 feet, is located in the planning area.
- *Laying two offshore export cables for the 800-megawatt (MW) Vineyard Wind 1 project* - This 20-mile cables will be buried 5-8 feet below the seafloor from the Massachusetts/Rhode Island Wind Energy Area through Muskeget Channel to Barnstable.
- *A communications cable (Amitié) that would run from England and France and make landfall in Lynn, Massachusetts* - 29 miles of the 1.5-inch cable are proposed to be buried 4-6 feet below the seafloor from the state/federal boundary off Gloucester to Lynn.
- *A cable to deliver power to the Martha's Vineyard Coastal Observatory* - The one-mile-long cable was laid in 2018 under a Chapter 91 amendment.
- *The Atlantic Link project, which proposed the installation of two new 337-mile long, subsea, 320 kV, high voltage direct current (HVDC) transmission lines between New Brunswick, and Plymouth, Massachusetts* - The 5-inch diameter cables would have a delivered capacity of 1,000 MW and would be bundled together along with one fiber optic cable. Approximately 19 miles of the cable would traverse Massachusetts waters; the project went through MEPA and a Secretary's certificate was issued on November 9, 2017, but the project did not proceed to permitting.

- *The SeaLink high voltage direct current (HVDC) 8-inch cable, which was proposed to connect the Seabrook substation in Seabrook, New Hampshire, to the Mystic substation in Everett, Massachusetts, and deliver 520 MW - SeaLink was not selected by Independent Service Operator New England as an option to bring power to Massachusetts, so the project did not submit an application to MEPA.*
- *The Maine Green Line proposal, which was an Anbaric transmission solution proposed by the Green Line Devco, LLC, as a project of the Green Line Infrastructure Alliance - The Maine Green Line proposed to transmit up to 1,200 MW of power from Maine to eastern Massachusetts, but the project did not proceed to permitting.*

Details on these projects and their review under the ocean plan are provided in the *Review of the 2015 Massachusetts Ocean Management Plan*,²⁸ which was completed in December 2020.

For projects proposed in the Massachusetts Ocean Management Planning Area (planning area), pre-application consultation with the interagency team is strongly encouraged, allowing agencies to assist proponents in determining whether the project is subject to MEPA review and ocean plan jurisdiction. Agencies will also provide additional guidance and recommendations as to what documentation and characterization will be required by the proponent in the regulatory review process. Upon written request, the EEA Secretary (or designee) will provide project proponents with an advisory opinion regarding the applicability of the ocean plan management standards to a proposed project.

Under the ocean plan, project proponents are required to document the following information when preparing an Environmental Notification Form (ENF) under MEPA: 1) whether the project is subject to the ocean plan based on criteria established in MEPA thresholds and the ocean plan, and 2) any potential impacts of the project to SSU resources or concentrations of WDUs. In the ENF review, agencies will assess the project's potential impacts on protected resources and uses and provide comments to the EEA Secretary that describe the type and extent of information and analysis that must be developed and submitted as part of an Environmental Impact Report (EIR) so that the project's conformance with the ocean plan's management standards can be evaluated. As explained in Chapter 2 of this document, the EEA Secretary retains discretion under the Oceans Act and MEPA to review a project for any issue deemed necessary and appropriate, based on information presented by the project proponent and agency or public comment.

²⁸ <https://www.mass.gov/files/documents/2021/01/08/ocean-plan-review-2020.pdf> (PDF, 3 MB)

In the EIR review, agencies assess the information submitted, including project alternatives and measures to be taken to avoid, minimize, and mitigate impacts to SSU resources or concentrations of WDUs, as well as public benefits of the project for conformance with the ocean plan's siting and management standards.

As required as part of MEPA review (Massachusetts General Law chapter 30 section 61), "all agencies, departments, boards, commissions and authorities of the Commonwealth shall review, evaluate, and determine the impact on the natural environment of all works, projects or activities conducted by them and shall use all practicable means and measures to minimize damage to the environment."²⁹ Further, any determination must "include a finding describing the environmental impact, if any, of the project and a finding that all feasible measures have been taken to avoid or minimize said impact." In the issuance of the final MEPA Certificate, the EEA Secretary considers agency and public comments and analysis from the MEPA staff and determines the project's conformance with the ocean plan's management standards. The Oceans Act requires that agencies ensure that all certificates, licenses, permits, and approvals for any proposed project subject to the ocean plan are consistent, to the maximum extent practicable, with the management standards and conditions outlined in the ocean plan and its implementing regulations. The EEA Secretary's MEPA Certificate will therefore direct each agency to include in its Section 61 Findings a determination that all feasible measures have been taken such that the agency's approval of the project is consistent with the ocean plan and its implementing regulations. To ensure consistency with the ocean plan, each agency, via its Section 61 Findings, shall specify any measures required by the project proponent to meet ocean plan requirements, the entity responsible for funding and implementing such measures, and the anticipated implementation schedule needed to ensure that the measures shall be implemented as appropriate to prevent or avoid impacts.

Ocean Development Mitigation Fee

The Oceans Act requires that any project subject to the ocean plan shall be assessed an Ocean Development Mitigation Fee as established by the EEA Secretary. According to the regulations implementing the Act (301 CMR 28.06), the purpose of the fee is to compensate the Commonwealth for unavoidable impacts of ocean development projects to the broad public interests and rights in the lands, waters, and resources of the planning area, as well as to support the planning, management, restoration, or enhancement of marine habitat, resources, and uses pursuant to the Act. The Act and its implementing regulations state that commercial or recreational fishing permits and licenses are not subject to the fee.

²⁹ <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleIII/Chapter30/Section61>

The regulations also require the EEA Secretary to promulgate a fee structure for ocean development projects based on their scope, scale, and effects on protected resources or uses. A fee structure and accompanying guidance were adopted in the 2015 ocean plan with input from an advisory working group comprised of representatives from the regulated community, commercial fishing and environmental interests, and state agencies. For the 2021 ocean plan, the fees were revised to reflect federal Cost of Living Adjustments.³⁰

Three activity classes were established for the fee structure, and general guidelines were developed to differentiate a proposed project's scope, scale, and effects. Using the fee structure in Appendix 3 as guidance, project proponents provide information and analysis during MEPA review to inform the determination of the fee. This information is submitted in the Draft EIR filing (or in the case of a Single EIR, in the Expanded ENF) and should include a detailed description and analysis of:

- The nature and location of the project;
- Project alternatives;
- Impacts of the project and its alternatives, including both short-term and long-term impacts for all phases and cumulative impacts;
- Measures and management techniques to be taken to avoid, minimize, and mitigate potential impacts to the environment, water-dependent uses, and public trust interests;
- Public benefits of the project, and other mitigation proposed, separate and distinct from the Ocean Development Mitigation Fee;
- Proposed Section 61 Findings; and
- Information for a Public Benefits Determination, including the nature of the tidelands affected by the project and the public benefit of the project.

The project proponent uses this information to determine the appropriate fee class. Proponents may request that the fee be paid over several years, up to a maximum of 10 years. Proponents may also seek a reduction of the fee based on a clear demonstration of need or hardship. The MEPA filing shall include a statement of the specific circumstances that constitute the need or hardship, and the relief requested.

During the EIR process, agencies, stakeholders, and the public may provide comments to the EEA Secretary on the proposed fee class. These comments can concur with the proposed fee class or recommend a different one as substantiated by their review and comments. The EEA Secretary shall issue a determination of the final fee to be referenced in the final MEPA Certificate. The determination will be based

³⁰ <https://www.ssa.gov/oact/cola/colaseries.html>

on the MEPA filing, comments received, evaluation of the proposed project and its effects, public benefits, other proposed mitigation, and other applicable information. As administrator of the fee, the EEA Secretary retains broad discretion in determining the fee amount and any conditions necessary to ensure that the “as-built” project is consistent with the project as described in the final MEPA EIR filing.

Ocean Resources and Waterways Trust

The Oceans Act also created an Ocean Resources and Waterways Trust to receive all proceeds from Ocean Development Mitigation Fees, as well as appropriations or other credits. The trust was established by the Executive Office for Administration and Finance in Fiscal Year 2009. The Act identifies the EEA Secretary as trustee and contains provisions pertaining to expenditures from the trust. EEA established the *Ocean Resources and Waterways Trust Implementation Guidelines* to direct the administration and management of the trust (see Appendix 4). Expenditures from the trust are directed to the restoration, enhancement, or management of marine habitat and resources impacted by an ocean development project. Funds derived from impacts to public navigation by an ocean development project are to be used for navigational improvements. Funds derived from impacts to fisheries resources are targeted for use for fisheries restoration and management programs. Other funds are to be used only for environmental enhancement, restoration, and management of ocean resources and uses generally consistent with the Act and the ocean plan.³¹

Potential royalty fees that may be established for renewable energy projects are subject to the following:

- For pilot/community-scale renewable energy projects, the renewable energy benefits (e.g., energy and jobs) will stand for any royalty fees.
- For commercial-scale renewable energy projects in the planning area, as part of any request for proposals and related contractual processes, the Commonwealth will negotiate royalty fees to be made as annual payments for a percentage of total energy production. The royalty shall be matched with a commensurate payment—or combination of energy royalty and benefits of equivalent value (e.g., energy, jobs, and municipal improvements)—to the host community (or communities), as defined in Chapter 2 of the ocean plan.

³¹ See <https://www.mass.gov/service-details/ocean-resources-and-waterways-trust-deposits-and-expenditures> for deposits made to the trust.

- For both pilot/community- and commercial-scale projects, nothing in the ocean plan changes, nor should be construed to change, the authority of a municipality to negotiate impact fees or other community benefits with renewable energy project developers.

Massachusetts Ocean Resource Information System

A key objective of the ocean plan is to enhance data availability and inform managers, stakeholders, and the public of science- and data-related advancements. The Massachusetts Ocean Resource Information System (MORIS)³² allows interested users to download spatial data associated with the ocean plan.

Ocean Plan Review and Revision

The Oceans Act and its implementing regulations require the review of the ocean plan and its components—including the Baseline Assessment and enforceable provisions—at least once every five years. In 2019, EEA initiated a formal review and update of the 2015 ocean plan, beginning with a comprehensive assessment of progress and performance to achieve the requirements and commitments established by the Act and the ocean plan itself. In addition to a 60-day public comment period, CZM conducted an online survey of members of the Ocean Advisory Commission (OAC), Ocean Science Advisory Council (SAC), and interested public to capture their experience and perspectives on the development, implementation, and future revision of the 2015 ocean plan.

The results of this assessment were released in December 2020 in the document, *Review of the 2015 Massachusetts Ocean Management Plan*.³³ This document evaluates the plan as a whole, as well as its key components including the siting and management standards, delineation of critical coastal resources and maritime uses, Baseline Assessment, and Science Framework. Additionally, this document suggests a framework for policy updates and priority science objectives to support implementation of the ocean plan over the next five years.

Two types of ocean plan modifications can be made through the review process: a plan amendment and a plan update. The ocean plan implementing regulations at 301 CMR 28.07 codify the standards for these two types of revisions and are summarized below.

³² <https://www.mass.gov/service-details/massachusetts-ocean-resource-information-system-moris>

³³ <https://www.mass.gov/files/documents/2021/01/08/ocean-plan-review-2020.pdf> (PDF, 3 MB)

Plan amendment

An amendment to the ocean plan is required for changes to substantive management elements of the ocean plan, including:

- Revision of existing or creation of new management area locations or boundaries, excepting minor adjustments;
- Substantial revision of existing or creation of new management standards;
- Identification of new or removal of current protected SSU resources or mapped areas;
- Identification of new or removal of current protected concentrations of water-dependent uses or mapped areas; or
- Other changes that would result in significant alteration to the management framework or geographic extent of the ocean plan.

Guidelines for the ocean plan amendment process are contained at 301 CMR 28.07(5). The amendment process is initiated with a public notice in the *Environmental Monitor* announcing the intent to amend the current ocean plan. The EEA Secretary consults with: 1) the OAC in determining the scope of the plan amendment, and 2) the SAC in determining the scope of the updates to the Baseline Assessment and science-related plan elements. Regional public hearings are held to receive input on the proposed scope for the amendment. A draft of the ocean plan amendment is made available for 60-day public review and comment, and public hearings are held. After the close of the public comment period, the EEA Secretary promulgates a final, amended ocean plan and files the ocean plan with the Massachusetts House of Representatives and Senate clerks.

Plan update

A plan update has a lesser scope or scale than a plan amendment. As specified in 301 CMR 28.07(6), the following changes may be made through a plan update when necessary for effective and efficient ocean plan administration:

- Corrections to address errata and technical discrepancies or errors, or to clarify intent or meaning;
- Additions of updated data and information on the spatial extent or further characterization of existing SSU resource areas or areas of concentrations of water-dependent uses;
- Minor shifts in existing management area boundaries; and

- Other adjustments that do not result in significant changes to the management framework or geographic extent of the ocean plan.

The ocean plan regulations contain guidelines to conduct the plan update process, including the submission of a plan update request by an agency or person. The request must include: a justification and rationale for the update, a strategy to ensure that the update conforms with data standards and processes, and a plan to secure input from EEA agencies, the OAC, and the SAC. A proposed update is noticed in the *Environmental Monitor* and subject to a 30-day public review and comment period. After the close of the public comment period, the EEA Secretary issues a final decision on the proposed update, which would then be noticed in the *Environmental Monitor*.

Stakeholder Input, Expert Advice, and Partnerships

An important requirement of the Oceans Act, and a fundamental tenet of the ocean planning process, is a strong expert, stakeholder, and public outreach and engagement process. The ocean plan development, review, and revision process includes expert advisory boards, government coordination, and work with partners and technical work groups.

Ocean Advisory Commission and Ocean Science Advisory Council

The Ocean Advisory Commission³⁴ is a formal, consultative body created by the Act to assist the EEA Secretary in the development of the ocean plan. It is comprised of 17 members representing communities and stakeholder interests, legislators, and public agencies, with mandated composition and terms. The Ocean Science Advisory Council³⁵ was established by the Act to provide support and advice on the scientific information and geospatial data compiled for the ocean plan. The SAC is made up of nine members from institutions or interests specified in the Act. All meetings of the OAC and SAC are publicly noticed, and the public is welcome to attend and provide comments.

The OAC and SAC played key roles in the development of the 2021 ocean plan, including providing feedback on: 1) the results of the ocean plan survey, 2) proposed science and data priorities for the next five years, 3) proposed management priorities for the next five years, 4) the update to the Baseline Assessment, and 5) the draft 2021 ocean plan. EEA will continue to seek stakeholder advisory and science and technical input from the OAC and SAC in matters pertaining to the ongoing implementation of the ocean plan, as well as on efforts related to regional ocean planning in the Northeast (described below). These two bodies will provide key forums for bringing

³⁴ <https://www.mass.gov/service-details/ocean-advisory-commission>

³⁵ <https://www.mass.gov/service-details/ocean-science-advisory-council>

the input, advice, and concerns of Massachusetts into the regional ocean planning process by discussing new and emerging ocean planning and policy issues.

Interstate and federal government coordination

In addition to interagency coordination and communication, several regional entities serve as key vehicles for dialogue, collaboration, and consultation with other states, federal government agencies, and tribes on issues related to regional ocean planning. Major interstate and federal government ocean planning coordination efforts that involve Massachusetts are described below.

Massachusetts is an active participant in the Northeast Regional Ocean Council (NROC),³⁶ a state and federal partnership that provides a forum for coordination and collaboration on regional approaches to balance resource use and conservation in the Northeast. NROC was formed in 2005 by the governors of the New England states, and later expanded to include federal agencies in recognition of the importance of the national role in regional issues. NROC works to augment the functions and activities of existing entities in the region and to build on current state, multi-state, and federal governance and institutional mechanisms to improve management of ocean and coastal resources. NROC serves as an important resource for and contributor to regional ocean planning in the Northeast, especially through its Ocean Planning Committee. In this role, NROC greatly benefits Massachusetts by expanding the scope and extent of data and information available on marine resources and maritime uses and through stakeholder engagement efforts. Examples of these benefits include new data and maps on recreational boating, commercial vessel traffic, and commercial fishing activity developed through this partnership. NROC established the Northeast Ocean Data Portal,³⁷ a centralized source of interactive maps and data on human uses and marine life in the northeastern United States. Massachusetts has contributed data to this effort and has also used data from the portal for ocean planning purposes. NROC updates the data in the portal periodically to keep it current.

Massachusetts is also a member of the Gulf of Maine Council on the Marine Environment.³⁸ This regional organization was established in 1989 by the governments of Nova Scotia, New Brunswick, Maine, New Hampshire, and Massachusetts to foster cooperative actions within the Gulf of Maine watershed. Its mission is to maintain and enhance environmental quality in the Gulf of Maine to

³⁶ <https://www.northeastoceancouncil.org/>

³⁷ <https://www.northeastoceandata.org/>

³⁸ <http://gulfofmaine.org/public/gulf-of-maine-council-on-the-marine-environment/>

allow for sustainable resource use by existing and future generations. Among other functions, the Gulf of Maine Council serves as a forum to share key information, knowledge, and data on ocean planning initiatives in both the United States and Canada. The council provides a unique opportunity to promote cross-border coordination and collaboration, track and exchange information on ocean planning strategies and activities, and share information and knowledge on best practices, tools and techniques, and data on marine natural systems and human uses.

Formed in 2008, the Northeastern Regional Association of Coastal and Ocean Observing Systems (NERACOOS)³⁹ is a regional nonprofit organization that leads and coordinates the development, implementation, operation, and evaluation of a sustained, regional coastal ocean observing system for the northeastern United States and Canadian Maritime provinces, as part of the United States Integrated Ocean Observing System. NERACOOS develops, assesses, and disseminates important data and data products on a multitude of ocean conditions and parameters, including current observations, forecasted conditions, and average weather and ocean conditions between 2001 and the present to examine trends in climate patterns. Massachusetts serves on the NERACOOS board and on its Strategic Planning and Implementation Team.

These regional forums have and will continue to benefit Massachusetts by providing key inter-governmental coordination and consultation opportunities, expanding stakeholder engagement efforts, and increasing the scope and extent of data and information available on marine resources and uses. Massachusetts will seek to ensure that these efforts continue to support and can be integrated into the state's ocean plan, to the maximum extent practicable.

Science and technical experts

Since its inception, the ocean plan was developed based on the principle of using the best available science and geospatial information, and the Commonwealth of Massachusetts is committed to maintaining a strong science foundation for future ocean plan development. Data and geospatial information come from sources both within and outside Massachusetts state government. Through technical work groups on Habitat, Fisheries, Transportation and Navigation, Sediment and Geology, Cultural Heritage and Recreational Uses, and Energy and Infrastructure, subject matter experts assist in the identification and characterization of important trends in ocean resources and uses, help form recommendations for future science and data

³⁹ <http://www.neracoos.org/>

priorities, provide direct input on data and information, and in many cases, provide direct access to valuable datasets.⁴⁰ Beyond the technical work groups, EEA will rely on existing partnerships to ensure that ongoing monitoring and assessment efforts continue to provide critical data for resource assessment and use characterization. EEA will also seek new opportunities to collaborate with other institutions and agencies to address the short- and long-term science priorities outlined in the Science Framework.

Evaluation Framework

The Oceans Act requires that the ocean plan be adaptive to changing ocean conditions, availability of new science and better geospatial information, evolving policy goals, emerging needs, and increased experience in implementation. A priority of the ocean plan is therefore to measure progress in plan administration and implementation, and to track changes in the condition of ocean resources and uses.

The ocean plan contains an evaluation framework that provides a structure for evaluating and updating the ocean plan. Under this framework, CZM evaluates progress in ocean plan implementation through two main processes: a stakeholder and public survey and information gathered by the six technical work groups. CZM uses a series of standard questions to survey members of the OAC and SAC, stakeholders, and the general public. The survey is an integral part of the ocean plan review process and serves to inform the next ocean plan update or amendment. Therefore, the survey timing is critical to gather feedback on the current plan as well as input on the future plan. The application of this framework has improved the ocean plan review by providing a structure and process to assess progress on the ocean plan's management objectives and actions, and better understand the status and trends of the Commonwealth's ocean resources and uses.

CZM worked with the six technical work groups and with the SAC to answer the following questions for each SSU resource and WDU:

- Are new data or information available for the topic (e.g., environmental, ecological, economic, socio-cultural, etc.)?
- Do the data or information support a potential change to SSU resource areas or concentrations of water-dependent use areas?
- Do the data or information reveal any significant or noteworthy trends?
- Is there a connection between the trend or change and the ocean plan management standards?

⁴⁰ Links to the relevant technical work group reports are provided on the index page for each version of the ocean plan. See <https://www.mass.gov/service-details/massachusetts-ocean-management-plan> for links to all ocean plan versions.

- Is this connection significant enough to warrant revisions or updates to the management standards?

The responses to the survey and to the questions above informed the revisions to the ocean plan including the modification of existing or creation of new management areas, the development of new management standards or adjustments to current ones, and changes to SSU resource areas or concentrations of WDU areas as described previously.

Appendix 1 - The Oceans Act of 2008

Chapter 114 of the Acts of 2008 - AN ACT RELATIVE TO OCEANS. [As modified by Chapter 131, Section 91 of the Acts of 2010].

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same as follows:

SECTION 1. Chapter 10 of the General Laws is hereby amended by inserting after section 35GG the following section:-

Section 35HH. There shall be established and set up on the books of the commonwealth a separate fund to be administered by the secretary of energy and environmental affairs, as trustee, in consultation with the department of environmental protection, to be known as the Ocean Resources and Waterways Trust Fund. There shall be credited to the fund any revenue from appropriations or other monies authorized by the general court and specifically designated to be credited to the fund, any appropriation or grant explicitly made to the fund and any income derived from the investment of amounts credited to the fund and the proceeds from any ocean development mitigation fees established pursuant to section 18 of chapter 132A. The priority for use of funds derived from compensation or mitigation for ocean development projects shall be to restore or enhance marine habitat and resources impacted by the project for which the compensation or mitigation shall have been received. The funds derived from compensation or mitigation related to public navigational impacts shall be dedicated to public navigational improvements; provided, however, that any funds for the enhancement of fisheries resources shall be directed to conduct fisheries restoration and management programs. Any other amounts credited to the fund shall be used, without further appropriation, only for the purposes of environmental enhancement, restoration and management of ocean resources by the secretary pursuant to section 4C of chapter 21A. No expenditure from the fund shall cause the fund to be in deficiency at the close of a fiscal year. Monies deposited in the fund that are unexpended at the end of the fiscal year shall not revert to the General Fund and shall be available for expenditure in the subsequent fiscal year.

SECTION 2. Chapter 21A of the General Laws is hereby amended by inserting after section 4B the following section:-

Section 4C. (a) The ocean waters and ocean-based development of the commonwealth, within the ocean management planning area described in this section, shall be under the oversight, coordination and planning authority of the secretary of energy and environmental affairs, hereinafter referred to as the secretary, in accordance with the public trust doctrine. Notwithstanding any general or special law to the contrary, the secretary, in consultation with

the ocean advisory commission established pursuant to subparagraph (c) and the ocean science advisory council established pursuant to subparagraph (d), shall develop an integrated ocean management plan, which may include maps, illustrations and other media. The plan shall: (i) set forth the commonwealth's goals, siting priorities and standards for ensuring effective stewardship of its ocean waters held in trust for the benefit of the public; and (ii) adhere to sound management practices, taking into account the existing natural, social, cultural, historic and economic characteristics of the planning areas; (iii) preserve and protect the public trust; (iv) reflect the importance of the waters of the commonwealth to its citizens who derive livelihoods and recreational benefits from fishing; (v) value biodiversity and ecosystem health; (vi) identify and protect special, sensitive or unique estuarine and marine life and habitats; (vii) address climate change and sea-level rise; (viii) respect the interdependence of ecosystems; (ix) coordinate uses that include international, federal, state and local jurisdictions; (x) foster sustainable uses that capitalize on economic opportunity without significant detriment to the ecology or natural beauty of the ocean; (xi) preserve and enhance public access; (xii) support the infrastructure necessary to sustain the economy and quality of life for the citizens of the commonwealth; (xiii) encourage public participation in decision-making; (xiv) and adapt to evolving knowledge and understanding of the ocean environment; and (xv) shall identify appropriate locations and performance standards for activities, uses and facilities allowed under sections 15 and 16 of chapter 132A. The division of marine fisheries, pursuant to chapter 130 and any other applicable general or special law, shall have sole responsibility for developing and implementing any fisheries management plans or fisheries regulations. Marine fisheries shall be managed in compliance with the applicable rules and regulations of the division of marine fisheries and federal or interstate fishery management plans issued pursuant to said chapter 130 or any other applicable general or special law and shall be integrated, to the maximum extent practicable, with an ocean management plan.

(b) An ocean management plan shall include any waters and associated submerged lands of the ocean, including the seabed and subsoil, lying between the line designated as the "Nearshore Boundary of the Ocean Management Planning Area", which is depicted on a plan dated January 31, 2006, prepared by the office of coastal zone management and maintained at the executive office of energy and environmental affairs and with the clerks of the house and the senate, and the seaward boundary of the commonwealth, as defined in 43 U.S.C. § 1312. An ocean management plan may take into account the different regional characteristics of the commonwealth's waters. A plan shall include existing municipal, state and federal boundaries and may include recommendations for clarifying those boundaries.

(c)(i) There shall be an ocean advisory commission to assist the secretary in developing the ocean management plan. The commission shall consist of 3 members of the senate, 1 of whom shall be appointed by the minority leader of the senate; 3 members of the house of representatives, 1 of whom shall be appointed by the minority leader of the house of representatives; the director of coastal zone management or his designee; the director of marine

fisheries or his designee; the commissioner of environmental protection or his designee; and 8 members to be appointed by the governor, 1 of whom shall be a representative of a commercial fishing organization, 1 of whom shall be a representative of an environmental organization, 1 of whom shall have expertise in the development of offshore renewable energy, 1 of whom shall be a representative of the Cape Cod commission, 1 of whom shall be a representative of the Martha's Vineyard Commission, 1 of whom shall be a representative of the Merrimack Valley Planning Commission, 1 of whom shall be a representative of the metropolitan area planning council and 1 of whom shall be a representative of the Southeastern Regional Planning and Economic Development District. Members shall be appointed for terms of 3 years, except that, initially, 4 members appointed by the governor shall be appointed for terms of 2 years and 3 members appointed by the governor shall be appointed for terms of 1 year. The appointing authority may fill any vacancy that occurs in an unexpired term. The members of the commission shall be selected with due regard to coastal geographic distribution.

(ii) The commission shall meet at least quarterly and at the discretion of the secretary. The commission shall hold public meetings relative to matters within the jurisdiction of the ocean management plan and shall make recommendations to the secretary for the proper management and development of the plan. The secretary shall consider the recommendations of the commission.

(iii) The office of coastal zone management and division of marine fisheries shall provide technical support to the commission.

(d) There shall be an ocean science advisory council to assist the secretary in creating a baseline assessment and obtaining any other scientific information necessary for the development of an ocean management plan. The council shall consist of 9 members to be appointed by the secretary, 3 of whom shall be scientists from academic institutions, at least 1 of whom shall be from the School for Marine Science and Technology at the University of Massachusetts at Dartmouth and at least 1 of whom shall be from the Department of Environmental, Earth and Ocean Sciences at the University of Massachusetts at Boston; 3 of whom shall be scientists from private, nonprofit organizations, at least 1 of whom shall be a scientist designated by the Massachusetts Fishermen's Partnership; and 3 of whom shall be scientists from government agencies with demonstrated technical training and experience in the fields of marine ecology, geology, biology, ichthyology, mammalogy, oceanography or other related ocean science disciplines, at least 1 of whom shall be from the division of marine fisheries. The secretary shall serve as coordinator of the council. The council shall meet at least quarterly and at any other time that the secretary shall deem necessary to assist him in compiling the scientific information necessary for the development of an ocean management plan.

(e) Upon the secretary's adoption of an ocean management plan, all certificates, licenses,

permits and approvals for any proposed structures, uses or activities in areas subject to the ocean management plan shall be consistent, to the maximum extent practicable, with the plan.

(f) The secretary shall develop and implement a public outreach and information program to provide information to the public regarding the ocean management planning process.

(g) The secretary shall, at least 6 months before establishing an ocean management plan pursuant to this section, provide for public access to the draft plan in electronic and printed copy form and shall provide for a public comment period, which shall include at least 4 public hearings in at least 4 different coastal regions. The secretary shall publish notice of the hearings in the Environmental Monitor within 30 days of the date of the hearing. A notice of the public hearing shall also be placed, at least once each week for the 4 consecutive weeks preceding the hearing, in newspapers with sufficient circulation to notify the residents of the coastal region where the hearing shall be held. The hearing shall be held not sooner than 30 days and not later than 35 days after the notice is published in the Environmental Monitor. The public comment period shall remain open for at least 60 days from the date of the final public hearing. After the close of the public comment period, the secretary shall issue a final ocean management plan and shall file the plan, together with legislation necessary to implement the plan, if any, by filing the same with the clerks of the house of representatives and senate.

(h) The secretary shall promulgate regulations to implement, administer and enforce this section and shall interpret this section and any regulations adopted hereunder consistent with his power to enforce the laws. These regulations shall include provisions for the review of the ocean management plan, its baseline assessment and the enforceable provisions of relevant statutes and regulations at least once every 5 years.

(i) The joint committee on state administration and regulatory oversight, in this subsection called the committee, may review a proposed ocean management plan or regulations proposed or adopted pursuant to this chapter. The committee shall consult with the joint committee on environment, natural resources and agriculture in performing this review. The committee may hold public hearings concerning a proposed ocean management plan or a proposed or existing regulation and may submit to the secretary comments concerning the merit and appropriateness of the plan or regulations to be promulgated and an opinion on whether the proposed plan or regulations are authorized by, and consistent with, this chapter and existing state laws and regulations. The secretary shall respond in writing within 10 days to the committee's written questions relevant to the committee's review of a proposed plan or proposed or existing regulation. The secretary shall provide to the committee, without charge, copies of all public records in the secretary's custody relating to the proposed plan or regulation or action in question within 10 days of a request by the committee. The committee may issue a report with proposed changes to a proposed plan or proposed or existing regulation and shall transmit this report to the secretary. If the secretary does not adopt the proposed changes

contained in the committee's report, the secretary shall notify the committee in writing of the reasons why he did not adopt the changes either at the time he adopts a proposed plan or proposed regulation or within 21 days of receiving the committee's report on an existing regulation.

(j) The ocean management plan shall be consistent with this section and all other general and special laws. The ocean management plan shall not be construed to supersede existing general or special laws, or to confer rights and remedies in addition to those conferred by existing general or special laws.

(k)(1) In the geographic area subject to the ocean management plan, as described in paragraph (b), commercial and recreational fishing shall be allowable uses, subject to the exclusive jurisdiction of the division of marine fisheries. Any component of a plan which regulates commercial or recreational fishing shall be developed, promulgated and enforced by the division of marine fisheries pursuant to its authority under chapter 130.

(2) A component of an ocean management plan which does not have as its primary purpose the regulation of commercial or recreational fishing but which has an impact on such fishing shall minimize negative economic impacts on commercial and recreational fishing. Prior to inclusion in an ocean management plan, a component with such a reasonably foreseeable impact shall be referred to the division of marine fisheries, which shall, in writing and in a timely and efficient manner, evaluate the component for its impact on commercial and recreational fishing and, if possible, develop and recommend to the secretary any suggestions or alternatives to mitigate or eliminate any adverse impacts.

(3) The director of marine fisheries, subject to the approval of the marine fisheries advisory commission, shall have sole authority for the opening and closing of areas within the geographic area described in subsection (b) for the taking of any and all types of fish, pursuant to section 17A of chapter 130. Nothing in this section shall be construed to limit the powers of the director pursuant to section 17 of chapter 130 or any other provision thereto.

SECTION 3. Section 12B of chapter 132A of the General Laws, as appearing in the 2006 Official Edition, is hereby amended by striking out the definitions of “Commissioner” and “Department” and inserting in place thereof the following definition:-

“Director”, the director of coastal zone management.

SECTION 4. Said section 12B of said chapter 132A, as so appearing, is hereby further amended by inserting after the definition of “Facilities plan” the following definition:-

“Office”, office of coastal zone management.

SECTION 5. Section 12C of said chapter 132A, as so appearing, is hereby amended by striking out, in lines 1 and 3, the word “department” and inserting in place thereof, in each instance, the following word:- office.

SECTION 6. Section 14 of said chapter 132A, as so appearing, is hereby amended by striking out, in line 2, the word “department” and inserting in place thereof the following word:- office.

SECTION 7. Said chapter 132A, as so appearing, is hereby further amended by striking out section 15 and inserting in place thereof the following section:-

Section 15. Except as otherwise provided in this section, the following activities shall be prohibited in an ocean sanctuary:

- (1) the building of any structure on the seabed or under the subsoil;
- (2) the construction or operation of offshore or floating electric generating stations, except: (a) on an emergency and temporary basis for the supply of energy when the electric generating station is otherwise consistent with an ocean management plan; or (b) for appropriate-scale renewable energy facilities, as defined by an ocean management plan promulgated pursuant to section 4C of chapter 21A, in areas other than the Cape Cod Ocean Sanctuary; provided, however, that (i) the renewable energy facility is otherwise consistent with an ocean management plan; (ii) siting of all such facilities shall take into account all relevant factors, including but not limited to, protection of the public trust, compatibility with existing uses, proximity to the shoreline, appropriateness of technology and scale, environmental protection, public safety and community benefit; and (iii) in municipalities where regional planning agencies have regulatory authority, a regional planning agency shall define the appropriate scale of offshore renewable energy facilities and review such facilities as developments of regional impact, and the applicant may seek review of the regional planning agency’s development of regional impact determination, but not its determination of appropriate scale, pursuant to the authority of the energy facilities siting board to issue certificates of environmental impact and public interest pursuant to sections 69K to 69O, inclusive, of chapter 164;
- (3) the drilling or removal of any sand, gravel or other minerals, gases or oils;
- (4) the dumping or discharge of commercial, municipal, domestic or industrial wastes;
- (5) commercial advertising; or
- (6) the incineration of solid waste or refuse on, or in, vessels moored or afloat within the boundaries of an ocean sanctuary.

SECTION 8. Section 16 of said chapter 132A, as so appearing, is hereby amended by striking out, in lines 14 and 15, the words “telecommunications and energy” and inserting in place thereof the following words:- public utilities or the department of telecommunications and cable.

SECTION 9. Said section 16 of said chapter 132A, as so appearing, is hereby further amended by striking out, in line 20 and in lines 28 and 29, the word “department” and inserting in place thereof, in each instance, the following word:- office.

SECTION 10. Said section 16 of said chapter 132A, as so appearing, is hereby further amended by striking out, in lines 29 and 30, the words “fisheries, wildlife and environmental law enforcement” and inserting in place thereof the following words:- fish and game.

SECTION 11. Section 16A of said chapter 132A, as so appearing, is hereby amended by inserting after the word “department”, in line 6, the following words:- of environmental protection.

SECTION 12. Section 16B of said chapter 132A, as so appearing, is hereby amended by striking out, in line 26 and in lines 30 and 31, the words “and the division of water pollution control” and inserting in place thereof the following words:- of environmental protection.

SECTION 13. Section 16C of said chapter 132A, as so appearing, is hereby amended by inserting after the word “department”, in lines 1 and 5, the following words:- of environmental protection.

SECTION 14. Section 16E of said chapter 132A, as so appearing, is hereby amended by inserting after the word “department”, in lines 1 and 2 and line 5, the following words:- of environmental protection.

SECTION 15. Said section 16E of said chapter 132A, as so appearing, is hereby further amended by inserting after the word “commissioner”, in lines 13 and 14, the following words:- of environmental protection.

SECTION 16. Section 16F of said chapter 132A, as so appearing, is hereby amended by inserting after the word “department”, in line 1, the following words:- of environmental protection.

SECTION 17. Said section 16F of said chapter 132A, as so appearing, is hereby further amended by striking out the last sentence.

SECTION 18. Section 18 of said chapter 132A, as so appearing, is hereby amended by inserting, after the word “of”, in line 2, the following words:-energy and.

SECTION 19. Said section 18 of said chapter 132A, as so appearing, is hereby further amended by striking out, in lines 7 and 8 and line 9, the word “department” and inserting in place thereof,

in each instance, the following word:- office.

SECTION 20. Said section 18 of said chapter 132A, as so appearing, is hereby further amended by adding the following paragraph:-

Any permit or license issued by a department, division, commission, or unit of the executive office of energy and environmental affairs and other affected agencies or departments of the commonwealth for activities or conduct consistent with this chapter shall be subject to an ocean development mitigation fee as shall be established by the secretary of energy and environmental affairs; provided, however, that no fee shall be assessed on commercial and recreational fishing permits or licenses. All the proceeds of the ocean development mitigation fee shall be deposited in the Ocean Resources and Waterways Trust Fund established pursuant to section 35HH of chapter 10.

SECTION 21. Nothing in this act shall be construed to alter the jurisdictional authority of the division of marine fisheries. Nothing in this act shall be construed to prohibit the transit of commercial fishing vessels and recreational vessels in state ocean waters.

SECTION 22. Any project that, before the effective date of this act, has: (1) filed a license application under chapter 91 of the General Laws and received a written determination of completeness from the department of environmental protection; (2) if subject to section 61 of chapter 30 of the General Laws, received a certificate of adequacy regarding a final environmental impact report; or (3) if the project is subject to the jurisdiction of the energy facilities siting board, received both a final decision from the energy facilities siting board and a certificate of adequacy regarding a draft environmental impact report, shall not be subject to the requirements of said ocean management plan.

SECTION 23. The secretary of energy and environmental affairs shall promulgate a final ocean management plan by December 31, 2009. Upon adoption, an ocean management plan shall formally be incorporated into the Massachusetts coastal zone management program, as referenced in section 4A of chapter 21A of the General Laws.

SECTION 24. Section 8 of this act shall take effect upon the adoption of an ocean management plan or by December 31, 2009, whichever occurs first.

SECTION 25. The secretary of energy and environmental affairs shall convene an advisory committee for the purpose of reviewing section 16 of chapter 132A of the General Laws and regulations promulgated pursuant thereto. The advisory committee shall review the regulatory definitions of “public necessity and convenience” and “significant alteration”. The secretary shall submit a report, together with legislative recommendations, if any, to the joint committee on environment, natural resources and agriculture by December 31, 2009.

Appendix 2 - 301 CMR 28.00

Implementing Regulations for the Ocean Management Plan

301 CMR 28: Ocean Management Plan

28.01: Authority and Purpose

28.02: Definitions

28.03: Jurisdiction

28.04: Management Areas and Standards

28.05: Consistency of Agency Authorizations

28.06: Ocean Development Mitigation Fee

28.07: Standards for Plan Review, Updates, and Amendments

28.08: Data Standards

28.99: Severability

28.01: Authority and Purpose

(1) 301 CMR 28.00 is adopted pursuant to M.G.L. c. 21A §4C and M.G.L. 132A, §§ 12A-16F (Massachusetts Oceans Sanctuary Act) as amended by St. 2008, c. 114 (Massachusetts Oceans Act). These regulations implement, administer, and enforce M.G.L. c. 21A, § 4C and the Ocean Management Plan, developed and promulgated in accordance with the Massachusetts Oceans Act. In accordance with St. 2008, c. 114, § 23 and with the federal Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et seq.) and implementing regulations at 15 CFR §§ 923 and 930, enforceable standards of the Ocean Management Plan form part of the Massachusetts Coastal Zone Management Program and shall be interpreted and applied in a manner consistent with 301 CMR 20.00.

(2) 301 CMR 28.00 is promulgated by the Secretary to fulfill, in part, the statutory responsibility for the oversight, coordination, and planning for ocean waters and ocean-based development in the Commonwealth. The Massachusetts Oceans Act requires the Secretary to develop and implement an integrated ocean management plan for a specified Ocean Management Planning Area. The purpose of 301 CMR 28.00 is also to define, interpret, and clarify the procedures and rules necessary for agencies to carry out responsibilities under the Massachusetts Oceans Act, M.G.L. c. 21A, § 4C, and M.G.L. 132A, §§ 12A-16F. Pursuant to statutory directive, the Ocean Management Plan establishes management areas and standards for certain Activities allowed under M.G.L. c. 132A, §§ 15-16 within the Ocean Management Planning

Area. The Activities subject to the Ocean Management Plan are governed by siting and performance standards, associated with mapped resources and uses, that direct development away from areas with important and high value resources and water-dependent uses. 301 CMR 28.00 establishes the procedures and requirements necessary to interpret, implement, administer, and enforce M.G.L. c. 21A, § 4C and the Ocean Management Plan, including provisions to:

- (a) Codify the jurisdiction, management areas, and standards developed by the Ocean Management Plan;
- (b) Establish procedures for assessing the Ocean Development Mitigation Fee, pursuant to M.G.L. c. 132A § 18;
- (c) Develop provisions for the review of the Ocean Management Plan and its baseline assessment and enforceable measures;
- (d) Define the process for making updates or amendments to the Ocean Management Plan; and
- (e) Ensure regulatory consistency for pertinent agency decisions regarding ocean development.

(3) Nothing in the Ocean Management Plan or 301 CMR 28.00 shall be construed to supersede existing general or special laws, or to confer rights and remedies in addition to those conferred by existing general or special laws.

28.02: Definitions

Activities means activities, uses or facilities allowed under M.G.L. c. 132A §§ 15 and 16.

Agency means any agency, department, board, commission, or authority of the Commonwealth.

Cables means linear infrastructure for the transmission of telecommunications or electricity.

Commercial Scale Wind Energy means wind energy projects of a scale designed for the generation of energy at commercial scale; that is, greater than wind energy projects for an individual community or subset thereof. Commercial scale wind energy facilities are those that are larger than the community-scale allocations contained in the Ocean Management Plan.

Commercial Scale Tidal Energy means tidal energy facilities at scale greater than could be authorized by the Federal Energy Regulatory Commission (FERC) as a

pilot project under FERC's Hydrokinetic Pilot Project Licensing Process described in the April 2008 *Licensing Hydrokinetic Pilot Projects* White Paper.

Community Scale Wind Energy means wind energy projects of a scale designed to provide energy for an individual community or communities. Community Scale Wind Energy Facilities must conform to the maximum allocation of turbines that may be approved within the areas of the coastal Regional Planning Agencies as contained in the Ocean Management Plan.

Concentrations of Water-dependent Uses means areas described and mapped in the Ocean Management Plan, as may be updated or amended, where the intensity of marine-based commercial and recreational fishing, commercial shipping and navigation, and recreational boating uses are significant. Maps of the Concentrations of Water-dependent Uses and the methods utilized for developing them are available on the Massachusetts Ocean Resources Information System.

Environmental Impact Report means an Environmental Impact Report, or EIR, as defined and used in 301 CMR 11.00: *MEPA Regulations*.

Environmental Monitor means the publication, titled the *Environmental Monitor*, issued by the Executive Office of Energy and Environmental Affairs to provide information on projects under review by the MEPA office, recent MEPA decisions, and other public notices from Agencies. The URL for the online version of the *Environmental Monitor* is <http://www.env.state.ma.us/mepa/emonitor.aspx>.

Environmental Notification Form means an Environmental Notification Form, or ENF, as defined and used in 301 CMR 11.00: *MEPA Regulations*.

Host Community means any town or city in which all or part of a renewable energy Activity's energy generating facilities (i.e., turbines not cables) are located.

Massachusetts Ocean Resources Information System means the online geographical information system (GIS) data base and mapping tool managed by the Office of Coastal Zone Management. All of the maps and GIS data contained in the Ocean Management Plan are maintained and available in digital format on the Ocean Management Plan Data site of the Massachusetts Ocean Resources Information System. The URL is http://maps.massgis.state.ma.us/map_ol/mass_ocean_plan.php.

MEPA means the Massachusetts Environmental Policy Act, M.G.L. c. 30, §§ 61 through 62H and regulations at 301 CMR 11.00: *MEPA Regulations*.

Ocean Advisory Commission means the advisory commission established by the Oceans Act for the purpose of assisting the Secretary in the development of an Ocean Management Plan. Membership and other terms are defined in M.G.L. c. 21A, § 4C(c)(i) through (iii).

Ocean Management Plan means the Massachusetts Ocean Management Plan developed and promulgated pursuant to St. 2008, c. 114 and M.G.L. c. 21A, § 4C and as updated and amended.

Ocean Management Planning Area means the waters and associated submerged lands of the ocean, including the seabed and the soil, lying between a line designated as the “Nearshore Boundary of the Ocean Management Planning Area” and the seaward boundary of the Commonwealth, as defined in 43 U.S.C. § 1312. The “Nearshore Boundary of the Ocean Management Planning Area” is depicted on a map dated January 31, 2006, prepared by the Office of Coastal Zone Management, and available on the Massachusetts Ocean Resources Information System, that constitutes the landward boundary of the Ocean Management Planning Area.

Ocean Science Advisory Council means the council established by the Oceans Act for the purpose of assisting the Secretary in creating a baseline assessment and obtaining other scientific information necessary for the development of the Ocean Management Plan. Membership and other terms are defined in M.G.L. c. 21A, § 4C(d).

Person means any individual, corporation, partnership, trust, association, or other business or nonprofit organization, or any Federal, municipal, or regional governmental, intergovernmental or other entity that is not an Agency.

Pilot Tidal and Wave Energy Project means a tidal and wave energy (or hydrokinetic) facility at a scale that could be authorized by the Federal Energy Regulatory Commission (FERC) as a pilot project under FERC’s Hydrokinetic Pilot Project Licensing Process described in the April 2008 *Licensing Hydrokinetic Pilot Projects* White Paper.

Pipeline means linear infrastructure for the conveyance of such materials as natural gas.

Proponent means any Agency or Person, including a designee or successor in interest, that undertakes, or has a significant role in undertaking, an Activity.

Regional Planning Agency means, for the purposes of these regulations, one of the six coastal regional planning organizations established pursuant to statewide enabling legislation that helps communities plan and implement short- and long-range improvements for transportation, economic development, environmental, land use, and community development needs. The six coastal regional planning organizations are: the Cape Cod Commission, the Martha's Vineyard Commission, the Merrimack Valley Planning Commission, the Metropolitan Area Planning Council, the Nantucket Planning and Economic Development Commission, and the Southeastern Regional Planning and Economic Development District.

Renewable Energy Activities means wind, tidal, or wave energy projects allowed under M.G.L. c. 132A §§ 15-16 and includes Commercial Scale Wind Energy, Commercial Scale Tidal Energy, Community Scale Wind Energy, Pilot Tidal and Wave Energy, and Test or Demonstration-Scale Renewable Energy Projects.

Sand and Gravel Extraction means the activity of removing sand or gravel from the seabed and subsoil for the purpose of beach restoration, nourishment or shore protection.

Secretary means the Secretary of the Executive Office of Energy and Environmental Affairs.

Special, Sensitive or Unique Resources means special, sensitive or unique estuarine and marine life and habitats, pursuant to St. 2008, c. 114 and M.G.L. c. 21A, § 4C. Special, Sensitive or Unique Resources are described and mapped in the Ocean Management Plan, as may be updated or amended. Maps of the Special, Sensitive or Unique Resources and the methods utilized for developing them are available on the Massachusetts Ocean Resources Information System.

Test or demonstration-scale renewable energy projects mean wind, tidal, or wave energy projects of a limited scale designed to pilot, test, and demonstrate renewable energy technology.

28.03: Jurisdiction

(1) Areas Subject to Jurisdiction.

- (a) Activities listed in 301 CMR 28.03(2) that occur in all or part of the Ocean Management Planning Area are subject to jurisdiction.

(2) Activities Subject to Jurisdiction.

- (a) Any Person engaged in the following Activities shall comply with the siting and performance standards set forth in 301 CMR 28.04: Renewable Energy, Sand and Gravel Extraction, Cables, and Pipelines.
- (b) Within the Ocean Management Planning Area, the Ocean Management Plan standards apply to Activities that are required to file an Environmental Impact Report.
- (c) Proponents of Activities that exceed Environmental Notification Form thresholds are required to document any potential impacts to Special, Sensitive and Unique Resources or areas of Concentrations of Water-dependent Uses.
- (d) The Ocean Management Plan may be amended to include other Activities allowed under M.G.L. c. 132A, §§ 15 and 16 pursuant to 301 CMR 28.07.
- (e) Upon written request, the Secretary or his or her designee will provide Proponents, Persons, or Agencies with a written advisory opinion regarding the applicability of the Ocean Management Plan or 301 CMR 28.00.
- (f) Activities that are allowable pursuant to M.G.L. c. 132A §§ 15 and 16 and that are not required to develop an Environmental Impact Report are presumed to meet the standards in 301 CMR 28.04.

(3) Protected Resources and Uses.

- (a) The Ocean Management Plan identifies key components of Massachusetts estuarine and marine ecosystems, defined as Special, Sensitive or Unique Resources, and establishes standards to protect them. The Ocean Management Plan also establishes management guidance for balancing potential impacts to areas with Concentrations of Water-dependent Uses with new Activities in the Ocean Management Planning Area. The standards for protected resources and uses are contained in 301 CMR 28.04.
- (b) Maps developed in the Ocean Management Plan and maintained in the Massachusetts Ocean Resources Information System delineate the areas of defined Special, Sensitive or Unique Resources and Concentrations of Water-dependent Uses. These maps shall be used to ensure that the standards in 301 CMR 28.04 are met. Additional information, including more accurate characterization or delineation of Special, Sensitive or Unique Resources and Concentrations of Water-dependent Uses, may be required pursuant to a Secretary's MEPA certificate. This additional information and other information made available during MEPA review will be utilized in the review and authorization of proposed Activities.

(4) Activities and Resources not subject to Ocean Management Plan jurisdiction.

- (a) Pursuant to M.G.L. c. 130 and any other applicable general or special law, the Division of Marine Fisheries shall have sole responsibility for developing

and implementing any fisheries management plans or fisheries regulations. Marine fisheries shall be managed in compliance with the applicable rules and regulations of the Division of Marine Fisheries and federal or interstate fishery management plans issued pursuant to M.G.L. c. 130 or any other applicable general or special law and shall be integrated, to the maximum extent practicable, with the Ocean Management Plan.

(b) Maps and information contained in the Ocean Management Plan will assist the Division of Marine Fisheries in the review of proposed Aquaculture Facilities pursuant to 322 CMR 15.00: *Management of Marine Aquaculture*.

28.04: Management Areas and Standards

(1) Management areas. Within the Ocean Management Planning Area, the following management areas are defined in the Ocean Management Plan:

(a) Prohibited areas. Areas where Activities are expressly prohibited by either the Ocean Sanctuaries Act or Ocean Management Plan.

(b) Wind Energy Areas. Areas suitable and presumptively allowed for commercial-scale wind energy facilities and other renewable energy Activities subject to standards and conditions contained in the Ocean Management Plan and these regulations.

(c) Multi-use Areas. Areas, including portions of state waters not identified as Ocean Sanctuaries pursuant to the M.G.L. c. 132A § 13(a), where Activities allowed under the Ocean Sanctuaries Act are subject to the standards and conditions contained in the Ocean Management Plan and 301 CMR 28.00.

(2) Management Standards for Special, Sensitive or Unique Resources. The following standards apply only to those Activities that are required to file an Environmental Impact Report pursuant to MEPA:

(a) Activities proposed in the Ocean Management Planning Area are presumptively excluded from the Special, Sensitive or Unique Resource areas delineated on maps contained in the Ocean Management Plan and maintained in the Massachusetts Ocean Resources Information System.

(b) This presumption may be overcome by demonstrating to the Secretary that:

1. The maps delineating the Special, Sensitive or Unique Resources do not accurately characterize the resource based on substantial site-specific information collected in accordance with data standards and processes contained in 301 CMR 28.08; or
2. No less environmentally damaging practicable alternative exists. For the purposes of this standard, an alternative is practicable if it is available and capable of being done after taking into consideration

cost, existing technology, and logistics with respect to the purpose of the Activity; and,

3. The Proponent has taken all practicable measures to avoid damage to Special, Sensitive or Unique Resources, and the Activity will cause no significant alteration Special, Sensitive, or Unique Resources.

Demonstrating compliance with this standard may include the incorporation of measures to avoid resources and impacts through time of year controls such that the construction, operation, or removal of the Activity will not occur when the Special, Sensitive or Unique Resource is present or may be adversely effected; and,

4. The public benefits associated with the proposed Activity outweigh the public detriments to the Special, Sensitive or Unique Resource.

(3) Management Standards for Concentrations of Water-dependent Uses. The following standard applies only to those Activities which are required to develop an Environmental Impact Report pursuant to MEPA. To the maximum extent practicable, Proponents of Activities must avoid, minimize, and mitigate impacts to areas of Concentrations of Water-dependent Uses delineated on maps developed in the Ocean Management Plan and maintained in the Massachusetts Ocean Resources Information System.

(4) Additional Management Standards for Renewable Energy Activities. The following standards apply to Renewable Energy Activities:

(a) Pursuant to M.G.L. c. 132A, § 15, a Regional Planning Agency shall define the appropriate scale of offshore renewable energy Activities and review such Activities as developments of regional impact in municipalities where Regional Planning Agencies have regulatory authority. A Proponent may seek review of the Regional Planning Agency's development of regional impact determination, but not its determination of appropriate scale, pursuant to M.G.L. c. 164 §§ 69K through 69O.

(b) For Commercial Scale Wind Energy Activities, the following standard applies. For Activities not subject to review by Regional Planning Agencies with regulatory authority as developments of regional impact, appropriate scale shall be determined by the Secretary in consultation with the Host Community and shall include consideration of economic benefits that the Host Community must receive from the Commercial Scale Wind Energy Activity.

(c) For Community Scale Wind Energy Activities, the following standard applies. The Ocean Management Plan lists the maximum number of turbines allocated for Community-Scale Wind Energy Activities within each Regional Planning Agency's planning area. The maximum allocation may be raised by

the Secretary based on a demonstration by a Regional Planning Agency that the existing cap for a community-scale wind energy facility is not economically viable or that raising the allocation will cause no significant impact to appropriate scale interests.

(d) For Community-Scale Wind and Pilot Wave or Tidal Activities, the following standards apply:

1. For Activities not subject to review by Regional Planning Agencies with regulatory authority as developments of regional impact, appropriate scale shall be determined by the Secretary in consultation with the Host Community.
2. Proponents of Activities must demonstrate that the Host Community formally supports the project. Such support may be demonstrated by a letter from the town's Board of Selectman, or the city's Mayor or City Council; and,
3. Proponents of Activities other than test or demonstration-scale renewable energy projects must provide an economic benefit to the Host Community.

28.05: Consistency of Agency Authorizations

(1) It shall be the responsibility of all Agencies to ensure that all certificates, licenses, permits and approvals for any proposed Activities in the Ocean Management Planning Area and subject to the jurisdiction of the Ocean Management Plan, as contained in 301 CMR 28.03, are consistent, to the maximum extent practicable, with the provisions of said plan.

(2) In issuing licenses, permits and approvals for the Activity, Agencies shall act consistently, to the maximum extent practicable, with the Secretary's findings and determinations contained in a MEPA certificate, including as they may apply to the Activity's compliance with the management standards contained in 301 CMR 28.04(2). An Agency may also rely upon such findings and determinations of the Secretary when reviewing and taking action on an application or request by a proponent for a license, permit or approval from the Agency for the Activity.

(3) An Agency shall include a determination in its § 61 findings pursuant to MEPA, that all feasible measures have been taken such that its approval of the Activity is consistent with the Ocean Management Plan and 301 CMR 28.00. The Agency shall specify any measures required to achieve consistency, the Person or Agency responsible for funding and implementing such measures, and the anticipated implementation schedule that will ensure that the measures shall be implemented prior to, or when appropriate, in relation to timing of unavoidable impacts.

28.06: Ocean Development Mitigation Fee

(1) Any Activity subject to the jurisdiction of the Ocean Management Plan and these regulations and requiring a permit or license issued by a department, division, commission, or unit of the Executive Office of Energy and Environmental Affairs and other affected agencies or departments of the commonwealth shall be subject to an Ocean Development Mitigation Fee as established by the Secretary. The purpose of the fee is to compensate the Commonwealth for unavoidable impacts of ocean development Activities on the broad public interests and rights in the lands, waters, and resources of the Ocean Planning Area and to support the planning, management, restoration, or enhancement of marine habitat, resources, and uses pursuant to the Massachusetts Oceans Act. No portion of the fee assessed by the Secretary shall be based on the Activity requiring a commercial or recreational fishing permit or license.

(2) All fees assessed by the Secretary shall be deposited in the Ocean Resources and Waterways Trust pursuant to M.G.L. c. 10, § 35HH and shall be administered in accordance with the purposes of the Fund and guidelines established by the Secretary.

(3) Under 301 CMR 28.06, the Secretary shall promulgate a fee structure for ocean development Activities subject to the Ocean Management Plan and 301 CMR 28.00. The Ocean Development Mitigation Fee should reflect differences in the scope and scale of Activities and their effects on protected resources or uses.

(4) The Ocean Development Mitigation Fee as determined by 301 CMR 28.06(3) will be listed in the final MEPA certificate.

(5) Nothing in 301 CMR 28.06 shall modify or otherwise affect an Agency's independent authority to require the Proponent to provide mitigation or compensation in *lieu* of mitigation as a condition of a permit or license issued by the Agency for the Activity.

28.07: Standards for Plan Review, Amendments, and Updates

(1) Consistent with M.G.L. c. 21A, § 4C, the development and revision of the Ocean Management Plan is the authority and responsibility of the Secretary. The Office of Coastal Zone Management will support the Secretary, and act on his or her behalf as delegated, in the administration, implementation, and oversight of the Ocean Management Plan and 301 CMR 28.00.

- (2) The Secretary shall ensure that the Ocean Management Plan, its baseline assessment, and the enforceable provisions of relevant statutes and regulations are reviewed at least once every five years.
- (3) The scope of such review will be determined by the Secretary in consultation with the Ocean Advisory Commission and the Ocean Science Advisory Council.
- (4) The following changes to the Ocean Management Plan shall be made only through an amendment:
- (a) The revision of existing or the creation of new management area locations or boundaries, excepting minor adjustments;
 - (b) The substantial revision of existing or the creation of new management standards;
 - (c) The identification of new or removal of current protected Special, Sensitive, or Unique Resources;
 - (d) The identification of new or removal of current protected areas of Concentrations of Water-dependent Uses; or,
 - (e) Other changes that would result in significant alteration to the management framework or geographic extent of the plan.
- (5) The Secretary will conduct the review and amendment process in accordance with the following guidelines:
- (a) The plan amendment process will be initiated with a public notice in the *Environmental Monitor* announcing the intent to review and amend the current Ocean Management Plan.
 - (b) Public hearings will be held to receive input on the content and implementation of the current Ocean Management Plan. Generally, a hearing will be held in the each of the following regions: North Shore, Metro Boston, South Shore, Cape and Islands, and South Coastal.
 - (c) The Secretary will consult with the Ocean Advisory Committee in determining the scope of the plan amendment and in the development of amendments pursuant to said scope.
 - (d) The Secretary will consult with the Ocean Science Advisory Council in determining the scope of the updated baseline assessment scope and in the review of science related to the plan amendment scope.
 - (e) The Secretary will make a draft of the plan amendment available in electronic and printed copy form for public comment. Public hearings will be held on the draft amended plan. The public comment period will remain open for a minimum of 60 days after the last hearing.

- (f) After the close of the public comment period, the Secretary will promulgate a final amended Ocean Management Plan and will file the plan with the House of Representatives and Senate clerks.
- (g) 301 CMR 28.00 will be revised as necessary to implement, administer and enforce M.G.L. c. 21A, § 4C and the Ocean Management Plan.

(6) Distinct from an amendment to the Ocean Management Plan, updates are revisions to the plan intended for proposed changes necessary for effective and efficient administration but not at the scope or scale of an amendment. The following changes to the Ocean Management Plan may be made through an update:

- (a) Corrections to address errata, technical discrepancies or errors, or to clarify intent or meaning;
- (b) Updated data and information on the spatial extent or further characterization of Special, Sensitive and Unique resources or Concentrations of Water-dependent Uses;
- (c) Minor shifts in existing management area boundaries; and,
- (d) Other adjustments that do not result in significant changes to the management framework or geographic extent of the Ocean Management Plan.

(7) The Secretary will conduct the update process in accordance with the following guidelines:

- (a) Requests for an update by an Agency or Person will be submitted to the Secretary. Proposed updates must meet a confirmed need for adjustments to the plan or clarify the management or administrative framework of the current and any proposal for an update must include a clear summary statement and rationale for the purpose of the update.
- (b) For a proposed update that pertains to new or updated data on Special, Sensitive, or Unique Resources or Concentrations of Water-dependent Uses, the update must conform with the data standards and processes contained in 301 CMR 28.08.
- (c) The Secretary will seek input from Agencies and will consult with the Ocean Advisory Commission and the Ocean Science Advisory Council on the proposed update.
- (d) The Secretary will provide for public notice in the *Environmental Monitor* of the intent to update the Ocean Management Plan upon a determination that the update meets the above criteria and will further the goals of the Ocean Management Plan. The public comment period will be at least 30 days. The Secretary may hold one or more public hearings on the proposed update.

(e) After the close of the public comment period, the Secretary will issue a final decision on the proposed update. This decision will be noticed in the *Environmental Monitor*.

28.08: Data Standards

(1) For Proponents seeking to demonstrate that the maps contained in the Ocean Management Plan do not accurately characterize the protected resource or use pursuant to 301 CMR 28.04 (2)(a)1, the following standards apply:

(a) Consultation with the Secretary, the Office of Coastal Zone Management, and other Agencies with expertise or authority is advised in order to review any proposed effort to map or otherwise characterize protected resources or uses.

(b) Information presented must be based on site-specific investigation or characterization that conforms with contemporary and accepted standards.

(2) For proposed updates to or the delineation of new areas of mapped Special, Sensitive and Unique Resources or Concentrations of Water-dependent Uses pursuant to 28.07, the following standards apply:

(a) Prior to initiating a proposed investigation or mapping effort, Persons or Agencies shall consult with the Secretary, the Office of Coastal Zone Management and other Agencies with expertise or authority to determine study requirements and data products.

(b) Any new or revised data set for Special Sensitive and Unique Resources or Concentrations of Water-dependent Uses should be based on site-specific studies that conform with contemporary and accepted standards, and adhere to other customary principles such as peer review.

(c) Any final data product must include acceptable geospatial meta-data, including the identification and description of any data modification or transformation, synthesis, or extraction.

28.99: Severability. If any section or clause of 301 CMR 28.00 is held invalid or unconstitutional by a court of competent jurisdiction, the remainder shall not be affected thereby.

Appendix 3 - Ocean Development Mitigation Fee

Pursuant to the Ocean Act of 2008, projects subject to the Massachusetts Ocean Management Plan (ocean plan) and its implementing regulations at 301 CMR 28.00 shall be subject to an Ocean Development Mitigation Fee, as established by the Secretary of the Executive Office of Energy and Environmental Affairs (EEA). Section 301 CMR 28.06 states that the purpose of the fee is to:

- Compensate the Commonwealth for unavoidable impacts of ocean development projects on the broad public interests and rights in the lands, waters, and resources of the Ocean Management Planning Area (planning area); and
- Support the planning, management, restoration, or enhancement of marine habitat, resources, and uses pursuant to the Massachusetts Oceans Act (St. 2008, c. 114).

The ocean plan regulations require the EEA Secretary to promulgate a fee structure for ocean development projects. The fee should reflect differences in the scope and scale of projects and their effects on protected resources or uses. The determination and application of the fee shall not modify or affect the requirement of a project proponent to provide mitigation (or compensation in lieu of mitigation) under separate authorities or as a condition of a separate permit or license.

With input from an advisory working group comprised of representatives from the regulated community (including an energy utility and a legal firm representative), commercial fishing and environmental interests, and state agencies, a proposed fee structure and accompanying guidance was developed. Chapter 3 of Volume 1 of the ocean plan provides an overview of the proposed fee structure and its administration. This appendix contains more details and lists the proposed fee structure.

Fee Administration

- The fee serves to offset, in part, unavoidable impacts on the broad public interests and rights in the lands, waters, and resources of the planning area not otherwise mitigated under separate authorities.
- Using the fee structure listed below as guidance, the project proponent will evaluate their project and provide information and analysis to inform the determination of the fee through the Massachusetts Environmental Policy Act (MEPA) review

process. The information shall be submitted in the draft Environmental Impact Report (EIR) filing, or in the case of a single EIR, in the Expanded Environmental Notification Form (EENF).

- This fee-determination analysis shall be based on the information required by MEPA in an EIR submittal, which includes a detailed description and analysis of:
 - The nature and location of the project;
 - Project alternatives;
 - Impacts of the project and its alternatives, including both short-term and long-term impacts for all phases and cumulative impacts;
 - Measures and management techniques to be taken to avoid, minimize, and mitigate potential impacts to the environment, water-dependent uses, and public trust interests;
 - Public benefits of the project, and other mitigation proposed, separate and distinct from the ocean development fee;
 - Proposed Section 61 Findings; and
 - Information for a Public Benefits Determination, including nature of the tidelands affected by the project and the public benefit of the project.

- A proponent may request that the fee be paid over several years, but any such allowance shall not exceed a term of 10 years. A proponent may request a reduction or waiver of the fee based on a clear demonstration of need or hardship. The MEPA filing shall include a statement of the specific circumstances that constitute the need or hardship, and the relief requested.

- The Oceans Act and its implementing regulations state that commercial or recreational fishing permits and licenses are not subject to the fee.

- In comments on the MEPA EIR, agencies, stakeholders, and the public may concur with the proponent's proposed fee class or advise a different class.

- Based on the MEPA filing, comments received, the evaluation of the proposed project and its effects, public benefits, other mitigation proposed, and other information, the EEA Secretary shall issue a determination of the final fee to be referenced in the final MEPA certificate.

- As administrator of the fee, the EEA Secretary retains broad discretion in determining the fee amount and any conditions necessary to ensure that the "as-built" project is consistent with the project as described in the final MEPA EIR filing.

Fee Structure

The following schedule contains three classes within a fee structure reflecting a hierarchy of projects based on their scope, extent, duration, and severity of impacts.

Activity Class	Project Scope, Scale, and Effects	Fee
Class I	<ul style="list-style-type: none"> • Project is limited in scale, size, and footprint. • Project footprint is less than 6 acres and project extent is generally confined to the seafloor (i.e., does not also include, or has only very minor expression in, the water column, water surface, and/or area above the ocean). • Effects are limited in duration (i.e., primarily during construction/installation). • Project has negligible or minor effects on habitat or natural resources. • Project has negligible or minor effects on water-dependent uses. 	\$12,000-\$50,000
Class II	<ul style="list-style-type: none"> • Project is moderate in scale, size, and footprint. • Project footprint is 6-20 acres and project extent may include a limited amount of water column, water surface, and/or area above the ocean. • Effects are more than temporary, extend beyond construction/installation, or are recurrent. • Project has moderate effects on habitat or natural resources. • Project has moderate effects on water-dependent uses. 	\$100,000-\$350,000
Class III	<ul style="list-style-type: none"> • Project is large and/or complex in scale, size, and footprint. • Project footprint is greater than 20 acres and project extent may include a moderate/major amount of water column, water surface, and/or area above the ocean. • Effects are frequent, recurring, and/or continuous in duration and permanent/lasting. • Project has major effects on habitat or natural resources. • Project has major effects on water-dependent uses. 	\$600,000-\$6,000,000
<p><u>Negligible</u> - Effects are at the lowest levels of detection, barely measurable, with no perceptible adverse consequences to the resources.</p> <p><u>Minor</u> - Effects are measurable or perceptible but are slight. Impacts are to very few resources. Most impacts to the affected resources are avoided or mitigated. Affected resources will recover quickly.</p>		

Moderate - Effects are measurable and perceptible. Impacts are to more than a few resources. Impacts to the affected resources are unavoidable. Affected resources will recover within a short time span.

Major - Effects are noticeable, substantial, and/or lasting. Impacts to the affected resources are unavoidable and affected resources will take appreciable time to recover or may not fully recover.

Appendix 4 - Ocean Resources and Waterways Trust Fund Implementation Guidelines

Chapter 114 of the Acts of 2008 (Oceans Act) created a new Ocean Resources and Waterways Trust Fund in Section 35HH of MGL Chapter 10. The trust receives ocean development mitigation fee payments associated with projects subject to the Ocean Sanctuaries Act and Massachusetts Ocean Management Plan (ocean plan), as well as other appropriations, grants, or investment income. The Act identifies the Secretary of the Executive Office of Energy and Environmental Affairs (EEA) as trustee of the trust and contains provisions pertaining to expenditures from the trust. The ocean plan provides additional guidance on the management of the trust. Based on the statutory requirements and ocean plan guidelines, these Ocean Resources and Waterways Trust Implementation Guidelines have been developed to direct the administration and management of the trust.

I. Purpose

The trust was established by law for the purpose of accepting funds from projects subject to an ocean development mitigation fee and other appropriations, royalties, and grants to be used by the Commonwealth for managing, protecting, restoring, and/or enhancing marine habitat, resources, and specified uses in state waters or adjacent ocean areas.

II. Trustee

The EEA Secretary serves as trustee of the trust. The Secretary may delegate certain trustee duties in order to assist with elements of the trust administration and management. Such duties include, but are not limited to: project identification, planning, and implementation; recommendations for and approval of expenditures consistent with these guidelines; fiscal management and auditing; and reporting on progress of projects supported by the trust.

III. Massachusetts Ocean Management Plan

The Oceans Act also conferred the EEA Secretary with the authority for oversight, coordination, and planning for the Commonwealth's ocean waters, resources, and development and required the development of an integrated ocean management plan. Working with the Ocean Advisory Commission (OAC) and the Ocean Science Advisory Council (SAC), advisory bodies established in the Act to provide policy guidance, EEA developed specific strategies and targeted outcomes for the ocean plan based on the goals of

the Act. Along with integrated management and stewardship of marine ecosystems, a key principle for the ocean plan is to ensure that it can adapt to evolving knowledge and understanding of the ocean environment and its future uses. The ocean plan also provides a blueprint for ocean management-related science and research needs in Massachusetts. The blueprint, or Science Framework, was developed in consultation with the OAC and SAC, as well as public and stakeholder input, and identifies both long-term goals and objectives as well as priority actions.

An interagency ocean management team was identified in the ocean plan to provide the EEA Secretary with input and advice on ocean planning and management—including policy development, technical and scientific information and research, and regulatory decision-making. The interagency group is chaired by EEA’s Office of Coastal Zone Management (CZM) and is comprised of personnel from CZM, the Department of Environmental Protection, the Department of Fish and Game, and the Massachusetts Environmental Policy Act Office.

IV. Trust Account

Pursuant to the Act, the trust was established as account #2000-0115 in the Massachusetts Management Accounting and Reporting System (MMARS). The effective date of the trust is May 28, 2008, the enabling date of the Act.

V. Deposits/Credits

The trust is eligible to receive revenue from appropriations or other funds specifically designated to be credited to the trust by the legislature; other appropriations or grants that are explicitly directed to the trust; income derived from the investment of amounts credited to the trust; and payments resulting from any ocean development mitigation fee established pursuant to MGL c. 132A, section 18 or similar compensation/mitigation payments.

Checks for deposits/credits should be made out to *Commonwealth of Massachusetts - Ocean Resources and Waterways Trust Fund*.

VI. Trust Expenditure Criteria

The use of trust funds for proposed projects is subject to the following qualifications:

- No less than fifty percent of trust funds from renewable energy projects must be directed to the “host” community(ies) as defined in the ocean plan and implementing

regulations. The host community(ies) must utilize such funds in a manner consistent with the provisions of these trust expenditure criteria.

- Trust funds are to be used for the restoration, enhancement, or management of marine habitat and resources impacted by the project. Within this framework, the following provisions apply:
 - Funds derived from impacts to public navigation by an ocean development project should be targeted to navigational improvements.
 - Funds derived from impacts to fisheries resources should be targeted to fisheries restoration and management programs.
- Other funds credited to the trust are to be used only for the purposes of environmental enhancement, restoration, and management of ocean resources and uses generally consistent with the Act and the ocean plan.
- All approved expenditures from the trust shall follow all applicable Commonwealth procurement and finance laws, regulations, and guidelines. These expenditures include direct procurement by EEA as well as fund transfers from EEA to another state agency via an Interagency Service Agreement.

VII. Trust Project Identification, Approval, and Implementation

As designated by EEA, CZM will lead the interagency ocean management group tasked with the review and approval of projects that are consistent with the expenditure criteria and will (1) advance the Commonwealth's identified ocean planning and management science, research, and informational needs, such as those specified in the ocean plan and/or (2) restore, enhance, or manage the habitat and resources impacted by specific projects. In determining whether projects proposed for trust support are consistent with these Trust Implementation Guidelines, CZM will seek input on proposed projects from the interagency ocean management group. Such review will include an assessment of the following:

- Purpose - The proposed project's purpose must conform to the expenditure criteria above and must further an identified science, research, or informational need and/or must restore, enhance, or manage habitats and resources impacted by specific projects.
- Objectives - The project objectives, including the project's scope, methodology, tasks, and technology, must advance the stated goals of the ocean plan. Project objectives must exhibit technical and scientific merit.

- Deliverables - The products/outcomes/deliverables of the proposed project must demonstrate quantifiable benefits to improve the public use and protection of the Commonwealth's marine habitats and resources.
- Budget - The project must be cost-effective and represent a good value for the Commonwealth. Projects should seek to leverage financial resources from other sources or associations with sponsoring partners.

Based on the review of the proposed project, CZM will make a recommendation to the EEA Secretary as to trust support for the proposed project. If approval from the Secretary or their designee is granted, the proposed project will move to final scoping, procurement of necessary services (if applicable), and implementation. A member of the interagency ocean management group will be designated as project manager and will be responsible for approving the final scope of work and outcomes/deliverables, overseeing the project through its completion, and reporting on progress and final results.

VIII. Tracking and Reporting

On behalf of the Secretary and in close coordination with EEA fiscal personnel, CZM will assume duties for monitoring trust deposits/credits and expenditures, as well as maintaining procurement/audit files.

CZM will maintain a registry of projects supported by the trust, with details on the budget, project purposes, primary tasks, and deliverables. This information will be shared with the OAC and the SAC and made publicly available through the CZM website or similar means. Additionally, since the trust projects are designed to advance ocean planning and management issues, CZM will include project summaries and updates in its regular communications (such as the CZ-Mail newsletter) as well as incorporate related content on relevant websites.

Volume 1 - Figures

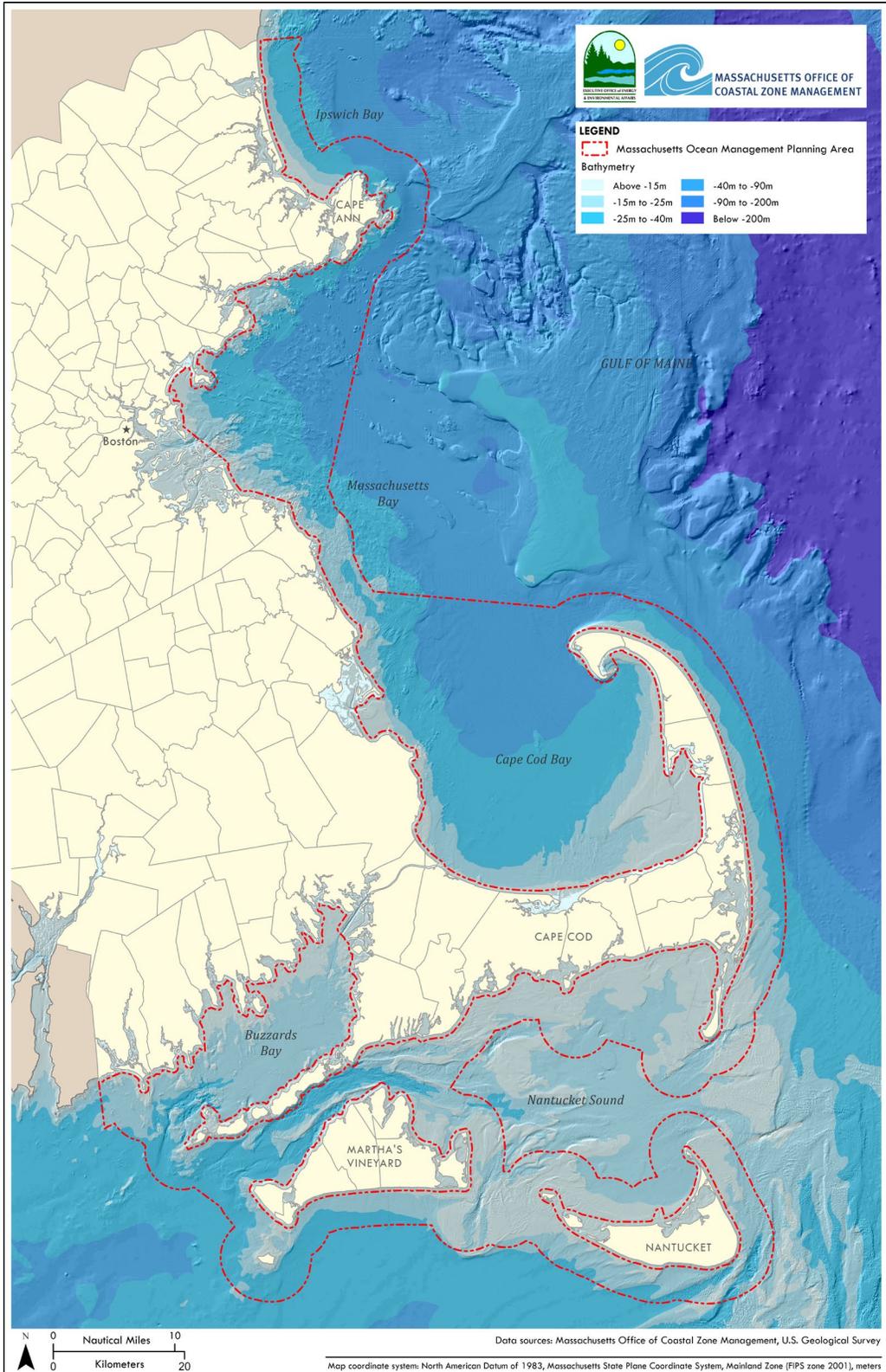


Figure 1. Massachusetts Ocean Management Planning Area



Figure 2. Management areas designated in the ocean plan

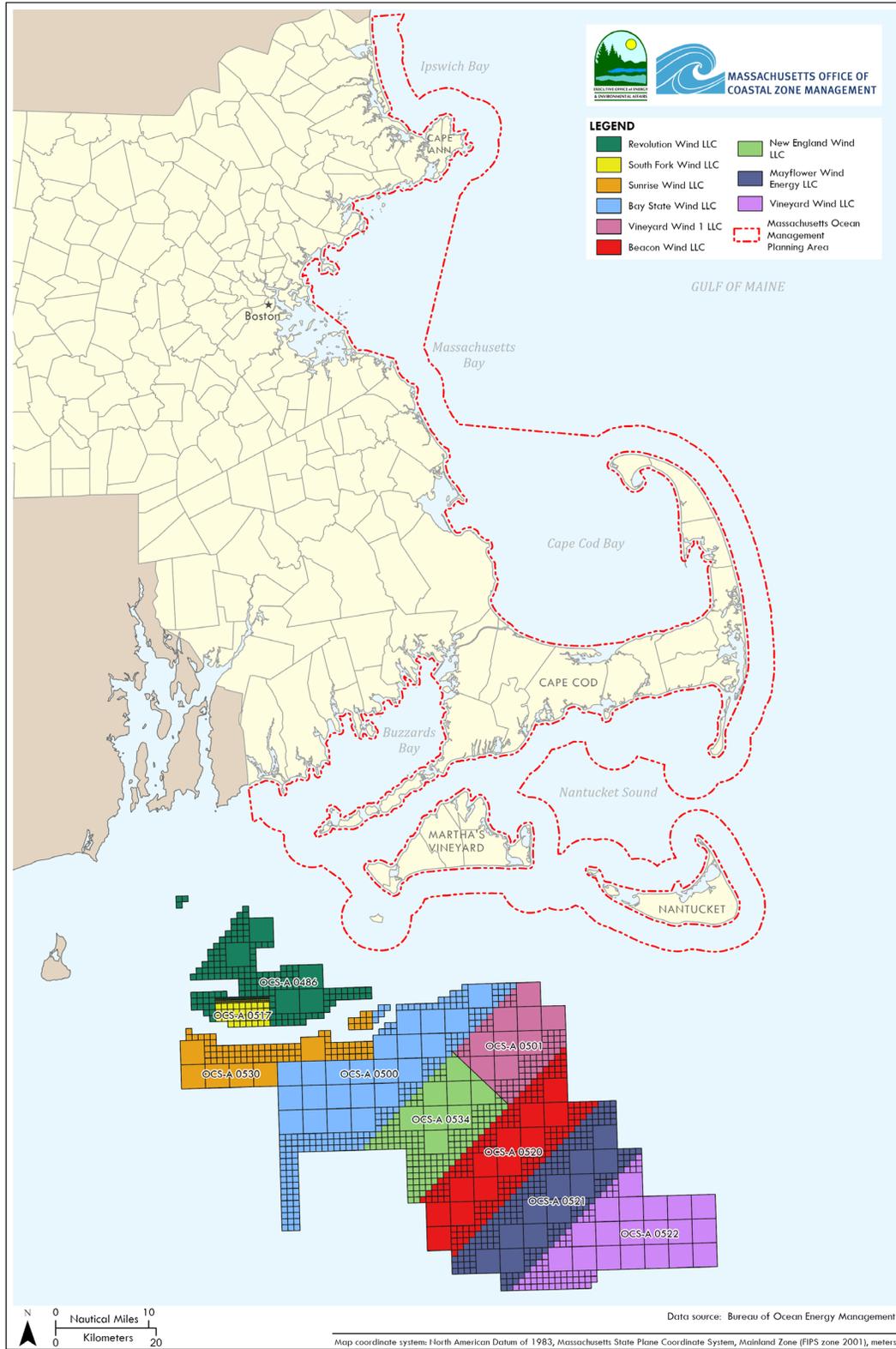


Figure 3. Renewable energy lease areas in federal waters adjacent to Massachusetts



Figure 4. Special, sensitive, or unique resource: North Atlantic right whale core habitat

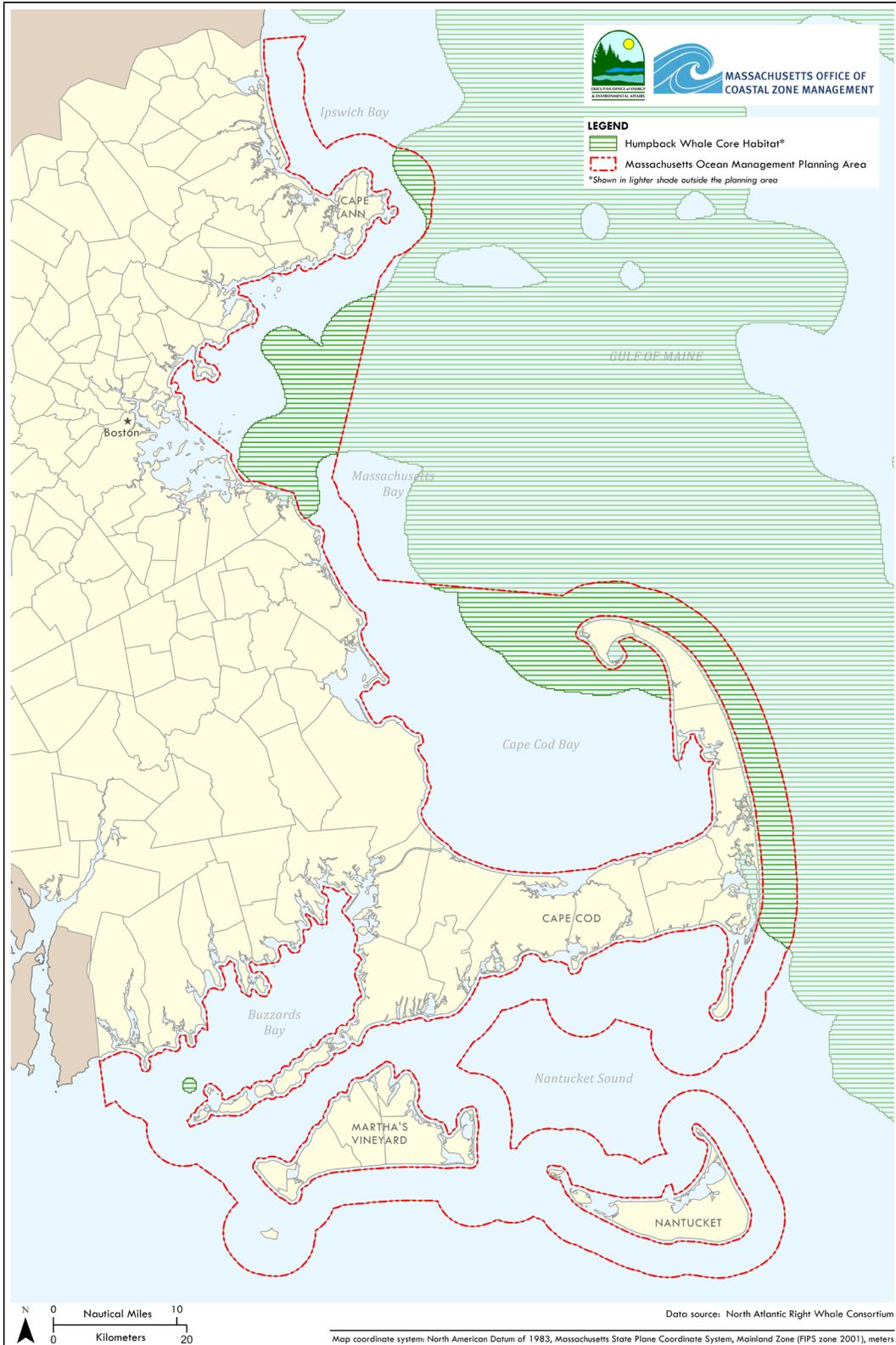


Figure 5. Special, sensitive, or unique resource: Humpback whale core habitat

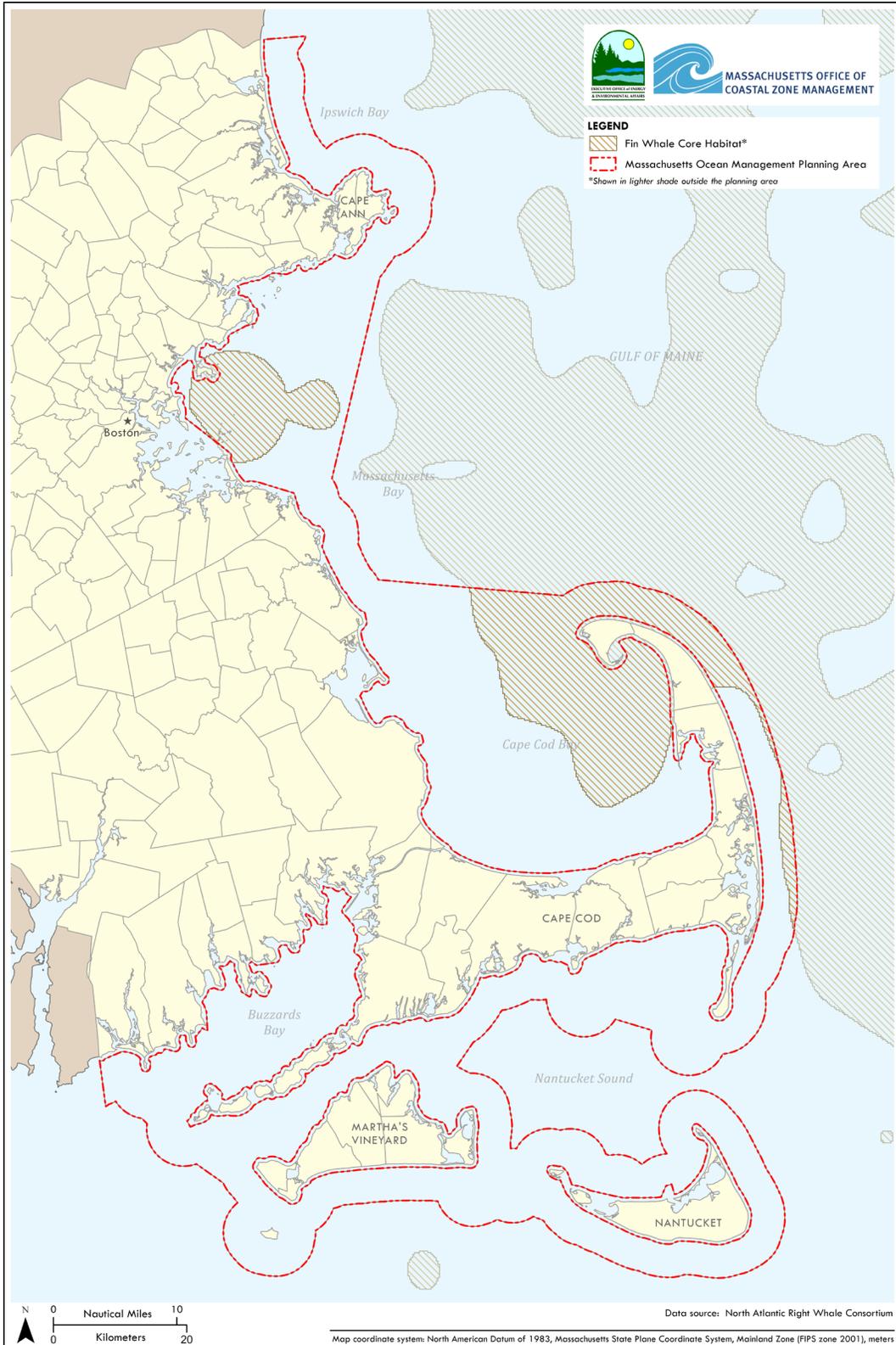


Figure 6. Special, sensitive, or unique resource: Fin whale core habitat

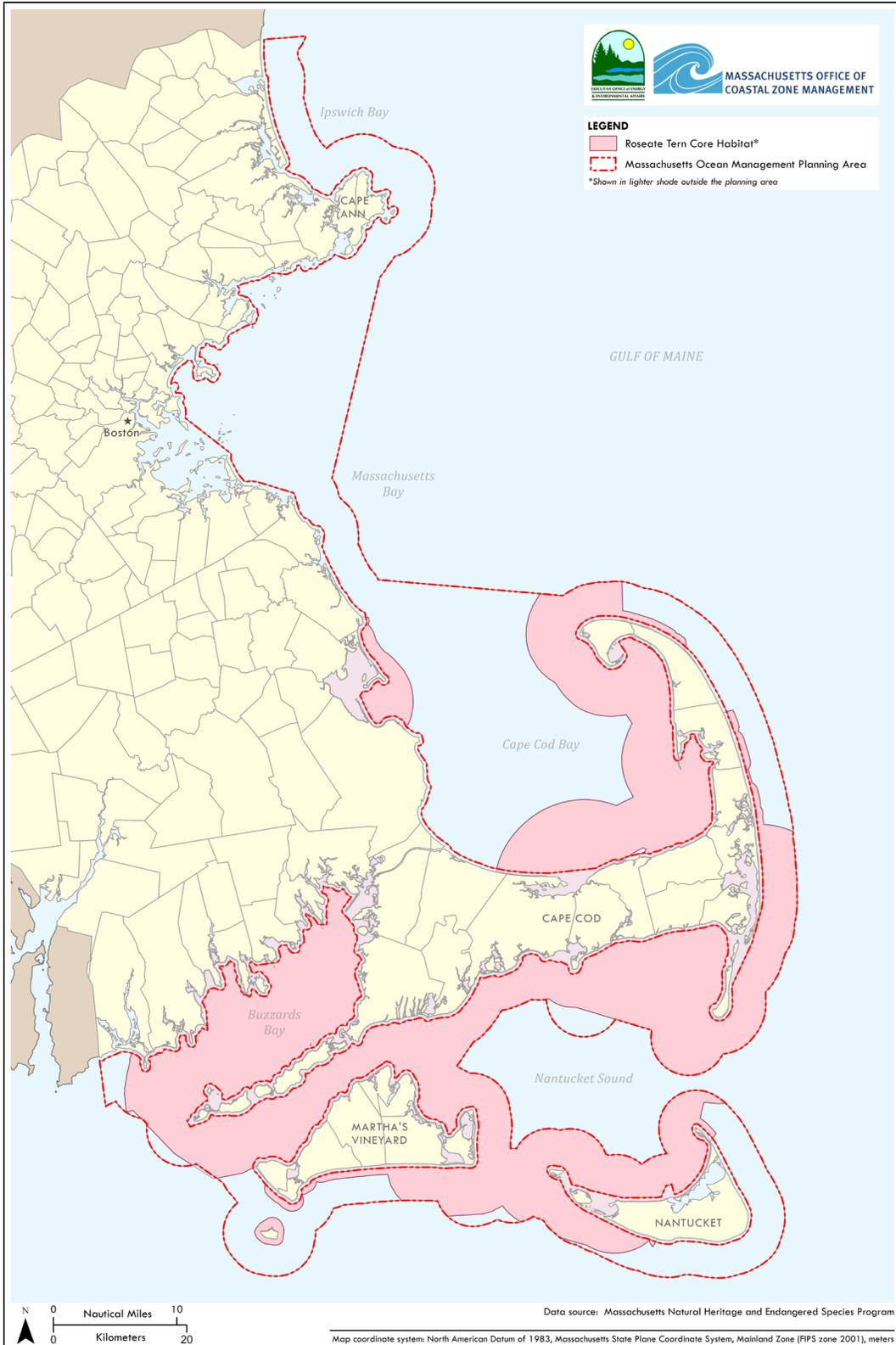


Figure 7. Special, sensitive, or unique resource: Roseate Tern core habitat



Figure 8. Special, sensitive, or unique resource: Special concern (Arctic, Least, and Common) tern core habitat



Figure 9. Special, sensitive, or unique resource: Sea duck (Long-tailed Duck, Common Eider, Black Scoter, Surf Scoter, and White-winged Scoter) core habitat



Figure 10. Special, sensitive, or unique resource: Leach's Storm-Petrel important nesting habitat

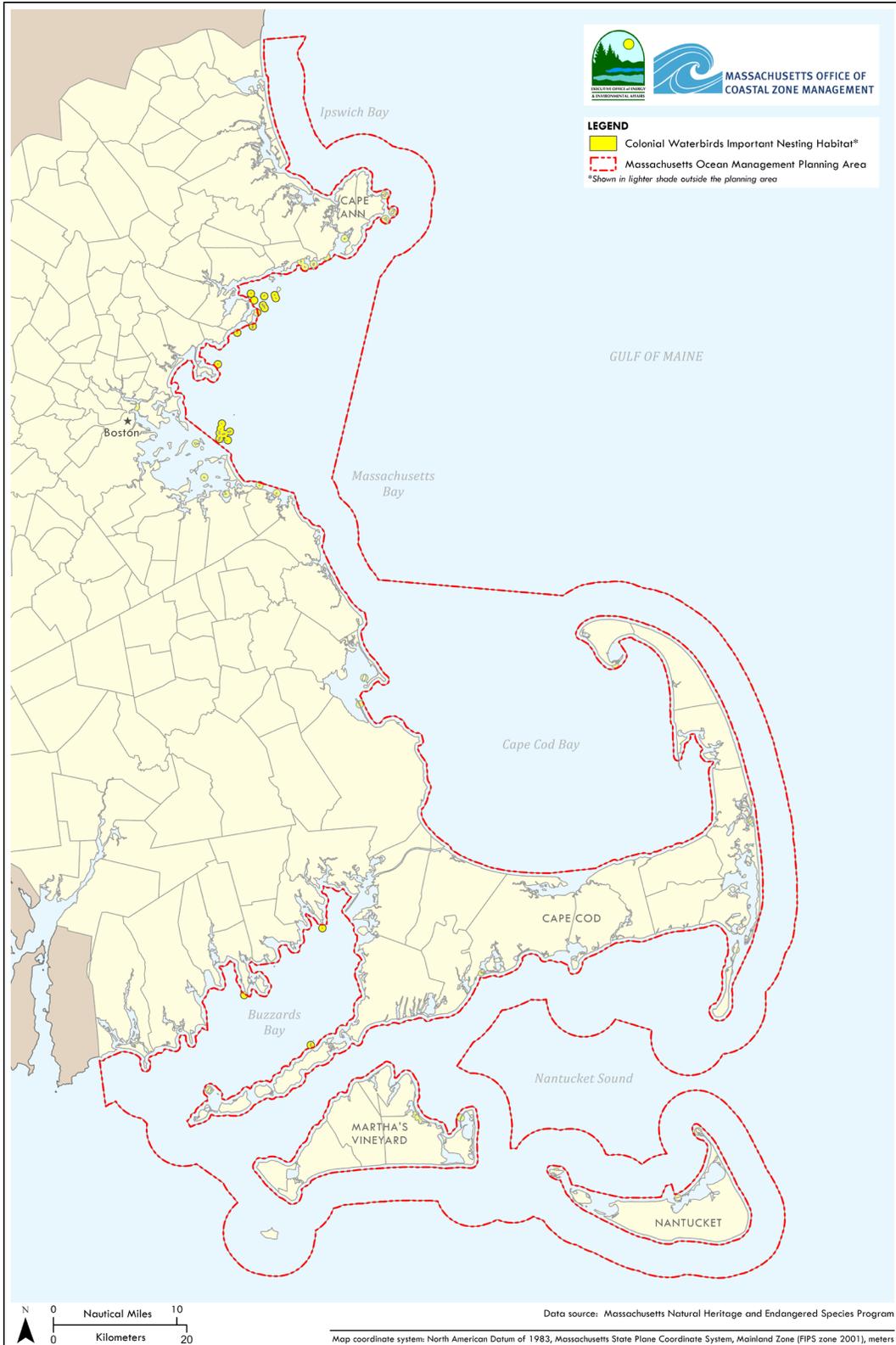


Figure 11. Special, sensitive, or unique resource: Colonial waterbirds important nesting habitat

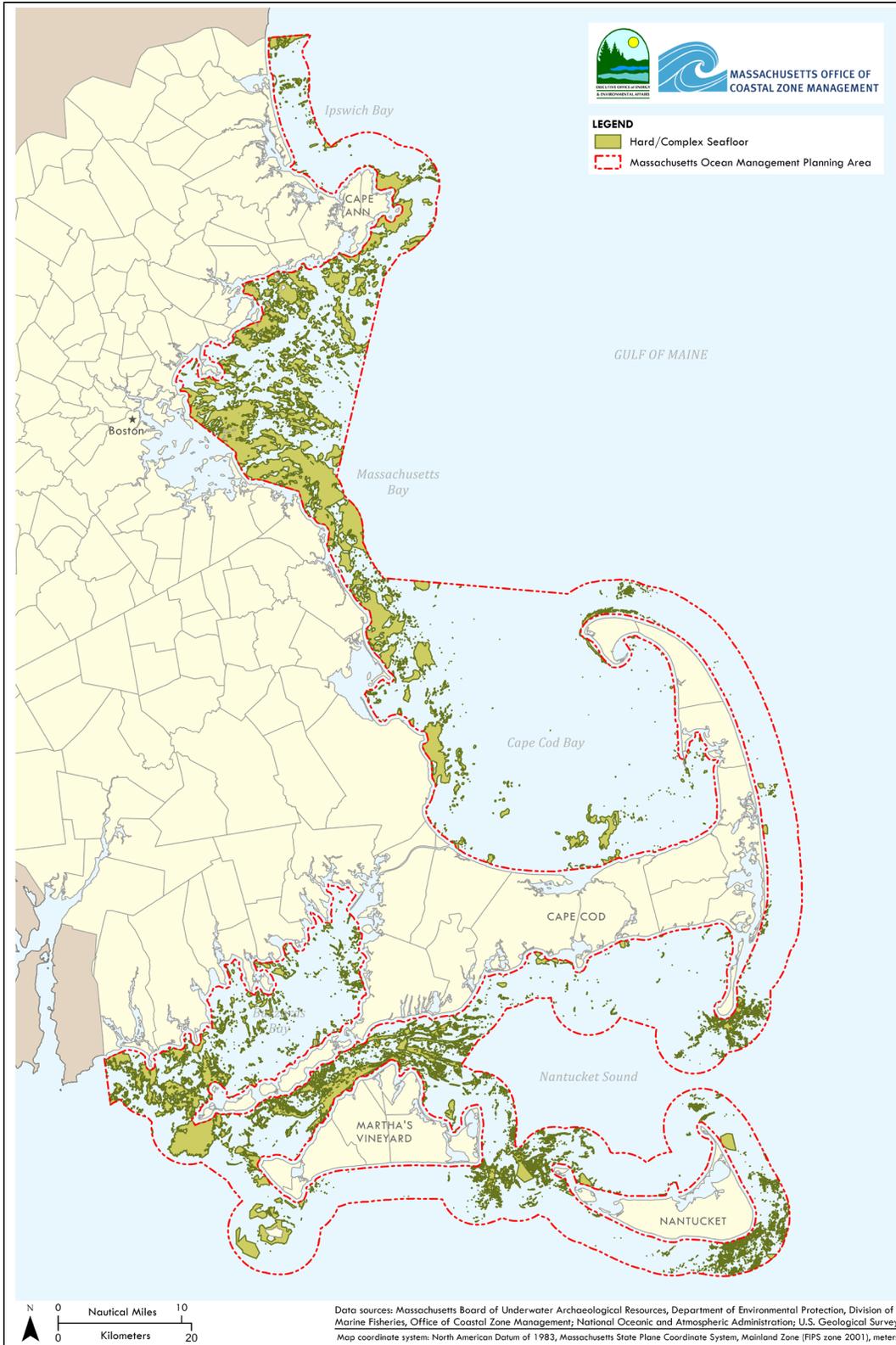


Figure 12. Special, sensitive, or unique resource: Hard/complex seafloor

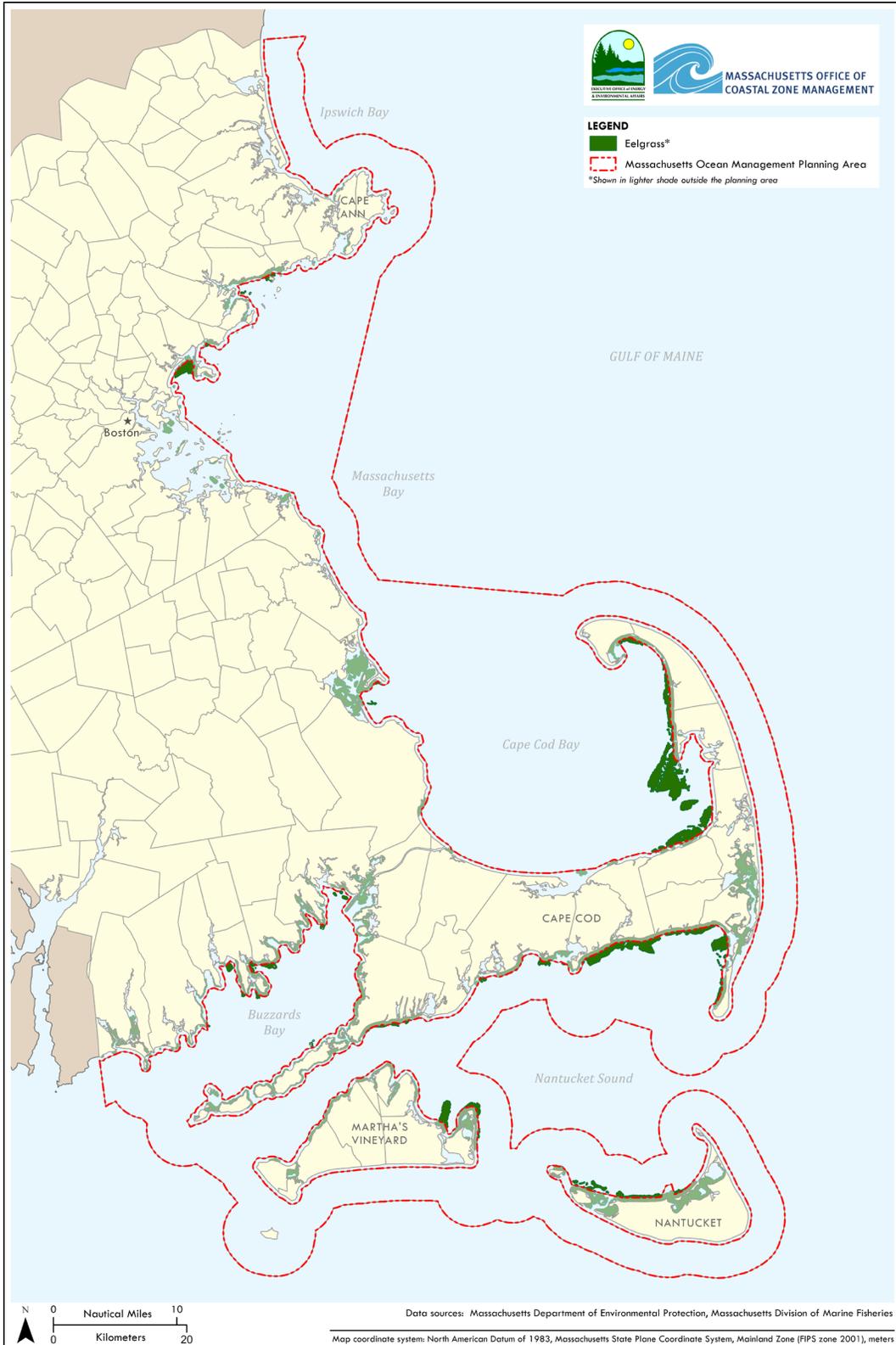


Figure 13. Special, sensitive, or unique resource: Eelgrass



Figure 14. Special, sensitive, or unique resource: Intertidal flats

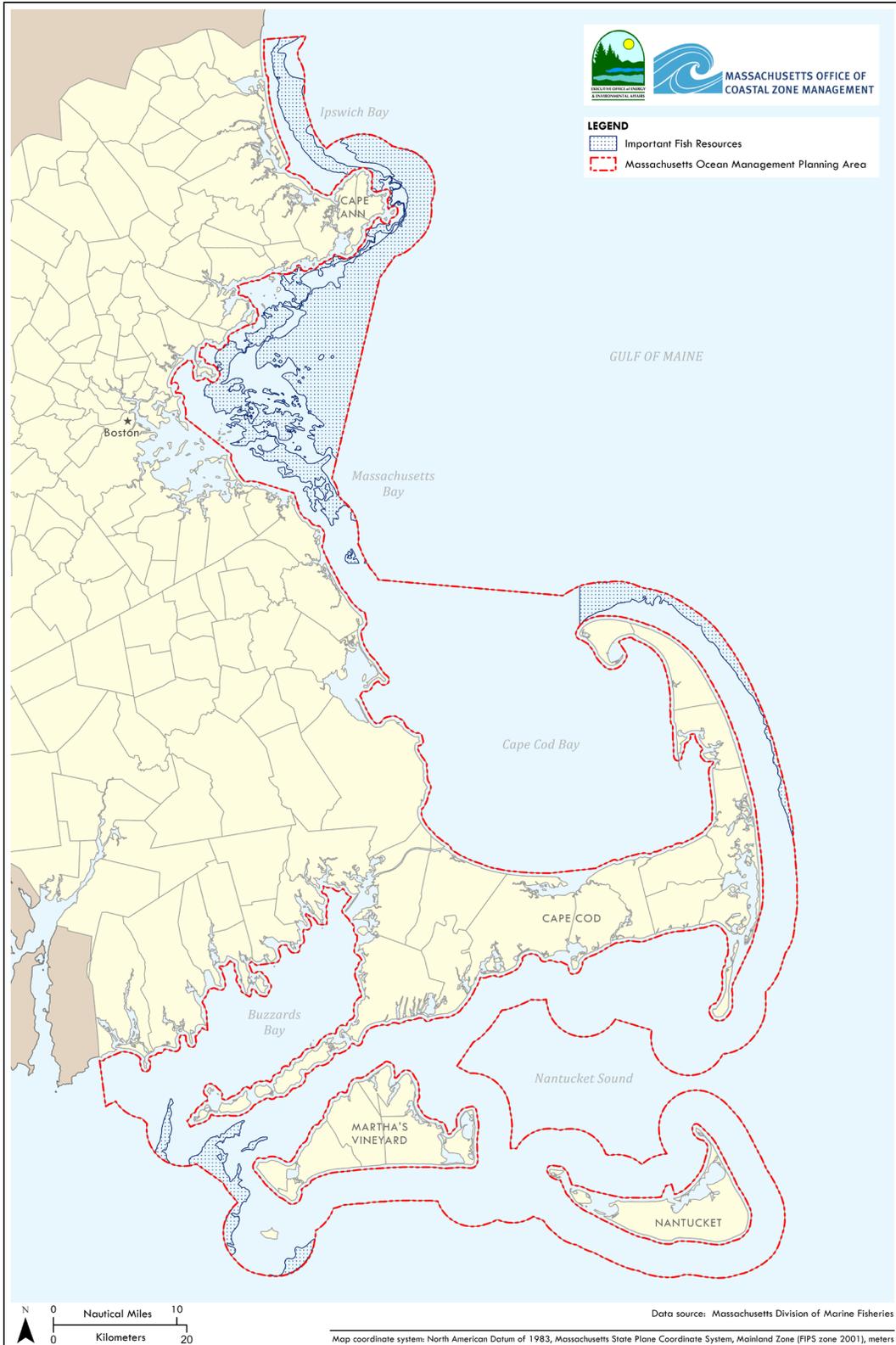


Figure 15. Special, sensitive, or unique resource: Important fish resource areas

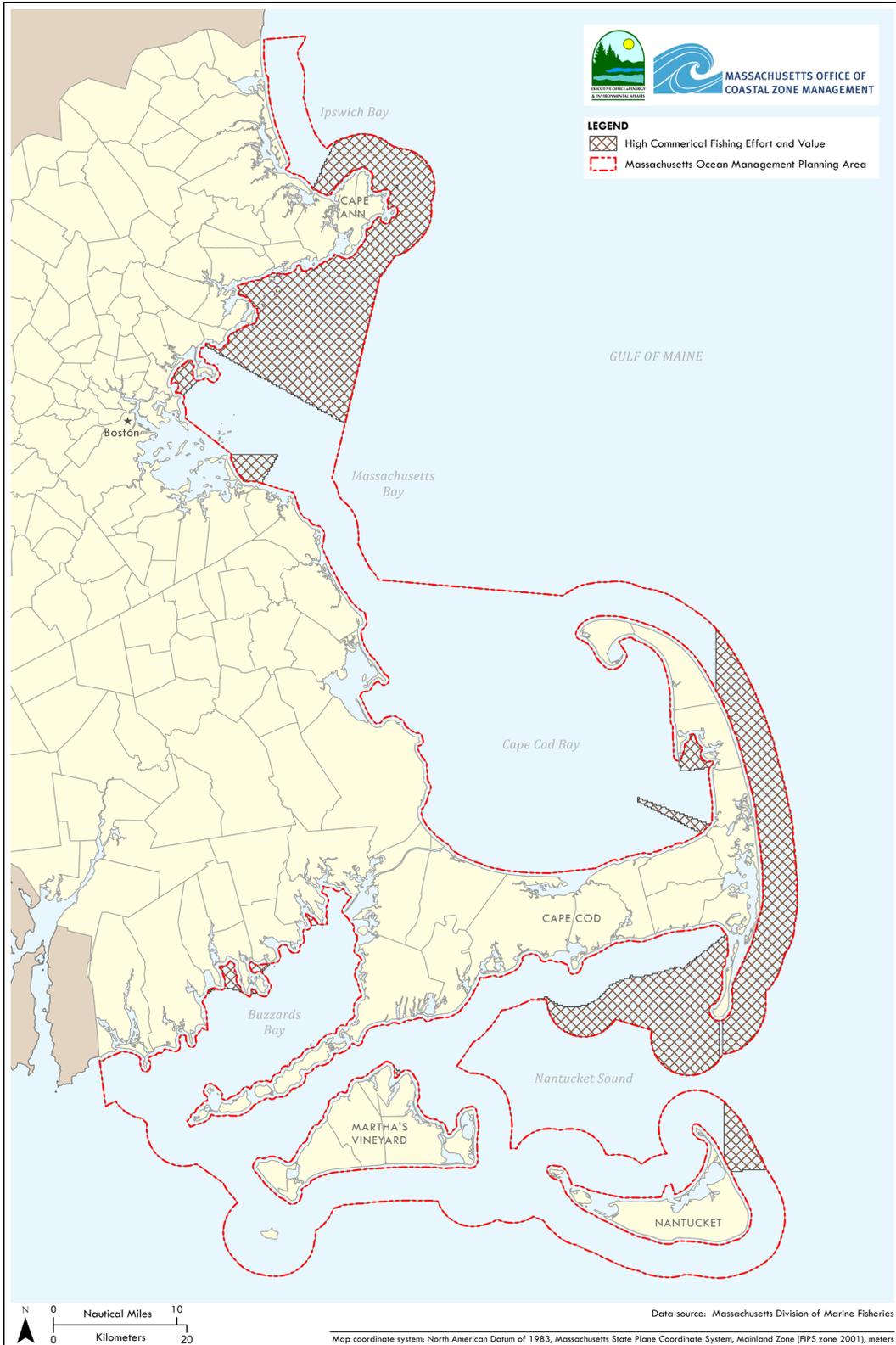


Figure 16. Concentrations of water-dependent use area: High commercial fishing effort and value



Figure 17. Concentrations of water-dependent use area: Concentrated recreational fishing

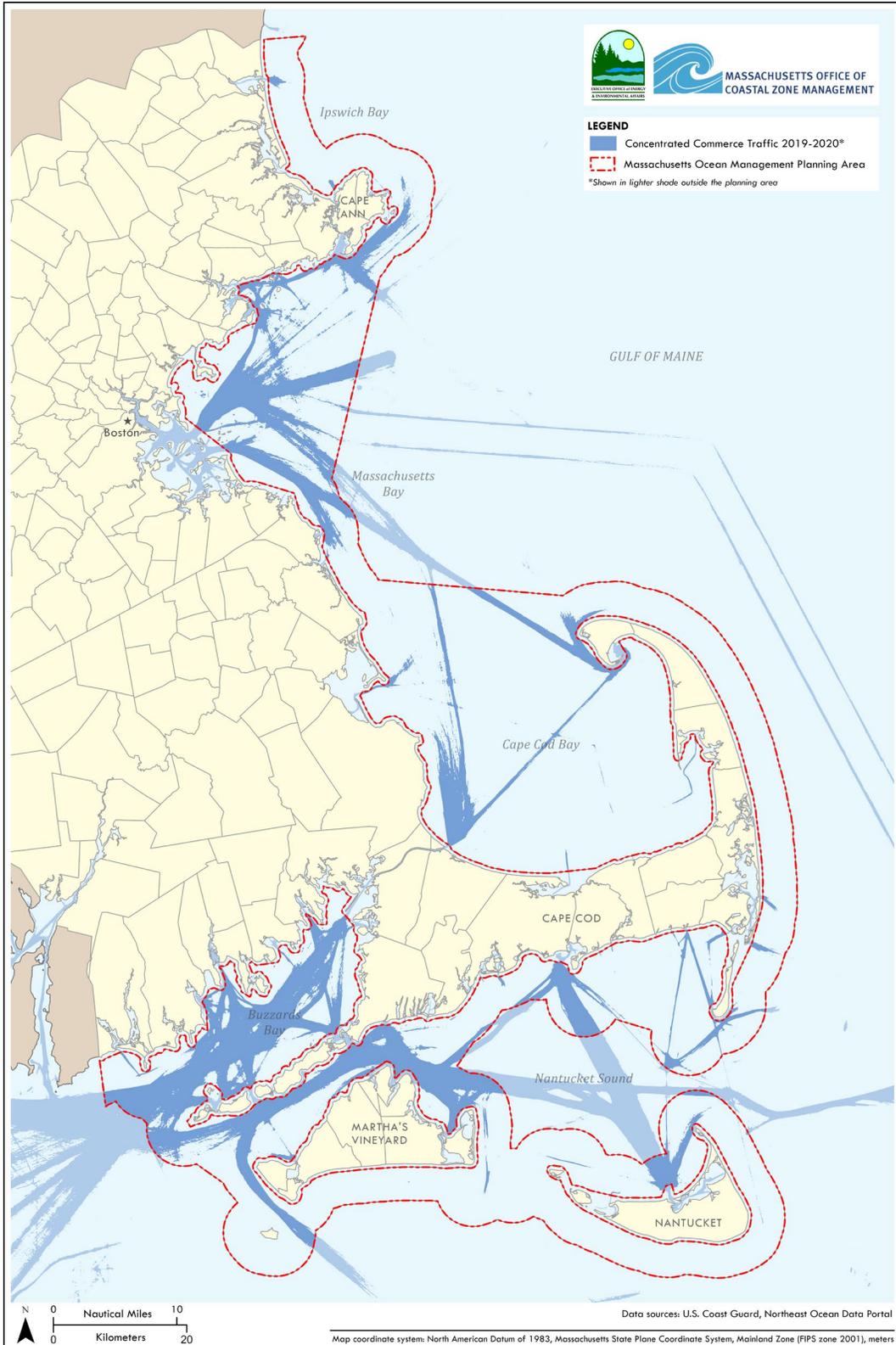


Figure 18. Concentrations of water-dependent use area: Concentrated commerce traffic



Figure 19. Concentrations of water-dependent use area: Concentrated commercial fishing traffic



Figure 20. Concentrations of water-dependent use area: Concentrated recreational boating

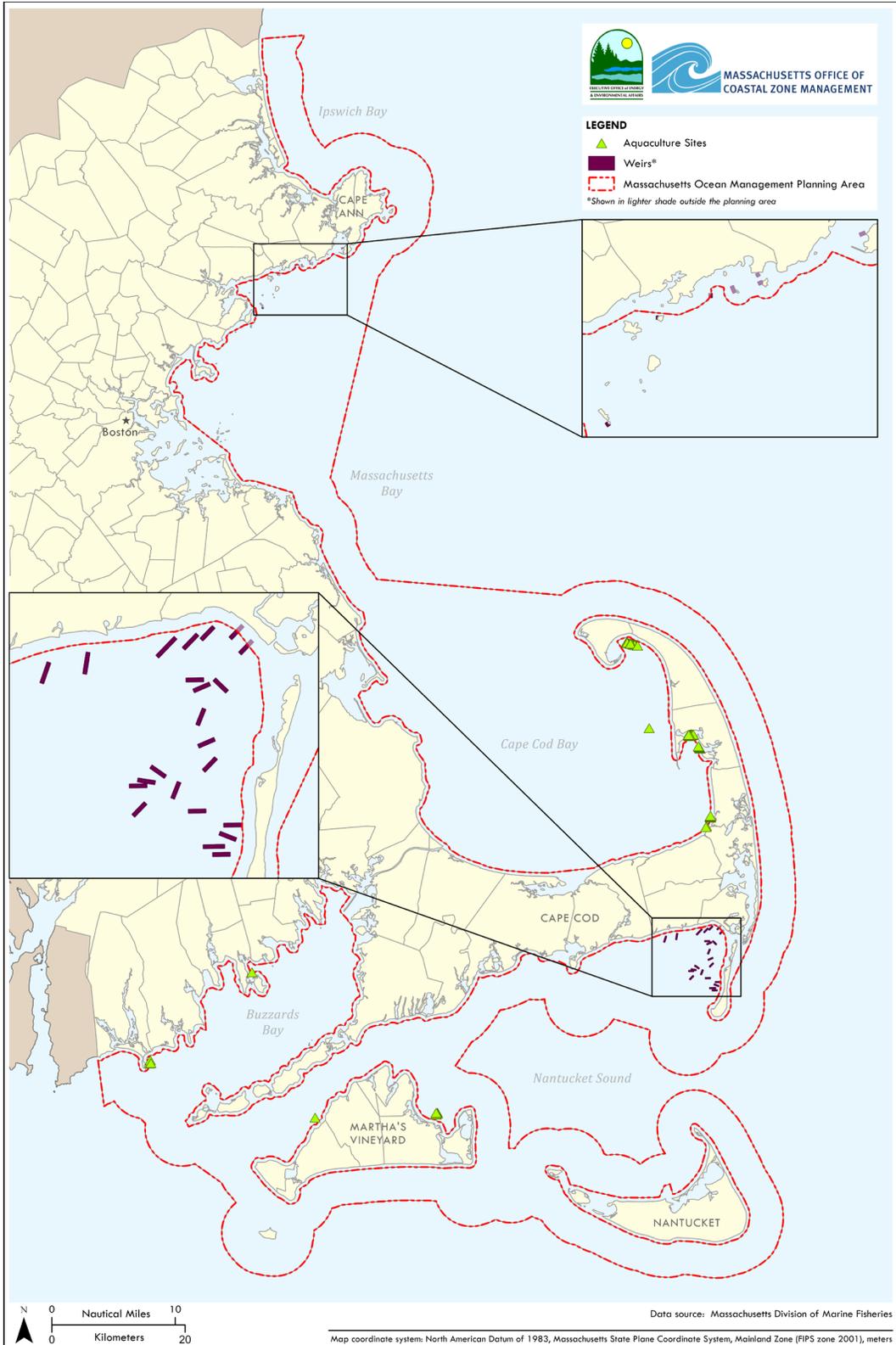


Figure 21. Concentrations of water-dependent use area: Fixed fishing facilities

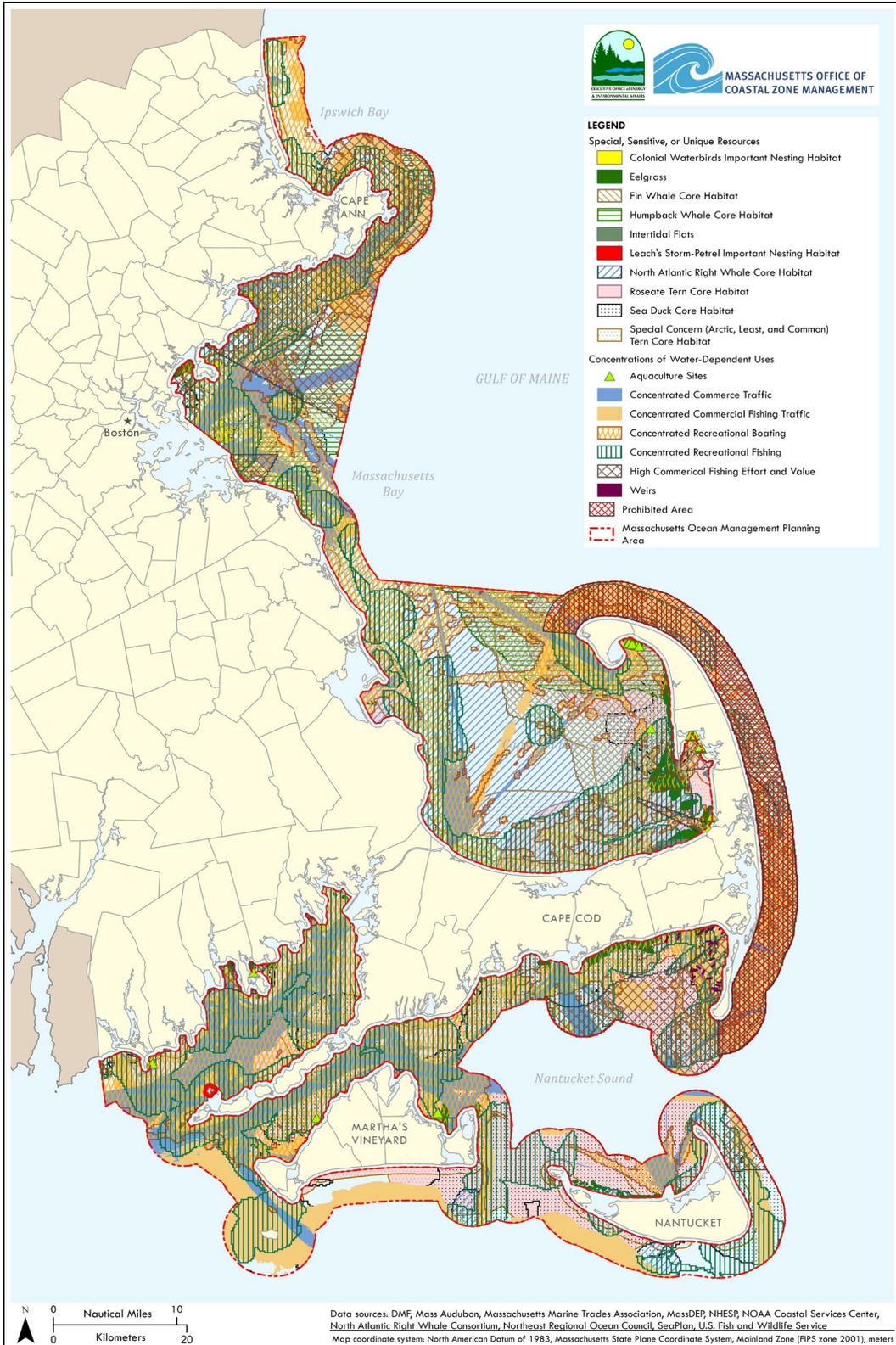


Figure 22. Special, sensitive, or unique resources and concentrations of water-dependent uses to be addressed for community-scale wind energy facilities

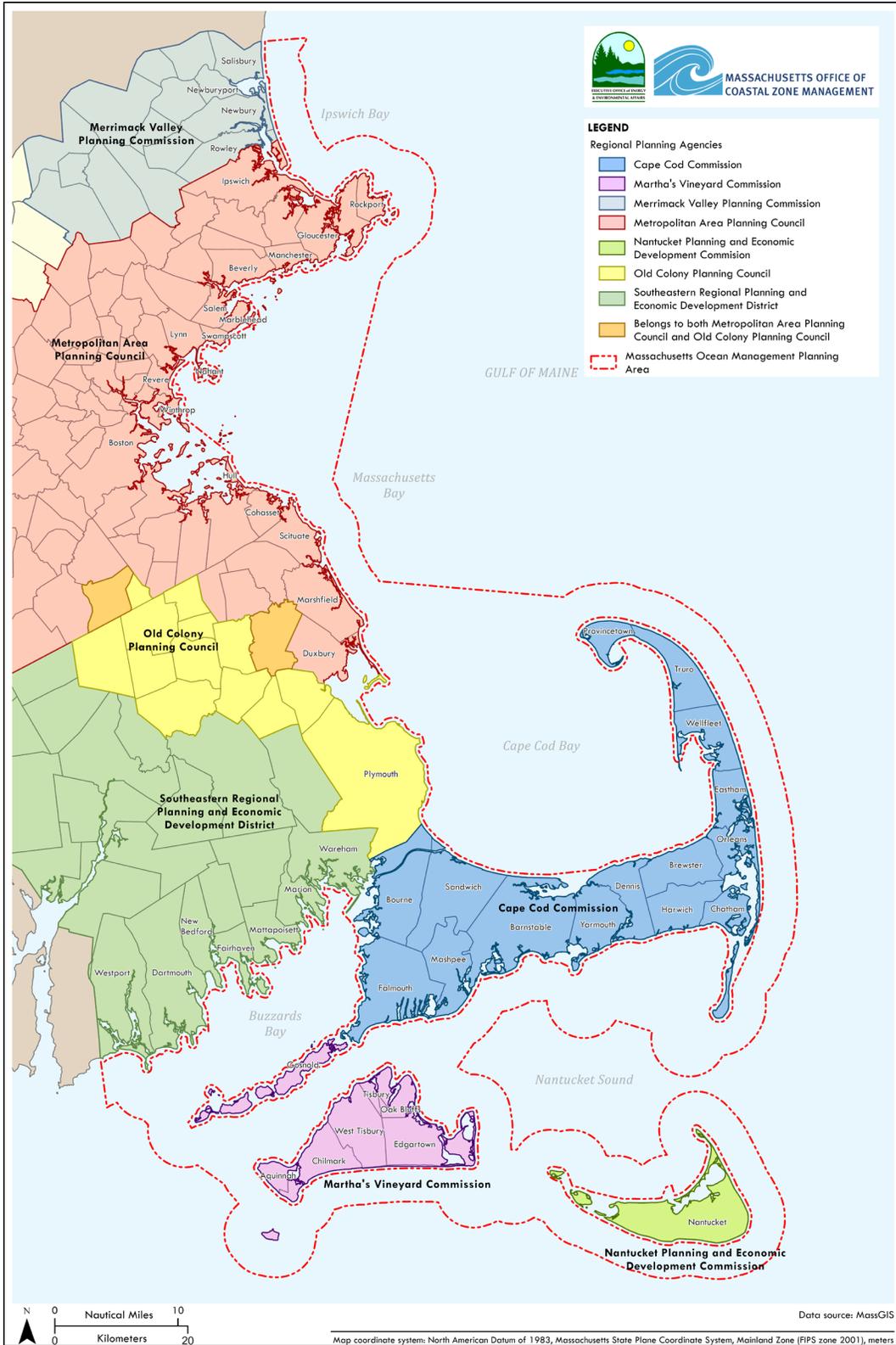


Figure 23. Regional planning agencies and municipalities adjacent to the Ocean Management Planning Area

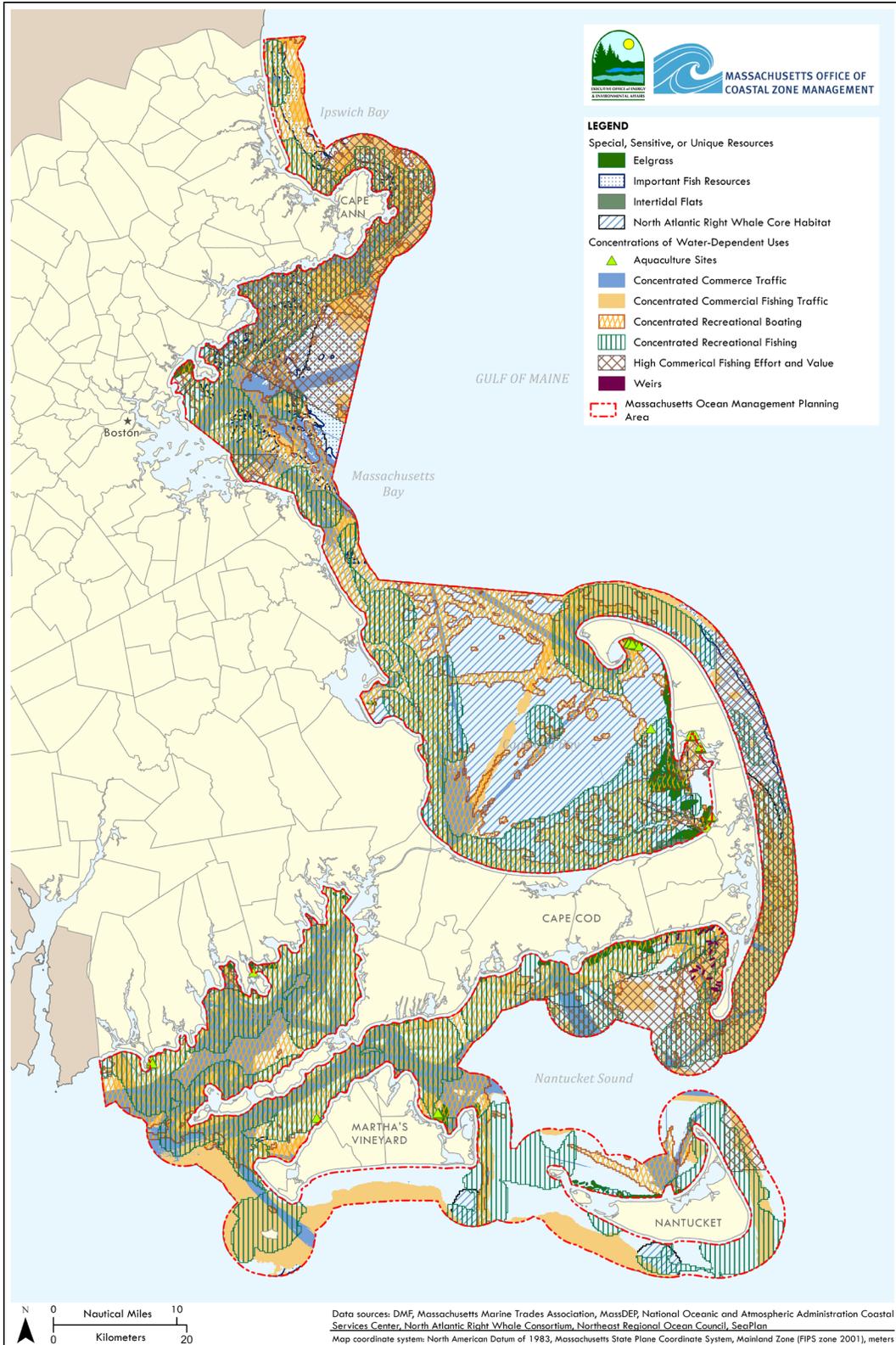


Figure 24. Special, sensitive, or unique resources and concentrations of water-dependent uses to be addressed for commercial-scale tidal energy facilities

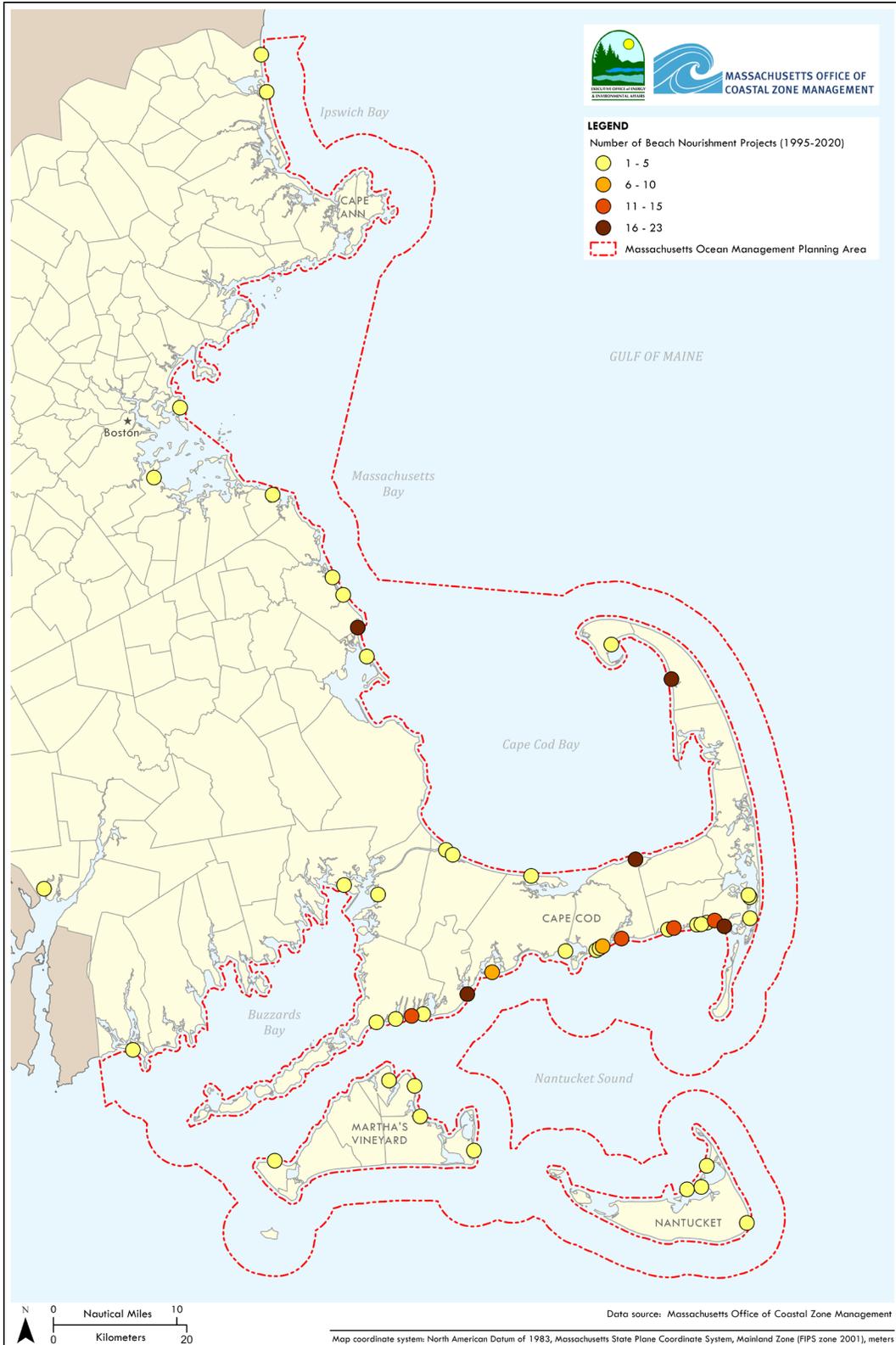


Figure 25. Beach nourishment projects in Massachusetts from 1995-2020



Figure 26. Potential sand resources that have advanced through the ocean planning process

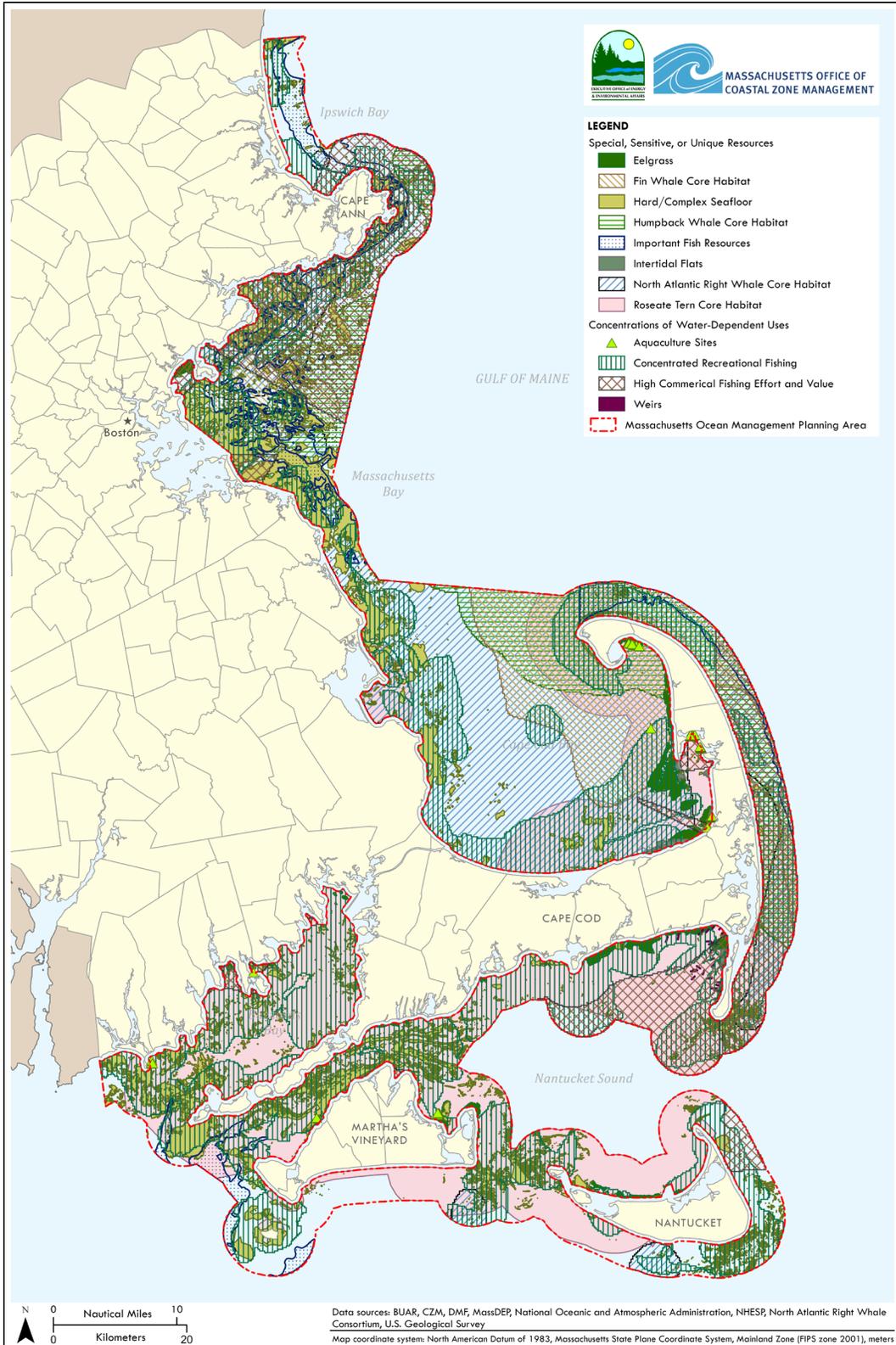


Figure 27. Special, sensitive, or unique resources and concentrations of water-dependent uses to be addressed for offshore sand projects for beach nourishment

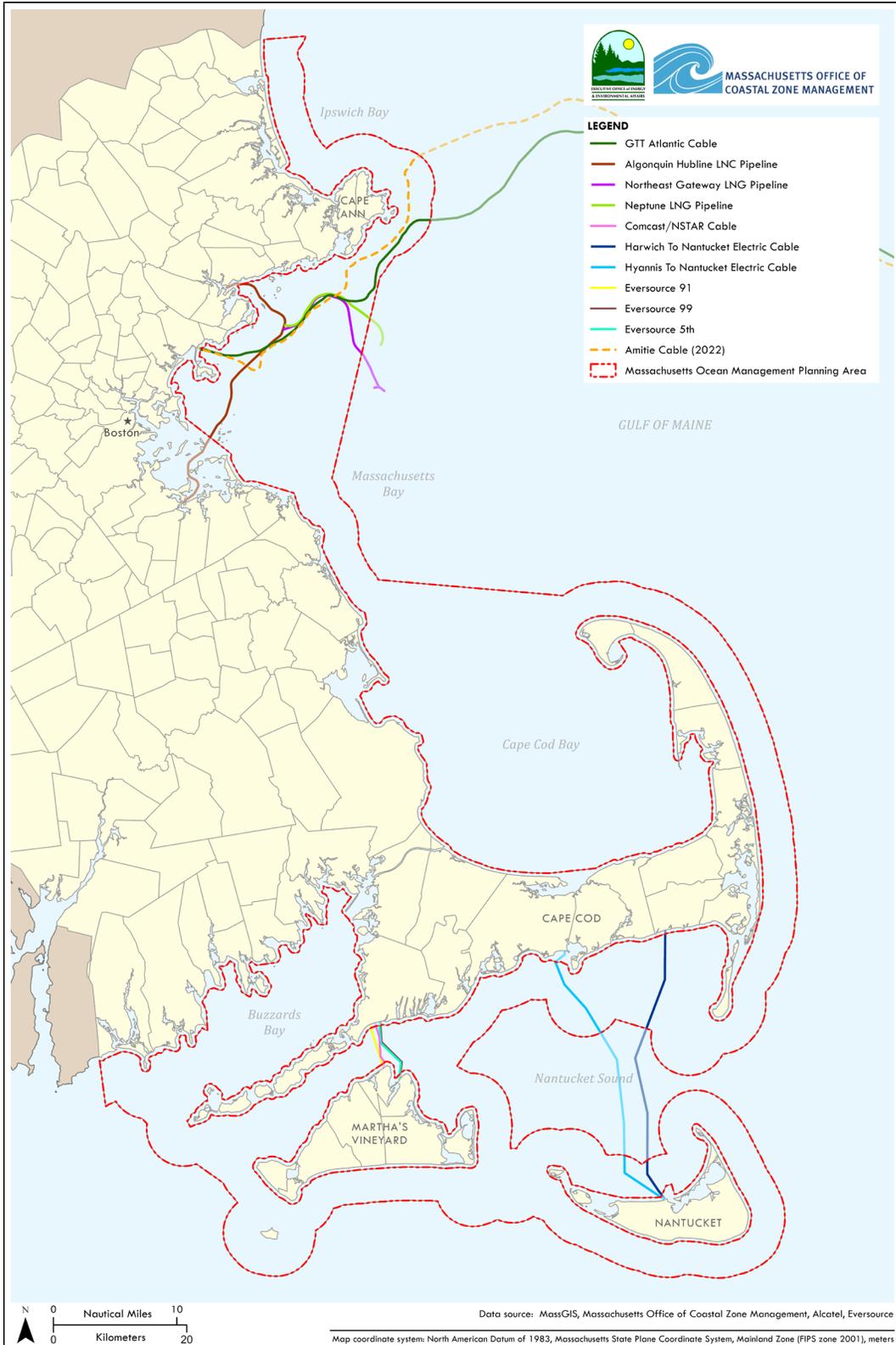


Figure 28. Electrical and telecommunication cables and natural gas pipelines in the planning area

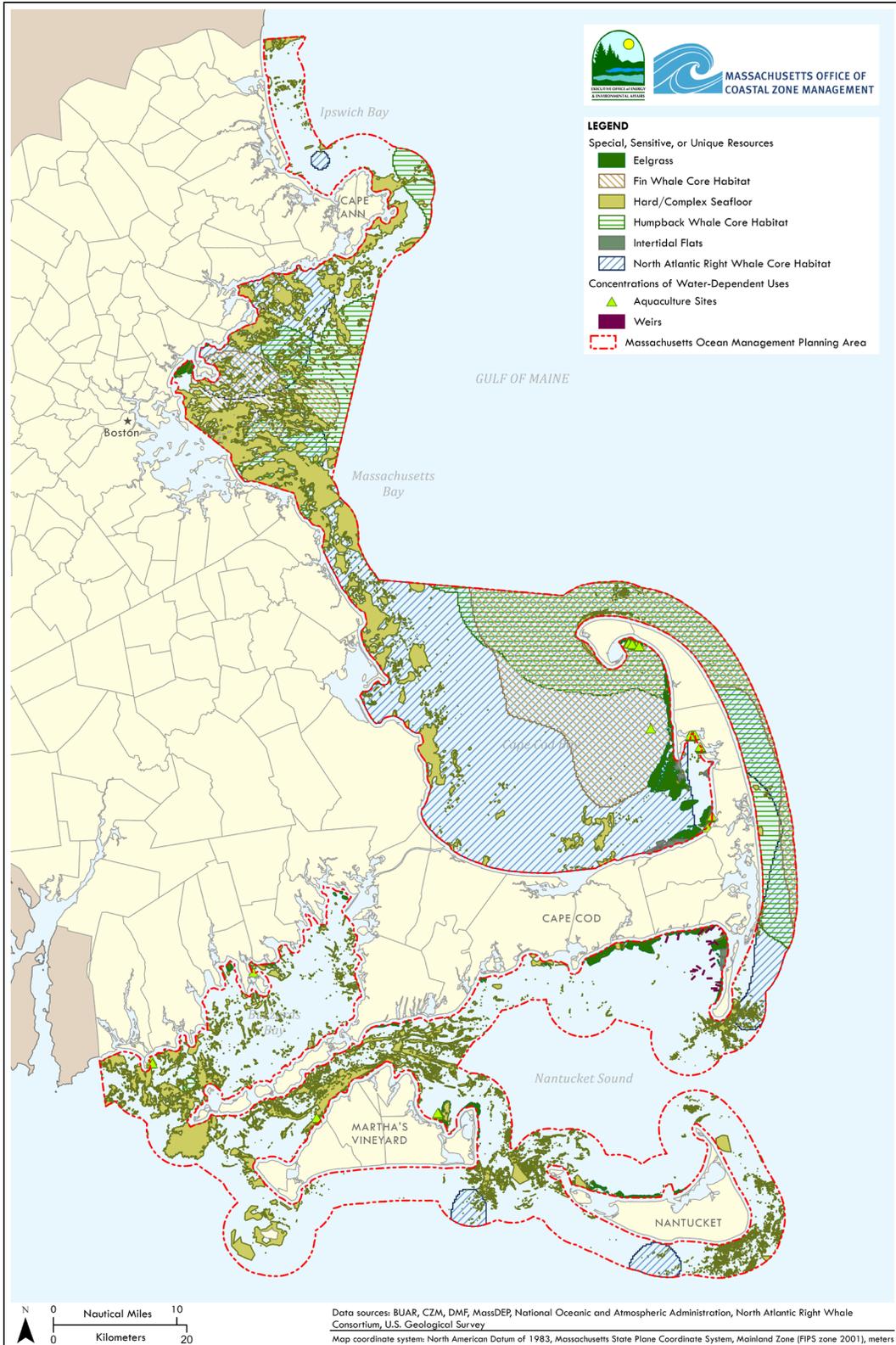


Figure 29. Special, sensitive, or unique resources and concentrations of water-dependent uses to be addressed for cable projects

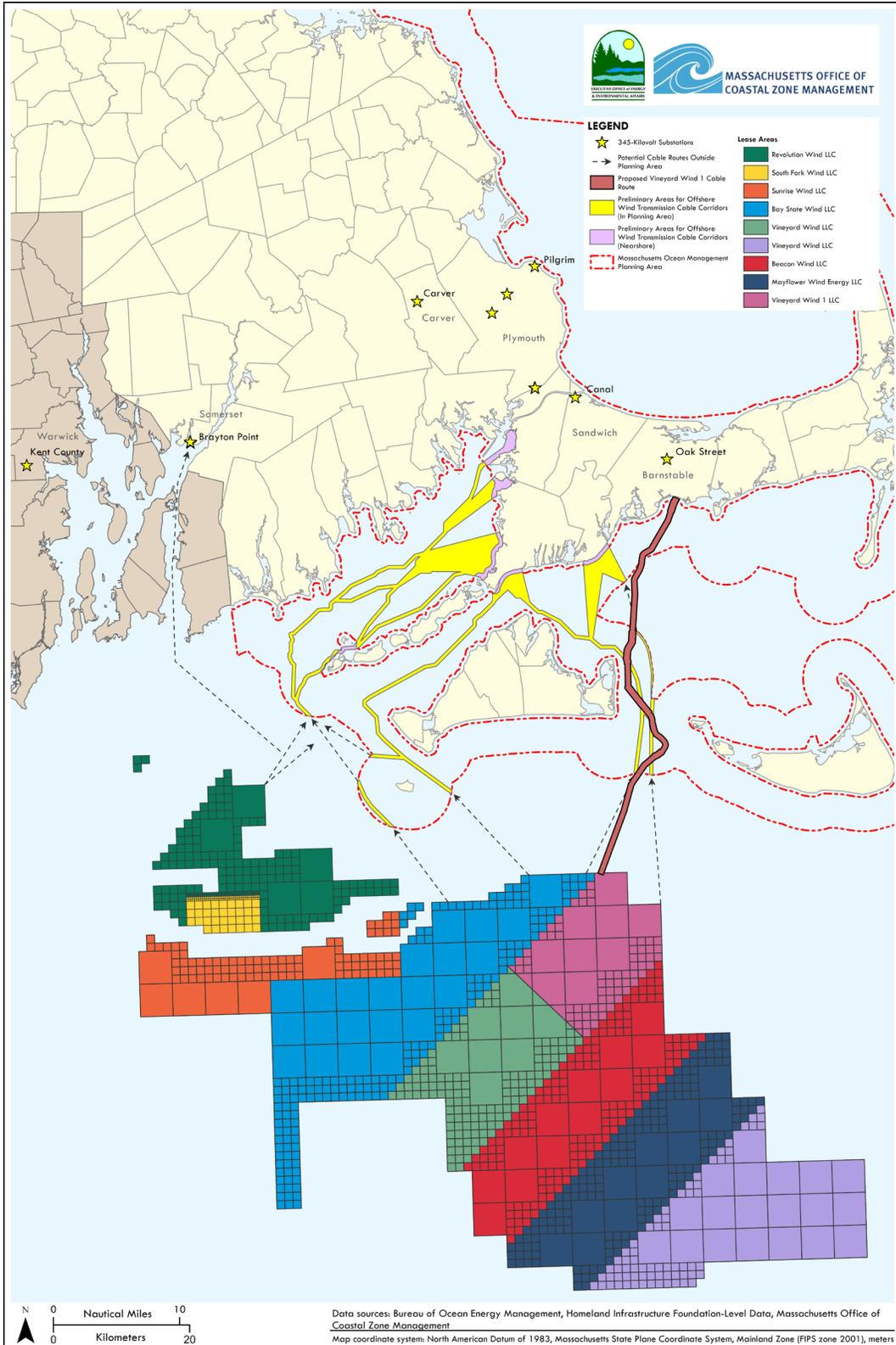


Figure 30. Preliminary areas for offshore wind transmission cable corridors from federal wind energy areas

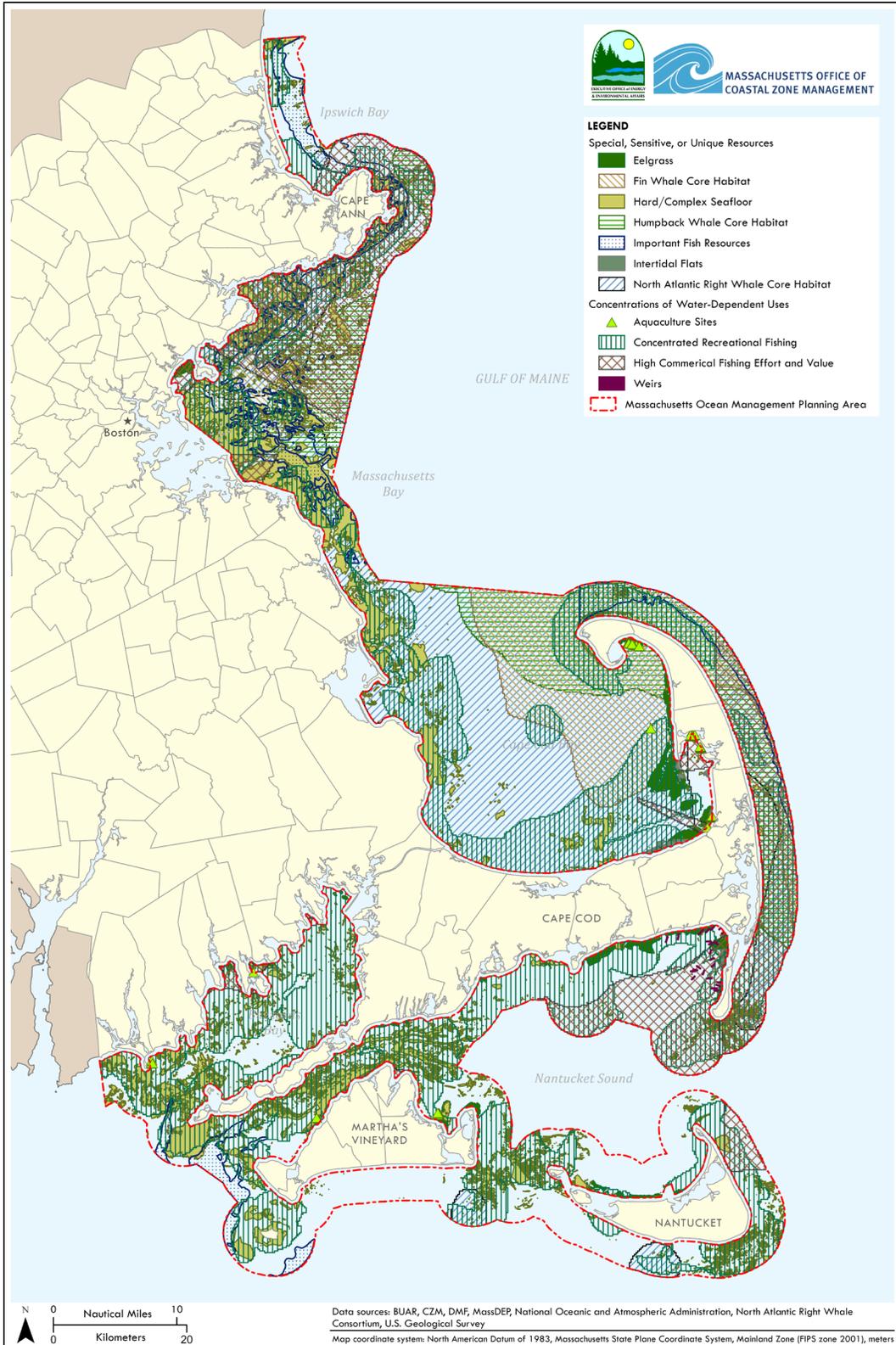


Figure 31. Special, sensitive, or unique resources and concentrations of water-dependent uses to be addressed for pipeline projects