



COMMERCIAL & RECREATIONAL FISHING



Commercial fishing in New England has a long and storied history. Its importance culturally and economically has lasted hundreds of years, becoming a part of many tales of the New England coast. Its economic importance is similarly well documented. In a single year (2012), the landings revenue by all species in New England was over a billion dollars;¹ once revenue generated by other related industries (processing, dealers, wholesalers, distributors, importers, and retailers) is included, total sales impact is estimated to be nearly \$13 billion in 2012.²

There is no single “commercial fishery” in New England. Fishing operations are different from harbor to harbor depending on a myriad of factors, which vary throughout the region and over time: targeted species, vessel sizes, proximity to fishing grounds (current and historic), changes in environmental conditions, economic and market-driven forces, shoreside supporting infrastructure, and many more. Commercial fishing in Maine currently looks quite different from that of southern New England. Ports such as New Bedford and Gloucester, Massachusetts (scallops and groundfish), and Stonington, Maine (lobster), have consistently ranked among the top US ports in terms of landings value in recent years.³ Assessing temporal trends needs to be fishery-specific: for example, the number of commercial ground fishing vessels has declined in recent years. Many coastal communities in the region remain closely connected to fisheries and thus are directly affected by trends in commercial fishing.

Similar to the case with commercial fishing, angling for recreational purposes is widespread and targets many different species. Striped bass, summer flounder, groundfish, and countless other species are targeted by shoreside anglers, surf casters, boaters, charter and party boats, and fishing tournaments throughout New England all summer long, drawing residents and visitors by the hundreds of thousands. In 2013, an estimated 5 million recreational fishing trips were taken in New England marine waters.⁴

Fisheries are an important issue for many coastal tribes, and they are embedded in tribal culture and history—from a commercial standpoint as well as for basic sustenance. Tribes are concerned about the restoration of diadromous fish populations and prioritize the restoration of water quality and fish habitat for Atlantic salmon and other species including American shad, river herring, and American eel. Currently, commercial fishing is an important source of income for certain coastal tribes.





REGULATION AND MANAGEMENT

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) is the primary law governing fisheries management, including aquaculture for managed species, in federal waters. The MSA establishes eight regional fishery management councils, including the New England Fishery Management Council (NEFMC), whose primary responsibility is the development of fishery management plans (FMPs) pursuant to 10 national standards, or conservation and management requirements. Once a council develops an FMP (or any amendments to an existing FMP) and its management measures, NMFS reviews the council's recommendations and approves and adopts the recommendations into federal regulations, provided they are consistent with other federal laws such as NEPA, MMPA, MBTA, ESA, Administrative Procedures Act, Paperwork Reduction Act, CZMA, Data Quality Act, and Regulatory Flexibility Act. The Atlantic States Marine Fisheries Commission (ASMFC) is also an important fisheries management entity in New England; it has management responsibility for 25 nearshore species and may request that NMFS issue complementary regulations in federal waters. Other agencies become involved in issues related to fisheries management pursuant to existing authorities. For example, to

address potential impacts to birds, sea turtles, and marine mammals, USFWS and NMFS work with partners to study measures that could be effective at reducing impacts to species that are protected under applicable federal law such as the ESA. Additionally, under MSA the US Coast Guard has responsibilities related to commercial fishing vessel safety and to supporting a sustainable fishery by ensuring compliance with the MSA.

Federal agencies are required by existing law (such as NEPA and RHA) to assess potential impacts of federal actions, such as the potential issuance of permits and leases for proposed development activities on commercial and recreational fisheries, and, depending on the results of the assessment, to consider impact avoidance or mitigation measures. Such assessments occur during the NEPA process associated with these federal actions or, in addition to NEPA, through the individual review processes associated with each applicable federal law. Some examples include the RHA public interest review (conducted by USACE), the DWPA licensing process (MARAD and USCG), and OCSLA leasing (BOEM). Additionally, through the PWSA, the US Coast Guard has responsibilities that include assessing potential navigational risks associated with offshore activities (see the Marine Transportation section for more information).



States are also typically involved in review of the potential impacts of proposed activities on fisheries. State regulatory programs also may require assessment of fisheries impacts as part of the review of proposed activities. For projects that may impact the waters of multiple states or fishery resources managed regionally or coastwide under an FMP, states may coordinate their review through their representation on the NEFMC (and coordination with the Mid-Atlantic Fishery Management Council) and the ASMFC.

Assessing the impacts of proposed new activities on commercial and recreational fisheries, both quantitatively and qualitatively, has typically proved to be a difficult exercise in New England. This difficulty reflects the dynamic nature of fisheries, the unique characteristics of each fishery, and a basic lack of knowledge

about the interactions between various fishing gear and newly proposed activities. Even prior to an impact analysis, however, is the initial step of identifying specific members of the fishing industry to engage in a discussion of a particular project, which has also been difficult at times. Additionally, proposed developments may include a range of activities with different types of conflicts with fishing. For example, site assessment and survey-based activities occurring before construction of offshore infrastructure have different spatial and temporal characteristics and impacts from actual construction and installation, which are also different from the long-term operation and support of a facility. Discussions related to newly proposed offshore activities will often become quite detailed to account for all the potential interactions, including understanding fishing activities in a particular location (different gear types, fishing- or transit-related activities, time of year) and the results of displacement or interruption of such activities. Conflicts may also arise between commercial or recreational fishing and activities such as scientific studies, ship-based seafloor mapping projects, and dredging of port channels. These conflicts can emerge from various issues, but common root causes include communication difficulties and a general lack of

readily available information to assess potential impacts, and the consequent challenges in engaging fishing industry representatives. In New England, the extent of these issues is often magnified by the number of fisheries that operate in a particular area over the course of the year and by the dynamic nature of these fisheries. For recreational fishing, this issue may be even more complex, given the many private anglers who may fish in a particular area.

Changes in environmental conditions, market trends, and other economic factors such as the costs of fuel and gear, advances in scientific understanding of the ocean environment, and fisheries management cause uncertainty when attempting to predict future conditions. For example, warmer water temperature in the Gulf of Maine is likely to contribute to changes in fish stocks, but the resulting future impacts on fishing and, subsequently, fishing communities are unknown. The manner in which commercial and recreational fisheries operate currently or in the past provides important insight, but is not necessarily a predictor of the future.

5M

Number of all
types of recreational
fishing trips in New
England, 2013

\$13B

Total sales impact
of fishing in New
England, 2012



MAPS AND DATA

The Portal includes the following map products characterizing commercial fishing activity from a regional perspective.

Vessel activity

The Vessel Activity theme contains a series of maps depicting the spatial footprint of vessels operating in certain federally managed fisheries.⁵ These maps are derived from Vessel Monitoring System (VMS) data maintained by NMFS and are the result of extensive engagement with the commercial fishing sector, fishery managers, and scientists in the region. This theme includes layers depicting the relative density of vessels operating in each fishery over a defined period of time. For each fishery, there are also maps that use speed thresholds to differentiate fishing activity from vessel transit. Specifically, the vessel activity theme includes the following maps:

- Vessels reporting in the Northeast multispecies fishery
 - > 2006–2010: All vessel activity
 - > 2011–2014: All vessel activity
 - > 2011–2014: Vessels traveling at less than four knots⁶
- Vessels reporting in the monkfish fishery
 - > 2006–2010: All vessel activity
 - > 2011–2014: All vessel activity
 - > 2011–2014: Vessels traveling at less than four knots⁷
- Vessels reporting in the herring fishery
 - > 2006–2010: All vessel activity
 - > 2011–2014: All vessel activity
 - > 2011–2014: Vessels traveling at less than four knots⁸
- Vessels reporting in the scallop fishery
 - > 2006–2010: All vessel activity
 - > 2011–2014: All vessel activity
 - > 2011–2014: Vessels traveling at less than five knots⁹
- Vessels reporting in the surf clam/ocean quahog fishery
 - > 2007–2010: All vessel activity
 - > 2012–2014: All vessel activity
 - > 2012–2014: Vessels traveling at less than four knots¹⁰
- Vessels reporting in the squid fishery
 - > 2014: All vessel activity
 - > 2014: Vessels traveling at less than four knots¹¹
- Vessels reporting in the mackerel fishery
 - > 2014: All vessel activity
 - > 2014: Vessels traveling at less than four knots¹²

It is important to note that these map products are limited to those fisheries for which there are VMS data and that there are some vessels in the fisheries listed above that do not have VMS reporting requirements, such as some permit categories in the monkfish fishery. A lack of



VMS data in a given location does not mean no fishing is occurring. Fisheries not represented by VMS data include bluefin tuna, bluefish, black sea bass, dogfish, fluke, lobster, red crab, scup, skate, and tilefish. The recreational fishery is also not represented.

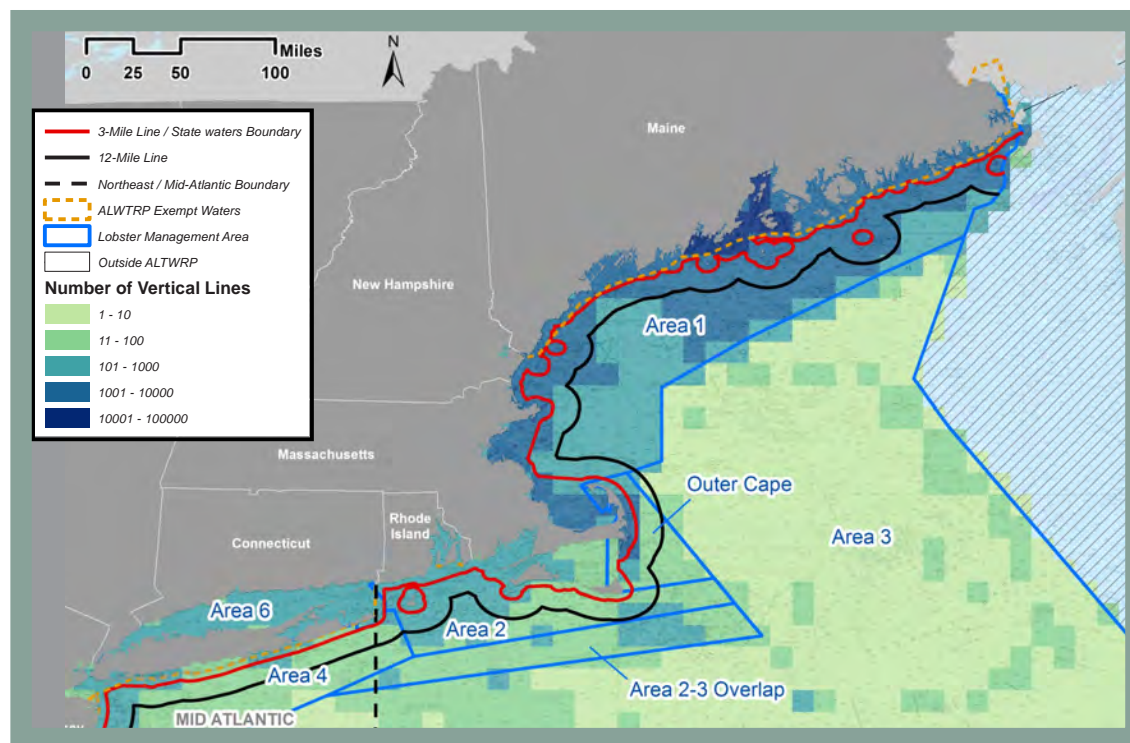
In addition, there are fisheries that are important locally that may not be represented by VMS data or may have their local footprint masked by a regional view (i.e., a regional view of a fishery may lose important local detail). Contact with the NEFMC and state fishery management agencies, and engaging the fishing industry to understand such issues are paramount.

Management areas

The Management Areas theme includes a series of maps showing the geographic extent of certain federal fishery management areas, as published by NMFS. These management areas were specifically selected because they are related to fisheries represented in the VMS-derived map products. They are an important supplement to the VMS maps: they inform the interpretation of fishing vessel activity patterns, because patterns in fishing activity are partly dictated by fisheries management.

Lobster fishery

In addition to the VMS-derived products and related fishery management areas on the Portal, the RPB considered developing maps and information on the lobster fishery. Spatial data related to the lobster fishery across the region is relatively limited and generally available only at a coarse scale. In discussions with fishery managers, fishermen, and scientists, the best available regionwide spatial depiction of the lobster fishery is a map of lobster trap end-line density.¹³ Higher-resolution portrayals of the lobster fishery exist for select smaller geographic areas (i.e., at the state level, particularly in Rhode Island, Massachusetts, and some parts of Maine). The RPB recognizes the need to develop additional information characterizing the spatial extent of the lobster fishery across the region.



Lobster trap end-line density

In this map, darker blues represent relatively higher density of end lines; lighter greens represent relatively lower density. This work was performed as part of the analysis associated with the North Atlantic Large Whale Take Reduction Plan to look at the density of vertical lines in the water column.

Party/charter fleet

Similar to the lobster fishery, information on the spatial extent of recreational fishing activity, including activity through for-hire party and charter boats, is limited. In partnership with several vessel captains, the ASMFC, the Atlantic Coastal Cooperative Statistics Program, and several states, the RPB has been conducting a pilot project to determine the potential for tablet-based technology to provide spatial data on party/charter fishing and transit patterns. The results of this pilot project are promising for improving spatial data on the party/charter fleet.¹⁴



OVERVIEW

ACTIONS

- CF-1 Maintain existing maps and data on the Portal
- CF-2 Develop additional regional maps and data of commercial and recreational fisheries
- CF-3 Inform regulatory and environmental reviews of agency actions for their potential impacts to commercial and recreational fisheries
- CF-4 Identify potentially affected commercial and recreational fishing stakeholders



ACTIONS: MAINTAIN AND UPDATE DATA

CF-1. Maintain existing maps and data on the Portal:

NMFS will maintain the commercial fishing maps and data that are currently on the Portal. NMFS Office of Law Enforcement (OLE) will provide annual updates of VMS-derived map products, using the processing and analysis methods developed for the existing maps. NMFS Greater Atlantic Regional Fisheries Office (GARFO) will ensure the map of fishery management areas related to VMS fisheries is reviewed and updated, if necessary, when VMS products are updated.

CF-2. Develop additional regional maps and data of commercial and recreational fisheries:

The RPB will develop and incorporate additional data characterizing commercial and recreational fisheries, including the following:

- NMFS GARFO will develop and make available maps and other data products using Vessel Trip Report information. This activity will initially focus on those federally permitted fisheries that are not currently included in the VMS maps.
- The RPB will work with regional partners to explore opportunities to develop regionally consistent spatial characterizations of the lobster and Jonah crab fisheries. See Chapter 5, Science and Research Priorities, for more information.

- The RPB will continue to work with regional partners to advance the party/charter fleet pilot project and/or other means of characterizing the recreational fishing industry. Additionally, spatial data are needed to depict private boat and shore-based fishing effort. See Chapter 5, Science and Research Priorities, for more information.
- The RPB will continue to seek additional ways to fill information gaps and address information needs by leveraging other projects. For example, in the Mid-Atlantic regional ocean planning effort, work has been done with Vessel Trip Report information to provide depictions of fishing activity according to gear type. The RPB will review these efforts to determine their potential utility. Additionally, the RPB will review the ability of AIS data (which, beginning March 1, 2016, is collected for fishing vessels over 65 feet in length) to fill information gaps. Finally, efforts such as the recently released *Lobster and Ocean Planning* report from the Island Institute provide useful information about the lobster industry in Maine and may be a model for other fisheries that currently lack spatial data as well.

ACTIONS: INFORM REGULATORY AND MANAGEMENT DECISIONS

CF-3. Inform regulatory and environmental reviews of agency actions for their potential impacts to commercial and recreational fisheries:

RPB agencies will, to the extent practicable, use the Portal when reviewing actions that may affect fisheries, including, but not limited to, proposals for new offshore development projects, scientific surveys involving research vessel activity or other actions with potential effects on commercial and recreational fishing, and conservation and restoration activities. While the RPB recognizes the limitations of available information, the consistent regional characterizations of certain fisheries can assist with the preliminary identification of potential conflicts by helping to identify fisheries using a particular area and the nature of that use (e.g., in transit or engaged in fishing). To the extent practicable, RPB agencies will also consider regional marine life and habitat data presented in the Portal when assessing conflicts or impacts with commercial and recreational fisheries, recognizing the connection between fishing activity and habitat. Specifically:

- USACE and BOEM through their permitting and leasing responsibilities are obligated to consider existing ocean uses, including fisheries, in leasing and permitting programs for



offshore energy and the use of offshore sand resources. The information in the Plan and the Portal will provide an important beginning step in identifying fisheries and fishing activity that may be affected by these activities. Furthermore, BOEM will amend guidance documents, such as the *Guidelines for Providing Information on Fisheries for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585*¹⁵ to direct potential lessees to the Portal for preliminary fishery-related information. See the Energy & Infrastructure section and Offshore Sand Resources section for more information.

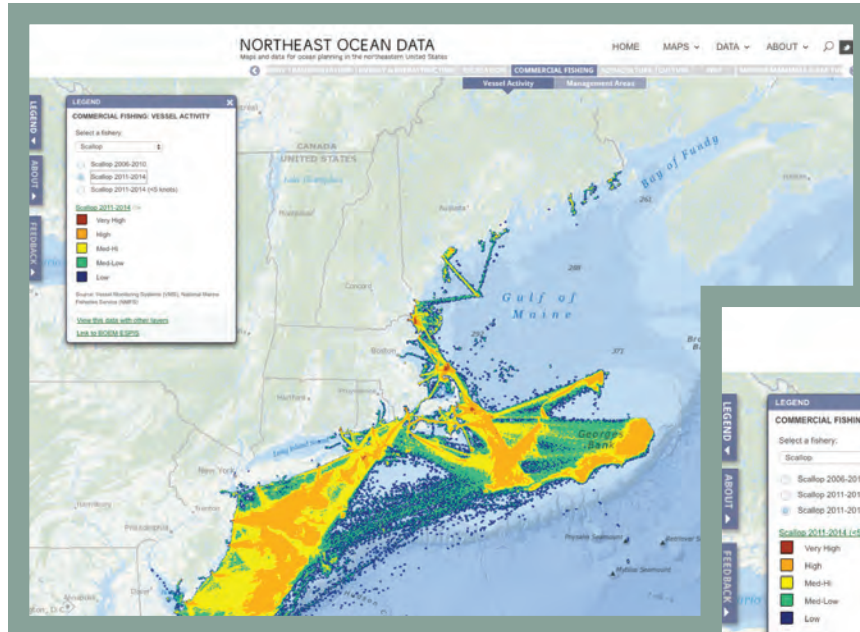
- As described in the Marine Transportation section, as part of the USCG's responsibilities as a cooperating agency during leasing, licensing, and permitting processes, to the extent practicable, the USCG will use the Portal to understand potential impacts to marine transportation and navigational safety. This usage includes determining potential conflicts, developing navigational risk mitigation strategies related to a particular waterway, and identifying potentially affected stakeholders (fishermen). See the Marine Transportation section for more information.
- The NEFMC will use the Plan data, as appropriate, to supplement traditional internal, state, and NOAA data sources to conduct analyses related to FMP development, and to satisfy the requirements of NEPA, MSA, and other applicable laws. The Portal may also inform NEFMC when considering climate change impacts to fisheries, developing and implementing ecosystem-based fisheries management, and resolving user conflicts. The NEFMC will inform its staff of the availability of the Portal.

CF-4. Identify potentially affected commercial and recreational fishing stakeholders: To the extent practicable, RPB agencies will use the Portal to help identify and improve communication with commercial and recreational fishing stakeholders who are potentially affected by agency actions. Because of the limitations in

existing data available on the Portal, this action should be viewed in combination with the best practices regarding coordination with state fishery agencies, the NEFMC, and fishing industry stakeholders described in Chapter 4.

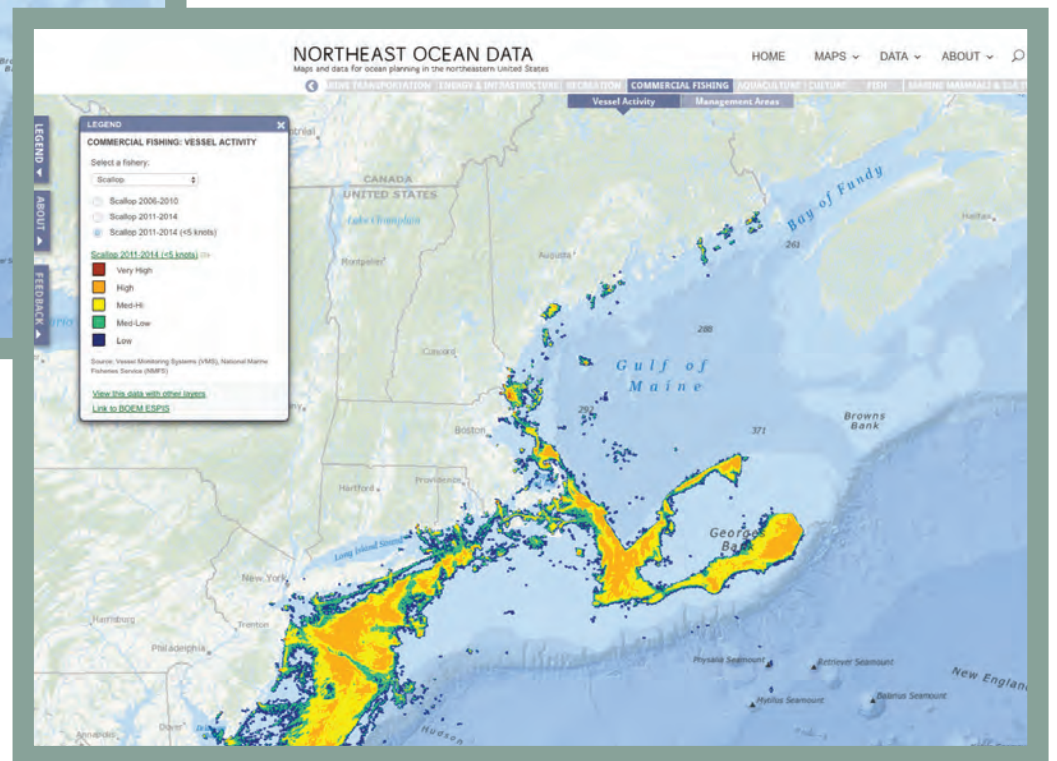
In addition, several recent efforts have attempted to improve communications with the fishing industry to better assess the potential impacts from newly proposed offshore activities. The following are most relevant to this Plan:

- In 2014, BOEM commissioned a study recommending a series of best management practices and mitigation measures for addressing potential impacts between fishing and offshore wind energy.¹⁶ In 2015, BOEM issued a separate document, *Guidelines for Providing Information on Fisheries Social and Economic Conditions for Renewable Energy Development on the Atlantic Outer Continental Shelf*.¹⁷ The practices outlined in this BOEM report have resulted in guidance to lessees.
- States have established advisory bodies to provide input into development of offshore wind energy in federal waters (the Rhode Island Fisheries Advisory Board and the Massachusetts Fisheries Working Group are two examples). Successes and opportunities from these efforts will be shared among RPB agencies to identify needs for further improvements.



All VMS scallop vessels 2011–2014

These VMS-derived maps indicate the general footprint of vessels operating in the federally managed scallop fishery. VMS-derived maps like these support a qualitative understanding of where vessels in certain fisheries operate, including potential transit and fishing areas. They can also help identify where certain vessels at a fishing ground originated. Therefore, they can help identify potential conflicts and potential fisheries interests to engage when new activities are proposed.



VMS scallop vessels traveling less than five knots (speed associated with fishing activity)