

Diver collects data in eelgrass beds.

Department of Fish and Game

Massachusetts Division of Marine Fisheries 2025 Annual Report

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Commonwealth of Massachusetts

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Lieutenant Governor Kimberley L. Driscoll

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Introduction

The Massachusetts Division of Marine Fisheries (DMF or Division) of the Department of Fish and Game is the Commonwealth's marine fisheries management agency. DMF is responsible for the development and promulgation of the Commonwealth's regulations governing commercial and recreational fishing activity conducted in the marine environment. The Division promotes and develops commercial and recreational fisheries through research, technical assistance, and the collection of statistics. Guidelines for managing marine fisheries come through Chapter 130 of Massachusetts General Law, the Atlantic Coastal Fisheries Cooperative Management Act, the Interjurisdictional Fisheries Management Act, and the Magnuson-Stevens Fishery Conservation and Management Act. To successfully fulfill its responsibilities, the Division has established the following mission, vision, and goals.

Mission

Manage the Commonwealth's living marine resources in balance with the environment resulting in sustainable fisheries and contributions to our economy, stable availability of diverse, healthy seafood and enriched opportunities that support our coastal culture.

Vision

Achieve sustainable fisheries and healthy marine ecosystems through sound science, innovation, collaboration, effective leadership, and stewardship all serving to enrich the productivity and socioeconomic value of marine fisheries to the Commonwealth.

Goals

Advance understanding and stewardship of our living marine resources, including fish, habitat, and marine protected species.

Support sustainable commercial and recreational fisheries.

Protect public health through monitoring and management of shellfish resources and advance the development of a sustainable marine aquaculture industry.

Expand and foster regional science, management, and education partnerships.

Build and maintain a high level of staff professionalism and administrative leadership.

Frequently Used Acronyms and Abbreviations

ACCSP	Atlantic Coastal Cooperative Statistics Program
ASMFC	Atlantic States Marine Fisheries Commission
CCB	Cape Cod Bay
CCS	Center for Coastal Studies (Provincetown)
CZM	Office of Coastal Zone Management (Massachusetts)
DER	Division of Ecological Restoration (Massachusetts)
DFG	Department of Fish and Game (Massachusetts)
DMF	Division of Marine Fisheries (Massachusetts)
DPH	Department of Public Health (Massachusetts)
EOEEA	Executive Office of Energy and Environmental Affairs (Massachusetts)
FMP	Fishery Management Plan
GARFO	Greater Atlantic Regional Fisheries Office (of NOAA Fisheries)
GIS	Geospatial Information System
GOM	Gulf of Maine
ILF	In-lieu Fee
ISSC	Interstate Shellfish Sanitation Conference
LCMA	Lobster Conservation Management Area
MassDEP	Massachusetts Department of Environmental Protection
MassDOT	Massachusetts Department of Transportation
MassWildlife	Massachusetts Division of Fisheries and Wildlife
MAFMC	Mid-Atlantic Fishery Management Council
MEP	Massachusetts Environmental Police
MEPA	Massachusetts Environmental Policy Act
MFAC	Marine Fisheries Advisory Commission (Massachusetts)
MRIP	Marine Recreational Information Program
NEFMC	New England Fishery Management Council
NEFSC	Northeast Fisheries Science Center
NOAA	National Oceanic and Atmospheric Administration (and NOAA Fisheries)
NSSP	National Shellfish Sanitation Program
OCC	Outer Cape Cod
PSP	Paralytic Shellfish Poisoning
SAFIS	Standard Atlantic Fisheries Information System
SMAST	School for Marine Science and Technology (at University of Massachusetts Dartmouth)
SNE	Southern New England
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFDA	United States Food and Drug Administration
USFWS	United States Fish and Wildlife Service
VTR	Vessel Trip Report
YOY	Young-of-the-year

FISHERIES MANAGEMENT SECTION

Daniel J. McKiernan, Director, Section Leader

Fisheries Policy and Management Program

Personnel

Daniel McKiernan, Director
Melanie Griffin, Federal Fisheries Policy Analyst
Nichola Meserve, Interstate Fisheries Policy Analyst
Jared Silva, State/Local Fisheries Policy Analyst
Kelly Whitmore, Federal Fisheries Policy Analyst
Bradley Schondelmeier, Offshore Wind and Fishery Specialist
Bradlie Morgan, Communications and Policy Administration Specialist (beginning February)

Overview

DMF is responsible for managing the Commonwealth's saltwater commercial and recreational fisheries. Management of marine resources unique to state waters and which cross state/federal boundaries is a constant, ongoing endeavor. A core of fisheries management professionals, with many years of practical experience and knowledge of Massachusetts fisheries, composes the team that initiates, evaluates, and selects fisheries management policy and strategies to implement rules and regulations. These rules and regulations frequently result from participation on, and in support of, federal fisheries management through the New England Fishery Management Council (NEFMC) and Mid-Atlantic Fishery Management Council (MAFMC), and interstate fisheries management through the Atlantic States Marine Fisheries Commission (ASMFC).

Our fisheries policy and management staff gathers and analyzes biological and economic data, communicates with the public on state, interstate, and federal fisheries management issues, and ensures adherence to administrative and regulatory protocols and procedures. This process also relies on our technical staff to provide biological analyses and other technical reviews of management options to ensure sustainable fisheries and fisheries habitat protection.

Frequent communication with commercial and recreational fishery participants is another important element of policy and management development. This effort directly involves a diverse array of fishermen, dealers, processors, and many other stakeholders. Public hearings to propose regulation changes are held by the Commonwealth's Marine Fisheries Advisory Commission (MFAC). The MFAC and the Commissioner of the Department of Fish and Game must approve most regulatory changes that DMF proposes in order for them to be implemented.

Advisory Groups

Following below is a summary of 2025 proceedings by groups advising DMF on fishery management issues.

Marine Fisheries Advisory Commission

The Massachusetts Marine Fisheries Advisory Commission (MFAC) was established by the Legislature in 1961. It is a nine-member board, representing recreational and commercial fishing interests across the Massachusetts coast. Commissioners are appointed by the Governor to three-year terms and attend monthly business meetings as well as public hearings. Proposed regulatory changes are approved or disapproved by a majority vote at the Commission's monthly business meetings. Extensive staff preparation occurs for these meetings including the development of recommendation memoranda on proposed regulatory changes that summarize public comment and review the biological and socio-economic impacts of alternatives; and preparation of informational presentations and written briefings on state, interstate, and federal fisheries management issues to keep the MFAC apprised of recent developments.

The MFAC convened for ten business meetings during 2025. The MFAC's striped bass focus group also met once during the year. Actions implemented during 2025 are included in the [summary of Fisheries Management Actions](#) beginning on page 14. MFAC membership changed in 2025 with the appointment of Eric Nelson of Topsfield, to fill the seat vacated by Timothy Brady in 2024; Raymond Jarvis of Westport, to fill the seat vacated by Michael Pierdinock in 2024; and William Goldsmith of Boston, to fill the seat vacated by Kalil Boghdan in 2025. Member biographies and meeting materials are available on the [MFAC's webpage](#). The MFAC awarded Henry Lind the 2025 Belding Award for his lasting contributions to fisheries science and conservation ([Figure 1](#)).



Figure 1. 2025 Belding Award recipient Henry Lind with MFAC Chair Raymond Kane, MFAC member Bill Amaru, and DMF Director Dan McKiernan at the award ceremony held in New Bedford in March 2026.

Marine Recreational Fisheries Development Panel

Pursuant to provisions of “An Act Instituting Saltwater Fishing Licenses,” a Marine Recreational Fisheries Development Panel was established in 2010 to engage with the Division on how annual

appropriations from the Marine Recreational Fisheries Development Fund should be spent. All fees collected from the sale of recreational saltwater fishing permits are deposited into this fund for the dedicated purpose of improving recreational fisheries or recreational fishery research in the Commonwealth, with a requirement that one-third of the annual appropriation be used for improving public access to marine recreational fisheries.

The Panel held three meetings during 2025. A June meeting focused on Marine Recreational Fisheries Development Fund accounting and the Division's recommended spending plan for the expected FY26 fund appropriation of roughly \$2.26 million. The Panel endorsed the Division's spending plan, which included: year-1 planning and engineering costs for the next large pier project in Somerset at Slades Ferry on the Taunton River; the Small Grants Program through which municipalities can compete for funds to finance public access improvement projects; enhanced sampling and assessment of the recreational fishery; public informational and educational materials and programs; monitoring diadromous fish populations and a shad stocking effort in the Taunton River; monitoring fish populations at artificial reefs; and new research into black sea bass, river herring, and winter flounder. Additional topics of discussion at the Panel's February, June, and December meetings focused on updates to funded research and outreach activities, recreational permitting including options to increase permit fees to maintain Fund solvency, and the annual fishing derby. Panel membership changed in 2025 with the appointments of Raymond Jarvis and Eric Nelson into the two seats reserved for members of the MFAC (previously held by Michael Pierdinock and Kalil Boghdan).

Seafood Marketing Steering Committee

On August 13, 2014, "An Act Promoting Economic Growth across the Commonwealth" established a Seafood Marketing Program within DMF. The legislation laid out the initial objectives of the program, required the appointment of a 19-member steering committee to guide DMF in the administration of the marketing program, and designated funding of up to \$250,000 per fiscal year from commercial harvester and dealer permit revenues. The Steering Committee, chaired by the DMF Director, met once in 2025. The Committee discussed implementation of DFG's Biodiversity Goals and their application to supporting local seafood demand and sustainability. Refer to the [Seafood Marketing](#) for additional programmatic information.

Shellfish Advisory Panel

The Shellfish Advisory Panel (SAP) was established by the Massachusetts legislature in 2021 (G.L. c. 130, §1C). Its purpose is to provide a public body to advise DMF on matters related to shellfish and create a forum for the dissemination of information relevant to shellfish resources and management and the discussion of emerging shellfish-related issues. This legislative action broadened and formalized an existing body, created by DMF in 2014 and meeting on an ad-hoc basis. A legislatively formed SAP was a primary objective of the Massachusetts Shellfish Initiative's 2021 Strategic Plan. To achieve these goals, the Panel meets at least twice annually to address ongoing matters of importance and emerging issues related to shellfish resources, fisheries, and management.

The SAP held two meetings in 2025. The meetings focused on several matters, including changes to the Massachusetts Shellfish Officer's Association (MSOA) training program; updates to regulations impacting derelict fishing gear and aquaculture gear; the depuration fishery; DMF's growing Shellfish Habitat Restoration Program; evaluation of the wastewater treatment plant model peer review;

addressing the invasive European green crab; changes to the surf clam fishery; and the implementation of a new shellfish sale transaction system. Updates were also shared on the US Food and Drug Administration's Risk Assessment Risk Management and Program Element and Evaluation Reviews. The SAP utilizes ad hoc working groups as needed to focus on specific issues. The SAP's Aquaculture License Transfer Work Group and Shellfish Hatchery Work Group met throughout the year. The SAP welcomed a new member, George Delaney of Ipswich, to fill the retail dealer seat vacated by Michael Trupiano in 2025.

Commercial Fisheries Commission

In Chapter 179 of the Acts of 2022, "An Act Driving Clean Energy and Offshore Wind," Section 79 established a Commercial Fisheries Commission (CFC) to develop and recommend strategies, methods and tools to promote the long-term sustainability of the Commonwealth's commercial fishing industry amidst the development of offshore energy projects through 2030. This public body is co-chaired by DMF and MA Office of Coastal Zone Management (CZM).

Additionally, the Secretary of the Executive Office of Energy and Environmental Affairs (EOEEA) and 14 members of the public who represent industry and research organizations were appointed by the Governor in 2024. The CFC held four meetings in 2025, with its inaugural meeting in April. In 2025, the CFC worked to determine their areas of focus, including port infrastructure, economic sustainability and development of the industry, seafood processing, and offshore wind. The CFC is expected to release its first annual report in 2026 outlining their recommendations to the Legislature and future work.

Public Input and Stakeholder Engagement

Input from commercial and recreational fishery participants and other stakeholder groups is integral to the Division's initiation, development, implementation, and monitoring of fisheries management initiatives. Stakeholder engagement is achieved through various structured processes including public hearings and comment periods; scoping and informational meetings; and the distribution of Advisories, the Division's newsletters, annual reports, and other publications. Such activities for 2025 are described below. Policy and Management staff also routinely participate in informal meetings with commercial, recreational, and non-traditional fisheries stakeholders at their request to discuss items of interest; and respond to constituent inquiries about fisheries management issues in the Commonwealth.

DMF Public Hearings and Comment Periods

State law requires DMF to conduct a public comment period and hold a public hearing(s) on most types of proposed amendments to the state's marine fisheries regulations. During 2025, four such comment periods were held including a total of five public hearings.

- February 14–March 16 comment period, with hearings on March 10 (Gloucester) and March 11 (Bourne): striped bass management; false albacore and Atlantic bonito size and bag limits; commercial menhaden management and permitting; state waters groundfish management; commercial summer flounder management; use of conch pots in federal waters; commercial American eel permitting; coastal shark management; possession of dogfish fins; restrictions on

shore-based shark fishing; recreational black sea bass season; protected species entanglement reporting; and possession of non-native worms.

- April 23–May 23 comment period, with a hearing on May 19 (virtual): lobster carapace sizes and escape vent rules.
- October 28–December 12 comment period, with a hearing on December 2 (virtual): striped bass commercial permitting.
- November 21–December 16 comment period, with a hearing on December 15 (virtual): establishing a framework to permit and regulate the removal, possession, and disposal of fishing gear debris.

Certain other actions, such as the Director’s Declaration to adjust commercial fishery limits for quota managed species, require a public comment period only. During 2025, written public comment was accepted on the following proposed actions:

- December 5–December 19: in-season adjustment to the 2026 Period I commercial summer flounder trip limit.

DMF Scoping and Informational Meetings

DMF occasionally holds additional ad hoc meetings to inform the industry of and/or accept informal scoping comment on upcoming issues. During 2025, the following such events were held:

- February 12 (Brewster) and February 13 (virtual and New Bedford) stakeholder engagement meetings on state waters surf clam management.
- March 12 (virtual) stakeholder engagement meeting with industry representatives in federal waters trawl fisheries to discuss lobster bycatch.
- March 14 (virtual and New Bedford) annual horseshoe crab science and management meeting.
- April 28 (Eastham) and April 30 (Duxbury) informational meetings on the 2025 *Vibrio parahaemolyticus* Control Plan for Oysters.
- May 8 (Scituate) stakeholder engagement meeting with inshore mobile gear and trap fishers to discuss development of regulatory framework to accommodate the removal and disposal of derelict fishing gear.
- July 31 (Weston) ad hoc commercial striped bass industry advisory panel meeting.
- August 26 (Gloucester) stakeholder engagement meeting on state waters scallop management.
- November 17 (virtual and New Bedford) stakeholder engagement meeting on trawl fishery management in Nantucket Sound.

Publications

DMF released over 95 electronic notices to our subscriber list on various rule changes, public hearings, quota closures, and other important information. Advisories are also posted to the Division's website and social media platforms. DMF published its newsletter twice in 2025. These publications serve to inform and educate our constituents on major management, science, and administrative happenings at the Division. Distribution of the newsletter occurred in electronic format through the Division's website and listserv. DMF published its 2024 Annual Report.

Regional Councils and Interstate Commissions

New England Fishery Management Council

Some fisheries go beyond state level and are managed regionally in collaboration with the federal government. The Director of the Commonwealth's Division of Marine Fisheries serves as one of 18 voting members on the New England Fishery Management Council (NEFMC). One of eight regional fishery councils established in 1976 under the Magnuson-Stevens Fishery Conservation and Management Act, the NEFMC supports management of the living marine resources within the United States exclusive economic zone (EEZ), spanning from 3 to 200 miles offshore, from Maine through Connecticut. The regional councils develop federal fishery management plans (FMPs), which are implemented by NOAA Fisheries after it ensures that 10 National Standards within the Magnuson-Stevens Act have been met. The NEFMC has federal FMPs for: Northeast Multispecies (13 groundfish stocks), Atlantic Sea Scallop, Monkfish, Atlantic Herring, Northeast Skate Complex (seven species), Small-Mesh Multispecies (five groundfish stocks), Red Crab, Spiny Dogfish, Atlantic Salmon, and Habitat. Since regional fisheries don't recognize jurisdictional boundaries, the Division also seeks to balance state waters management of regional fisheries in a manner consistent with and in support of federal FMPs; in some cases, this is done with the Atlantic States Marine Fisheries Commission to coordinate management plans between federal and state waters.

During 2025, staff represented Massachusetts at five NEFMC meetings; served on the Committees for Atlantic Herring (Vice-Chair), Atlantic Sea Scallop (Chair), Executive, Groundfish, Monkfish, Skate, and Spiny Dogfish (Vice Chair) as well as the Risk Policy Working Group; acted as NEFMC liaison to the Mid-Atlantic Fishery Management Council (MAFMC) River Herring/Shad and Squid/Mackerel/Butterfish Committees; provided technical expertise to the Groundfish, Scallop, Atlantic Herring, Monkfish, and Habitat Plan Development Teams, the Northeast Trawl Advisory Panel, and Research Set-Aside (RSA) program for Atlantic Sea Scallops; and participated in over 100 Council related meetings, hearings, and workshops. Additionally, a DMF staffer was elected as Vice-Chair of the NEFMC in September 2025.

In recognition of these cooperative activities and their benefit to the successful management of fisheries, the Council once again granted the Commonwealth funds to support management and technical assistance (refer to [Grants section](#) for further details). Although, funds were delayed due to federal budget uncertainties in 2025.

Throughout 2025, the Council finalized specifications for access to its various managed fisheries and responded to numerous Executive Orders while advancing longer-term priorities including updates to Essential Fish Habitat, development of strategies for long-term scallop management and reducing gear interactions of on-demand fixed gear with other fisheries, incorporating climate resilience into fisheries

management decisions and processes, as well as revising the Council’s overarching Risk Policy. A major theme of the year for the Council has been responding to diminished federal scientific and management capacity (e.g., Omnibus Management Flexibility Act). DMF staff continued to contribute to technical analyses and policy decisions at the NEFMC in support of 2025 work including Essential Fish Habitat revisions, Atlantic Sea Scallop Framework 40 (2026 specifications), recreational recommendations to the Greater Atlantic Regional Fisheries Office for management of cod and haddock, 2025–2027 Atlantic herring specifications, Monkfish Framework 17 (2026–2028 specifications), Skate specifications for FY2026–2028, a revised Groundfish Amendment 25 (cod stock transition and 2026–2027 specifications), Groundfish Framework 72 (2026–2030 specifications), and Spiny Dogfish specifications for 2026–2027.

DMF coordinated the process of gubernatorial nominations to vacant seats on the NEFMC, including solicitation of potential candidates and submission of nominations by the Governor’s office. Nominee Mr. Eric Hansen of Marion, Massachusetts, was reappointed by the Secretary of Commerce to an at-large seat to serve a second three-year term on the Council.

Atlantic States Marine Fisheries Commission

The Atlantic States Marine Fisheries Commission (ASMFC) coordinates the conservation and management of 27 nearshore, migratory fish and shellfish species along the Atlantic coast. The Commission was formed through an Interstate Compact, ratified by the states and approved by the US Congress in 1942. Each member state from Maine through Florida is represented by three Commissioners—the director of the state’s marine fisheries management agency, a state legislator, and an individual appointed by the state’s governor to represent stakeholder interests—who collectively have one combined ballot on votes taken by the Commission’s species management boards. These species management boards develop and adopt interstate FMPs, which are then implemented at the state level. Failure to implement interstate FMP requirements can result in a non-compliance determination triggering the US Department of Commerce to close a state’s fishery until regulatory compliance occurs. In addition to interstate fisheries management, Commission deliberations also address fisheries science, habitat conservation, and law enforcement.

During 2025, Massachusetts had a declared interest and served on 16 species management boards, including American eel, American lobster/Jonah crab, Atlantic herring, Atlantic menhaden, Atlantic striped bass, Atlantic sturgeon, bluefish, coastal sharks, horseshoe crab, northern shrimp, shad/river herring, spiny dogfish, summer flounder/scup/black sea bass, tautog, weakfish, and winter flounder. In October, the DMF Director was elected and began a two-year term as Chair of the Commission. DMF represented Massachusetts at the four routine quarterly meetings of the ASMFC, plus 12 additional Board-specific meetings, six of which were held jointly with the MAFMC on co-managed species. Management and Policy staff also served on several committees that were active in 2025 including an ad-hoc striped bass commercial tagging program review committee (conducting a 10-year evaluation) and an ad-hoc declared interests and voting privileges workgroup (reviewing current procedures and recommending revisions), and also attended the meetings of various other technical, scientific, and monitoring committees to stay informed and contribute to the latest developments in interstate management issues.

States are afforded the opportunity of a public hearing for any draft addendum or amendment to the ASMFC's interstate fishery management plans. DMF assists ASMFC in the scheduling and moderation of such hearings. During 2025, DMF hosted or co-hosted eight ASMFC public hearings to collect stakeholder input on the following management actions: Summer Flounder, Scup, and Black Sea Bass Draft Addendum XXXVI; Bluefish Addendum III; Northern Shrimp Draft Amendment 4; a Summer Flounder, Scup, Black Sea Bass, and Bluefish Public Information Document; American Lobster Draft Addendum XXXII; and Striped Bass Draft Addendum III.

Several of the more remarkable interstate fishery management actions that DMF management and policy staff played an integral role in 2025 included: the Policy Board's adoption of a revised recreational measure setting process for summer flounder, scup, black sea bass, and bluefish; the Northern Shrimp Section's approval of a long-term moratorium management approach; the American Lobster Board's action to repeal certain gauge and vent size measures; the Striped Bass Board's approval of several new requirements to improve the efficacy of existing measures and initiate long-term management planning; and the setting of Atlantic menhaden, Atlantic herring, and spiny dogfish fishery specifications.

Fisheries Management Actions

Described below are the fishery management actions enacted by DMF during 2025. Actions fall into several categories: permanent regulatory changes to 322 CMR (Code of Massachusetts Regulations), which can occur only after a public hearing and comment period on the proposals, and are subject to the MFAC and Commissioner of DFG's approval of the Director's recommendation; temporary (90-day) regulatory changes to 322 CMR under the Director's Emergency Authority for the preservation of the public health, safety or general welfare; annual specifications and adjustments under the Director's Declaration Authority as established in pertinent regulations, some of which require public comment periods; time-specific authorizations or restrictions per Letters of Authorization, Permit Conditions, Pilot Programs, and Quota Transfers. This list does not include regulatory changes approved by the MFAC in 2025 but not codified until 2026; such items will be covered in the 2026 Annual Report.

American Eel

Commercial Permitting Regulations

DMF adopted regulations to limit entry into the commercial American eel fishery beginning in 2026. These regulations established a December 31, 2024 control date for the American Eel Endorsement; restrict the issuance of this endorsement in 2026 to renewals by only those permit holders who reported landing any eels between January 1, 2015 and December 31, 2024; and require the named permit holder to be the person conducting the authorized commercial eel fishing activity moving forward. This action responded to persistent low American eel abundance and concerns about underreporting in the commercial fishery. It was expected that eel endorsement issuance would decline from over 200 to less than 20 in 2026.

American Lobster

Commercial, Recreational, and Dealer Regulations

Consistent with Addendum XXXII to the Interstate Fishery Management Plan for American Lobster, DMF undertook rulemaking to rescind those minimum and maximum carapace size standards and escape vent changes implemented in December 2024 for compliance with Addendum XXVII. These Addendum XXVII measures were triggered for implementation sooner than expected when the addendum was approved in 2023 as a proactive plan to improve the resiliency of the Gulf of Maine/Georges Bank stock based on concerns about persistent low lobster settlement over the prior decade, and were later repealed through Addendum XXXII due to economic concerns and in order to provide the Gulf of Maine states the opportunity to collaborate with the lobster industry on alternative conservation approaches with more support.

DMF's rulemaking, occurring first through emergency action to preclude the July 1, 2025 effective date of the existing regulations and then final regulations following public comment, had the following effects: (1) the minimum carapace size standard remained 3 ¼" for commercial fishers in Lobster Conservation Management Area 1 (LCMA1) and recreational fishers in the Gulf of Maine Management Area; (2) the minimum escape vent size remained at 1 15/16" by 5 ¾" rectangular or 2 7/16" diameter circular for commercial fishers in LCMA1 and recreational fishers in the Gulf of Maine Management Area; (3) the maximum carapace size remained 6 ¾" for commercial fishers in LCMA 3; (4) the maximum carapace size remained 6 ¾" for commercial fishers in Outer Cape Cod (OCC) LCMA who hold a federal lobster permit; (5) there remained no maximum carapace size for commercial state-only OCCLCMA permit holders and recreational fishers in the Outer Cape Cod Management Area; and (6) for seafood dealers, all pending changes to the minimum and maximum carapace size rules were rescinded consistent with the above described actions. Notably, Addendum XXXII did not repeal Addendum XXVII's measures regarding surplus trap tag issuance in LCMA1 and LCMA3, nor the v-notch possession definition for OCCLCMA and these remained in the Commonwealth's regulation.

Atlantic Bonito and False Albacore

Commercial and Recreational Regulations

Effective May 9, DMF enacted its first-ever size and possession limits for Atlantic bonito and false albacore; specifically, a 16-inch curved fork length minimum size for each species and a 5-fish retention limit for both species combined. These new limits apply to all commercial and recreational fishers, except commercial weir and mechanized mackerel jig fishers for whom sorting minor incidental catch during routine operations would be unduly burdensome. These measures were adopted as precautionary management to constrain recreational harvest approximately at current levels and prevent the development of a directed commercial fishery, given recent rapidly-growing popularity for these fish in Massachusetts occurring without the benefit of a population estimate, extensive understanding of life history, or fishery management plans to control fishing mortality. The minimum size limit reflects estimated size-at-maturity for both species.

Atlantic Herring

Area 1A Effort Control Permit Conditions

DMF implemented landing days, possession limits, and seasonal closures for the directed herring fishery in Area 1A (inshore Gulf of Maine) consistent with ASMFC Herring Management Board decisions. Letters of Authorization were issued to vessels which had declared into the directed fishery through DMF's opt-in process and according to their federal category permit. The Massachusetts/New Hampshire spawning area closure was also implemented per the FMP's default closure dates (September 23–November 3).

Atlantic Menhaden

Commercial Regulations

Effective May 9, to encourage full quota utilization and enable access to the Episodic Event Set-Aside (EESA), DMF revised the quota-use management trigger that drops the trip limit for the limited entry fishery from 25,000 pounds to 6,000 pounds so that it only occurs if 98% of the quota is reached on or after September 1. Previously, the trip limit would be dropped if 90% of the quota was reached before September 1, which was contributing to a quota underage and restricting the fishery from the EESA because a state's allocated quota must be used entirely prior to September 1 to opt in per the interstate management plan. This change had the intended effect in 2025, with the fishery using its full quota of roughly 10.8 million pounds and transitioning to the EESA on August 28.

DMF also made changes to the menhaden permitting regulations to take effect in 2026. Renewals of the limited entry Menhaden Endorsement will be further restricted to only those permit holders with a minimum of one landing of at least 6,000 pounds of menhaden between January 1, 2014 and August 1, 2023 or hold a Menhaden Endorsement in conjunction with a Fish Weir Endorsement. This action was taken at the request of industry to prevent the activation of latent effort. Should it be needed in the future to constrain open access participation in the fishery, the Control Date for the CAP-Purse Seine Endorsement was also amended so that any person issued the endorsement after December 31, 2024—whether by renewal or a new application—may be subject to eligibility criteria based on historic landings by the permit holder.

Harvester Partnership Pilot Program

DMF initiated a Harvester Partnership Pilot Program for 2025 that allows similarly permitted vessels rigged for seining to share catch from their nets should a set exceed the trip limit or a vessel's capacity. The intent of the program was to reduce the potential for discarding and possibly decrease the number of seine nets being set, with a benefit to user-group relations. Letters of Authorization were issued and provided the program's conditions, e.g., each vessel must be rigged for purse seining and capable of catching what they land, must only take fish from the net (not from the other vessel) and must bring the fish ashore themselves, must comply with their applicable trip limit, and may only partner with one of their pre-approved partnering vessel per day. All limited entry permit holders with a clean enforcement record over the prior calendar year were eligible to participate, as well as any open entry permit holders who had documented landings in 2024 and had a similarly clean enforcement record. DMF issued LOAs for eleven vessels to partner with at least one other vessel.

Episodic Event Set Aside Permit Conditions

Following approval by the ASMFC to enter the 2025 EESA fishery, DMF issued permit conditions to authorize a 25,000-pound trip limit for limited entry participants (leaving in place the 6,000-lb trip limit for open entry participants). Fishery participants landed roughly 1.1 million pounds of the 5.15-million-pound set-aside from the onset of the state's EESA fishery on August 28 through mid-October.

Quota Transfers

Massachusetts requested and received a 160,000-pound quota transfer from Rhode Island in November to help offset an overage of the Commonwealth's quota. Menhaden quota transfers require multi-state agreement and ASMFC approval per FMP requirements.

Atlantic Striped Bass

Commercial and Recreational Fish Measurement Regulations

Effective May 9, DMF amended its definition of total length for striped bass to clarify that the measurement must be taken with the upper and lower fork of the tail squeezed together. Previously, anglers had discretion to squeeze the forked tail or not. This lack of a clean and consistent standard was eroding the intended conservation and enforceability of the size limits. At DMF's urging, this was subsequently incorporated into a coastwide standard definition through Striped Bass Addendum III to Amendment 7 of the interstate plan, as approved in October 2025 with a compliance deadline of 2027.

Commercial Permitting Regulations

On November 21, DMF enacted emergency regulations affecting permitting in the commercial striped bass fishery for 2026. Specifically, these regulations: (1) limit the issuance of the regulated fishery striped bass endorsement in 2026 to only individuals who held the endorsement in 2024 or 2025; (2) establish the endorsement as non-transferable; (3) require the named permit holder be present during fishing; and (4) updated the striped bass control date from June 14, 2022 to December 31, 2025. Based on public comment received on the emergency regulations, and as memorialized in a December 2025 memorandum to the MFAC, DMF intended to rescind the owner-operator requirement in the final implementation regulations for 2026. These changes were adopted as the first step to preserve remaining commercial fishing opportunities for a smaller number of existing participants given current and expected future stock conditions, and to lay the foundation for the development of additional permitting proposals to support the implementation of harvester tagging by 2029 as mandated by Addendum III to the interstate plan.

Bluefish

Commercial Quota Transfers

DMF transferred 100,000 pounds of unused commercial bluefish quota to North Carolina in September to aid in their season length. Bluefish quota transfers require multi-state agreement and ASMFC and NOAA Fisheries approval per FMP requirements.

Fishing Gear and General Matters

Bait Deployment Device Regulations

Effective May 9, DMF prohibited anglers from using mechanized, compressed propulsion, and remote-controlled devices to deploy bait when shore fishing. This action complemented DMF's regulatory actions to restrict the shore-based targeting of white sharks (page 21) by limiting the ability for anglers to set baits beyond the surf where white sharks occur. Additionally, it will limit anglers' ability to target fish at a greater distance and specific size classes when conditions allow, and in doing so, may reduce post-release mortality particularly for striped bass by limiting the fight-time related to stress placed on the fish.

Conch Pot Regulations

Effective May 9, DMF extended state permitting and effort control rules to Massachusetts commercial permit holders fishing conch pots for knobbed and channeled whelk ("whelk") in the federal zone. This requires any Massachusetts commercial permit holder possessing or landing whelks taken by conch pot gear in state or federal waters to: (1) hold a DMF-issued conch pot permit; (2) have all conch pots present on the vessel or set in the water to have a valid annual conch pot trap tag affixed; (3) fish no more than 200 conch pots; and (4) adhere to the April 15–December 15 conch pot fishing season. Absent a federal fishery management plan for whelk, no federal controls govern the use of conch pots in these waters. This responds to a reported expansion of the traditional state waters conch pot fishery into the federal zone off Nantucket. This raised concerns about the potential proliferation of conch pot gear in federal waters increasing entanglement risks for protected whales and sea turtles.

Prohibited Baits Regulations

Effective May 9, DMF prohibited the possession, sale, and use of Pacific lugworms as bait. Over the past several years there were reports of these non-native worms being sold at local bait and tackle shops and acquired by anglers through online purchases. These worms present biosecurity concerns particularly related to pathogen transmission—including White Spot Syndrome Virus, which can infect crustaceans, and Covert Mortality Nodavirus, which can infect a variety of shellfish, crustaceans, and finfish—as well as potential naturalization in our local waters.

Free Saltwater Fishing Days Declaration

DMF declared May 10 (Mother's Day) and June 21 (Father's Day) as the Commonwealth's free saltwater fishing days for 2025. By statute, the Division may establish two such days per year when anglers need not have a saltwater recreational fishing permit to fish the marine waters of the state, out to 3 miles.

Groundfish

American plaice, cod, haddock, halibut, ocean pout, pollock, redfish, windowpane flounder, winter flounder, witch flounder, wolfish, and yellowtail flounder are managed as part of a federal multispecies FMP. DMF also includes monkfish in its definition of multispecies groundfish. Any management actions affecting these species are thus grouped.

Atlantic Cod Commercial and Recreational Regulations

DMF took two actions, effective May 9, to amend its cod management regulations consistent with expected changes to the federal management plan. First, DMF amended its cod management area boundaries. All state waters north of Cape Cod and those waters down the backside of the Cape and east of Nantucket west of the 70th meridian became the Western Gulf of Maine Cod Management Area; all other state waters became part of the Southern New England Cod Management Area. Effectively, this moved that band of waters east of Cape Cod and Nantucket south of 42° 00' north latitude from the Southern New England Cod Management Area to the Western Gulf of Maine Cod Management Area. This was done consistent with Amendment 16 to the federal multispecies FMP, which was not implemented by NOAA Fisheries until early 2026. Second, DMF established a moratorium on the harvest and possession of cod by commercial and recreational fishers within the Southern New England Cod Management Area. Under the moratorium, fishers who lawfully retain cod caught in another jurisdiction may transit state waters within the Southern New England Cod Management Area and land this cod catch in Massachusetts.

Non-Cod Commercial Regulations

To provide commercial fishing access to other non-cod species, DMF increased the yellowtail flounder trip limit from 350 pounds to 500 pounds; and increased the monkfish trip limit from 536 pounds tail weight (1,560 pounds whole weight) to 1,000 pounds tail weight (2,910 pounds whole weight), effective May 9.

Commercial Groundfish Consecutive Daily Trip Limit Pilot Program

DMF renewed the pilot program (begun in 2024) for commercial trawlers and gillnetters participating in the state-waters groundfish fishery to land two daily limits of Gulf of Maine winter flounder and yellowtail flounder that were lawfully caught and retained over consecutive calendar days. The purpose of this pilot program is to enhance flexibility and safety for these small-scale vessels given the high cost of fuel, the long-distance vessels must travel between port and seasonal fishing grounds, and challenges related to accessing fish buyers in certain ports. Permit conditions include catch segregation and daily logbook maintenance. Ten Letters of Authorizations were issued to participate in the fishing year 2025 pilot program (running through April 30, 2026).

Commercial Permitting Regulations

DMF updated the Control Date for the Groundfish Endorsement from December 31, 2018 to December 31, 2024. The Groundfish Endorsement is the regulated fishery permit endorsement necessary to participate in the state-waters-only groundfish fishery above the open access limit of 25 pounds of groundfish species in aggregate. This endorsement has been limited in entry since it was first established in 2006, and overtime, the number of inactive permits has grown. The significant amount of latency, if activated, could pose substantial issues for the fishery given the relatively nominal levels of the state waters sub-components. DMF updated the control date to be better prepared to further restrict activity in this fishery should it be warranted.

Protected Species

Reporting Regulations

DMF adopted a regulation effective May 9 requiring any mariner who observes sea turtles or whales entangled in fishing gear to report the entanglement to the Massachusetts Environmental Police, NOAA Fisheries, or the Provincetown Center for Coastal Studies. This action extended a long-standing requirement for mariners to report observed entanglements of North Atlantic right whales to entanglements of all whales and sea turtles to enhance disentanglement efforts more broadly in Massachusetts waters, in support of the state's Habitat Conservation Plan.

Seasonal Fixed Gear Closure Declaration

To reduce the risk of right whale entanglement in fixed gear buoy lines, state regulations establish seasonal closures for gillnets and trap gear through May 15 that may be extended by Declaration beyond May 15 or rescinded after April 30 based on the presence or absence of right whales. In 2025, these gear closures were lifted effective May 13 as a result of aerial and acoustic monitoring indicating that right whales had migrated out of state waters.

Vessel Speed Limit Declaration

To reduce the risk of ship strikes on right whales, state regulations establish a speed limit of 10 knots for small vessels (<65' overall length) operating within Cape Cod Bay during March and April, although this timing may be adjusted by Declaration as reasonably necessary to prevent vessel strikes. In 2025, the speed limit was extended through May 13 given the continued presence of right whales in the area. A complementary federal speed restriction in the same area applied to vessels 65' and greater.

Sharks

Dogfish Finning Regulations

To enhance enforcement of the shark fin prohibition in state law, DMF adopted a requirement effective May 9 for businesses selling spiny or smooth dogfish fins in the Commonwealth to produce paperwork that documents the lawful origin of the product. Spiny and smooth dogfish are the only shark species which may be processed after landings into various parts, including fins, and sold; this documentation will validate that any fins in commerce are from smooth or spiny dogfish.

Spiny Dogfish Quota Transfers

The Spiny Dogfish Northern Region (Maine through Connecticut) transferred 1.5 million pounds of FY 2024 commercial quota to Virginia in March and 2 million pounds of FY 2025 commercial quota to Virginia in December. These transfers helped Virginia avoid an early quota closure without impacting the Northern Region's fishery which primarily operates in the first eight months of the fishing year (i.e., May–December). All such transfers require multi-state agreement and ASMFC approval per FMP requirements.

Oceanic Whitetip Regulations

Effective May 9, DMF prohibited the retention and landing of oceanic whitetip sharks. This conformed state rules to new federal limits responding to the latest stock status information and ensured Massachusetts remain in compliance with the Interstate Fishery Management Plan for Coastal Sharks.

Shore-Based Shark Fishing Regulations

Effective May 9, DMF took action to constrain shore-based shark fishing in Massachusetts to enhance the enforcement of the existing prohibition on capturing white sharks and address burgeoning user group conflicts between anglers presumably targeting white sharks and other beachgoers. First, DMF created an area where shore-based anglers are prohibited from fishing with a baited hook that has an inside gap exceeding 5/8 inch when measured straight across from barb to shank coupled with a wire or metal leader that measures greater than 18 inches. The area where this activity is prohibited begins at the northernmost point of Plymouth Beach and follows the shoreline around Cape Cod Bay and the Outer Cape including all of Chatham Harbor and Monomoy Island. The use of this heavy gear remains authorized outside of the area and anglers may fish lighter tackle within the area to target other species. If shore fishing with this heavier gear outside the prohibited area, DMF has restricted anglers from chumming from sunrise to sunset.

Summer Flounder, Scup, and Black Sea Bass

Summer Flounder Commercial Declarations

A Director's declaration was used to reduce the 2025 Summer Flounder Period I (January 1–April 22) commercial trip limit from 5,000 pounds to 2,000 pounds. This was done to slow consumption of the Period I quota, achieve a longer season, and limit the risk of a quota overage. In 2024, under a similar quota level and 5,000-pound limit, the Period I fishery was projected to hit its allocation in early February.

In announcing this trip limit reduction, DMF also advised fishery participants that it would not be renewing the multi-state possession limit allowance for the 2025 Period I fishery due to concerns about quota utilization rates during the Period I fishery and the limited use by Massachusetts homeported vessels. Per the regulations, this allowance is subject to an annual authorization by the Director. When active, it allows vessels permitted to land summer flounder in multiple states to possess non-conforming quantities of summer flounder when offloading a state's limit provided fish destined for each state is segregated and clearly labeled and the limit for each state is not exceeded.

Summer Flounder Commercial Regulations

Effective May 9, DMF made several regulatory adjustments to the commercial summer flounder management program with a focus on shifting more quota to and lengthening the summertime fishery when the resource is more valuable to more permit holders. Regulatory changes taking effect in 2025 included a reduction in the summertime (April 23–September 30) directed fishery trip limits from 600 pounds to 500 pounds for net fishers and from 400 pounds to 325 pounds for hook fishers; an amendment to the trigger that reduces trip limits to 400 pounds for net fishers and 250 pounds for hook fishers so that it occurs if 75% of the quota is taken before August 15, rather than August 1; the addition of a new trigger to reduce the trip limit to 200 pounds for all gear types if 90% of the quota is taken before September 1; and a prohibition on possessing, retaining, and landing summer flounder on Saturdays. Due to the timing of the action, the following regulatory changes would take effect in 2026: an adjustment to the annual quota allocations so that the Period I fishery (January 1–April 22) receives 15% of the annual quota (rather than 30%) and the Period II fishery (April 23–December 31) receives the remaining 85% of the quota (rather than 70%); and a reduction in the Period I trip limit from 5,000 pounds to 2,000 pounds.

Summer Flounder Commercial Authorizations

The Director renewed the Consecutive Daily Limit program—effective June 8—that allows vessels participating in the summertime mixed species trawl fishery south of Cape Cod to possess and land two days’ trip limits of summer flounder and other commonly caught species (e.g., horseshoe crabs, whelks, black sea bass, smooth dogfish) provided each day’s catch is segregated and labeled. Participation was granted by Letter of Authorization. Additional conditions include completion of a daily logbook. This program is designed to enhance economic efficiency and address on-the-water safety issues. Thirty-eight LOAs were issued to participate in the 2025 program.

Black Sea Bass and Scup Commercial Authorization

DMF renewed a pilot program allowing black sea bass and scup pot permit holders to possess and land consecutive daily trip limits that were lawfully caught and retained over two consecutive open fishing days provided each day’s catch is segregated and labeled. Participation was granted by Letter of Authorization in mid-August to promote more efficient utilization of the quota. Similar to the summer flounder program (above), additional conditions include completion of a daily logbook. Six LOAs were issued to participate in the 2025 pilot program.

Black Sea Bass Recreational Regulations

Through conservation equivalency, DMF amended the recreational black sea bass season from May 18–September 3 to May 17–September 1 in order to maintain the opening day as a Saturday. The possession and size limits remained status quo at 4 fish of at least 16.5” in length.

Adjudicatory Proceedings

Under state law, DMF may sanction commercial and recreational fishing permits for violations of the state’s marine fishery laws and regulations subject to a due process adjudicatory proceeding. These adjudicatory proceedings are held before a magistrate. They may be initiated by the agency, the Environmental Police, or municipal officials (constables) authorized to enforce the marine fishery laws of the Commonwealth.

In 2025, DMF initiated six administrative proceedings. Five of the six proceedings dealt with commercial striped bass violations. Each of these five matters were resolved through a settlement agreement resulting in the permit holder forgoing the renewal of their commercial regulated fishery permit endorsement for striped bass, with one matter also resulting in the permanent revocation of the individual’s commercial fishing permit and all regulated fishery permit endorsements and another matter also resulting in the permanent revocation of the individual’s regulated fishery permit endorsement for striped bass. The sixth proceeding initiated in 2025 addressed the failure of a commercial lobster permit holder to comply with electronic vessel monitoring requirements and permitting rules. An administrative hearing on this matter was held in early December 2025, with a final agency action expected in early 2026.

Offshore Wind

The Commonwealth of Massachusetts supports the co-existence of the offshore wind industry and the fishing communities of the Northeast. DMF engages with offshore wind development by working

directly with developers to minimize impacts during project siting and layout, reviewing offshore wind project fisheries and habitat monitoring plans, organizing and participating in state and regional working groups to improve regional research efforts, contributing to preparation of federal guidelines for monitoring and fisheries compensation, and providing best management recommendations to state and federal agencies in response to developer permitting submissions.

Massachusetts Fisheries Working Group on Offshore Wind

The Massachusetts Fisheries Working Group on Offshore Wind (FWG) provides an important forum for maintaining a dialogue with key stakeholders, receiving their feedback and guidance, and identifying issues and concerns regarding offshore wind development and operation on the Atlantic outer continental shelf. The FWG is convened and managed by CZM and DMF in coordination with the Massachusetts Clean Energy Center and includes a range of commercial and recreational fishery representatives, scientists, and state and federal agencies. As offshore development has progressed over recent years, the FWG has shifted from discussing monitoring and potential impacts to sharing findings and on-the-water experiences. Usually held quarterly, FWG meetings in 2025 covered topics including fisheries mitigation funds and claims processes, habitat and fisheries monitoring, construction updates, navigation and transit safety enhancements, boulder relocation mitigation, floating offshore wind lessons learned from a UK Study Tour, recreational fishing experiences in Revolution Wind, and early insights into Gulf of Maine planning for floating offshore wind.

DMF also lends expertise and resources to other state and regional panels, working groups, advisory councils and committees to further the responsible development of offshore wind and to guide useful research and mitigation projects. In 2025, DMF staff participated in meetings of the Massachusetts Habitat Working Group on Offshore Wind, the Eleven States' Regional Initiative Design Oversight Committee, Responsible Offshore Science Alliance's Advisory Council, the Regional Wildlife Science Collaborative, the Maine Offshore Wind Research Consortium, the Interagency Offshore Wind Council, and the Rhode Island/Massachusetts Boulder Relocation Working Group, among others.

Massachusetts' unique standing as an experienced participant in offshore wind development allows for a unique and informed perspective as further development and mitigation strategies are discussed.

Massachusetts Fisheries Innovation Fund

As part of a 2020 compensatory mitigation agreement between EEA and a developer, Vineyard Wind, DMF was selected to administer the \$1.75-million Fisheries Innovation Fund (FIF). This fund is designed to "support programs and projects that ensure safe and profitable fishing continues as Vineyard Wind and future offshore wind projects are developed in Northern Atlantic waters". It is guided by the FIF's nine-member Advisory Panel, made up of fishing industry representatives from different sectors, and chaired by the Director of DMF. After seeking guidance from the panel, a Request for Proposals seeking projects that addressed fishing innovation, community resilience, and/or safety was released as FIF Solicitation 1 in July. The application period closed at the end of August and DMF received 20 applications seeking \$3.37 million. From September through November, two separate review panels were convened to make initial, and then final, recommendations for funding.

With approval from EEA and Governor Healey's Office, DMF announced the six awarded projects through a press release and at the FWG meeting in December. These six projects, awarding nearly \$1.2

million, will create innovative fishing gear solutions, promote healthy local seafood consumption, and address critical safety concerns of fishers operating around offshore wind infrastructure:

- \$174,908 awarded to FV Martha Elizabeth for the project *Fishermen Led Gear Innovation in Southern New England*
- \$262,443 awarded to Commercial Fisheries Research Foundation for the project Advancing Mechanical Jigging to Strengthen Squid Fishery Resilience Amid Offshore Wind Development
- \$265,984 awarded to UMass Dartmouth–SMAST for the project Novel Fish Potting with Lights for Black Sea Bass and Scup: Developing Innovative Fishing Gear for Safe and Efficient Operation in Offshore Wind Farm Areas
- \$156,533 awarded to Eating with the Ecosystem for the project Reelsilience: Strengthening Markets for Massachusetts Seafood Through Video and Public Engagement
- \$250,000 awarded to New Bedford Port Authority for the project *New Bedford Seafood Study, Marketing and Promotional Campaign*
- \$60,768 awarded to Commercial Fisheries Research Foundation for the project *Evaluating the Hazard of Trawling Over Cable Protection Mattresses*

Future solicitations will be modified through FIF Advisory Panel discussions and are expected to be released every two years until funds are exhausted.

Other Mitigation Funds

Following the 2024 release of Fisheries Direct Compensation Fund programs by Vineyard Wind and Ørsted for their respective lease areas, DMF assisted in outreach and engaged with administrators of those funds to understand progress. Another developer, Equinor, who is building Empire Wind in the New York Bight, solicited claims for their Direct Compensation Fund in 2025. While these programs have differing eligibility criteria and compensation methods, they provide lessons that can be incorporated into the design of future compensation programs.

One such program is the Eleven States Regional Fund for Offshore Wind Mitigation. This program, which chose a Regional Fund Administrator (RFA)—BrownGreer (Virginia) and Carbon Trust (UK)—is guided by a Design Oversight Committee (DOC). The DOC, made up of three individual caucuses (Fisheries, State, and Developer), meets regularly to design eligibility and successful claims criteria that would likely be used by developers of future offshore wind projects. This regional effort seeks to create a more consistent application of mitigation strategies for the East Coast while accounting for the diverse fisheries and businesses that support our fishing industry, and Massachusetts serves as the primary New England state caucus representative. The RFA plans to publish Eligibility and Claims criteria for comment in 2026.

An additional mitigation program, the Ørsted Navigational Enhancement and Training Program (NETP), made over \$1.2 million available for commercial, for-hire, or recreational fishermen who had experience navigating in or around one of Ørsted's new wind projects (South Fork, Revolution or Sunrise Wind). These funds, made available in the form of vouchers up to \$10,000 in value, could be used for upgrading radar, Automatic Identification System (AIS) or navigation software, taking captain's

license training courses, or gaining navigational experience in a maritime simulator. This program became very popular in 2025, and funds were nearly exhausted by year's end.

Southern New England Wind Energy Area Developments

The change in federal administration in early 2025 ushered in a less favorable climate for offshore wind development. An Executive Order on January 20 initiated a temporary withdrawal of offshore wind lease areas, and a review of federal permitting practices for such wind projects. While this was deemed unlawful by a judge late in the year, this was one of numerous actions that complicated or interrupted existing agreements. Multiple developers with projects under construction were given stop-work orders that lasted up to one month, and on December 22, 2025 the US Department of the Interior (DOI) announced a pause on all offshore wind projects, citing risks to national security. While these were all eventually overturned in court, the effect has been negative for ongoing projects (Figure 2) and has created uncertainty in the energy sector. It is not expected that any projects without full permitting will be able to begin construction in the near future.

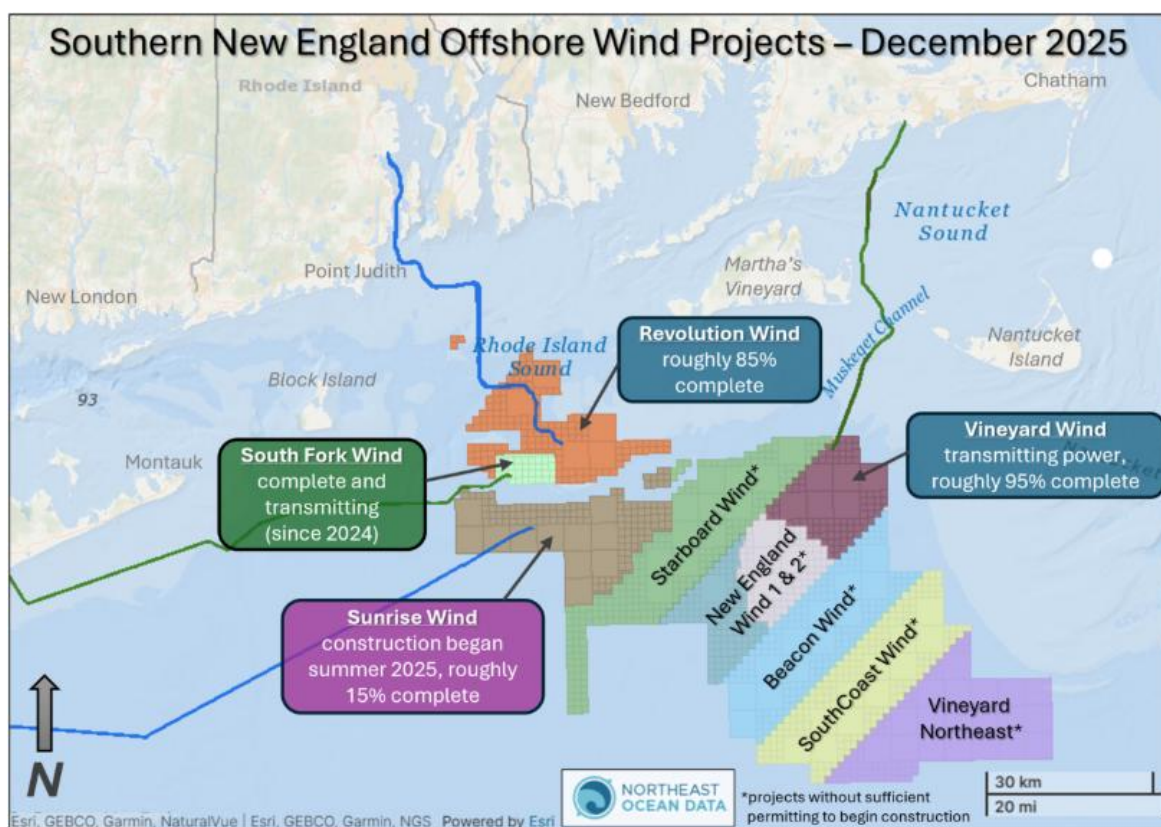


Figure 2. Status of Southern New England Offshore Wind Projects as of December 2025.

South Fork Wind

Constructed between June 2023 and February 2024, South Fork Wind, owned and operated by Ørsted, represents the first utility-scale offshore wind farm in the United States. The project is relatively small and consists of only twelve 11-megawatt (MW) Siemens Gamesa wind turbine generators (WTGs) and can produce up to 132 MW of renewable energy. Power transmission, which began in mid-2024, is

delivered through the Offshore Substation and Export Cable to Long Island, New York, and has the capacity to power around 60,000 homes.

Vineyard Wind

After beginning construction out of New Bedford in the summer of 2023, Vineyard Wind faced a significant setback in July 2024 when a blade on their southernmost turbine delaminated, scattering materials like foam and fiberglass into the ocean. This event, tied to blade manufacturing defects and questionable practices at a plant in Quebec, led to a work suspension and required the removal of most blades that had already been installed. While this occurrence delayed the project by at least six months, progress has since been steady, and generated electricity first reached the Massachusetts energy grid in early 2025. Nearly all of the project's sixty-two 13-megawatt (MW) GE Vernova WTGs have been installed, though faulty blades are still being replaced. Additional inter-array cable laying and WTG commissioning remains, but the project's expected completion is mid-2026. Vineyard Wind will deliver up to 800 MW of renewable energy to the Massachusetts grid, powering up to 400,000 homes.

Revolution Wind

The first monopile foundations for Revolution Wind, Ørsted's second commercial scale wind project in the northeast after South Fork Wind, were installed in May 2024. Construction was interrupted in 2025 by the one-month stop-work order from the DOI but resumed and has been constant since a federal judge issued a preliminary injunction, ruling the stop work order was unlawful. By year's end, most of Revolution Wind's sixty-five 11-MW Siemens Gamesa WTGs were installed, and cable construction vessels were working on the inter-array cable network. At its current pace, the project should be completed by mid-2026, at which point it will deliver up to 704 MW of renewable energy to Connecticut and Rhode Island, powering up to 350,000 homes.

Sunrise Wind

Installation of monopile foundations began on Sunrise Wind, the larger Ørsted project to the south of Revolution Wind, in June 2025. This project, which will deliver up to 924 MW to Long Island, New York, will use the same 11-MW Siemens Gamesa WTGs as the other Ørsted projects. Roughly half of the foundations for the project's 84 WTGs have been installed, and the wind farm's high voltage direct current (HVDC) substation arrived from Norway and was installed in September. The Sunrise Wind Export Cable construction was ongoing at year's end while construction of the wind farm pauses for the winter season. This export cable, which will run 100 miles from a central Long Island beach to the wind farm, was being tunneled through the surf zone (at 11-60 ft deep) and nearshore installation will follow. Sunrise Wind is expected to be completed in 2027 and will power up to 600,000 New York homes with renewable energy.

Empire Wind

This Equinor project in the New York Bight finished installing all 54 monopile foundations in October despite a federal stop-work order in April and May. The Export Cable was being trenched, laid, and buried, from Brooklyn, New York towards the wind array. In 2026, this project is expected to install 15-MW Vestas WTGs at all turbine locations and will generate up to 810 MW of renewable energy for New York, powering up to 500,000 homes.

Coastal Virginia Offshore Wind

This Dominion Energy project is progressing similarly. In October 2025, the last of the monopile foundations were installed. The project will consist of 176 14.7-MW Siemens Gamesa WTGs, will have three offshore substations, and will deliver power to nearby Virginia Beach. Once complete, this project will be one of the world's largest, generating up to 2,600 MW and powering up to 1.4 million homes with renewable energy.

Gulf of Maine Wind Energy Area Developments

Four of the eight Gulf of Maine offshore wind lease areas were awarded in late 2024: two to Avangrid, Inc., and two to Invenergy NE Offshore Wind, LLC. These four leases, about 110,000 acres each, are sited as close as 22nm to the Massachusetts coast and, due to their water depth, will feature floating offshore wind turbines. These leases were in very early stages of development, with only Communications Plans being published through 2025. While construction may be on a decade-long time scale, DMF will continue to be part of discussions about suitable siting, cable routes and landfall sites, as well as the evolution of floating offshore wind technology.

Other Activities

Marine Fisheries Institute

The Massachusetts Marine Fisheries Institute (MFI) is a cooperative venture between DMF and the University of Massachusetts Dartmouth School for Marine Science and Technology (SMAST). Founded in 2002, the MFI exists to promote sustainable fisheries through scientific study and the provision of timely information to protect, conserve, and manage Massachusetts and New England marine fisheries and their habitats in a manner that balances the economic, environmental, and cultural interests of the citizens of the Commonwealth. DMF's Director and SMAST's Dean co-chair the MFI with additional agency and university staff serving as research, education, and policy directors.

In 2025, the MFI continued its record of providing independent scientific research applied to regional, national, and international marine fisheries with an emphasis on cooperative research between scientists and fishermen. Continuing to expand beyond traditional areas of focus on Northeast multispecies and Atlantic sea scallops, MFI researchers have been highly productive in a variety of areas, including shellfish modeling, nutrient analysis for anadromous fish habitat, shelf break upwelling dynamics, on-call fishing gear, coastal health and resilience and climate change effects on fishery catch rates.

In addition to MFI contributions to research, MFI has also been a vehicle for advancing graduate education in fisheries-related fields from video and plankton surveys, whelk biology, and cod tagging to water quality, marine habitat studies, and science communication. This includes direct involvement by and support for students in MFI research and workshop activities, participation by DMF scientists in graduate and post-doctoral advising and development of courses, enrollment of DMF personnel in graduate programs, as well as other educational efforts. Additional details can be found in the 2024–2025 MFI Annual Report.

The MFI began a five-year review in late 2025 that will conclude in 2026.

Striped Bass Conservation License Plate

During 2019, DMF and the Massachusetts Environmental Trust (MET) collaborated to develop a new Striped Bass Conservation Plate, from which the proceeds (\$40 per issued plate every other year) would be dedicated to striped bass studies, fish passage improvement projects, and angler education through a grant process. The plate became available in 2022, and by the end of 2025 over \$100,000 had been generated for Striped Bass conservation. The grant review panel met in early 2025 to review available funds and chose to fund three projects, including 1) enhanced youth angler education; 2) handling techniques and lure modification promotion; and 3) a coastwide striped bass tackle use survey. Using this funding, DMF educated thousands of young anglers at free, in-person clinics and distributed 200 rod/reel/tackle combos to new anglers, promoted best handling practice videos and handed out nearly 2,000 plug flags to anglers, and conducted a survey of anglers across Massachusetts, Connecticut, New York, New Jersey, Maryland, and Virginia to help calculate a new coastwide estimate of striped bass post-release mortality (refer to [Fisheries Research in the Fish Biology Section](#)).

Stellwagen Bank Sanctuary Advisory Council

A Policy and Management staff served as state representative to the Stellwagen Bank National Marine Sanctuary's (SBNMS) Sanctuary Advisory Council (SAC), which included attendance at two SAC meetings in 2025 ([Figure 3](#)) and preparation for a third meeting, which was postponed due to the federal government shutdown. The SAC is a community-based body, established by the Secretary of Commerce per the National Marine Sanctuaries Act, that advises the sanctuary superintendent on issues relevant to the effective implementation of the Sanctuary management plan. In 2025, staff reported on DMF activities relevant to Sanctuary resources (e.g., protected species conservation and research, the Commonwealth's biodiversity initiative, fisheries research, and management actions) and coordinated with SBNMS staff for a joint community outreach at DMF's *MarineQuest* event.



Figure 3. The Stellwagen Bank Sanctuary Advisory Council pictured at their May meeting alongside Scituate fisherman Kevin Norton's seafood truck.

Permitting and Statistics Program

Personnel

Story Reed, Deputy Director
Anna Webb, Acting Assistant Director

Permitting Team

Kerry Allard, Permitting Program Coordinator
Matthew Duggan, Permitting Specialist
Lynne Besse, Permitting Receiving Teller
George Davis, Permitting & Support for Fisheries Reporting
Luke Putaansuu, Permitting & Support for Fisheries Reporting
Vicki Oliveira, Permitting Receiving Teller
Kate McGoldrick, Permitting Receiving Teller & Support for Fisheries Reporting

Statistics Team

Erich Druskat, Fisheries Data Analyst
Scott Schaffer, Fixed Gear Data Analyst
Cara Litos, Spatial Analyst
Nicholas Buchan, Harvester Reporting & VMS Coordination
Kim Lundy, Dealer Reporting Coordination & Quota Monitoring
Mary Ann Fletcher, Fisheries Statistics Support
Matthew McLaughlin, Harvester Reporting Data Entry
Kiera Lawlor, Vessel Tracking Support
Thomas Hoopes, Contractor

Overview

The Permitting Project is responsible for the issuance of commercial fishing, seafood dealer, recreational fishing, scientific, and other types of Division-issued permits; overseeing and approving the transfer of limited entry fishing permits and endorsements; issuing trap and fish tags; and issuing Letters of Authorization as needed. The project follows applicable laws, regulations, and policies relative to these activities. Project staff fulfill public data requests for non-confidential permit data and provide support to administrative staff as needed. Project staff also interact with the public on a routine basis to answer questions on permitting and regulations.

The Fisheries Statistics Program collects fisheries dependent data from both commercial harvesters and dealers involved in the initial sale of food and shellfish, and designated as primary buyers. Both data sets are collected in a standardized trip-level format from all commercial permit holders. These data have broad applications and uses, both within DMF and to fulfill requests made from outside the agency. Personnel also participate in the planning and development of the Atlantic Coastal Cooperative Statistics Program (ACCSP) and provide support to administrative staff for policy and permitting. In addition, staff act as a liaison to the Administration's Energy & Environmental Affairs Information

Technology Group for the Division and the Gloucester facility and, along with other agency personnel, continue to maintain the agency's websites and Oracle databases.

Permitting Project

Commercial Fishing Permits

Anyone who lands and sells finfish, shellfish, lobsters, edible crabs, or other living marine resources in Massachusetts must have a DMF commercial fishing permit and must sell only to permitted Massachusetts dealers. All 2025 commercial and dealer permits were issued through DMF's FISH permitting system (which went online in January 2023) by DMF staff or through the online portal by the permit holder. DMF issued a total of 7,556 commercial fishing permits in 2025 (Table 1). Over the past decade, DMF has seen a slight increase in commercial fishing permit sales, particularly for small boats (0–59') in length.

Table 1. 2025 commercial fishing permit issuance.

Permit Type	Number of Permits Issued to Residents	Number of Permits Issued to Non-Residents
Coastal Lobster	938	6
Offshore Lobster	264	71
Seasonal Lobster	79	2
Boat 99+'	14	12
Boat 60-99'	86	197
Boat 0-59'	3,811	459
Individual	179	4
Shellfish and Seaworm	674	0
Shellfish and Rod & Reel	369	0
Rod & Reel	388	19
Total	6,802	770

The **Coastal Lobster Permit** allows the taking, landing, and sale of lobsters and edible crabs harvested from within the coastal waters of the Commonwealth. There is a maximum pot limit per vessel that is based on Lobster Management Areas and individual allocations. The permit may be endorsed to take and sell shellfish and finfish at no additional cost. In the case of skin or scuba divers, only the licensee is covered.

The **Offshore Lobster Permit** allows the landing and sale of lobsters and edible crabs taken outside of the coastal waters of the Commonwealth pursuant to appropriate federal permit(s). If the permit is endorsed for the use of pots to harvest lobster, there is a maximum pot limit per vessel that is based on Lobster Management Areas and individual allocations. The permit may be endorsed to take and sell shellfish and finfish at no additional cost.

The **Seasonal Lobster Permit** is issued to full-time students only (verification required) and allows the licensee only to take and sell lobsters and edible crabs from June 15–September 15. A maximum of 25 pots may be used. Diving is not permitted; sale of fish and/or shellfish is not permitted.

A **Boat Permit** allows the taking, landing, and sale of finfish and may be endorsed for shellfish. The permit covers everyone aboard the vessel. Price varies with vessel size (0–59', 60–99', and 99+'). No lobsters or edible crabs may be taken.

The **Individual Permit** allows the holder only to take, land, and sell finfish and may be endorsed for shellfish. No lobster or edible crabs may be taken.

The **Shellfish Permit** allows an individual to take, land, and sell shellfish and seaworms. A Shellfish Transaction Card from DMF and a town permit are also required. A Shellfish Transaction Card allows the named individual holding a commercial permit endorsed for shellfish and seaworms to sell shellfish and seaworms when used in conjunction with a Registry of Motor Vehicles identification card.

The **Rod & Reel Permit** allows the holder only to catch and sell finfish caught by Rod & Reel only. No other gear types may be used.

Dealer Permits

Anyone engaged in the wholesale or retail trade of raw fish, shellfish, lobster, or bait, whether frozen or fresh, must have a DMF Dealer Permit and may be subject to inspection from the Massachusetts Department of Public Health (MassDPH). Shellfish dealers must abide by MassDPH regulations for tagging and record keeping. Seafood dealers who purchase seafood products, even if for bait purposes, directly from harvesters are considered primary buyers, and must be so endorsed on their dealer permits. DMF issued a total of 1,905 seafood dealer permits in 2025 (Table 2), a number relatively unchanged over the past ten years.

Table 2. 2025 dealer permit issuance.

Permit Type	Number of Permits Issued to Residents	Number of Permits Issued to Non-Residents
Wholesale Dealer	373	4
Wholesale Truck	77	123
Wholesale Broker	27	6
Retail Dealer	920	0
Retail Truck	34	3
Retail Boat	180	3
Bait Dealer	126	12
Retail Farmer's Market	12	2
Biomedical Dealer	5	0
Biomedical Processor	2	0
Total	1,756	153

The **Wholesale Seafood Dealer Permit** allows the holder to acquire, handle, store, distribute, process, fillet, ship, or sell raw fish and shellfish, whether frozen or unfrozen, in bulk or for resale. It also allows retail sales from the same single, fixed location. An approved inspection from MassDPH must be submitted with the application to DMF. The name and address must be the same on the inspection report and permit. This permit may be endorsed for bait (excluding shellfish), with an inspection specifically stating, "Approved for retail and bait license." A Hazard Analysis and Critical Control Points plan is also required.

The **Wholesale Seafood Truck Dealer Permit** allows the holder to acquire, handle, distribute, ship, or sell raw fish, whether frozen or unfrozen, in bulk or for resale from a truck only. It does not allow the holder to process raw fish, whether frozen or unfrozen, lobster, or shellfish. Nor does it allow the holder to purchase shellfish or shuck, relabel, or repack shellfish. An approved inspection from the Division of Food and Drugs must be submitted with the application to DMF.

The **Wholesale Seafood Broker Permit** allows the holder to act as an agent who negotiates contracts of purchase and sale of seafood. The brokerage activities will not involve the actual handling, processing, or reshipping of finfish, shellfish, or other marine resources. A “broker only” waiver must be filed in lieu of a health inspection.

The **Retail Seafood Dealer Permit** allows the holder to sell raw fish (frozen or unfrozen), shellfish, and lobsters at one retail location. The holder must purchase shellfish only from a holder of a wholesale dealer or wholesale truck permit, or a certified out-of-state wholesale dealer. It does not allow the holder to shuck, relabel, or repack shellfish. An approved inspection from the Division of Food and Drugs must be submitted to DMF. The name and address must be the same on the inspection report and permit. This permit may be endorsed for bait (excluding shellfish). The inspection must specifically state “Approved for retail and bait license.”

The **Retail Seafood Truck Dealer Permit** allows the holder to sell fish or lobsters at retail from a mobile unit (does not include shellfish). It does not allow the holder to process, fillet, shuck, cook, etc. An inspection is required from a town or county Board of Health. A copy of the inspection must be submitted with the application. The name and address must be the same on the inspection report and permit. A Hawkers and Peddlers permit may be required.

The **Retail Boat Seafood Dealer Permit** allows the holder to sell whole fish and lobsters from his/her boat only (does not include shellfish). A commercial permit is required in addition to this permit. A boat waiver must be filed in lieu of a health inspection.

The **Bait Dealer Permit** allows the holder to take and sell marine bait. No inspection is required. Local regulations (i.e., on worms, eels) may apply.

The **Retail Seafood Farmer’s Market Dealer Permit** allows the holder to sell certain raw fish and fish products at a farmer’s market subject to written approval by the Department of Public Health, or the municipal or county board of health.

The **Biomedical Horseshoe Crab Dealer Permit** allows an entity affiliated with a biomedical processor to obtain and hold biomedical horseshoe crabs and sell biomedical horseshoe crabs to the affiliated biomedical processor. The biomedical dealer permit may be authorized as a primary buyer to allow for the primary purchase of horseshoe crabs directly from a biomedical fisher.

The **Biomedical Horseshoe Crab Processor Permit** allows an entity to process horseshoe crabs for biomedical purposes including, but not limited to, the bleeding of horseshoe crabs for the production of Limulus Amebocyte Lysate. The biomedical processor permit may be authorized as a primary buyer to allow for the primary purchase of horseshoe crabs directly from a biomedical fisher. The Director may limit access to the Biomedical Horseshoe Crab Processor permit.

Special Permits and Regulated Fishery Endorsements

Special Permits are required for certain activities in the marine environment, as described below. DMF issued a total of 23,309 special permits and regulated fishery endorsements in 2025 (Table 3).

Table 3. 2025 special permit and regulated fishery endorsement issuance.

Permit Type	Number of Permits Issued to Residents	Number of Permits Issued to Non-Residents
Non-commercial Lobster	4,790	86
Regulated Fishery Endorsements	16,186	1,765
Master Digger	1	0
Subordinate Digger	16	0
Scientific Collection	67	22
Shellfish Propagation & Aquaculture	372	0
Total	21,432	1,873

A **Non-commercial Lobster Permit** is required to fish for or take lobsters and edible crabs for personal use. This authorizes the holder and members of the holder's immediate family (defined as spouse, parents, children, grandparents, and siblings), residing in the same residence, to fish for and take lobsters using 10 pots only. This permit may be endorsed for diving by the permit holder only. Other family members may purchase additional permits for diving only.

The **Regulated Fishery Endorsement** is required for certain commercial fishing activities in addition to a commercial fishing permit. Regulated Fishery Endorsements are required for dragging, gillnetting, netting in inshore net areas, setting fish pots in waters under the jurisdiction of the Commonwealth, and the commercial harvest of northern shrimp, surf clam/ocean quahog, sea herring, sea urchins, summer flounder, black sea bass, scup, striped bass, dogfish, American eel, horseshoe crab, groundfish, tautog, menhaden, and Atlantic mackerel.

The **Master Digger Permit** is required for an individual who wants to harvest contaminated clams from areas classified as "restricted." Shellfish are depurated at the Shellfish Purification Plant in Newburyport in accordance with regulations and established procedures. In addition to the application form, applicants must include a \$1,000 surety bond, sign a master digger affidavit, have their vehicle inspected and approved by MassDPH Division of Food and Drugs, must be at least 18 years of age, and may not possess an "open" area commercial shellfish license at the same time as a Master Digger Permit.

The **Subordinate Digger Permit** is required for the harvest of contaminated clams from areas classified as "restricted." Shellfish are depurated at the Shellfish Purification Plant in Newburyport in accordance with regulations and procedures. Subordinate diggers must work for a Master Digger, be at least 18 years of age, and may not possess an "open" area commercial shellfish license at the same time as a Subordinate Digger Permit.

Other Special Permits are required for activities including aquaculture, scientific collection, shellfish propagation, and shellfish relay.

Recreational Saltwater Fishing Permits

DMF began issuing recreational saltwater fishing permits in 2011. DMF issued a total of 174,903 recreational saltwater fishing permits in 2025 ([Table 4](#)).

The **Recreational Saltwater Fishing Permit** is required of all fishers aged 16 and over. Exceptions have been made for anglers fishing aboard legally permitted for-hire vessels, individuals that are disabled, and for those fishers with a valid recreational saltwater fishing permit from another coastal state (NH, RI, and CT) that has entered into a reciprocity agreement with Massachusetts. The permit is free for fishers aged 60 and over.

The **Charter Boat Permit** is required for a for-hire vessel that can carry up to six persons fishing as passengers.

The **Head Boat Permit** is required for a for-hire vessel that can carry seven or more persons fishing as passengers.

Table 4. 2025 recreational saltwater fishing permit issuance.

Permit Type	Number of Permits Issued to Residents	Number of Permits Issued to Non-Residents
Recreational Saltwater, Age 16–59	94,982	17,454
Recreational Saltwater, Age 60+	54,249	7,280
Charter Boat	808	81
Head Boat	45	4
Total	150,084	24,819

Limited Entry Permit Transfer Program

State regulations prohibit the transfer, loan, lease, exchange, barter, or sale of any permit without DMF permission. Limited entry permits (commercial permits and endorsements that are restricted in distribution to renewals) may be transferable according to criteria established by regulation and policy. Transfer criteria include two key components: the permit’s activity and the transferee’s experience. Limited entry permits and endorsements include, but are not limited to, coastal lobster, fish pot (scup, conch, and black sea bass), gillnetting, surf clam/ocean quahog, mobile gear coastal access, summer flounder, horseshoe crab, groundfish, black sea bass, tautog, and menhaden.

The transfer process begins with pre-application forms through which the permit holder and potential transfer recipient can determine their eligibility to participate in a transfer. Pre-approval is followed by the completion of a transfer packet, and final approval. Refer to [Table 5](#) for a summary of transfers administered by DMF during 2025.

Table 5. 2025 preliminary limited entry permit transfer statistics.

Permit Type	Number of Permits Issued to Residents	Number of Permits Issued to Non-Residents
Coastal Lobster	28	0
Mobile Gear Coastal Access	3	6
Fish Pot-Scup	3	0
Fish Pot-Sea Bass	3	0
Fish Pot-Conch	2	0
Fluke	11	10
Black Sea Bass	22	10
Groundfish	1	1
Surf Clam/ Ocean Quahog	1	0
Quahog Dredge	1	0
Horseshoe Crab	0	2
Menhaden	2	1
Tautog	4	0
Inshore Net	1	1
Total	82	31

Fisheries Statistics Program

Dealer Landings Data Collection

Landings or purchases of all marine species by seafood buyers from commercial harvesters were collected as part of the dealer reporting program. Since 2005, all primary buyers not already required by federal law to report electronically have been required to report under state regulations, and all data regardless of jurisdiction were entered into the ACCSP Standard Atlantic Fisheries Information System (SAFIS) database. Since 2020, state reports were required to be submitted electronically by the dealers.

In 2025, 1,900 businesses obtained a Massachusetts seafood dealer permit. Of those, 525 (or 28%) were categorized as primary buyers which is defined as a dealer permitted to buy seafood product directly from harvesters and required to report their primary purchases, including products retailed themselves. Of the 525 dealers, 262 had a federal dealer permit and the remaining 263 dealers were categorized as “state-reporting.” Compared to 2024, there were 3% more primary buyers in 2025. The number of primary buyers has relatively stabilized since its peak in 2020.

As is the case every year, all primary buyers were required to complete paperwork to confirm their buying intentions and their commitment to the dealer reporting requirements. This registration process not only provided a signed statement for enforcement purposes, if necessary, but also provided the means to monitor reporting compliance and track quotas.

Throughout the year, 120,062 dealer reports were entered into the SAFIS database, an approximate 5% decrease from 2024. Total landings (in whole pounds), as reported through the SAFIS database or other federal reporting programs, amounted to 384 million pounds valued at \$611 million (ex-vessel;

calculated from price paid to harvesters). The 2025 total landings were slightly higher than 2024; however, the ex-vessel value in 2025 rebounded even surpassing 2023 as well (Figure 4, Figure 5) though this does not adjust for inflation. The depressed landings in recent years were driven primarily by a reduction in sea scallop landings.

The top five species in order of value were sea scallop, American lobster, Eastern oyster, haddock, and Atlantic surf clam, totaling \$510 million or 84% of the total value. Offshore shellfish (sea scallop, Atlantic surf clam, and ocean quahog) made up 57% of the total value, whereas inshore and intertidal landings of shellfish, such as soft shell clam, northern quahog, blue mussel, and oyster amounted to 8% of total value. Landings of invertebrate species (lobster, crabs, and whelk) amounted to 30 million pounds, valued at \$134 million, or 22% of the total value. Cumulative finfish landings, including both pelagic and benthic species, made up 13% of the total value with the multispecies groundfish species complex amounting to 6% of the total value. Landed species with an individual gross value over \$2 million are shown in Table 6; in aggregate, these species accounted for approximately 98% of the total value of all species landed.

Species managed by quota in Massachusetts were monitored using the dealer-reported landings in the SAFIS database. Automated analyses ran on a nightly basis and the results were displayed on both the [DMF Commercial Fishing Quotas and Landings webpage](#) and the Statistics Project intranet website. On a weekly basis during the open season, staff reviewed compliance and estimated projections for each quota-managed species. An estimated closure date was calculated based on a regression analysis run at least once per week for each open fishery.

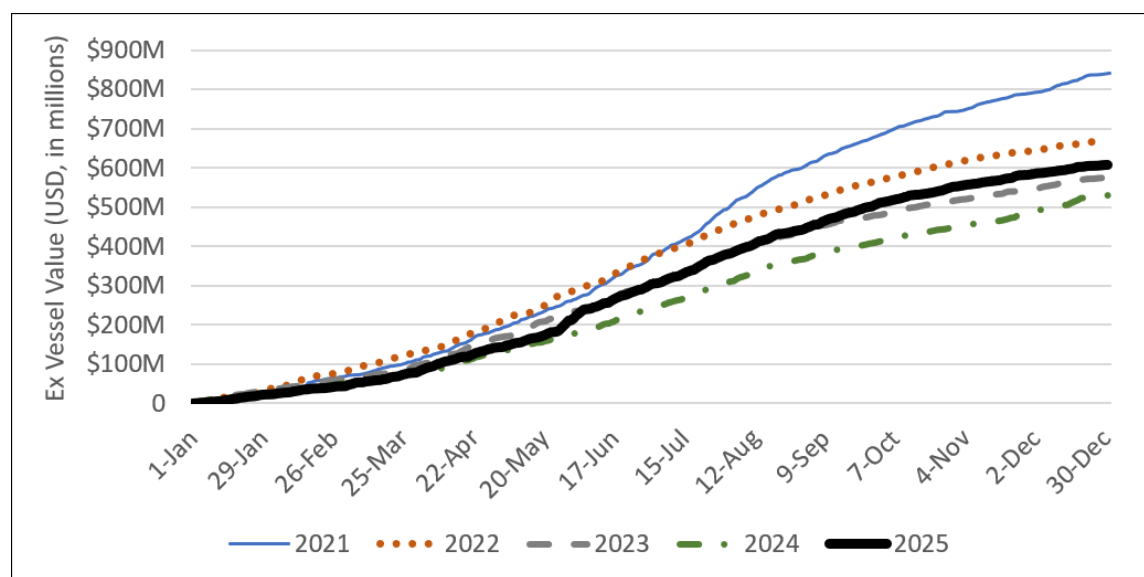


Figure 4. Daily running total ex-vessel value for 2021–2025. Value is not adjusted for inflation. Source: ACCSP Data Warehouse; 4/27/2026.

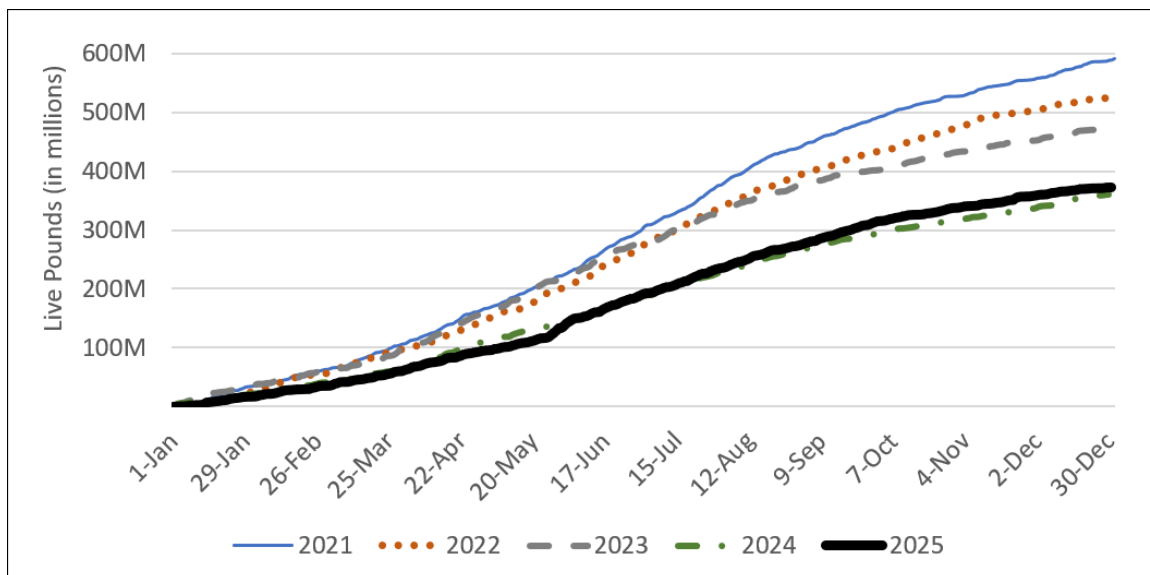


Figure 5. Daily running total landings for 2021–2025. Source: ACCSP Data Warehouse; 4/27/2026.

Table 6. 2025 MA-landed species with ex-vessel value greater than \$2 million. Source: ACCSP Data Warehouse, 4/27/2026. Ocean Quahog, Deepsea Red Crab, and Hagfish excluded for confidentiality.

Species	Landings (whole pounds)	Ex-Vessel Value (USD)
Sea Scallop	153,685,157	\$334,033,336
American Lobster	17,913,051	\$120,130,871
Eastern Oyster	10,808,058	\$36,675,860
Haddock	5,516,795	\$9,987,884
Atlantic Surf Clam	31,471,157	\$8,986,512
Goosefish	10,816,316	\$6,568,923
Jonah Crab	6,340,904	\$6,372,914
American Plaice	2,762,456	\$5,367,561
Soft Clam	1,775,432	\$5,246,525
Pollock	4,854,701	\$5,092,851
Acadian Redfish	8,920,775	\$4,982,552
White Hake	3,470,820	\$4,886,940
Northern Quahog	3,266,960	\$4,435,774
Bluefin Tuna	862,431	\$4,229,280
Silver Hake	3,953,827	\$3,915,952
Menhaden	12,203,537	\$3,672,468
Winter Flounder	1,400,898	\$3,600,772
Winter Skate	10,980,902	\$3,455,079
Witch Flounder	2,135,236	\$3,073,773
Striped Bass	683,431	\$2,900,614
Channeled Whelk	842,341	\$2,681,681
Razor Clam	557,947	\$2,664,481
Summer Flounder (Fluke)	619,487	\$2,571,732
Black Sea Bass	831,246	\$2,426,737

Harvester Catch and Effort Data Collection

Since 2010, all commercial harvesters have submitted—on a monthly basis—comprehensive, standardized trip-level data for all commercial trips conducted under the authority of a Massachusetts commercial fishing permit. Those individuals holding a federal permit with reporting requirements to NOAA Fisheries (e.g., Vessel Trip Report or VTR), were exempt from reporting to DMF for those activities occurring on their federally-permitted vessel as were those vessels commercially fishing solely for bluefin tuna who were already required to report landings to NOAA Fisheries Highly Migratory Species Division. All other individuals were required to report to DMF.

Harvesters either submitted their trip-level reports in paper form or entered their fishing activities themselves using SAFIS eTRIPS Online or eTRIPS Mobile. Project staff used the eTRIPS Online application or a bulk upload process called eTRIPS Upload to enter data submitted on paper forms. Thus, the primary repository for all trip-level state data was the SAFIS database. Since 2023, NOAA Fisheries VTR data began to be pushed to SAFIS nightly as well, creating a comprehensive real-time dataset available to managers. Since 2021, eTRIPS Online has collected additional fixed gear specific fields including but not limited to effort specific ten-minute squares and number of buoy lines, enabling DMF and other partners to meet the requirements set forth in recent addenda to both the lobster and Jonah crab interstate FMPs. Data were easily accessed from the SAFIS database and used for compliance and fisheries analyses by project staff; harvesters also have easy access to their own landings within SAFIS. In 2025, DMF announced that harvesters will be required to enter data electronically beginning in early 2027.

In 2025, DMF issued 7,553 commercial harvester permits, of which 20% were for federal reporting vessels, and the remaining 6,019 commercial permits were designated as “state-reporting.” Forty-six percent of all permit holders chose to report electronically using the SAFIS eTRIPS Online or Mobile applications, which was a 2% increase over 2024. This left 34% of all harvesters submitting paper reports to DMF.

The Greater Atlantic Regional Fisheries Office (GARFO) required all federal lobster permit holders to report on federal VTRs as of April 1, 2024, thus reducing the number of permits and trips reported to the state and 2025 was the first full year of this implementation. Of the almost 75,000 commercial trips that were entered into the SAFIS database to date for state reporting harvesters for the 2025 calendar year, approximately 45% were entered by commercial permit holders using one of the SAFIS eTRIPS applications, with the remaining trips entered by DMF staff. Compared to 2024, the percentage of trips entered electronically in 2025 increased by approximately 4% higher. Additionally, the total number of trips reported for 2025 was slightly reduced compared to 2024 and in line with the reduction in landings and the shift to federal reporting for some lobster permit holders.

Vessel Tracking

Massachusetts federal lobster trap permit holders for areas 1, 2, 3, 4, 5, and Outer Cape Cod (OCC) are required to install an Atlantic States Marine Fisheries Commission (ASMFC) approved vessel tracking device onboard their vessel in accordance with Addendum XXIX to Amendment 3 to the American Lobster Fishery Management Plan. This requirement, which began in May 2023, entered its third year in 2025. DMF managed approximately 320 federal lobster trap permit holders subject to the vessel tracking requirement.

To strengthen oversight and improve compliance, new methods were developed to assess vessel tracking device performance. These methods allowed for more effective identification and resolution of malfunctioning units. Trip reports, dealer reports, and daily ping reports from all permit holders in the program were monitored daily for compliance. Once compliance issues were identified, permit holders were notified if their device failed to transmit or otherwise malfunctioned. Outreach also continued to new permit holders, informing them of their vessel tracking requirement and providing information on how to obtain a device. Approximately 14,400 vessel trip reports landing lobster caught with trap gear in Massachusetts were matched to corresponding vessel tracking data, providing location information for where the fishing effort occurred.

During the 2025 fixed gear closure (February 1–May 30), the program analyzed tracking data to monitor compliance in the Massachusetts Restricted Area (MRA) Wedge closure. The program provided weekly mapped summaries of estimated fishing activity within the Wedge to managers and environmental police. After the closure, the tracking program created a summary report of estimated fishing activity in the MRA Wedge. The program developed methods to match vessel tracking data to trip reports, permit information, and assign estimated effort and catch values proportional to fishing vessel tracks. Using this method, mapped estimates of the spatial distribution of effort and catch, using both gridded value and hot spot maps, were included in the report. The development of these methods and mapping products has informed DMF on how tracking data can be utilized and presented in confidential and non-confidential formats.

DMF also continued the surf clam dredge pilot tracking program in 2025. This program distributed tracking devices to volunteer vessels to determine the ability to identify fishing effort locations. Alerts were received through text messages or email when vessels crossed pre-programmed geographic boundaries.

Data Analysis and Dissemination

Project staff were frequently asked to present on in-season landings, quota monitoring, and value trends throughout the year. Additionally, significant time was dedicated to routine activities such as ensuring correct harvester reporting methods and maintaining compliance metrics for harvester and dealer reporting. Lastly, significant time was spent working with ACCSP to validate landings for a variety of species throughout this time as stock assessments and other data heavy projects continued. A selection of additional projects is highlighted below.

Development of New Method for Finalizing Combined Harvester Dataset

Prior to 2025, data were compiled from a variety of sources into a complete harvester dataset for each calendar year. With the advent of federal data available in SAFIS, this process could be redeveloped in 2025 to pull from a single data source to create the working full harvester dataset for 2025. Developing this process highlighted several major issues with the federal data transfer into SAFIS, some of which continue to be worked through into 2026. Due to these issues, some data ultimately had to be compiled from other sources, but the bulk of the records were able to be added from the SAFIS tables. Project data analysts and coordinators spent significant time identifying issues and sharing them back to ACCSP and GARFO for resolution. Once this process is stabilized, ideally by the time 2025 data are compiled in late 2026, this will be a much simpler process compared to previous methods to compile these data.

Statistical Reporting Area (SRA) Corrections to 2024 Harvester Data

In 2025, Project analysts collaborated to refine methods for how SRA is assigned to federal pot/trap trips. Using newly available 2024 harvester data, our team identified more than 5,000 trips, representing millions of pounds of catch across dozens of harvesters that were linked to incorrect SRAs due to VTR coordinate errors. Many records lacked decimal minutes and seconds or placed locations on land or in harbor. The affected trips were then isolated through a newly implemented API and summarized for spatial review. The spatial analyst subsequently reassigned SRAs based on where most fishing activity occurred during each trip, when tracking data were available.

After the corrections were made, trips with available tracking data were compared against harvester reported SRAs that were not already corrected using the methods described above. This analysis revealed that 58.7% of reported SRAs aligned with the areas where tracking data showed fishing activity was concentrated. This effort not only corrected substantial data quality issues for 2024 but also established a framework for how to identify and correct similar issues that persist into 2025 data and beyond.

Port Profile Project Refresh

An update to the Port Profile Project began in late 2025, with an expected publishing date in late summer 2026. This project includes reviewing landings and permit data for each Massachusetts port and requires substantial data processing and quality control measures, which began in 2025. A more detailed update will be available in the 2026 Annual Report.

New Limited Entry Endorsement Permitting and Activity Analyses

Program staff worked to support and implement a transition from open entry to a limited entry permitting scheme for American eel and striped bass as well as an action to reduce the number of issued permits for Atlantic menhaden using the most recent control date. Staff collaborated with the management team and performed a comprehensive analysis of all three fisheries to support the development of a limited entry program executed for the 2026 permit year in an effort to reduce latent effort. This included an evaluation of fishery performance, participation trends, and available harvester data.

Finfish Tagging Programs

Program staff are responsible for the oversight and administration of two commercial tagging programs mandated by the ASMFC to reduce poaching coastwide. 2025 was the twelfth and sixth year of the programs for striped bass and tautog, respectively. These tagging programs are conducted at the dealer level for striped bass (per Massachusetts' choice) and at the harvester level for tautog (FMP mandate). Program staff estimated the 2025 tags required for individual dealers (striped bass) and harvesters (tautog) and distributed tags prior to the respective seasons and throughout as needed. At the end of the seasons, unused tags and an accounting report were required to be submitted to DMF. Program staff were responsible for identifying discrepancies and following up with fishery participants as needed, as well as preparing reports to ASMFC. For striped bass in 2025, DMF purchased 65,000 tags and distributed 55,120 tags to 115 dealers; of those distributed, 32,399 striped bass tags were used and 22,141 were returned, leaving 580 tags unaccounted for (as of April 2026). For tautog in 2025, DMF purchased 40,000 tags and distributed 34,675 tags to 153 harvesters (203 harvesters were

eligible); of those distributed, 20,915 tautog tags were used and 11,935 were returned (as of April 2026).

ACCSP Participation and Planning

DMF staff continued to participate in all partner-based committees within ACCSP. Staff served on the Operations (as chair), Information Systems, Commercial Technical (as chair through March 2025), Standard Codes, Biological Technical, and Bycatch Technical committees, while staff from the recreational program served on the Recreational Technical committee. Staff worked with programmers to address application bugs and long-term solutions to ongoing issues as well as provided technical advice in areas such as data quality and standards, application design, outreach, policies, and vessel monitoring (as described above). Additionally, ACCSP developed a new dealer reporting online application (SAFIS eDR) to be launched on January 1, 2026. Program staff were integral to this development through providing requirements for development, iterating feedback during testing phases, designing outreach and providing training to the industry, and assisting prioritization of bug fixes. ACCSP tasks demanded significant time from project staff throughout the year, and this is expected to continue moving forward as their applications continue to expand.

Local IT Management

Information systems/technology are primarily conducted through the Executive Office of Energy and Environmental Affairs' Information Technology Group (EOEEA-IT) under the larger direction of the Executive Office of Technology Services and Security. During 2025, project staff assisted EOEEA-IT on local information systems issues when needed and worked on several specific tasks outlined below.

Website Maintenance

The Quota Monitoring webpage is one of the agency's most visited. Detailed quota information is also displayed on a Statistics Project intranet site. Maintaining the automated process that updates the data displayed on both sites and accommodating changing requirements was an ongoing task, made more time consuming due to lack of automation options. The two Power BI dashboards released in the fall of 2024 continued to dynamically update each day, and 2025 was the first full quota fisheries season where this tool was available. Minimal changes were made to the dashboards in 2025.

Oracle Database/Application Development and Maintenance

Enhancements to the Permitting application released in January 2023 continued in 2025 in collaboration with EOEEA-IT, and the application launched externally in late 2024 for the 2025 renewal season incorporating online credit card permit sales.

DMF's project manager frequently met independently with developers to discuss questions on the requirements for various pieces of the applications. Testing each application release prior to the new version going live in production was labor intensive and staff contributed where needed.

The launch in December 2024 for external users and credit card sales went relatively smoothly through early 2025. Bugs in the application were noted and addressed as feasible throughout the year. Ultimately, approximately 4% of permits were issued online for 2025. In late 2025, an outreach campaign was conducted to encourage more participation in electronic permit sales for the 2026

permit year. Significant enhancements to the permitting application were completed prior to this launch to further streamline the user experience. Initial reports indicated that many seafood dealer businesses utilized the online renewal tool soon after renewals opened for the 2026 permit year. Additionally, a slower uptick in online commercial permit sales began in late 2025.

Additionally, the Program's Oracle database, GADUS, continued to be enhanced throughout the year accommodating changes as required after changes to the permitting application. Development and testing of the enhancements to the database required input from all project staff familiar with Oracle and database design or management.

The Invertebrate sampling application was in maintenance mode for the bulk of 2025. The application is keyboard friendly and accommodates several new features as compared to the older Oracle system, namely the ability to store additional invertebrate sampling program data as well as enhanced bycatch data collected through these programs.

SHELLFISH AND HABITAT SECTION

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Overview

The Shellfish Sanitation and Management Program focuses on public health protection, as well as the management of the Commonwealth's molluscan shellfish resources. Public health protection is ensured through sanitary classification of growing area waters, monitoring of marine biotoxins and implementation of a *Vibrio parahaemolyticus* Control Plan within state waters.

Nationally, the harvest and handling of all bivalve molluscan shellfish entering interstate commerce is regulated by the National Shellfish Sanitation Program (NSSP). The NSSP was established in 1925 by the

US Public Health Service and is administered today by the United States Food and Drug Administration (USFDA) and the Interstate Shellfish Sanitation Conference (ISSC), a federal/state cooperative. Massachusetts is a voting member of the ISSC.

Shellfisheries management is accomplished by a multipronged approach including direct DMF regulation of the commercial surf clam, ocean quahog, and quahog dredge boat fisheries; and indirect management of other shellfish resources through partnerships with coastal communities, who have home-rule authority over those other bivalve shellfish resources. In addition, DMF regulations cover safe harvest and handling practices for market-bound shellfish, the harvest of contaminated shellfish for depuration and relay, and establish minimum size, trip limit, and season for many shellfish species. DMF also regulates commercial shellfish aquaculture and is required to certify that operation of private shellfish aquaculture projects at sites licensed by coastal municipalities will not have an adverse impact on shellfisheries or other natural resources.

Shellfish Sanitation and Public Health Protection Project

Shellfish Growing Area Classification

Surveys

Public health protection is accomplished with the use of sanitary surveys to determine a shellfish growing area's suitability as a source of shellfish for human consumption. Sanitary surveys include: 1) identification and evaluation of all actual and potential pollution sources which may affect a shellfish growing area; 2) evaluation of meteorological, hydrodynamic, and geographic characteristics that may affect distribution of pollutants; and 3) assessment of overlying water quality. Each shellfish growing area must have a complete sanitary survey evaluation every 12 years, a triennial evaluation, and an annual report to maintain a classification allowing shellfish harvest. Minimum requirements are set by the ISSC and outlined in Section II of the NSSP [Guide for the Control of Molluscan Shellfish](#) (a.k.a., Model Ordinance).

To satisfy NSSP requirements in 2025, staff biologists completed 288 annual reports, 34 triennial evaluations, and 42 sanitary surveys. Additionally, 138 conditional area management plans/Memorandums of Understanding (MOU) were re-evaluated. A total of 14,527 water samples were collected and analyzed for fecal coliform bacteria from 241 shellfish growing areas and 511 classification sub-areas in 66 cities and towns of the Commonwealth. All samples were tested at one of the Division's two shellfish laboratories using the NSSP approved m-TEC method. During the annual USFDA evaluation for compliance with NSSP requirements, shellfish growing area files were reviewed with regard to standards for sampling frequency, completion of required reports, conditional area management plan updates, and conformity with appropriate water quality criteria.

Classification and Status

The Shellfish Program uses two methods to control harvest access to shellfish growing areas. Classification is assigned according to the NSSP's five categories: Approved, Conditionally Approved, Restricted, Conditionally Restricted, and Prohibited (defined below). If water quality within a growing area trends toward permanent improvement or impairment, its Classification is upgraded or downgraded based on those data. If water quality within a growing area suddenly demonstrates

degradation from emergency or unexpected conditions, the growing area can be temporarily closed with a status change until water quality improves and the contamination has abated. All Classifications except Prohibited may be in the Open status or placed in the Closed status for cause.

1. **Approved:** Allows harvesting for direct human consumption subject to local rules and regulations. Closed only during emergency events (e.g., hurricane, oil spill, harmful algal bloom/biotoxin event).
2. **Conditionally Approved:** Closed some of the time due to predictable/manageable contamination events such as rainfall or seasonally poor water quality. When in Open status, it is treated as an Approved area.
3. **Restricted:** Contains a limited degree of contamination at all times. When in the Open status, shellfish may be relayed by municipalities to Approved or Conditionally Approved shellfish growing areas for natural contaminant reduction, or harvested for processing at a depuration facility.
4. **Conditionally Restricted:** Contains a limited degree of contamination during some periods, but subject to periods of unacceptable water quality and may be Closed some of the time due to predictable/manageable contamination events such as rainfall or seasonally poor water quality. When Open, it is treated as a Restricted area.
5. **Prohibited:** Closed to the harvest of shellfish under all conditions, except the gathering and culture of seed for commercial shellfish aquaculture and municipal propagation programs under a DMF permit.

In 2025 a total of 1,755,562 acres were assigned a Classification ([Table 7](#), [Figure 6](#)). The total acreage of Approved areas decreased nominally, and the total acreage of Conditionally Approved, Restricted, and Prohibited areas increased slightly over 2024. Most of the areas that were downgraded were because of implementation of NSSP requirements for classifying areas adjacent to Wastewater Treatment Plant (WWTP) outfalls.

Classification of shellfish growing areas around WWTP outfalls continues to be a challenge for DMF and affected shellfishers. Because WWTP effluents pose a potential threat to public health from both microbiological and chemical contaminants, the NSSP requires state shellfish authorities to perform dilution analyses on shellfish growing area waters directly receiving effluent discharges, as well as adjacent waters potentially impacted. In addition to assessing WWTP performance (e.g., peak flow, contaminant concentrations), the dilution analyses must assess the hydrodynamics that influence effluent dispersion in the area. Because DMF lacks the necessary physical oceanographic expertise, we successfully sought funding through the Marine Fisheries Institute to partner with S Mast faculty Dr. Changsheng Chen to model WWTP effluent discharges and inform DMF decisions when assigning shellfish growing area classifications. This collaboration was ongoing at year's end.

DMF continued to work with affected shellfishers and communities to mitigate the impact of new closures required as informed by modeling results. At the request of both DMF and affected entities, the Woods Hole Sea Grant graciously offered to coordinate an independent peer review of the model. While the peer review concluded that both the model and DMF's implementation of its outputs were appropriate, it recommended that additional physical validation occur to increase confidence in the results and the public's acceptance of DMF's decision-making. Toward that end, DMF initiated validation studies in Ipswich and New Bedford which will be completed in 2026.

Table 7. Change in Massachusetts shellfish growing area classification, 2024 to 2025.

Area Classification	Acreage in 2024	Acreage in 2025	Change in Acreage
Approved	1,341,672	1,337,594	-4,078
Conditionally Approved	129,064	132,830	+3,766
Restricted	1,516	1,521	+5
Conditionally Restricted	5,017	5,017	0
Prohibited	278,301	278,600	+299
Total	1,755,570	1,755,562	-8

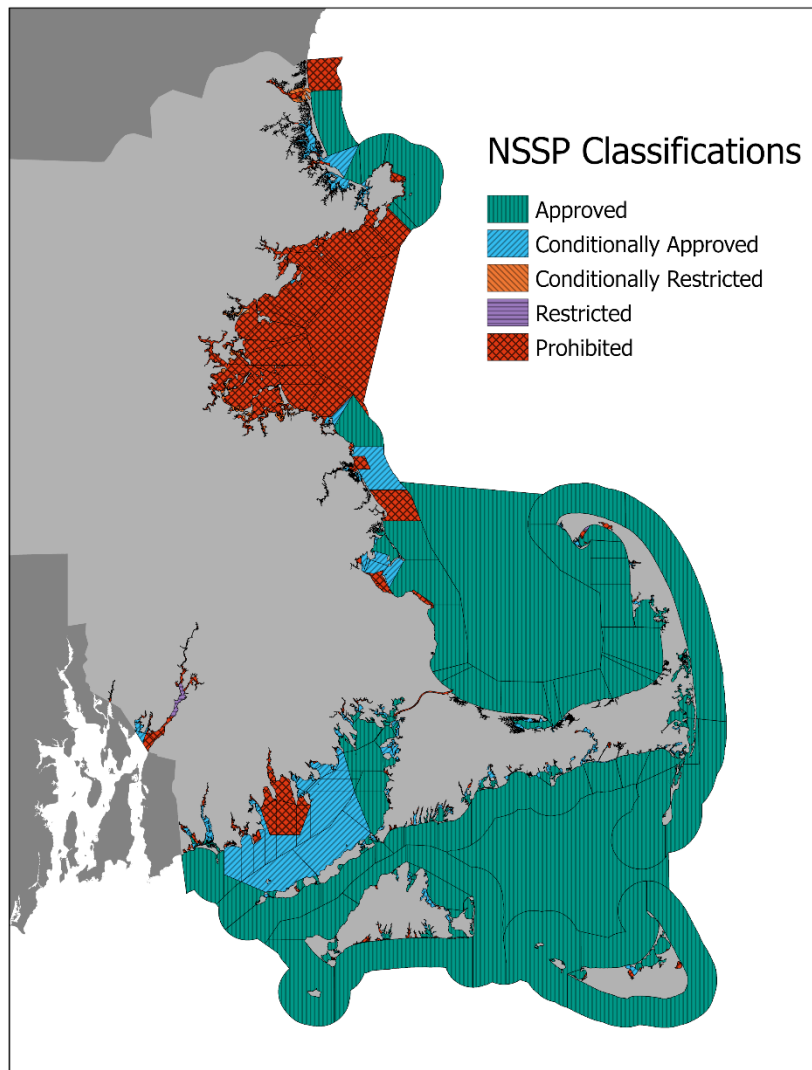


Figure 6. 2025 Classification of Massachusetts Shellfish Growing Areas.

Due to MassDEP's new sewage-discharge public notification regulation (314 CMR 16.00) effective in 2022, DMF continued to receive new information on the size and scope of the combined sewer overflow (CSO) problem statewide, which required new and frequent emergency CSO closures to long-standing fisheries adjacent to these pollution sources. As was done for the WWTP outfall challenge, DMF implemented several validation studies and investigated several new technologies with the goal

of reducing the impact of these new CSO closures on fishers and communities while protecting public health.

A legal notice is required for each change in a shellfish growing area's classification, and in many cases also required for a change in status. These notices reflect the type of opening or closure, the dates, the reason, and other pertinent descriptive information. Copies are sent to municipal managers, Massachusetts Environmental Police (MEP), MassDPH, USFDA, and other interested parties. In 2025, staff generated 496 legal notices which were distributed for sanitary reclassification, rainfall closures and re-openings, paralytic shellfish poisoning (PSP) events, oil spills, and more typical emergency closures (e.g., extreme rainfall, flooding, sewage discharge).

Biotoxin Monitoring

Phytoplankton Monitoring

There are many kinds of microscopic algae that potentially pose a public health risk due to production of potent biotoxins. Though paralytic shellfish poisoning (PSP), caused by the dinoflagellate *Alexandrium*, has historically been the primary threat in the northeast and is the subject of routine toxin monitoring in shellfish meats, DMF monitors the phytoplankton community for the presence of many other potentially toxic algae and/or nuisance species that can form Harmful Algal Blooms (HABs). Phytoplankton monitoring occurs year-round on both the North Shore (4 primary stations) and South Shore (10 primary stations). When elevated concentrations of HAB cells are observed, the sampling frequency at a given monitoring station increases and adjacent areas are sampled. In 2025, 502 phytoplankton samples were collected at primary stations for analysis at the New Bedford and Gloucester offices. An additional 60 samples were collected in response to high cell counts at primary stations.

North Shore biologists collected 207 samples from the four primary regional stations in Newburyport, Ipswich, Essex, and Gloucester. No secondary stations were sampled in 2025. There was very little phytoplankton activity in the winter months. There were low abundances of *Alexandrium* from April to June, with cell counts spiking mid-June around one thousand cells per liter in Gloucester and two thousand cells per liter in Essex, before decreasing sharply. Low levels of both small and large cell *Pseudo-nitzschia* (the cause of amnesic shellfish poisoning, ASP) were observed throughout the year. A small cell *Pseudo-nitzschia* bloom was observed in June; however, ASP screening tests revealed no toxicity during this event. Phytoplankton of the genus *Dinophysis* produce toxins that cause diarrhetic shellfish poisoning (DSP). In addition to *Dinophysis acuminata* and *Dinophysis norvegica* species, which are commonly observed on the North Shore, during 2025 *Dinophysis fortii* was present in the fall and low amounts of *Dinophysis sacculus* were also observed. *Dinophysis* species were observed at relatively low abundances and primarily seen late summer through fall. *Karenia mikimotoi* were also present in low concentrations from mid-summer into fall.

The South Shore processed a total of 355 phytoplankton samples in 2025: 295 from the ten primary stations and an additional 60 samples from secondary and ad-hoc stations. Another anomalous early winter *Alexandrium* bloom was detected in the Nauset System on Cape Cod in late October 2024 with steady presence observed through the end of June 2025. Peak concentration in the spring bloom was observed in early April. This continued the trend of an early winter bloom start in the Nauset system which closes annually due to PSP. There was a repeat in October 2025 of another fall/winter

Alexandrium bloom anomaly. Toxicity in shellfish was not detected in late fall/early winter, presumably due to cold water temperatures (32–49°F) and low likelihood of substantial shellfish pumping activity. Seawater samples were screened for presence of PSP and ASP due to elevated cell counts of both *Alexandrium* and *Pseudo-nitzschia* in Town Cove in December (both negative).

Varying abundances of small and large *Pseudo-nitzschia* were observed at all South Shore monitoring stations. Generally, small cells were more abundant. On several occasions, abundances exceeded 30,000 cells per liter: Mattapoisett in January, Eastham in June (system was already closed due to PSP), and Chatham in July. Replicate screening kits for ASP were used to test water samples from Mattapoisett in January with negative results. No closures were required.

Dinophysis presence was observed in low abundances at all South Shore stations and at various times/seasons throughout year.

Some HAB organisms do not pose a threat to human health but can have adverse impacts on ecosystem and fish/shellfish health. Some of these organisms previously identified in South Shore samples include *Margalefidinium polykrikoides*, *Karenia mikimotoi*, *Akashiwo sanguinia* and *Amphidinium* species. There were no notable blooms of such species during 2025.

In addition to monitoring of primary stations for biotoxins and potentially toxic algae, Shellfish staff respond to reports of discolored water and potential cyanobacteria blooms throughout the state. In most cases, non-toxic algal blooms are identified, and no further action is necessary. Staff presented a synopsis of 2024 Massachusetts HAB/biotoxin events at the 2025 Gulf of Maine HAB Science Symposium. Staff also attended a CyanoHAB training hosted by Woods Hole Oceanographic Institution.

Paralytic Shellfish Poisoning Monitoring in Shellfish

A major aspect of the Shellfish Program is monitoring for PSP biotoxins in shellfish. Consumption of shellfish containing high levels of PSP toxin can cause severe illness and even death. Blue mussels are used as our sentinel species, because they tend to take up and bioaccumulate toxins quicker than other shellfish species. Staff collect shellfish from 15 primary stations weekly April through September. Samples are analyzed at the DMF Gloucester lab where mouse bioassays determine the levels of toxin. If toxin is detected, both the frequency of sampling and the number of sample sites are increased. Shellfish areas are closed if toxin levels approach or exceed established safe limits. A total of 377 shellfish samples from state waters were processed for PSP during 2025.

A PSP closure of the Nauset system on Cape Cod (OC2–OC6) is a nearly annual event, whereas PSP closures elsewhere in Massachusetts occur more sporadically. In 2025, the Nauset system closure (Figure 7) was issued on March 19 and remained in effect for all areas in Nauset until June 18, except for Salt Pond, which didn't reopen until July 3. Additionally, a precautionary closure was also instituted in Pleasant Bay (SC53–SC64). This closure was based on elevated *Alexandrium* cell counts observed at the Meetinghouse Pond monitoring station. *Alexandrium* population growth began in Meetinghouse Pond in March, which caused DMF to issue a closure of Meetinghouse, Frostfish Cove, and the Namequoit River on March 19. The oyster farms to the east of the closure line continuously tested negative for PSP toxins, and the closure was lifted in mid-May after several species of shellfish within Meetinghouse Pond and Lonnie's Pond tested negative and cell counts throughout the system fell to safe levels. The coastal closure was issued for north shore areas N3–N7 and Mass Bay growing areas (MB1–MB14) on June 13. The closure was lifted in Plum Island Sound (N4) on June 26 and lifted for all

other areas on June 27 (note: some areas have long-term PSP closures for ocean quahog and carnivorous snail).

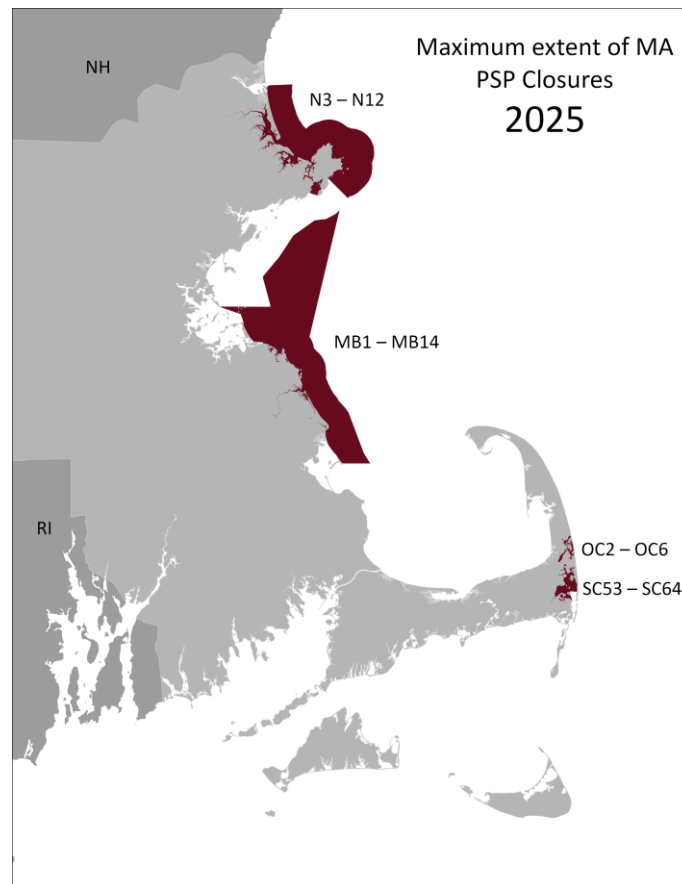


Figure 7. Map of 2025 PSP Closures throughout Massachusetts. Closure areas are shown in dark red shaded sections, with the names of the shellfish growing areas next to them.

Shellfisheries Management Project

Shellfish Advisory Panel

The Shellfish Advisory Panel (SAP) was created by the legislature to enhance communication between the Commonwealth and the shellfishing community. Program staff regularly contribute to meetings of the Panel. Read more about it in the [Policy and Management Section](#).

Contaminated Shellfish Resources

DMF directly manages contaminated shellfish resources for commercial bait harvest, relay, and depuration.

Commercial Bait Harvest

Dredge boat permits were issued for the contaminated surf clam bait fishery off Nantasket Beach, Hull. Landings cannot be reported for confidentiality reasons (i.e., fewer than three vessels participated).

Contaminated Relay

DMF permits municipalities to relocate (between and within communities) bacterially contaminated shellfish to Approved and Conditionally Approved waters for natural purification (depuration) and municipal propagation. All activities are conducted under strict NSSP guidelines and are heavily supervised by state and local enforcement authorities. No shellfish can be harvested from the receiving relay sites until bacterial (fecal coliform) testing of the shellfish meats has been completed. Generally, the Division requires shellfish to remain in the water for a minimum of 60 days after transplant but recommends they stay in the water through at least one spawning season.

Quahogs were the only shellfish species transplanted in 2025 (Table 8). A single dredge boat was contracted by six permitted towns to harvest quahogs from Restricted areas in the Taunton River. Prior to harvest, shellfish veterinary disease testing was conducted on quahogs from several locations within the donor site (pathology conducted by Kennebec River Biosciences in Richmond, Maine). Harvesting began on April 22, with a minimum 60-day depuration period required prior to harvest. The dredge boat harvested a total of 6,244.5 bushels of quahogs for the six communities during the season which ended on November 21 due to low water temperatures.

Orders for an additional 2,500 bushels from three municipalities were not filled due to the vessel sinking at the dock that took nearly two months to correct. These orders will be filled first at the start of the 2026 season. In addition to the contaminated relay out of the Taunton River, Barnstable conducted in-town contaminated relay, transplanting quahogs from Bumps River to East Bay and Sandwich relayed oysters in Sandwich Harbor from their nursery area.

Table 8. 2025 Municipal Relays of contaminated quahogs.

Harvest Site	Receiving Municipality	Transplant Site	Classification Area	Bushels	Last Day Planted
Taunton River	Yarmouth	Lewis Pond	SC28.7	700	May 7
Taunton River	Wellfleet	Inner Harbor & Harbor	CCB11, CCB13	1,116	May 28
Taunton River	Truro	Pamet Harbor	CCB7.1	263	June 3
Taunton River	Dennis	Bass River Center	SC34.23	160	June 12
Taunton River	Sandwich	Sandwich Harbor	CCB37.0	300	June 30
Taunton River	Westport	East/West Branch	BB3, BB4	3,665.5	November 21

Depuration

DMF has operated the Shellfish Purification Plant in Newburyport since 1961. The commercial harvest of mildly contaminated softshell clams was made possible historically through depuration at the plant. During the purification process, seawater pumped from a saltwater well is used to flush pathogens (disease-causing bacteria) out of the shellfish, making them safe for market, as verified through daily testing of shellfish and tank water in the on-site NSSP certified laboratory. Clams harvested from Conditionally Restricted areas can only be harvested by licensed and bonded Master Diggers under strict enforcement. Upon completion of depuration, clams are returned to the harvesters who pay a depuration fee. The purified clams are then sold into commerce. In recent years, the Plant typically processed between 2–9% of all softshell clams harvested in Massachusetts each year.

Following the closure of the Plant in November 2023 due to damage from a severe coastal storm and the completion of a study and feasibility analysis to re-establish operations, DMF made the difficult decision to permanently close the Plant in December 2024. To maintain the fishery, DMF established an MOU with relevant parties as required by the NSSP to allow for the depuration of Massachusetts shellfish at the Spinney Creek depuration facility in nearby Eliot, Maine. The MOU became operational in February 2025. DMF also established a subsidy program to assist master diggers with the cost difference between depuration in-state and at Spinney Creek. The program proved a success with a total of 145,220 pounds of Massachusetts softshell clams successfully depurated at Spinney Creek in 2025. This roughly equated to the throughput of the DMF Plant in its last full year of operation in 2023. DMF continued to work with the industry and partners to lay the groundwork to expand the harvest of mildly contaminated softshell clams in future years. DMF worked extensively with industry partners and the State Division of Capital Asset Management and Maintenance (DCAMM) on the future of the shuttered DMF facility. It is anticipated that final disposition of the Plant will be determined in 2026.

Aquaculture and Propagation Project

The management of marine aquaculture and shellfish propagation activities is a major responsibility of DMF. This includes managing the introduction, culture, and harvest of all marine species in the Commonwealth. Currently the vast majority of marine aquaculture in Massachusetts consists of municipally licensed, private molluscan shellfish aquaculture. DMF's duties involve three major areas of concern: 1) certifying the issuance of aquaculture licenses by municipalities; 2) permitting of aquaculturists, towns, and hatcheries to obtain, possess, and sell sub-legal shellfish (seed) for transplant and grow-out to legal size; and 3) reviewing shellfish pathology reports to add hatcheries to DMF's list of approved seed sources to prevent new introductions and spread of shellfish diseases in Massachusetts waters.

Shellfish License Certification

Under state statute, DMF is required to certify that municipally-issued aquaculture licenses and associated culture activities will cause no substantial adverse effects on the shellfish or other natural marine resources of the city or town where they are located. Project staff review proposed aquaculture projects and survey sites to determine a project's potential to impact important or protected marine resources. Staff also review projects to evaluate potential conflicts with existing recreational and commercial fisheries and other public uses. If it is determined that a project presents a risk to marine resources or may limit public access, DMF may deny certification or require the town to condition the license to minimize such impacts. In 2025, Project staff certified five sites for new shellfish aquaculture licenses or extensions to existing sites. This involved surveying 5.2 acres of tidelands ([Table 9](#)).

Table 9. New License Certifications in 2025.

Town	License Sites	Acres
Barnstable	1	1
Eastham	3	1.5
Yarmouth	1	2.7
Total	5	5.2

Permitting

DMF issues permits for all marine aquaculture activities in the Commonwealth. Permits require holders to manage their culture activities in a manner that minimizes impacts to the environment and other user groups, and prevents the introduction of diseases, non-native species, and other pests or predators that could harm both aquaculture and wild commercial fisheries. Additionally, permits may be conditioned to ensure food safety standards are met.

In the case of shellfish, a propagation permit is issued annually to both private growers and municipalities conducting shellfish planting activities. The permit allows the possession, transplant, and grow-out of seed shellfish from approved sources. In 2025, DMF issued shellfish propagation permits to 378 private aquaculture license site holders (Table 10), and 27 municipalities (for public propagation activities) operating shellfish aquaculture projects in 33 coastal municipalities throughout the Commonwealth. DMF also issued several non-shellfish aquaculture permits for the culture of kelp, horseshoe crabs, and green sea urchins.

Aquaculture Project staff continued to dedicate an extensive amount of time assisting with the development of a new DMF permitting system and database. DMF now offers the option of electronic filing of propagation and aquaculture permit applications and requisite annual reports.

Table 10. 2025 private aquaculture and shellfish propagation permits and acreage under cultivation by municipality.

Municipality	Number of Propagation Permit Holders	Acres ¹	Species Cultivated
Aquinnah	1	2.6	Quahog
Barnstable	41	157	Oyster, Quahog, Softshell Clam, Surf Clam
Bourne	4	16	Oyster, Quahog, Softshell Clam, Bay Scallop
Brewster	11	11.5	Oyster, Quahog, Softshell Clam, Surf Clam
Chatham	2	7	Oyster, Quahog, Sugar Kelp
Chilmark	6	20	Oyster, Bay Scallop
Dartmouth	2	1	Oyster
Dennis	24	32	Oyster, Quahog, Softshell Clam, Surf Clam
Duxbury	30	79.1	Oyster, Quahog, Softshell Clam, Surf Clam, Bay Scallop
Eastham	30	51.1	Oyster, Quahog, Softshell Clam, Surf Clam
Edgartown	10	20	Oyster
Fairhaven	3	44	Oyster, Quahog
Falmouth	8	54	Oyster, Quahog, Surf Clam, Bay Scallop, Horseshoe Crab
Gosnold	1	32	Oyster
Harwich	1	0.01	Bay Scallop
Ipswich	1	1	Softshell Clam
Kingston	3	8.5	Oyster, Quahog
Marion	2	1.5	Oyster, Quahog
Mashpee	5	22	Oyster, Quahog

Municipality	Number of Propagation Permit Holders	Acres ¹	Species Cultivated
Mattapoisett	2	60.4	Oyster, Bay Scallop
Nantucket	6	73	Oyster, Quahog
Oak Bluffs	1	4	Oyster, Quahog
Orleans	12	18.5	Oyster, Quahog, Surf Clam
Plymouth	34	98.3	Oyster, Quahog, Softshell Clam, Surf Clam
Provincetown	9	42	Oyster, Quahog, Softshell Clam, Surf Clam, Sea Urchin
Rowley	3	26	Oyster, Quahog, Softshell Clam
Scituate	3	3	Oyster
Tisbury	3	4	Oyster, Bay Scallop
Truro	3	20	Oyster
Wareham	6	83	Oyster, Quahog
Wellfleet	101	270.6	Oyster, Quahog, Softshell Clam, Surf Clam, Blood Arc
Westport	6	80	Oyster, Quahog
Yarmouth	7	41.7	Oyster, Quahog
Grand Total¹	378	1,385	N/A

¹Propagation permit holders may be licensed to aquaculture sites in more than one municipality. Acreage is based on the best available data. DMF is actively verifying and ground truthing grant acreage.

Aquaculture Landings

Aquaculture landings and value for oysters and quahogs are presented in [Table 11](#) and [Table 12](#). Oyster culture continued to dominate the aquaculture industry. Landings value of aquaculturally raised oysters in 2025 increased by 7% from 2024. Quahog aquaculture revenue continued to be dominated by landings from growers in Barnstable and Wellfleet with a total value of over \$850,000. The value of other cultured shellfish species including bay scallops, softshell clams, and surf clams, and kelp does not substantially add to aquaculture landings value and are not reported here due to confidentiality issues.

Table 11. 2025 Aquaculture Landings and Value for Oysters. Confidential data are specified in table. Totals reflect only displayed values.

Town or Region	Pieces	Reported Value
Barnstable	13,079,742	\$7,562,610
Brewster	768,135	\$450,368
Dennis	3,488,043	\$1,933,183
Duxbury	11,857,879	\$6,993,997
Eastham	1,531,784	\$849,190
Edgartown	1,774,384	\$1,065,678
Falmouth	2,945,737	\$1,662,636
Nantucket	815,985	\$637,762
Orleans	859,310	\$510,863

Town or Region	Pieces	Reported Value
Other Buzzards Bay Towns	3,306,659	\$1,825,116
Other Cape Cod Towns	918,152	\$534,834
Other Island Towns	754,146	\$621,705
Plymouth/Kingston	2,687,926	\$1,573,346
Provincetown	72,950	\$56,974
Rowley	Confidential	Confidential
Scituate	Confidential	Confidential
Wareham	1,663,712	\$1,019,587
Wellfleet	12,769,878	\$7,453,471
Yarmouth	865,284	\$505,169
TOTAL	60,429,852	\$35,441,858

Source: SAFIS Dealer Reports as of April 2026 and staff edits.

Table 12. 2025 Aquaculture Landings and Value for Quahogs.

Town or Region	Pieces	Reported Value
Barnstable	1,387,047	\$392,748
Other MA Towns	173,325	\$62,054
Wellfleet	1,440,737	\$397,629
TOTAL	3,001,109	\$852,431

Source: SAFIS Dealer Reports as of April 2026 and staff edits.

Aquaculture staff engaged in outreach activities including providing guest lectures for the Fundamentals of Shellfish Farming course sponsored by Cape Cod Cooperative Extension and Woods Hole Sea Grant, as well as a workshop in Barnstable to address ongoing issues regarding the effective use of bird deterrents on floating aquaculture gear.

Vibrio Management

A major component of the Shellfish Program’s public health protection responsibilities is the implementation of control measures intended to limit the human health risks associated with exposure to *Vibrio parahaemolyticus* bacteria (*Vp*; *Vibrio*) from the consumption of raw oysters. Consumption of raw shellfish exposed to high levels of *Vibrio* can cause severe gastrointestinal illness, and in rare cases can be lethal. As a result, NSSP member states with a history of *Vibrio* illness outbreaks are required to monitor conditions in oyster harvest areas, implement *Vibrio* control measures, and respond in the event of a *Vibrio* illness associated with shellfish consumption. DMF is also responsible for the closure of harvest areas following notification of a *Vibrio* outbreak from MassDPH.

DMF first implemented its *Vibrio* Control Plan in 2012, after two confirmed cases of illness in 2011 (Table 13). DMF and MassDPH continually evaluate the effectiveness of the *Vibrio* controls and work with industry and other stakeholders to make improvements and incorporate state-specific data where possible. There were no significant changes to the *Vibrio* regulations or *Vibrio* Control Plan in 2025.

Table 13. Single-source *Vibrio* cases related to the consumption of MA-harvested shellfish.

Year	# of Cases
2011	2
2012	9
2013	33
2014	11
2015	28
2016	10
2017	14
2018	10
2019	8
2020	11
2021	16
2022	16
2023	15
2024	21
2025	26

The *Vibrio* Control Season in Massachusetts currently runs May 19–October 19, when the risk of illness is highest. During this period, commercial oyster harvesters are required to ice oysters to prevent the post-harvest growth of *Vibrio* bacteria; tag containers of oysters with the times of harvest and icing; shade oysters during harvest and transportation; and maintain a harvest logbook. Additionally, certain aquaculture activities related to the culling and processing of oysters are subject to *Vibrio* related restrictions. DMF, in cooperation with local Shellfish Constables and the MEP, works with harvesters and growers to educate them on and verify compliance with the *Vibrio* Control Plan through routine compliance monitoring and industry training meetings. With the exception of the pandemic anomaly in 2020, oyster landings have exhibited an increasing trend over the last decade but the number of illnesses per million oysters landed has remained relatively constant since 2016 (Figure 8).

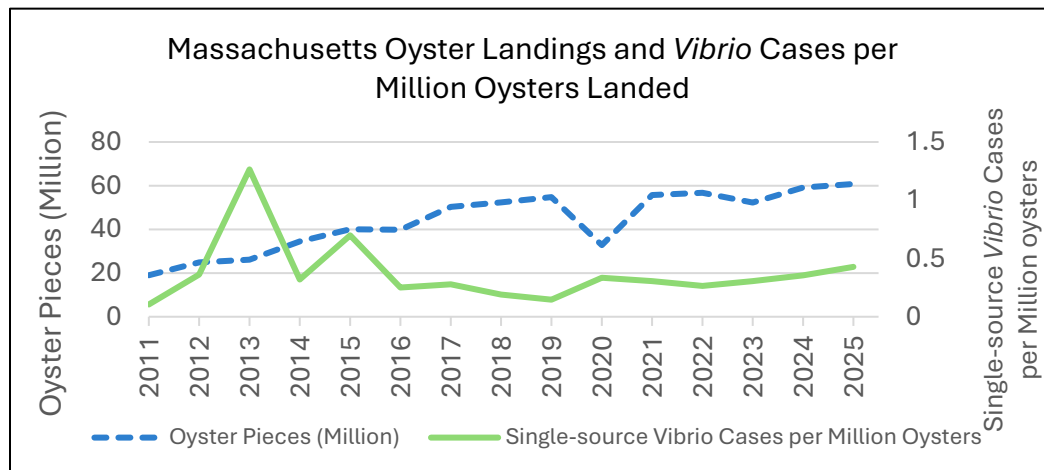


Figure 8. Trends in *Vibrio* Illnesses Relative to Quantity of Oysters Landed, 2011–2025.

MassDPH and DMF investigated 13 single-source confirmed *Vp* illnesses involving consumption of raw oysters in 2025. Three multi-source confirmed *Vp* illness tracebacks involved oysters from only MA growing areas, and five cases implicated both in-state and out-of-state growing areas (Table 14). Twenty-two additional investigations were completed for illnesses associated with raw oyster consumption that were confirmed *Vibrio* genus but species was not identified, including 13 Massachusetts harvested single-source tracebacks, two Massachusetts harvested multi-source tracebacks, and seven multi-state, multi-source tracebacks. There was also a single *Vibrio vulnificus* illness associated with wound infection (none with consumption), and a single illness confirmed to be *Grimontia hollisae*, formerly of the *Vibrio* genus.

In 2025, DMF investigated a substantial increase in *Vibrio* illnesses from several growing areas including Wellfleet (CCB11, CCB14), Duxbury/Plymouth/Kingston (CCB42, CCB45), and Orleans (SC61). Precautionary closures were implemented during the 2025 *Vibrio* control season for Duxbury/Plymouth/Kingston (10 days) and Pleasant Bay, Orleans (14 days) due to a significant number of single-source illnesses that fell just one short of NSSP mandatory *Vibrio* closure for number of illnesses in a 30-day period. A precautionary closure was considered in Wellfleet, but illness notifications were not timely and environmental conditions in the area had changed significantly by the time tracebacks were completed, so it was determined that no closure was necessary. Wareham (BB36 and BB37) had no single-source *Vibrio* illnesses in 2025 and only one multi-source illness after elevated illness numbers in 2024.

Table 14. 2025 *Vibrio parahaemolyticus* Illnesses (Raw Oysters) Traced Back to Massachusetts Growing Areas. Growing area names and maps for the codes used are available on DMF's [Shellfish Classification Areas webpage](#).

Traceback Type	Implicated MA Growing Areas
MA Single-source (13)	BB3 (1 case); CCB11 (1 case); CCB14 (2 cases); CCB45 (1 cases); N4 (2 cases); SC50 (2 cases); SC61 (3 cases); V2 (1 case)
MA Multi-source (3)	[BB36 & CCB31]; [CCB31 & SC50]; [CCB11 & SC61]
Both In-state and Out-of-state Multi-source (5)	[CCB31, CCB45, & CT]; [BB32, CCB9, SC61, & ME]; [CCB42, CCB45, V20, & ME]; [SC61 & NY]; [CCB14, CCB23, CT, ME & Canada]

Illness Outbreak Investigations

In addition to *Vibrio* illness investigations and precautionary closures, aquaculture staff investigated a steep increase in *Campylobacter* illnesses linked to shellfish consumption including 20 illnesses resulting in five *Campylobacter* illness outbreaks, including one closure from August 1–28 in Menemsha Pond and Katama Bay. In accordance with the NSSP Model Ordinance, when an illness outbreak is linked to shellfish consumption, an investigation must be completed within 24 hours of notification or the growing area where the shellfish originated must be closed until an investigation can be completed. DMF altered the criteria for investigating these outbreaks/illnesses from what was done during the 2024 outbreak in Yarmouth. DMF did not have *Campylobacter* tested in oyster samples from implicated areas due to lengthy processing times and highly variable results. Instead, DMF collected water and oyster samples from affected areas to test for fecal coliform. It is assumed that *Campylobacter* found in oysters result from bird feces, and as such, if a persistent issue existed on

implicated aquaculture sites, a fecal coliform signal should be seen in oysters and water samples. This change in investigation method allowed DMF to more quickly assess the risk of oysters from implicated growing areas because the analyses could be conducted in DMF laboratories and led to significantly fewer closures than would have previously been necessary under the same circumstances.

Other Activities

Staff participated in professional organizations and meetings including the Shellfish Advisory Panel, the Massachusetts Shellfish Officers Association (MSOA), the Massachusetts Aquaculture Association, the Gulf of Maine Harmful Algae Bloom Symposium, the Northeast Shellfish Sanitation Association (NESSA), and several in-state conferences/events (e.g., Plymouth Blue Future Conference, Wellfleet Oyster Fest, high school career days, SEMAP/MDAR events). Staff also served on the Woods Hole Sea Grant Marine Outreach Guidance Group and the Massachusetts Institute of Technology Sea Grant Aquaculture Advisory Panel; and served on several competitive grant review panels.

Senior shellfish staff collaborated with the MSOA board of directors, MEP and DPH in the planning and implementation of a new MSOA training course hosted by Cape Cod Community College. The new course would be offered for the first time during the spring 2026 semester and would follow a hybrid model with three in-person sessions and nearly 60 recorded presentations that students could watch virtually. DMF contributed over 25 educational presentations with discussion questions and attended office hours weekly to answer student questions. A total of 35 municipal employees registered for the course which will likely be offered yearly going forward.

Preparations continued in both the Gloucester and New Bedford laboratories to establish the capability to test for biotoxins utilizing High Performance Liquid Chromatography (HPLC). A representative from Thermo Fisher held a training session with lab staff in January. In addition, column splitters were acquired and installed on instruments to allow the labs to run tests for both types of PSP toxins on one instrument, streamlining the process for analyzing samples.

In October 2025 DMF was able to order needed supplies and equipment through an extension of the 2024 FA AFDO equipment grant. DMF used the awarded \$8,225 to replace a broken incinerator and purchase nine ZORBAX columns for HPLC.

DMF also applied for and was awarded a training grant through USFDA Milk and Shellfish Grant for \$18,558. This grant funded travel and attendance to NESSA for the shellfish team. DMF is grateful for the support of the USFDA, ISSC, NCIMS, and AFDO National Shellfish Sanitation Grant Program for providing over \$90,000 to the Shellfish Sanitation and Management Program in equipment and educational funding over the last several years.

In June 2025 both labs were evaluated for compliance by four representatives of the USFDA. This was the first evaluation of the labs in over 10 years and was the first evaluation ever for several staff members. Over the course of several days the labs were evaluated on two newly incorporated test methods, male-specific coliphage (MSC) in shellfish and MSC in wastewater, as well as all current methods and Quality Control practices. All staff did an excellent job during the evaluation process, and both labs were awarded with a conforming status before the USFDA left, something that does not typically happen during evaluations—most labs are provisionally conforming at the end of evaluations, pending corrections.

In September 2025 the New Bedford lab completed a verification study on the use of ethafoam for processing water samples in place of the two-hour resuscitation at 35°C. The study was successful and showed there was no significant difference in plate counts when using one method versus the other. The lab immediately switched over to ethafoam, eliminating the need for a sample transfer after two hours. Thanks to this, the New Bedford lab was able to extend how late samples can be processed. This has saved the lab time and simplified coordinating water samples with other tasks.

Finally, both labs completed their method verification testing and reports for MSC in shellfish. This was an intensive process involving extensive testing, data collection, and statistics to demonstrate that the labs are proficient in the method and capable of conducting it to support the NSSP. USFDA reviewed the reports and Gloucester was approved in July and New Bedford in November.

Other Shellfish Program elements that undergo evaluation by the USFDA include: 1) Growing Area Classification, 2) Control of Harvest, and 3) Risk Assessment/Risk Management. No new deficiencies were identified in 2025 and during the Growing Area program element evaluation close out meeting the USFDA stated that Massachusetts has “become a bright spot in the nation” for conformance with NSSP standards.

Habitat Program

Personnel

Mark Rousseau, Program Manager

Gloucester

Kate Frew, Marine Fisheries Biologist

Dr. Forest Schenck, Marine Fisheries Biologist

Iris Seto, Marine Fisheries Biologist

Sean Terrill, Habitat Restoration Specialist

Evan Connors, UMASS Undergraduate Student Intern (May–September)

New Bedford

Dr. John Logan, Marine Fisheries Biologist

Steve Voss, Marine Fisheries Biologist

Amanda Davis, Marine Fisheries Biologist

Kara Falvey, Contract Assistant

Tessa Peixoto, Contracted Seasonal Employee (May-October)

Summer O'Rourke, Contracted Seasonal Employee (May-October)

Giovanni Aulizio, Contracted Seasonal Employee (February-December)

Marcel Almeida, New Bedford High School Intern (July-August)

Overview

The Habitat Program protects and enhances marine fisheries resources through its Technical Review and Fisheries Habitat Research projects. The **Technical Review Project** review permits submitted to municipalities, the Commonwealth, and the federal government for construction projects occurring in waters with fisheries and habitats under DMF jurisdiction. The reviewers provide recommendations to avoid and minimize impacts to marine fisheries resources. In addition, staff participate in various working groups to provide technical analysis and policy input on a variety of topics including ocean planning and offshore wind development. The **Fisheries Habitat Research Project** conducts state- and grant-funded research related to marine fisheries habitats. Research studies focus on marshes, embayments, artificial reefs, eelgrass, and food webs.

Technical Review Project

Technical Review

DMF reviews coastal construction projects and provides information to municipal, state, and federal agencies to ensure projects avoid, minimize, or mitigate potential impacts to marine fisheries resources and habitats. In 2025, staff reviewed 789 permit filings associated with 586 projects in 100 municipalities ([Figure 9](#)). Of these, 356 were new projects, which is slightly below the annual average of 387 new projects per year over the past decade. The dominant new project type was residential docks ([Figure 10](#)). Not all projects reviewed represent new construction or new impacts; 272 (46%)

projects were specific to replacements or repairs of previously permitted structures. For example, 119/139 hardened shoreline, 98/194 residential docks, and 59/83 commercial/public docks projects addressed the replacement of existing structures. Of all projects reviewed, 111 projects occurred in or near salt marsh (19%) and 34 in or near eelgrass (6%) habitats. In 2025, DMF recommended time of year restrictions (TOYs) for 192 projects (24%) and received waiver requests for 20 projects.

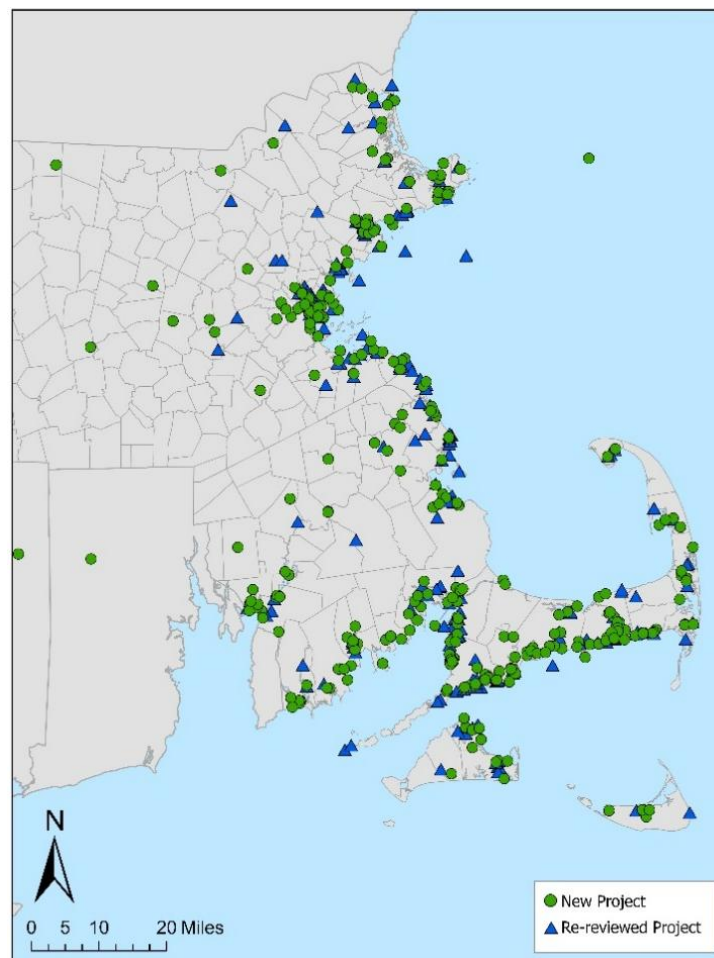


Figure 9. Locations of Coastal Alteration Projects Reviewed by DMF in 2025. New projects (green circles) and re-reviewed projects (blue triangles) are shown throughout the state.

Notable projects reviewed in 2025 include Cape Cod Bridges Program (Sagamore and Bourne bridge replacement), Kingston Forge Pond/Jones River Fish Passage improvement project, Neptune Deepwater LNG Port Terminal decommissioning, Boston Draw 1 Bridge Replacement, Town of Falmouth Ocean Outfall project, and Town of Wareham Comprehensive Wastewater Management Plan. Major dredging projects included Katama Bay in Edgartown and Conley Terminal Dredge project in Boston. Erosion control and nourishment projects included Crescent Beach in Chatham, East Chop Drive in Oak Bluffs, and Duxbury Beach High Pines in Duxbury.

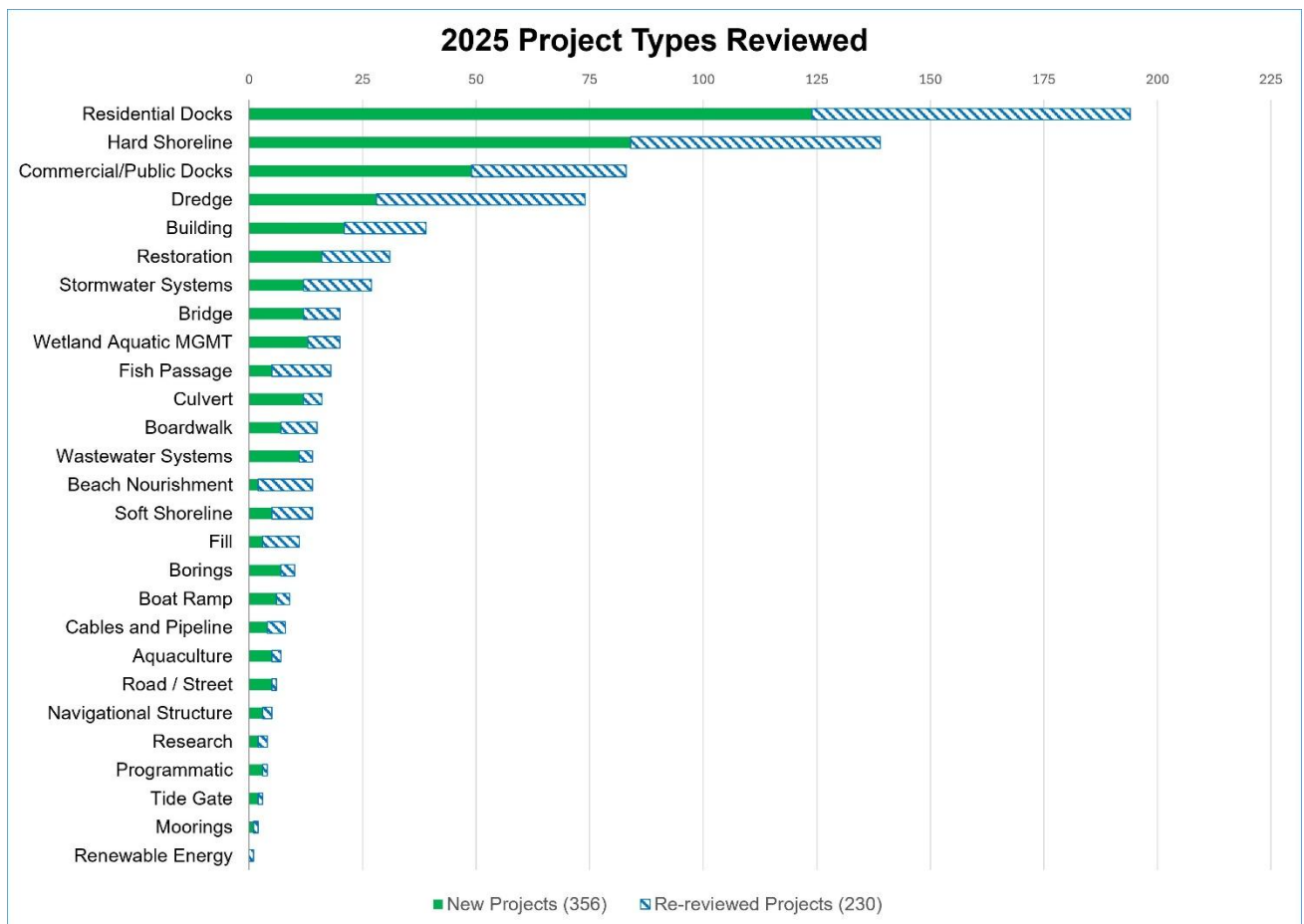


Figure 10. Coastal alteration projects reviewed by project type in 2025. A single project can include multiple project types. New projects (solid green bar) are shown closer to the category, and re-reviewed projects (blue dashed bar) are shown farther from the axis.

Data Management

Data management and archiving are important parts of Technical Review. Program staff continue to improve these systems as technologies improve. In 2025, Habitat Program staff continued to use the DMF Review Database (v. 2.1) to track project location, type, impact size, potential habitat impacts, and other project attributes. Program staff utilize the database to track the number of projects reviewed and the number of reviews associated with each project. Additionally, Habitat staff coordinate with the shellfish program during National Pollutant Discharge Elimination System (NPDES) review. Two NPDES projects were reviewed in 2025.

In Lieu Fee Program

In 2014, a Massachusetts-wide In Lieu Fee Program (ILFP) sponsored by DFG was developed to address unavoidable resource impacts statewide under both the US Army Corps of Engineers (USACE) General Permit and Individual Permit. DFG initiates an annual selection process for identifying coastal restoration projects to submit to the USACE for ILFP funding approval. Projects approved for funding are typically required to include monitoring for five years or more. Program staff participate in the

ILFP's proposal review for projects submitted annually for funding consideration, the tracking of payments received, and credits sold, and the development and review of the Department's annual reports on the program. DMF has also received In Lieu Fee (ILF) funding for projects restoring eelgrass and enhancing hard bottom habitats in the Commonwealth's marine waters.

In 2025, the Habitat Program completed work on two active ILF-funded projects, Eelgrass Restoration Site Selection and Marine Habitat Enhancement, Artificial Reef – Yarmouth and submitted a proposal to the ILFP for funding consideration for permitting and construction of two artificial reefs in Cape Cod Bay in the municipalities of Brewster and Dennis. Additional information on [Eelgrass Restoration Site Selection Project](#) is further described on page 65; [Marine Habitat Enhancement, Artificial Reef – Yarmouth](#) on page 63, and the [Cape Cod Bay reef project](#) on page 63.

Ocean Planning

In 2025, the Massachusetts Ocean Management Plan (MOP), the Commonwealth's blueprint for the protection and sustainable use of state ocean waters, initiated the plan's required five-year review and revision. Habitat Program and many other DMF staff contributed to the update of the MOP Fisheries chapter, including analysis of commercial and recreational fisheries, fisheries resources, infrastructure, critical trawl survey areas and artificial reefs as part of the MOP Baseline Fisheries assessment. The Habitat Program has also participated as the designee of the Director on the Science Advisory Council and the Ocean Advisory Commission steering committee meetings hosted by CZM and in an interagency ocean management team to inform CZM's expenditure of funds from the Ocean Resources and Waterways Trust established for the MOP.

Program staff also participated in the Northeast Regional Ocean Council (NROC) and the Northeast Habitat Assessment team. Both entities work to improve regional coordination of the management and permitting of offshore activities, including offshore wind development in the Mid-Atlantic Bight and Gulf of Maine.

Fisheries Habitat Research Project

Artificial Reefs

Massachusetts has five permitted artificial reefs in its waters. Staff perform surveys to identify new reef sites for permitting, conduct compliance and biological monitoring, coordinate materials acquisitions and deployments, and provide technical guidance to advance responsible artificial reef development and uses in Massachusetts coastal waters.

Reef Monitoring

In 2025, all reef sites were monitored for community composition, biomass, invasive species presence, permit compliance, and temperature. Acoustic receivers were utilized year-round to assess the patterns of tagged fish. During the summer months, scup and black sea bass were collected using rod and reel sampling for stomach content and stable isotope analysis to assess whether diet or trophic position differed for either species as a function of habitat type ([Figure 11](#)). Black sea bass diet was dominated by crustaceans at all sites within the experimental array. Scup diet contained a mix of crustaceans, bivalves, and gastropods across the experimental array. Tissue samples were prepared and archived for later stable isotope analysis.

Staff completed data collection for a study using Baited Remote Underwater Video Stations (BRUVS) comparing reef productivity of artificial reefs in Nantucket Sound. BRUV units were deployed on natural and artificial habitat types between May and October. The BRUVS were used to measure species richness, diversity, abundance, and age structure of black sea bass and scup and compare fish aggregations on artificial reefs to those on nearby natural reefs and sand bottom habitats. Staff utilize BRUVS to assess structured habitat connectivity to determine appropriate spacing of new artificial reefs.

Side scan sonar surveys were conducted for pre- and post-artificial reef deployments and for selecting sites to permit (Figure 11). The surveys are used to demonstrate compliance with permit conditions and provide a snapshot of material footprints of new materials added to the reef sites.

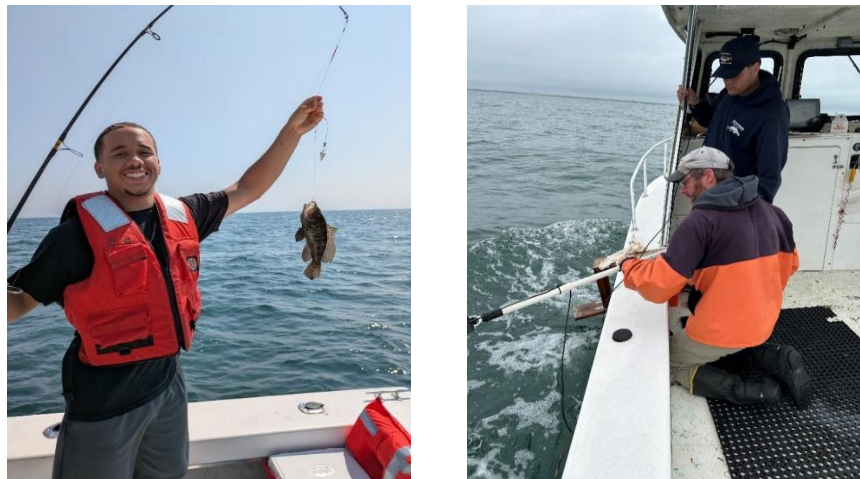


Figure 11. DMF reef monitoring activities: (Left) New Bedford High School intern Marcel Almeida assisting in the collection of samples for assessing diet of black sea bass caught on the Yarmouth artificial reef; (Right) DMF Biologist Steve Voss and Contracted Seasonal Employee Giovanni Aulizio collecting side scan sonar survey data at the Yarmouth artificial reef.

Material Storage and Procurement

Efforts to obtain surplus materials from MassDOT, DER, Massachusetts Bay Transit Authority (MBTA), and other parties are ongoing. DMF continues working with MassDOT, MBTA, CZM, and local municipalities to identify suitable storage areas for artificial reef materials, focusing on port areas capable of handling the weight and volume of reef materials. No suitable long-term storage locations for artificial reef materials were identified in 2025. Discussion with MassDOT on the direct deployment of debris from the Cape Cod Canal Bridge Project to a permitted artificial reef site are ongoing.

Cape Cod Bay

In 2018, DMF began exploring the potential for four to five new artificial reef locations in lower Cape Cod Bay between Sandwich and Barnstable. In 2025, Program staff met with the towns of Brewster and Dennis to establish partnerships in support of advancing two sites (one in each municipality) into the permitting phase, with the Towns and DMF acting as co-applicants. Notices of Intent (NOI) were filed in each municipality and DMF coordinated with MassWildlife Natural Heritage and Endangered Species Program (NHESP) to develop a comprehensive North Atlantic Right Whale (NARW) Protection Plan for

avoiding/minimizing interactions with NARW during construction. Permitting, including MEPA and USACE review, is expected to continue into 2026.

Outreach

Habitat staff presented updates on DMF artificial reef activities to various groups, including DMF's Marine Recreational Fisheries Development Panel, the Cape Cod Commercial Charter Boat Association, and the Cape Cod Salties Sportfishing Club.

Climate Change

Climate change is an area of active research and policy development in New England. DMF's primary focus is on harnessing existing research efforts and ensuring that data relevant to climate change are collected in a standardized way and made accessible to all research entities.

Temperature

Project staff compile all marine and coastal continuous bottom temperature monitoring records collected by DMF. The database contains over 7 million records from 1986 to present, inventorying more than 30 seafloor stations and over 40 estuarine and riverine sites where bottom temperature data are collected. Approximately 200,000 temperature records statewide are collected annually. Efforts to advance the database to a publicly accessible platform continued in 2025. DMF receives requests for information from the bottom temperature database from researchers and scientists exploring data relevant to regional climate and fisheries management issues. In 2025, data were provided to DMF researchers to model environmental covariates for smelt catch.

Food Webs

Project staff have been researching the processes by which ocean warming and other physiological changes from climate change may alter food webs. Staff have been involved in diet and stable isotope studies of tunas in New England shelf and offshore waters in collaboration with the University of Maine. DMF staff assisted with drafting a manuscript that explores recent changes in Atlantic bluefin tuna diet in the Gulf of Maine. DMF staff also led an international collaboration that compiled a 30-year Atlantic bluefin tuna diet dataset that identified important prey bases for this economically important top predator throughout its migratory range across the North Atlantic and Mediterranean Sea. Both studies were published in the journal *Marine Ecology Progress Series* in 2025. DMF staff also served on a University of Maine Master's student thesis committee for a project that continues to monitor Atlantic bluefin tuna diet in the Gulf of Maine.

A study initiated in 2012 to examine the interplay between eutrophication and transfer of contaminants into Cape Cod estuarine food webs continued in 2025. Undergraduate students and faculty from the Harvard School of Public Health performed additional lab and data analyses to measure the total mercury concentration of Atlantic silversides and mummichogs collected from estuaries with different nitrogen loads in Falmouth, Massachusetts as part of an environmental science course on local pollution issues. A scientific manuscript is under development.

In collaboration with DMF Diadromous Program staff and collaborators from MassWildlife, MIT Sea Grant, and the University of Waterloo, Habitat Program staff submitted a manuscript for peer review that uses stable isotope tracers to track the transfer of marine and freshwater nutrients through

seasonal migrations of river herring between Massachusetts coastal waters and freshwater spawning and nursery habitats. The study examined both a recently restored river herring connection to freshwater spawning habitat as well as two established river herring runs.

Eelgrass Monitoring and Restoration

Eelgrass (*Zostera marina*) is a critical marine fisheries habitat. Project staff conduct research, monitoring, and restoration of eelgrass in Massachusetts. The eelgrass experts at DMF also play an important role advising other groups studying eelgrass, and protecting eelgrass through technical review of construction projects.

Eelgrass Monitoring

Project staff completed the 18th year of dive surveys at West Beach, Beverly in Salem Sound as part of the international SeagrassNet monitoring program and CZM's Marine Invader Monitoring and Information Collaborative. Long term monitoring at this site provides the region with data on the response of eelgrass to changing temperature and resilience to storms, algal blooms, and eelgrass wasting disease.

Project staff coordinated the 8th year of the Citizen Science Eelgrass Rapid Assessment Program, which relies primarily on volunteers to collect eelgrass presence and condition data using a standardized protocol and the iSeaGrass web app to document eelgrass distribution and health at locations throughout the state. The program's focus in 2025 remained in the Duxbury-Kingston-Plymouth embayment (DKP) and was led by the North and South Rivers Watershed Association. Overall, these data continue to suggest eelgrass area remains well below the historic baseline in DKP.



Figure 12. Dr. Forest Schenck presents findings on the timing of eelgrass seed maturation at the 2025 Coastal and Estuarine Research Federation Conference in Richmond, VA.

Project staff completed the second year of work associated with grants received from the USEPA and WHOI Sea Grant to assess the timing and distribution of eelgrass seed production in Massachusetts in partnership with the Rhode Island Division of Marine Fisheries, Massachusetts Bay National Estuary Partnership, and Salem Sound Coast Watch. Preliminary results were presented at the Coastal Estuarine Research Federation's conference in Virginia (Figure 12).

Collaborative Seed-Based Eelgrass Restoration

Project staff led a large-scale eelgrass seed collection effort in Salem Sound (Figure 13). Project staff also continued collaborations with researchers from Massachusetts Bay National Estuarine Partnership, Salem State University, and Salem Sound Coast Watch to develop seed storage and processing methodologies at the Cat Cove Laboratory. These efforts produced over 250,000 eelgrass seeds that DMF provided to partners to plant in 2025. Staff plan to continue to produce eelgrass seed at Cat Cove for collaborative eelgrass restoration projects in 2026. This work was funded through the Massachusetts Bay National Estuary Partnership and Woods Hole Sea Grant.



Figure 13. Ten divers and four topsiders aboard the R/V Micheal Craven prepared to collect 1 million eelgrass seeds from Salem Sound in July 2025.

Eelgrass Restoration Site Selection Project

Project staff completed efforts to identify suitable locations for future eelgrass restoration with funding from the DFG ILF Program. In 2025, this work included submission of a final project report. None of the seven test plots planted over the course of the project were successful.

Float Impacts to Eelgrass

Project staff have assumed a leadership role in an ongoing project in collaboration with Salem Sound Coast Watch to assess the impact of floats on eelgrass. This work will inform our environmental review comment letters pertaining to dock and pier construction. In 2025, project staff submitted a scientific manuscript associated with the project for peer review.

Town Neck Beach, Sandwich Eelgrass Surveys

Project staff, in a partnership with the Woods Hole Group (WHG), completed the 12th annual eelgrass survey along Town Neck Beach in Sandwich. DMF is responsible for the boat-based side scan sonar and drop camera surveys for the deeper eelgrass extents, while WHG conducts the wading survey for the near shore shallow areas. This site is of particular interest due to continued beach nourishment activities and the potential impacts to eelgrass and habitat in the area. The surveyed eelgrass bed has persisted following nourishment based on surveys to date.

Oyster Habitat Restoration

Eastern oysters (*Crassostrea virginica*) are a keystone species and the reefs they create a foundational marine habitat that supports biodiversity, water quality, and coastal resiliency. In Massachusetts, natural oyster reef decline has been driven by centuries of overharvesting, water quality degradation, coastal development, landscape change, and the range expansion of harmful diseases due to climate change. Habitat staff are newly partnered with the United States Department of Agriculture Natural Resources Conservation Service, The Nature Conservancy (TNC), and the Cape Cod Conservation District on a statewide project to restore critical coastal habitats to at least five estuaries in Massachusetts over a period of five years, with a focus on oyster reef restoration. The long-term goal of this project is to restore over 2,500 acres of oyster reef habitat in Massachusetts by 2050.

In 2025, DMF, in collaboration with local municipalities, initiated siting and permitting for large-scale oyster reef restoration projects encompassing roughly 50 acres, making it the largest oyster reef restoration effort in Massachusetts to date. To begin, the Habitat Program developed an Oyster Restoration Suitability Index (RSI) Model to identify suitable oyster restoration areas and inform the needs of restoration practitioners throughout Massachusetts. The model utilizes DMF Shellfish Classification Areas (SCAs) as spatial units, and focuses on habitat (salinity, historic suitability, and water depth), logistics (boat ramp proximity, exclusionary uses), and community resources (shellfish management capacity and proximity to aquaculture partners).

Model results indexed every SCA for restoration potential and revealed several regional hotspots, including Plum Island Sound, upper Buzzards Bay, the Westport River estuary, central Cape Cod's south shore (Figure 14), and the coastal ponds of southern Martha's Vineyard. This is the first statewide oyster restoration suitability model in Massachusetts, and the first in the US to use shellfish classification areas as spatial units. This approach is accessible and user-friendly and allows practitioners to map oyster restoration suitability without satellite- or model-derived data sets that often have low resolution and poor spatial coverage in small estuaries.

Using the Oyster RSI Model to guide project selection, DMF made significant progress in planning and coordinating oyster reef restoration projects across the Westport River, Bass River, Upper Buzzards Bay, and Plum Island Sound in 2025. DMF worked closely with municipal shellfish constables, local non-governmental organizations, oyster growers, and other stakeholders to delineate and refine potential restoration areas, supported by GIS mapping and field-based site assessments using a range of sampling and surveying techniques. Restoration site assessments and RSI model ground truthing were conducted in Westport and Bass Rivers using newly acquired survey and water quality equipment (Figure 15). DMF staff conducted bathymetric and sidescan sonar surveys, along with underwater video and sediment sampling, to map benthic habitats and inform site selection.

In November, DMF and TNC staff worked together to deposit cultch on a new oyster reef restoration site in Hamblin Pond, Mashpee. DMF staff staked out the restoration site, performed pre-restoration hydroacoustic surveys, deployed over 100 cubic yards of shell cultch over the course of a week (Figure 15), and performed post-restoration hydroacoustic surveys. The cultch reef is planned for seeding with adult oysters from the Mashpee Department of Natural Resources in 2026 to kickstart oyster larval settlement and reef colonization. This restored oyster reef will be monitored over time to assess restoration success.

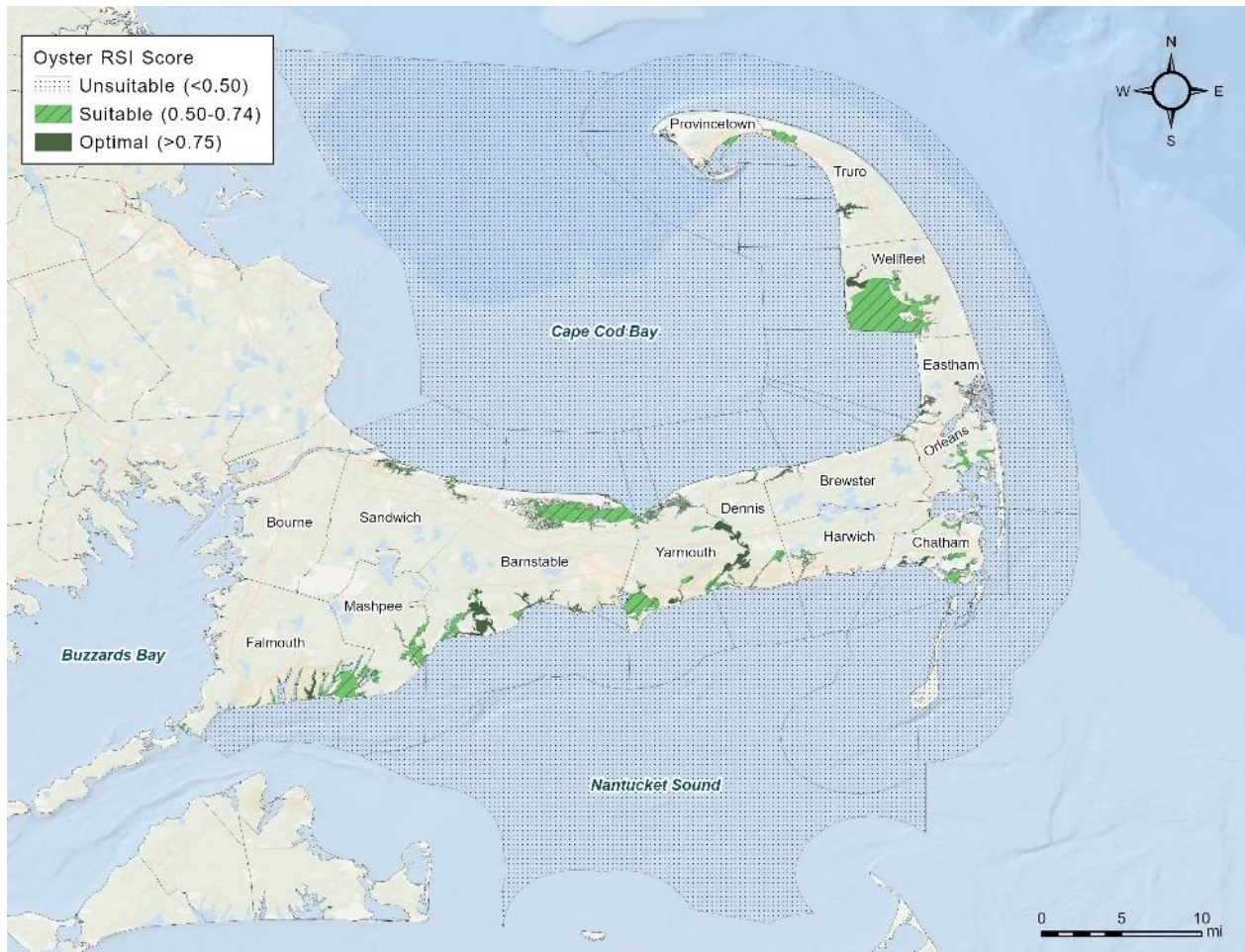


Figure 14. Massachusetts Oyster Restoration Suitability Index (RSI) model results for the Cape Cod region, with optimal restoration areas concentrated along the southern coast, most notably in Three Bays and the Bass River.



Figure 15. DMF Oyster Restoration Activities: (Left) Habitat Restoration Specialist, Sean Terrill, performing a bathymetric and sidescan sonar survey in the Westport River estuary locate ideal oyster reef restoration sites; (Right) Personnel from DMF, TNC, and Mashpee Department of Natural Resources work together to deploy shell cultch for larval oyster settlement on an oyster reef restoration site in Hamblin Pond.

Bay Scalping Impacts to Eelgrass

Bay scallops are found predominantly in eelgrass meadows. To better understand if a winter bay scallop fishery was impacting eelgrass, DMF started studying the impact of dragging for bay scallops on eelgrass in 2018 and continued field monitoring through 2022. The first study relied on a natural experiment. In fall 2017 to winter 2018, the Westport River supported a large and prolonged bay scallop harvest for the first time in decades, presenting a unique opportunity to characterize eelgrass meadows during multiple growing seasons following a single season of scalloping. From 2018–2021, the Habitat team surveyed an eelgrass meadow that was the site of intensive scallop dragging as well as several nearby unfished beds that served as references for comparison. Eelgrass bed area and percent cover significantly declined in the bed where scalloping occurred previously, but this decline appears to have been the result of an unrelated local algal bloom. The observed decline did not occur in the growing season immediately following the scalloping event, but rather in the two subsequent years. This decline coincided with an inundation of cyanobacteria that carpeted much of the bed.

The second study was a controlled impact assessment whereby DMF established experimental scallop dragging sites in an eelgrass meadow in Nasketucket Bay in Fairhaven and in the West Branch of the Westport River. In each area, high and low intensity dragging was conducted during the November–December bay scalloping season for three consecutive years (beginning in 2018 in Fairhaven and in 2019 in Westport), followed by subsequent summer season measuring of eelgrass density in both the fished sites and adjacent unfished reference sites. The final round of eelgrass monitoring for Westport was conducted in summer 2022 to complete all field work for the study. No impacts to eelgrass were detected in any of the monitoring years or seasons in the Westport River. Minor declines were observed in a single year in the Fairhaven study area, but no long-term effects were detected. All sidescan sonar and bottom image analyses were completed in 2024. Results were presented at the Spring Massachusetts Shellfish Officers Association (MSOA) meeting held in New Bedford and submitted for peer review to *Estuaries & Coasts* in 2025.

Environmental DNA (eDNA)

Winter Flounder

Winter flounder spawn demersal, adhesive eggs in winter months. These eggs are sensitive to turbidity and burial so dredging projects in all Massachusetts embayments are limited by time of year (TOY) restrictions during the spawning and larval development periods as an impact minimization strategy. Because detailed information regarding the timing and location of spawning within embayments is currently lacking, the winter flounder TOY spawning recommendation is broad and long. When combined with user conflicts during summer months, this generally restricts the dredging window to the fall and early winter. There is great interest in better understanding how to adequately protect winter flounder while providing more flexibility for dredging projects in time and space.

DMF initiated a combined eDNA and fyke net survey of winter flounder in Waquoit Bay in 2023. This combined survey was replicated during winter 2023-2024 and 2024-2025. Fyke nets were installed in four locations in Waquoit Bay in December and monitored weekly through April. Winter flounder collected in fykes were counted, measured, and assessed externally for reproductive status prior to release. During this period, eDNA samples were collected from 13 sampling stations biweekly to directly compare eDNA data with fyke catch-per-unit-effort. Spatial and temporal patterns of winter

flounder catches were consistent across the three field seasons. Most winter flounder were caught in January and February with the highest percentage of fish caught at our fyke stations at the head of Waquoit. Timing of peak catches aligned with the periods of peak eDNA detections from the previous winter. eDNA samples collected in 2023 were processed in 2024 to allow for direct comparison to catch data from the same year. eDNA results from 2023 closely matched fyke catches except for a secondary peak in eDNA detections in late April. This secondary peak likely reflects young-of-year winter flounder, which are not typically part of fyke catches. eDNA samples collected in 2024 and 2025 will be analyzed in 2026. Both male and female winter flounder in active spawning condition were observed during all three survey years providing direct evidence of spawning within this estuarine environment.

In collaboration with DMF Resource Assessment Survey staff, the Habitat Program collected additional water samples for winter flounder eDNA analysis in Waquoit Bay during the DMF young-of-year winter flounder seine survey. Samples were collected at stations during the annual seine survey sampling at Waquoit Bay in June 2025. eDNA results will be analyzed in 2026 for comparison with seine catch data. Results from an earlier winter flounder eDNA study conducted across six Cape Cod estuaries over a 12-month period from 2021-2022 were submitted to the journal *Marine Ecology Progress Series* for peer review.

Additional eDNA sampling targeting winter flounder was conducted in winter and spring 2025 in Barnstable Harbor and Sesuit Harbor. These Cape Cod Bay facing estuaries are considered part of the Gulf of Maine winter flounder stock, which has demonstrated a higher degree of coastal spawning relative to the southern New England stock, which primarily uses estuaries as spawning habitat. The eDNA survey in Barnstable Harbor complemented a concurrent net-based survey led by the Provincetown Center for Coastal Studies while the Sesuit Harbor eDNA survey was complemented by fyke and trawl-based surveys led by the DMF Habitat and Recreational Fisheries teams, respectively.

Offshore Wind

DMF Habitat Program staff collaborated with Gloucester Marine Genomics Institute on a pilot eDNA study in 2023 focused on the offshore wind lease areas off the Massachusetts coast. This sampling effort was repeated in 2024 and 2025. From May to November, Habitat Program staff collected monthly surface and bottom water samples from 40 fixed stations, both within lease areas permitted for development and in nearby reference areas not currently under development. Stations in active development were located within the South Fork and Revolution Wind lease areas as well as the Vineyard Wind 1 lease area with most stations aligned closely with an existing acoustic telemetry array maintained by the New England Aquarium's Anderson Cabot Center for Ocean Life to allow for comparison of eDNA results with the presence of acoustically tagged fish species. eDNA metabarcoding methods are being used to characterize the biodiversity of fishes, marine mammals, sea birds, and sea turtles in these offshore wind lease areas. More than 100 unique species have been identified in the eDNA dataset to date. Preliminary results were presented at the Marine Technology Society's Fisheries & Benthic Monitoring Tech Surge in Fall 2025. These data will provide an important assessment tool for potential impacts to marine biodiversity from large-scale construction in this region as monitoring continues through the post-construction phase in 2026.

Other Activities

Regulatory Revisions

In 2025 Habitat Program staff assisted the Shellfish Program and Policy and Statistics staff in developing a pilot program to update DMF Surf Clam and Ocean Quahog regulations for the purpose of installing trackers on vessels participating in the state surf clam fishery. Program staff developed new regulatory boundaries for the fishery that would address potential impacts to existing uses and established a 200' buffer zone to protect eelgrass from impacts associated with hydraulic dredging. Proposed new boundaries will be presented to municipalities, industry, and other state agencies for review, with the goal of initiating public hearings for and finalizing new regulations in 2026.

Technical Committees

Program staff continued to serve on a variety of habitat-related committees, including the ASMFC Habitat and Artificial Reef Committees, the Atlantic Coastal Fish Habitat Partnership (ACFHP) and its Science and Data Committee, the NEFMC Habitat Plan Development Team, the NROC Ocean Planning Committee and Habitat Classification and Ocean Mapping Subcommittee, the MA State Interagency Aerial Spraying Technical Committee, NEFMC/MAFMC Northeast Regional Habitat Assessment Team, MA Climate Change Vulnerability Assessment Team, the Massachusetts Bay Management Committee, MassBays Tide Gates Science Advisory Committee, the MassMarsh Long-term Salt Marsh Resilient Research and Monitoring Program, the Buzzards Bay National Estuary Program, the Boston Harbor Habitat Coalition, the Gulf of Maine Climate Network's Sentinel Monitoring Project, the Marine Invader Monitoring and Information Collaborative, the DFG ILF Steering Committee and Project Proposal Review Team, MassDEP salt marsh restoration working group, Chappaquiddick Salt Marsh Restoration Project Advisory Team, and the MIT Sea Grant Advisory Committee.

Executive Order 618: Biodiversity Conservation in Massachusetts

In 2023 Governor Healey signed Executive Order 618, directing DFG to conduct a review of existing biodiversity conservation efforts and establish goals and strategies to achieve a nature-positive future for Massachusetts. DMF staff collaborated with representatives from MassWildlife, DER, OFBA and other agencies in the development of a plan for the Commonwealth to address biodiversity conservation. Program staff played key roles on the DFG Biodiversity Steering Committee in the development of DMF's role in addressing biodiversity goals for the Commonwealth using a whole-of-government approach. DMF received \$1.5 million in Capital funding for FY26 and FY27 to advance the development of the Cat Cove Marine Habitat Restoration Center in Salem. Project staff assisted in drafting a vision statement associated with promoting the development and use of the Cat Cove Marine Lab into a Marine Habitat Restoration Center with a focus on implementing eelgrass, oyster, and kelp restoration. Project staff established partnerships with the MassBays Program and kelp researchers from UMASS Boston and will continue to participate in future efforts designed to further DMF's marine habitat restoration efforts.

Publications Webpage

In 2025, the Habitat Program continued to develop and maintain a Fisheries Habitat Publications webpage to provide access to white papers, standard operating procedures, and peer reviewed

publications written by staff. Topics covered include artificial reefs, climate change, eelgrass, ILF project reports, ocean planning, offshore wind, salt marshes and estuaries, and seafloor studies.

Support Activities

Staff reviewed proposals for NOAA, MIT Sea Grant, ACFHP, and performed peer review for nine academic journals and served as an editor for one paper of *Frontiers in Marine Science*. Staff represented the agency at the Northeast Association of Fish and Wildlife Agencies Conference, CERF Conference, American Fisheries Society Conference, Gulf of Maine Symposium, MassBays Comprehensive Conservation and Management Plan review, and DEP permitting workshops. Habitat Program staff represented DMF in the field for the Marine Carbon Dioxide Removal (LOC-NESS) experiment in Wilkinson Basin. Staff provided presentations to MFAC, MSOA, NEAFWA, NEERS, and the SAC. Staff also participated on thesis committees for PhD and master's candidates at UMass Boston, MIT, UMaine, and UNH. Project staff advised one UMass Amherst undergraduate intern and a New Bedford High School intern. In June, Program staff participated in DMF's inaugural Marine Quest at the Cat Cove Facility in Salem highlighting the Program's habitat restoration and enhancement efforts (Figure 16).



Figure 16. Habitat Program Staff Irisi Seto, Tessa Peixoto, and Sean Terrill manning an interactive station at DMF's Marine Quest in June.

FISHERIES BIOLOGY SECTION

Fish Biology Program

Personnel

Dr. Gary Nelson, Program Manager

Age and Growth

Scott Elzey, Project Manager

Kimberly Fine, Assistant Biologist

Christy Draghetti, Ageing Technician

Kara Duprey, Ageing Technician

Fisheries Research and Monitoring

William Hoffman, Project Manager

Michelle Heller, Assistant Biologist

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Resource Assessment

Steven Wilcox, Project Manager

Mark Symanski, Biologist

Jack Wilson, Biologist

Fish Stock Assessment

Dr. Micah Dean, Senior Biologist

Dr. Tara Dolan, Senior Biologist

Elise Koob, Senior Biologist

Overview

The objectives of the Fish Biology Program are to collect, process, and analyze biological data on recreationally and commercially important fishes needed for effective, science-based management of Massachusetts' fishery resources. Biological data collected from harvested and released fish include age structures (i.e., scales, otoliths, vertebrae), length frequencies, maturity stages, and bycatch levels. All data are used in stock assessments to determine the status of those resources. In addition, information on catch and effort of recreational anglers is collected via volunteer surveys. Special research projects are also conducted to address specific management needs. Staff also contribute to and assist with field and laboratory activities of other DMF programs. These activities are organized under five projects: Age and Growth, Fisheries Research and Monitoring, Resource Assessment, Fish Stock Assessment, and the Striped Bass.

Age and Growth Project

The Age and Growth Project is responsible for receiving, processing, and ageing samples collected by projects throughout DMF. Those ages and data are compiled by species and sent to stock assessment biologists for use in models to help inform regulations. In 2025, the Age and Growth lab processed and aged nearly 10,000 structures (Table 15).

The number of age structures processed for Atlantic cod and black sea bass increased significantly in 2025, due to a joint project with the New England Aquarium Anderson Cabot Center for Ocean Life, NOAA Fisheries, and the Nature Conservancy to collect otoliths from recreationally-caught Atlantic cod and the Division's Fisheries Research and Monitoring Project collecting otoliths from commercially-caught black sea bass for the first time in 2025. Both efforts will help to address assessment data gaps.

Table 15. The number of age structures processed and aged by species in 2025.

Species	Process
Alewife and Blueback Herring	3,447 whole otoliths extracted and aged.
American Shad	29 whole otoliths extracted and aged. 63 scales mounted and aged.
Atlantic Cod	363 otoliths sectioned and aged, first annulus measured.
Black Sea Bass	723 otoliths thin-sectioned and aged.
Bluefish	135 otoliths thin-sectioned and aged.
Haddock	43 otoliths thin-sectioned and aged.
Menhaden	246 scales cleaned, mounted, and aged. 246 otoliths aged whole. Scales sent to NOAA Fisheries for age comparison.
Rainbow Smelt	491 scales cleaned, mounted, and aged.
Scup	247 otoliths thin-sectioned and aged.
Striped Bass	1,569 scales cleaned, pressed into acetate and aged. 600 otoliths thin-sectioned and aged.
Summer Flounder	517 otoliths thin-sectioned and aged.
Tautog	228 pelvic spines cleaned, cross sectioned, and aged. 70 otoliths thin-sectioned and aged.
Weakfish	9 otoliths thin-sectioned and aged.
Winter Flounder	872 otoliths thin-sectioned and aged.

Standardization of ageing protocols across state and federal agencies is a critical component of Project activity to ensure precise and accurate results for assessment use. Annually, Project staff attend the ASMFC Quality Control and Quality Assurance Workshop. In 2025, Project staff began work with DMF stock assessment biologists to ensure Massachusetts and Rhode Island are producing precise ages for tautog due to the last tautog assessment identifying a difference in the age-at-length between the states, with Massachusetts tautog seeming to have a slower growth rate. Multiple potential causal factors were identified which will be modeled statistically to help clarify the reason for the observed difference. Additionally, Project staff collaborated with other ASMFC related entities to improve the consistency of Atlantic menhaden ageing protocols as more of the workload has shifted from the

NOAA Fisheries age and growth lab in Beaufort, North Carolina to the states given greatly increased sample sizes in recent years.

Part of the mission of the Age and Growth Project is to share our knowledge and aid other fish ageing entities. DMF's Age and Growth staff also had the opportunity to train researchers from the University of Massachusetts and the US Fish and Wildlife Service Connecticut River Fish and Wildlife Conservation Office on proper river herring aging techniques using otoliths and spawning mark identification on scales.

Fisheries Research and Monitoring Project

The Fisheries Research and Monitoring (FRM) Project is responsible for the at-sea and shore-side sampling of commercial fisheries that occur in and adjacent to Massachusetts territorial waters, as well as conducting applied fisheries research to improve the management and assessment of the Commonwealth's marine resources. These tasks are completed through collaboration with various industry, state, university, non-profit and federal organizations. The FRM Project also provides substantial field and vessel support to other Division projects and conducts fisheries data analysis and summarization for fisheries policy staff.

Commercial Fisheries Monitoring

Project staff collect data and biological samples from commercial fisheries to document and characterize fishery performance, support stock assessments and research, and address specific management questions. These data also strengthen DMF's participation on and contributions to regional fishery management councils and the ASMFC. Project staff maintain close contact with commercial industry members, stakeholders, and managers to gather and document important fisheries information outside of sampling activities.

Despite staffing limitations caused by a vacated role within the project and a state-wide hiring freeze, FRM continued to support the port sampling of commercial catches ([Table 16](#)). Species regulated through the ASMFC (menhaden, Atlantic herring, winter flounder, striped bass, and black sea bass) were prioritized and sampled in collaboration with the South Shore Recreational Fisheries Program staff. Of note, black sea bass landed in Massachusetts were made a high priority in 2025 due to under-sampling by Federal port samplers. Between July and October, 682 individual fish (from Jumbo, Large, Medium and Unclassified market categories) were sampled for length, weight, otoliths, and fin clips taken for future genetic analysis during 19 intercepts.

Table 16. Number of port sampling events, or trips, made to intercept commercial vessels or seafood dealers where information was collected in 2025.

Species	Intercepts	Number of Individuals	Number of Samples
Menhaden	24	245	245 (scales and otoliths)
Winter Flounder	20	360	53 (fin clips)
Striped Bass	12	224	148 otoliths
Black Sea Bass	19	682	328 (otoliths)
Atlantic Herring	6	456	190 (maturity observations)

In 2025, FRM continued to cultivate a state-federal partnership with NOAA Fisheries Greater Atlantic Regional Fisheries Office's (GARFO) Northeast Port Biological Sampling Program (NEPBSP) to supplement biological samples available for federal stock assessments. Annually, project staff receive sample requests of species/stock/market categories provided by Northeast Fisheries Science Center (NEFSC) Population Dynamics Branch. Working with commercial seafood dealers, and members of the commercial fishing industry, species-specific biological samples were collected. The primary ports sampled are Gloucester, Boston, New Bedford and Point Judith, Rhode Island.

In 2025, FRM and NESFC staff conducted 96 trips to nine different fish dealers, collected 4,004 individual lengths and weights and extracted 2,923 otoliths across eight species (Table 17). Efforts will be made to increase samples for select species and market categories in 2026. In addition, FRM samplers will be working with NEFSC Cooperative Research Branch to support an Atlantic halibut total length to fork length conversion study.

Table 17. Number of lengths, weights, otoliths collected across the 72 different strata in 2025.

Species	Length and Weight	Otoliths
Atlantic cod	385	289
Haddock	886	886
Pollock	500	205
Winter flounder	480	423
Yellowtail flounder	302	302
American plaice	460	350
Witch flounder	492	228
Summer flounder	514	250
Total	4,004	2,923

The FRM completed the first year of a two-year Conversion Factor Project with NEFSC Cooperative Research Branch that focuses on reevaluating conversion weights of eight groundfish species by sampling at-sea and portside. The data collected will update gutted-to-whole weight conversion factors and length-weight relationships. This project requires samples to be collected from landings tracked at high spatial resolutions and as such, staff had challenges completing sampling requests due to the division of stock areas and requested species within those stock areas.

To address these challenges, FRM initiated a pilot project called Opportunistic Sampling of Difficult to Access Groundfish Stocks (OPSAMP) in 2024. Collaborating with industry, fisheries sector managers, the Northeast Seafood Coalition, and the Conservation Law Foundation, FRM staff identified four boats that would collect samples and provided the required supplies and training on collection protocols to those participating vessels. Funding, provided by Conservation Law Foundation, was given to the vessels to support this effort with the intention of developing a system that could be applied by other port sampling programs.

FRM staff participated in commercial sea sampling of the lobster and horseshoe crab fisheries. For the lobster fishery, 35 trips were made on vessels harvesting in Cape Ann, Beverly/Salem and Boston waters. Three trips were made to sample horseshoe crabs caught in Massachusetts waters to record

bycatch and animal condition scores. A summary of 2025 commercial sampling efforts is covered in the [Invertebrate Fisheries Program section](#).

Field work and final meetings for the Boston Harbor Winter Flounder Beam Trawl Survey have concluded. Project staff and participants began working with the Winter Flounder Research Track Assessment Group; however, due to federal government funding uncertainty this working group has been paused indefinitely. Once reconvened, beam trawl survey data will be evaluated on how it can best be used to support future management track assessments.

Preliminary results from the Boston Harbor work indicated that estuaries may not be as important to winter flounder spawning as previously believed. Through FRM port sampling efforts, biologists were able to determine when winter flounder spawn; however, there is still uncertainty about where winter flounder spawn. Understanding the life history of winter flounder is not only important for stock assessments and management but also impacts time-of-year restrictions used to manage dredging and development activities in Massachusetts coastal waters. As a result, a new initiative began in 2025 to examine two estuaries on Cape Cod and evaluate the relative importance as spawning habitat for winter flounder. Five sampling trips were conducted in Sesuit Harbor, Pamet Harbor, and on Billingsgate Shoal using a 10-meter otter trawl and DMF's research vessel, the *R/V Alosa*. Surveys will continue in 2026 starting mid-February and will run through May.

In addition to trawling in Cape Cod Bay and associated estuaries, FRM biologists continue to track tagged winter flounder on our acoustic receiver array. To pinpoint potential offshore spawning areas, FRM biologists placed a receiver array northwest of Stellwagen Bank in an area of high winter flounder density during the spawning season based on analysis of commercial catch and the industry-based trawl survey data.

FRM has continued to maintain an array of acoustic receivers throughout Massachusetts waters. In 2025, these receivers recorded over 450,000 detections of 760 tagged individuals. Many of these were detections of fish tagged by DMF, allowing researchers to understand movement patterns through Massachusetts waters. These receivers also collect detections for fish tagged by other research groups, which FRM shared through participation in a cooperative tagging network.

FRM staff continued vessel support to other DMF projects and external collaborations and included multiple sea days aboard *R/V Michael Craven* and *R/V Alosa*. These efforts included collecting water quality samples for the Shellfish Program, supporting dive operations for the Habitat Program, setting and hauling acoustic receivers dedicated to white sharks, and supporting Massachusetts Environmental Police removal of non-compliant commercial fishing gear as well as supporting on-the-water lobster fishery enforcement training.

Fisheries Research Projects

DMF continued its commitment to applied fisheries research to improve the management and assessment of the Commonwealth's marine resources through various collaborations with universities, non-profit, state, and federal organizations.

Atlantic Herring Genomics

Atlantic herring in the US are assessed as a single unit, yet fishery managers divide the annual catch limit (ACL) among four sub-areas to prevent overfishing of individual spawning components. The distribution of total ACL among these areas is based on coarse estimates of the size of each spawning component from the 1990s and informed predictions on the seasonal mixing rate between them. The fishery management plan acknowledges that little is known about US herring population structure and migration patterns, and that these have likely changed over time. Regardless, the area-based sub-ACL percentages have remained static since the system was created. DMF was recently awarded a NOAA Saltonstall-Kennedy Grant to investigate the population structure of Atlantic herring using genomics. We have partnered with knowledgeable commercial fishing captains to collect samples from each of the known herring spawning grounds in US waters. Using low-coverage whole-genome sequencing, we will evaluate the genomic population structure among these spawning groups. A panel of single nucleotide polymorphisms (SNPs) will be identified that can reliably discriminate between the sub-populations. This genomic tool would allow fishery managers to set area-specific quotas that prevent unsustainable levels of fishing on each spawning component, thereby augmenting the productivity and resilience of the overall herring population and fishery. Collection of tissue samples from spawning fish began in 2025 and will continue into 2026. DNA sequencing and genomic analyses is expected to be completed by early 2027.

Optimizing Yield of the Massachusetts Groundfishery

DMF collaborated with the Northeast Seafood Coalition to acquire an Exempted Fishing Permit (EFP) from NOAA Fisheries to allow a limited number of Massachusetts bottom trawl vessels access to seasonal cod protection areas (i.e., “rolling closures”) designed to protect aggregations of spawning cod. DMF scientists evaluated extensive trawl survey datasets to identify specific narrow times and areas where spawning cod are generally absent, yet under-utilized groundfish species like haddock and flounders are abundant. Strict protocols were put in place requiring vessels to bring any cod catch back to port in whole condition, so that awaiting DMF scientists could determine their spawning status. Conservative triggers were established that would immediately shut down access to these areas if spawning cod were encountered.

This program began in May of 2025 with two access areas ([Figure 17](#))—one in Ipswich Bay (Area A) and the other between Jeffreys Ledge and Stellwagen Bank (Area B). Three vessels took advantage of this opportunity in 2025, one of which encountered a small amount of spawning cod, closing access to these areas for the remainder of the season. Although only in effect for a short period of time in its first year, this program demonstrated the effectiveness of the sampling and communication protocols, ensuring continued protection of spawning cod. The EFP access areas and seasons are being modified for 2026 to further prevent interaction with spawning cod, while still providing additional opportunities for Massachusetts vessels to maximize their yield of underutilized species.

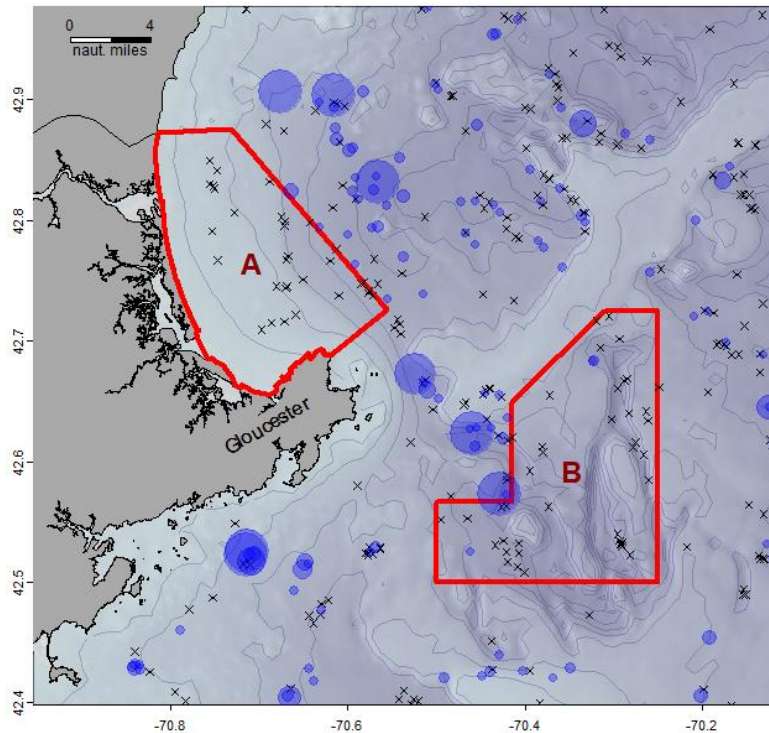


Figure 17. Map of the two EFP access areas (A and B; thick red lines) for May–June 2025. Bathymetry is shown via background shading and thin contour lines, with darker colors representing deeper depths. Bubbles represent survey tows where spawning cod were caught, with the size of bubbles proportional to the amount caught. The “x” symbols represent survey tows where no spawning cod were caught.

Atlantic Herring Research Track Stock Assessment

A major assessment overhaul for the US Atlantic herring stock was completed in 2025. This represents the first time that herring have been assessed using the new Woods Hole Assessment Model, a modern state-space modeling framework that can account for environmental effects, as well as observation and process errors. Throughout the assessment, significant efforts have been made to incorporate environmental influences on the stock, including: temperature effects, prey abundance (copepods), and predator abundance (haddock). Staff served on the assessment workgroup and led the effort to describe the impact of haddock predation on herring eggs (Figure 18) and co-led the development of an index of juvenile abundance based on long-term monitoring of herring in sea bird diets. The assessment passed peer review in March and an article describing the sea bird diet analyses was published in the journal *Fisheries Research* in December.

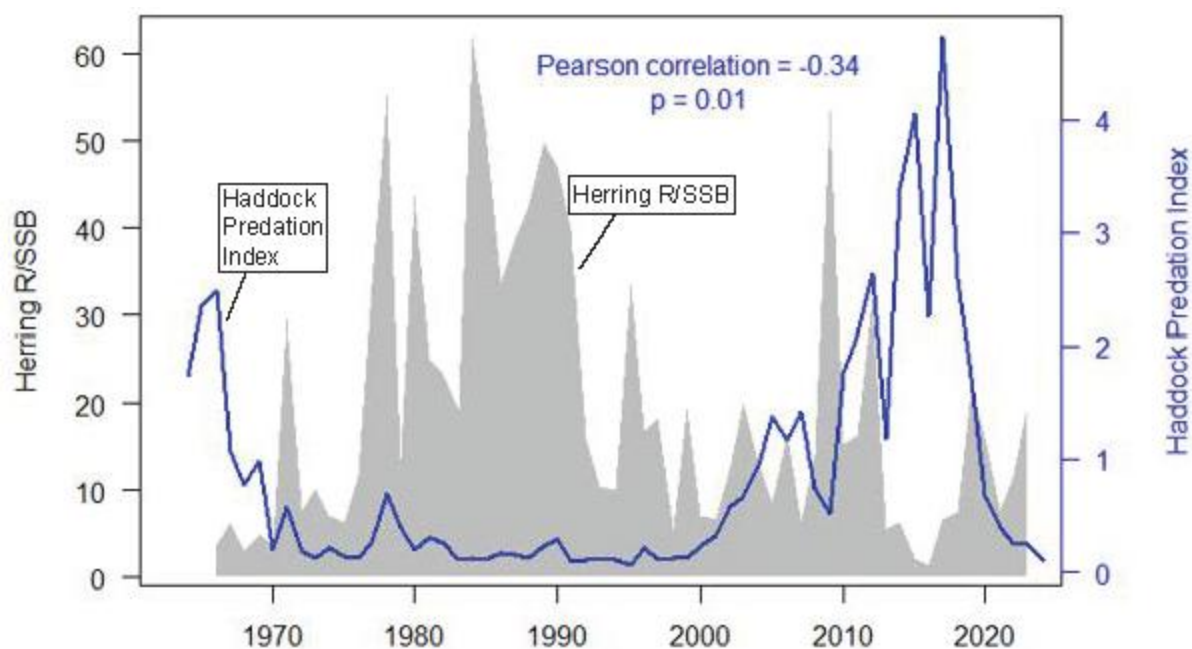


Figure 18. An index of haddock predation on herring eggs (solid blue line; right axis) developed for the research track stock assessment. The index is negatively correlated with the relative productivity of the herring stock (i.e., recruitment/spawning stock biomass; solid gray region; left axis).

Ecosystem Approach to Menhaden Management

Atlantic menhaden support the largest fishery by volume on the US East Coast, while also playing an important role as a forage species. Managers' and stakeholders' increasing concerns about the impact of menhaden harvest on ecosystem processes led to an evolution in the assessment and management of this species from a purely single-species approach to an ecosystem approach. In 2020, the ASMFC formally adopted an ecological modeling framework as a tool to set reference points and harvest limits for Atlantic menhaden that considers their role as a forage fish, notably for striped bass. This modeling framework accounts for major menhaden predators (striped bass, bluefish, dogfish, weakfish) as well as alternative prey species for these predators (anchovies, herring). A benchmark re-assessment of this process was completed in late 2025. Staff have played a significant role in the development of this approach over the past 15 years. During this assessment cycle, staff led efforts to account for bluefin tuna as a menhaden predator, and on the development of a species distribution model to better represent the spatio-temporal patterns in anchovy abundance.

Black Sea Bass Research

Black sea bass, long a staple of mid-Atlantic recreational fisheries, have become increasingly prominent in Massachusetts waters over the last few decades leading to heightened fishing effort. Fish typically arrive in Massachusetts waters mid-spring, where they aggregate to feed and spawn. Several spawning aggregations in Massachusetts, particularly within Buzzards Bay, are well-known and attract anglers, and new spawning locations continue to be discovered; however, the timing and location of feeding and other aggregations is not well-known. Contributing to further uncertainty, black sea bass are increasingly found outside their historical range. Over the last decade or so, black sea bass have been

found by anglers and trap fisheries with increased frequency north of Cape Cod in the Gulf of Maine. While concentrations in Cape Cod Bay, Boston Harbor, and farther north remain significantly lower than south of Cape Cod, greater biomass in the Gulf of Maine may increase potential interactions with juvenile lobster, a key commercial species in Massachusetts waters, or expand opportunities for recreational and commercial fisheries in northern regions of the state.

To better understand these potential impacts, DMF initiated a black sea bass movement and migration study in 2025, tagging 66 fish in Buzzards Bay near Cleveland Ledge in May with surgically-implanted acoustic tags. DMF maintains receivers throughout state waters to monitor acoustic tags, including an array in Buzzards Bay. These fish will help DMF further understand not only when and where black sea bass spawn in Buzzards Bay but how they migrate north into the Gulf of Maine. All 66 tagged fish were detected on the Buzzards Bay receivers. Many fish remained near their immediate release area for several weeks; however, some fish did move throughout the array before exiting (Figure 19). By July 4, 90% of the fish had left the array. While detection records are still being collected (and will be for several years), collaborating researchers have already shared detections of tagged fish in Rhode Island, Nantucket Sound, Vineyard South, and near Block Island. Looking ahead to 2026, DMF plans to tag more fish in Buzzards Bay, as well as north of Cape Cod to better understand how black sea bass are expanding their range, describe their spawning behavior, and characterize release mortality.

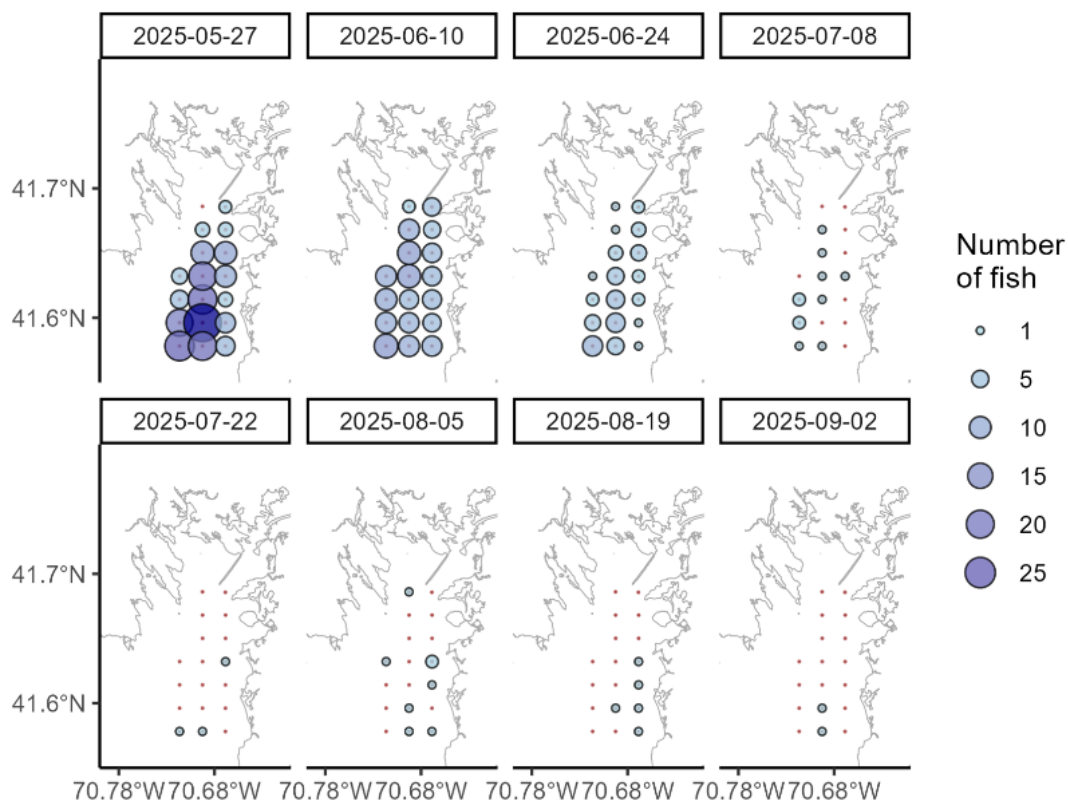


Figure 19. Presence of tagged black sea bass in Buzzards Bay, May–September 2025. Red points are the locations of receivers anchored to the seafloor. The size and shade of blue bubbles represent the number of individual fish detected at each receiver over a two-week period.

Resource Assessment Project

2025 Trawl Surveys

The 47th annual spring and fall surveys were successfully completed aboard NOAA's *R/V Gloria Michelle* in 2025. The spring survey completed 100 stations during May 5–21 and the fall survey completed 100 stations during September 2–18 (Figure 20). Both surveys provided weights, counts, and measurements for over 100 different species of fish and invertebrates. The collections of over 2,400 otoliths and over 3,000 sex and maturity observations from Atlantic cod, haddock, summer flounder, winter flounder, yellowtail flounder, black sea bass, scup, tautog, weakfish, American lobster, and Jonah crab aid cooperative fisheries assessments.

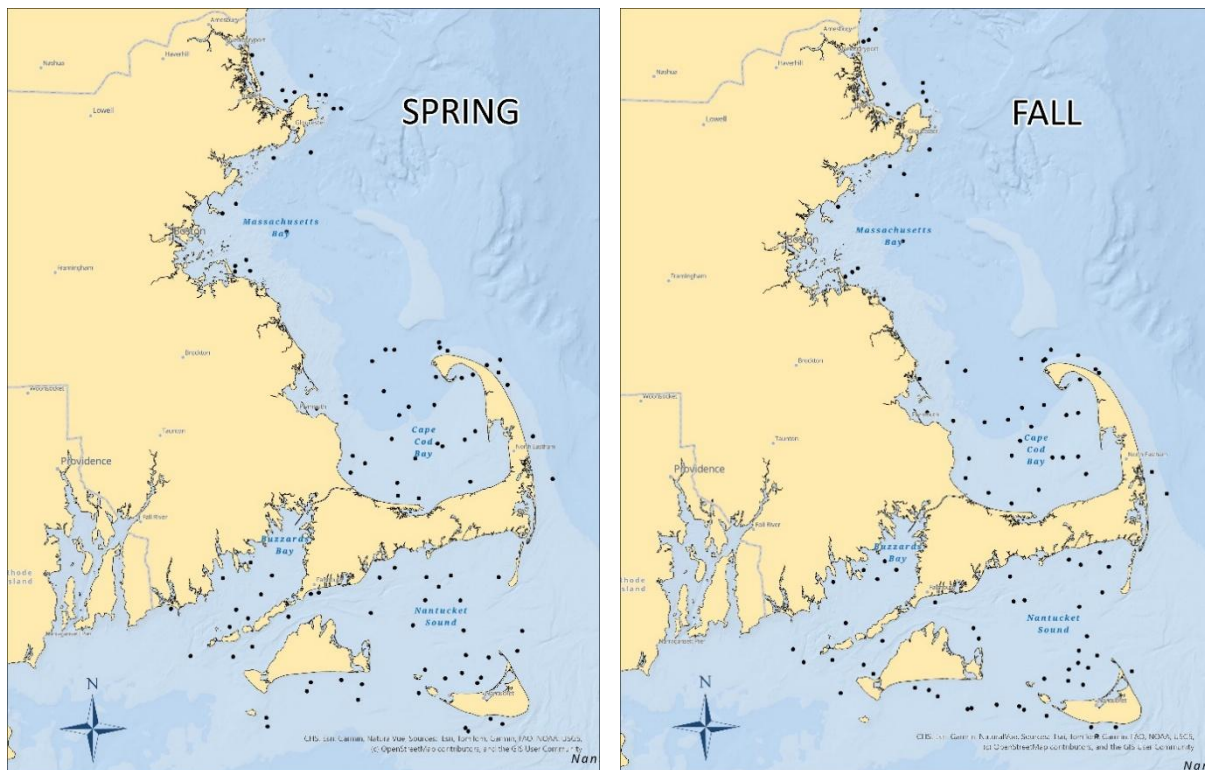


Figure 20. Completed 2025 spring (left) and fall (right) trawl survey station locations, shown as dots on the map.

Many different volunteer scientists assisted in making both trawl surveys successful this year (Figure 21). Thirty-two DMF employees participated in the spring survey as part of the scientific party along with one biologist from MassDEP, one biologist from Responsible Offshore Science Alliance, and one biologist with The Nature Conservancy. Thirty-two DMF employees participated in the fall survey, along with three biologists from NOAA. Full survey staffing allowed for increased otolith extraction and collection as well as the documentation of additional sex and maturity observations.

There were several notable trends or new records in the spring bottom trawl survey. A single tow with four clearnose skate set a record high for abundance and biomass. Summer flounder set a record for abundance, had the fourth highest biomass, and were observed at the highest proportion of stations in

the time series. Atlantic cod had the third highest abundance in the time series driven by YOY fish. Other species trends followed those of recent years. Scup dominated the catches south of Cape Cod and accounted for 29% of all catch by number and 51% of all biomass throughout the survey. Northern sea robins were the second highest biomass, though almost all of them were from one stratum 18 tow south of Nantucket. North of Cape Cod had moderate catches of winter flounder, longhorn sculpin, yellowtail flounder, and YOY Atlantic cod.

Notable survey records, first occurrences, and trends were recorded for the fall bottom trawl survey. An Atlantic sturgeon and five Atlantic croaker were observed for the first time. Individual station biomass records occurred for rougtail stingray, smallmouth flounder, and sea raven at different stations. Summer flounder set a new fall record for abundance, driven by new records in four different strata. Longhorn sculpin had the second highest abundance and biomass to date. Winter flounder abundance was the second highest on record, driven by catches in the Gulf of Maine. General catch trends followed a similar pattern to recent surveys. Scup dominated the catches south of Cape Cod and accounted for 69% of all catch by number and 18% of all biomass. Scup, longfin squid, butterfish, and black sea bass made up much of the total catch for stations south of Cape Cod. North and east of Cape Cod had moderate catches of winter flounder, red hake, silver hake, longhorn sculpin, little skate, and winter skate.

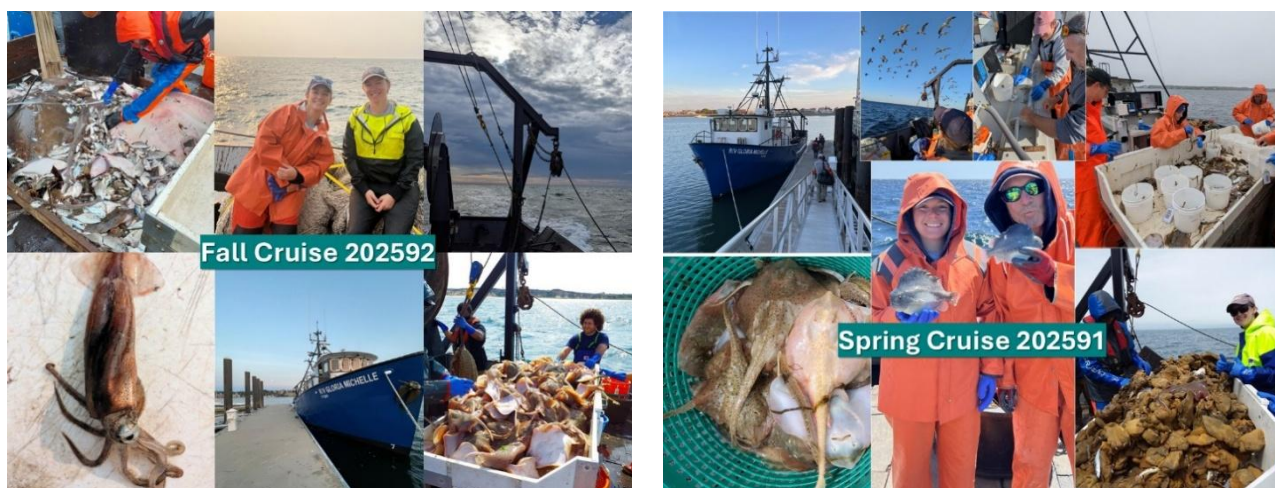


Figure 21. Photo collage from the 2025 spring (left) and fall (right) trawl surveys.

2025 Seine Survey

The 50th Nantucket Sound Estuarine Winter Flounder YOY Seine Survey was completed from June 9–July 3. This survey provides an index of abundance for YOY winter flounder in the Southern New England/Mid-Atlantic stock. All commercially and recreationally important finfish and invertebrates were enumerated, and presence/absence for all other species recorded. Forty-two species were encountered in total. The 2025 stratified mean index for YOY winter flounder abundance was below the time series median. The age 1+ winter flounder index was below the time series median for the 17th consecutive year. The 2025 stratified mean index for YOY summer flounder for all sites combined increased from 2024, was above the time series median, and became the second highest for the time series. The age 1+ summer flounder index was the second highest for the time series, down from the 2024 record high.

Fish Stock Assessment

Staff represented DMF on ASMFC and MAFMC technical committees for bluefish, black sea bass, scup, summer flounder, and winter flounder. In addition, staff served on the monkfish plan development team, the groundfish plan development team (including two subgroups: the Cod Transition and ABC Control Rules), the NEFSC winter and yellowtail flounder research track assessment, the Atlantic herring plan development team and technical committees, and ASMFC's striped bass technical and stock assessment committees, menhaden technical committee, multispecies committee, and age and growth committees.

Staff served as biologists on the DMF Resource Assessment survey project, helped collect striped bass commercial samples, developed protocols for commercial striped bass otolith sampling, developed several proposals related to black sea bass tagging and genetics, completed ASMFC compliance reports, served on master and doctoral thesis committees for University of Massachusetts-Amherst, State University of New York-Stony Brook, and Virginia Tech students, and reviewed papers for peer-reviewed academic journals. Staff also gave lectures at university and public fora.

Striped Bass Research Project

Atlantic striped bass are the backbone of the Massachusetts recreational fishing industry and provide enjoyment to hundreds of thousands of recreational anglers each year. The Commonwealth is also home to one of the largest commercial fisheries for striped bass in the country. Accordingly, this important resource is given a high level of attention by conducting many special investigations and monitoring programs designed to support the regional management process.

Striped Bass Release Mortality

Due to regulations and conservation-minded anglers, most striped bass are released back to the water after being caught. Even though most of these fish survive, the popularity of striped bass fishing makes post-release mortality a significant component of fishing mortality. Since 2020, DMF scientists have been investigating the underlying causes of striped bass release mortality and working towards estimating a fishery-wide release mortality rate for use in stock assessment and fishery management. Three separate yet connected studies have been conducted over the past six years: acoustic telemetry, citizen science, and angler methods survey.

A two-year telemetry experiment was conducted between 2020 and 2021 where 349 striped bass were tagged with accelerometer transmitters to monitor their survival post-release ([Figure 22](#)). An array of 39 acoustic receivers encompassing the study area was used to track tagged fish for four months (in each year). Bass were caught using natural baits on four different hook models, and prior to release each fish was assigned a "condition score" that accounted for its level of injury and vitality. We found no significant difference in mortality rates between any of the circle hook models and the conventional "J"-hook used as a control. However, we did find that the condition score was a powerful predictor of release mortality. A scientific article describing this telemetry study was published in the journal *Marine and Coastal Fisheries* in 2024.

During the summers of 2023 and 2024, we partnered with volunteer anglers who were willing to collect data while fishing for striped bass to help us understand what factors influence release condition. A total of 362 anglers participated in the citizen science program, providing valuable data on over 8,000 striped bass. A machine learning model was developed to disentangle the effects of many correlated and interacting variables. We found that the most influential predictor of release condition was handling time, with larger fish having the longest handling times and poorest release conditions. Angler tackle choices were also important, with baited hooks and double-treble-hook lures causing the greatest amount of injury.

In 2025, invitations to an electronic survey were sent to a 5% random sample of the registered saltwater anglers in the top six striped bass fishing states along the Atlantic coast. Survey invitations were also sent to 100% of the permitted for-hire captains in these states. Respondents were asked to estimate the number of striped bass they released in the prior year and, using percentages, to break those releases into different bait and tackle categories. Nearly 5,000 anglers responded to the angler methods survey, providing a comprehensive description of tackle usage in the striped bass fishery. As expected, the most avid and experienced anglers accounted for a majority of the released bass. We found that natural bait and fly fishing accounted for a larger fraction of releases in the northern portion of the stock (New York to Maine) than farther south. Approximately 10% of released bass were caught on lures equipped with multiple treble hooks. Dead baits (e.g., squid and clams), live menhaden and eels were popular bait choices coastwide, but live mackerel was a prominent bait only in northern New England (Maine, New Hampshire, and Massachusetts).

Results from each of these three phases of research are being combined to create an estimate of release mortality rate that is representative of the entire coastwide fishery. Preliminary results suggest that on average, the release mortality rate of striped bass is 4.2%, but significantly lower for small fish and higher for large fish. Age-specific estimates of release mortality from this research are being incorporated into an ongoing benchmark stock assessment, and a scientific journal article describing this work was under preparation in 2025.



Figure 22. Senior biologist Bill Hoffman releases a striped bass affixed with an accelerometer tag.

Migration and Residence Study

During 2015–2019 staff conducted a study to examine how mortality of striped bass is influenced by habitat selection and migratory routes to and from Massachusetts waters. The design combined analysis of fish tagged with acoustic transmitters and estimates of population composition of summering aggregations derived from genetics. A 2021 grant from ACCSP funded the analysis of 5,000 DNA samples collected from Massachusetts recreational and commercial fisheries. In late 2023, DMF received the genetic data for the fish tagged in the acoustic telemetry study and the 5,000 fish samples. In 2025, DMF submitted a peer review journal detailing the abilities of a 233 Single Nucleotide Polymorphism genomic panel, as determined through simulation and empirical investigation. The panel produces highly accurate and precise estimates of stock composition for samples of 200-300 individuals and provides estimates of catch composition in the Massachusetts striped bass fishery for the year 2018, which was dominated by catch from the Delaware-Chesapeake stock (Figure 23).

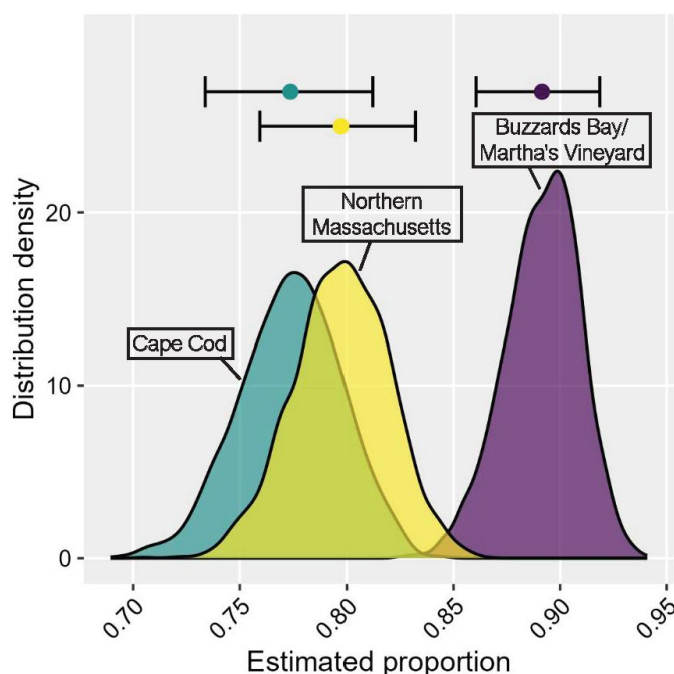


Figure 23. Comparison of the distribution of estimated proportions for the Delaware-Chesapeake reporting unit across three areas of collection in Massachusetts (teal/left = Cape Cod, yellow/middle = Northern MA, purple/right = Buzzards Bay/Martha's Vineyard) from a mixed-stock fishery in 2018. Mean proportion (closed circle) and 90% CI (horizontal error bar) are provided above the distributions.

Coastwide Tagging Study

DMF has participated in the Striped Bass Cooperative State-Federal Coastwide Tagging Study since 1991. The study's primary objective has been to develop an integrated database of tag releases and recoveries that will provide current information related to striped bass mortality and migration rates. In 2025, staff tagged 317 striped bass during nine charter trips. These fish ranged in size from 24 to 39 inches and were collected during September–October mainly southeast of Cape Cod off Monomoy.

Market Sampling

Monitoring of the age, size, and sex composition of the commercial harvest of striped bass is indispensable for identifying effective management and for substantiating estimates of mortality derived from fishery-independent sources. The objective of this project is to generate a time series database of biological characteristics of Massachusetts's commercial striped bass landings. Length, weight, and age structures (scales and otoliths) are collected during market sampling trips, in accordance with ASMFC target sampling levels. During 2025, staff conducted 16 market sampling trips and collected length, weight, and age structures from 353 striped bass.

Volunteer Recreational Angler Data Collection Program

The Sportfish Angler Data Collection Team program was implemented in 2002 to generate a time series database of biological characteristics of Massachusetts' striped bass recreational catch. Black sea bass, summer flounder, and scup were added in 2013, and bluefish in 2021. During 2025, 55 participating anglers returned 1,101 paired length/age samples from striped bass (Figure 24). Anglers also provided samples from 1,606 black sea bass, 136 summer flounder, 665 scup, and 542 bluefish. The striped bass carcass collection program also continued; volunteer anglers donated 397 carcasses.

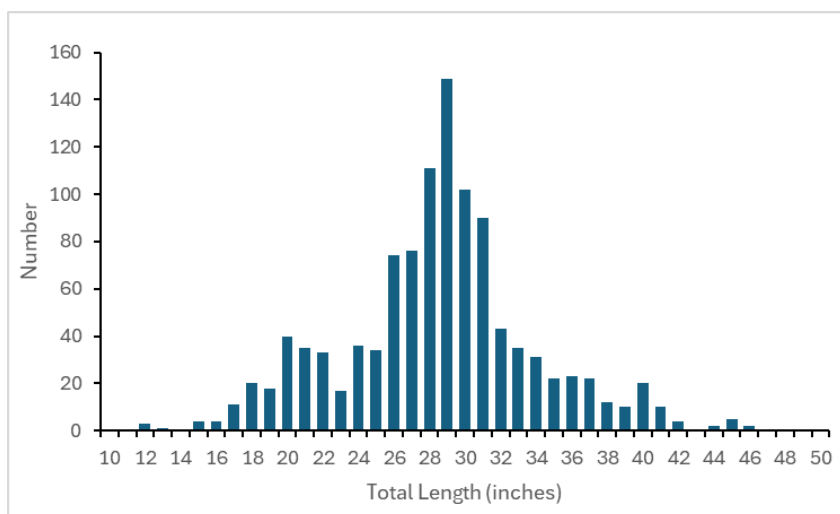


Figure 24. Size composition of striped bass measured by volunteer anglers in 2025.

Striped Bass Stock Assessment

Staff conducted simulation analyses for the ASMFC Striped Bass Technical Committee exploring the impacts of regulation changes on the recreational and commercial fisheries and began planning for the benchmark stock assessment scheduled to start in 2026. In addition, staff began a simulation study to examine methods that can be used to convert scale ages to otolith ages when sample sizes are low.

Other Activities

Program staff provided technical expertise to other governmental organizations, private groups, and individuals with concerns about marine fisheries, served on technical and advisory committees to support management efforts of important marine species, and gave several presentations to other governmental organizations, private groups, and at science-related conferences.

Invertebrate Fisheries Program

Personnel

Dr. Tracy Pugh, Program Manager
Derek Perry, Senior Marine Fisheries Biologist
Jillian Swinford, Marine Fisheries Biologist
Jacob Dorothy, Assistant Marine Fisheries Biologist
Laura Tomlinson, Assistant Marine Fisheries Biologist
Miranda Eisenman, Seasonal Fisheries Technician (May–November)

Overview

The Invertebrate Fisheries Program is responsible for conducting fishery-dependent and fishery-independent surveys and applied research projects to characterize the populations of, and the fisheries for, American lobster, horseshoe crab, Jonah crab, northern shrimp, and whelk. Program staff also regularly engage with managers to provide science-based advice to inform management of these valuable marine species.

American Lobster Research and Monitoring

American lobster supports the most commercially valuable single-species fishery conducted within Massachusetts state waters. DMF has a comprehensive monitoring program that tracks various life history stages, along with an at-sea sampling program to characterize the commercial catch. Applied research focused on this species aims to understand important vital rates, reproductive capacity, and environmental impacts.

Commercial Lobster Trap Sampling

DMF has worked cooperatively with Massachusetts commercial lobster trap fishermen to sample their catch since 1981. In 2025, the 45th year of operation, a total of 66 trips were conducted by staff members of the Invertebrate Fisheries Program (16 trips), the Protected Species Program (15 trips), and the Fisheries Research and Monitoring Project (35 trips), during which 37,761 lobsters were sampled from 15,956 trap hauls. Data from the commercial trap sampling program are used to characterize the sex ratio and size distribution of the commercial catch, as well as to track conservation discards (including sublegal-sized lobsters, egg-bearing females, and v-notched females). This effort also includes shell disease monitoring, which tracks the prevalence of shell disease symptoms on lobsters in Massachusetts coastal waters.

Staff continued to conduct bycatch sampling during the commercial lobster trap sampling program to better characterize the incidental catch of several commercially important finfish species in lobster gear. For each sampled species (e.g., black sea bass, tautog, scup, cod, haddock, various flounders), samplers collect size and disposition information (including presence/absence of barotrauma wounds).

Ventless Lobster Trap Survey

This survey is a cooperative effort between DMF and the Massachusetts lobster fishing industry to monitor the abundance of lobster and several bycatch species and is funded primarily by commercial and recreational lobster permit fees. Data from the Ventless Trap Survey are used to generate indices of lobster relative abundance, to monitor various population characteristics (such as sex ratio, abundance of egg-bearing females, and disease), and to examine spatial patterns in abundance. The ASMFC Lobster Technical Committee continually monitors the results of the various states' ventless trap surveys as indicators of stock status in both the Gulf of Maine (GOM)/Georges Bank (GB) and Southern New England (SNE) stocks, and data are provided to the ASMFC Lobster Stock Assessment.

The 2025 Ventless Trap Survey took place from June through September in the GOM survey area, and from June through August in SNE, with a total of six contracted vessels. Program staff completed a total of 43 sea days, during which 8,682 lobsters were sampled from 2,834 trap hauls in the northern survey area and 473 lobsters were sampled from 282 trap hauls in the southern survey area (Figure 25).



Figure 25. A ventless trap containing lobster catch.

Additional biological sampling of bycatch species was continued in 2025, which increases the available data on commercially important crab and finfish species. In both survey areas, samplers collected size and sex for *Cancer* crabs (Jonah and rock crabs), and size information for various finfish species. Additionally in the southern survey area, staff collected size information for whelk, and size information and age structures for black sea bass and tautog, which were analyzed by the DMF Age and Growth Project. Staff are developing a Technical Report summarizing the bycatch data and the catch characteristics for several of the most common and commercially important bycatch species.

Annually, significant time is dedicated to maintenance of the DMF-owned gear needed to conduct the survey. Over 600 traps and 6+ miles of groundline must be checked, repaired, and standardized each year. To minimize data loss, spare traps and groundlines must be ready to replace any survey gear that is lost or damaged throughout the season. In addition to the gear maintenance, a total of 12 days each year are dedicated to trap delivery and retrieval to and from participating captains. Finally, all gear needs to comply with current vertical line configuration and marking standards which reduce

entanglement risk for protected species. DMF continues to provide the necessary vertical lines and marking materials for the survey gear to participating captains to ensure compliance.

Annual Early-Benthic-Phase Lobster Suction Sampling

Project staff completed the 31st year of the Early Benthic-Phase Lobster Suction Sampling program in 2025. The survey tracks year-class strength of newly settled post-larval American lobsters (YOY) and delineates coastal habitat important to the settlement of these juveniles. Project staff conducted the SCUBA-based survey over eight field days in August, September, and October, sampling 16 coastal sites spanning Cape Ann to Buzzards Bay. Two new sites added to the Cape Ann region in 2021, Hodgkins Cove and Brace Cove, have not yet been incorporated into the time series due to the limited years (five) they've been sampled. Average density of YOY lobster was at or below time series averages for each region (Table 18). No YOY lobsters were observed in Buzzards Bay, Boston Harbor, or the historical Cape Ann sites. The low number of YOY in the Cape Ann area was unusual, so an additional day of sampling was conducted in this region in late October to see if there was a later than normal settlement period, but no YOY lobsters were observed during the second trip either.

Data from this survey are contributed annually to the American Lobster Settlement Index, an international research collaborative that compiles data and tracks changes in the recruitment of American lobsters in US and Canadian waters. Staff represented DMF on the newly formed Governing Board of this collaborative. These data are also used in the ASMFC Lobster Stock Assessment as an abundance indicator.

Table 18. Comparison of 2025 Young of Year (YOY) lobster densities to time series averages, by region. Lobster densities are defined as number of lobsters per meter squared.

Region	Number of Years Sampled	2025 YOY Average Density	Time Series Average Density
Cape Ann	16	0.00	0.38
Beverly/Salem	30	0.17	0.53
Boston Harbor	29	0.00	0.20
South Shore	14	0.08	0.08
Buzzards Bay	31	0.00	0.07

Assessment and Management Support

Staff served as Chair for the ASMFC American Lobster Technical Committee and the 2025 ASMFC American Lobster Benchmark Stock Assessment. Significant work was performed finalizing analyses and preparing the assessment report, culminating with the Peer Review Workshop in early September. Staff, as Chair, then presented the assessment to the Lobster Management Board in October. Additional work supported actions related to Addendum XXVII and its repeal in Addendum XXXII, and coordination and attendance at Lobster Conservation Management Team Area 3 meeting.

Applied Research

Staff continued work with the Lobster Foundation of Massachusetts' Cape Cod Bay Study Fleet to monitor temperature and dissolved oxygen (DO) conditions in Cape Cod Bay. DMF covered the cost of annual maintenance on the Fleet's monitoring equipment, and the Fleet participants deployed 25 sensors to monitor conditions during July–November 2025. Staff monitored the Fleet's incoming data, and continued work with DFG to improve GIS tools for monitoring, summarizing, and sharing data. The data from the [Study Fleet are publicly accessible online](#). The website displays an interactive map of existing and recent DO and temperature conditions, and now includes downloadable annual datafiles.

Program staff maintain several external collaborative relationships and currently are either actively involved with or acting as an advisor to projects with Center for Coastal Studies (lobster settlement), Gloucester Marine Genomics Institute (regional connectivity), and Maine Department of Marine Resources (molting and growth). Staff were co-authors on a publication led by researchers from Bigelow Laboratory for Ocean Sciences on lobster shell disease and molt stage.

Outreach and Other Activities

Program staff attended the annual Massachusetts Lobstermen's Association Trade Show in Hyannis, presenting information during seminars and interacting with industry members at the DMF booth and on the trade show floor. Staff participated in the 2025 US/Canada Lobster Town Meeting (Bar Harbor, Maine), an annual event that brings industry, researchers, and managers from both countries together to discuss topics of mutual interest. Staff also served on the planning committee for the 2025 event and the 2026 event. This event is hosted by the Lobster Institute, based at the University of Maine. Staff served on the Advisory Board for the Lobster Institute. Program staff presented two talks and a poster at the North American Lobster Science Symposium in Orono, Maine. Staff took on co-editorship of The Lobster Newsletter, an international publication that fosters communication between people interested in various species of lobsters around the world. Staff responded to several media requests relative to ongoing dissolved oxygen monitoring work and a low dissolved oxygen advisory issued in fall of 2025. Staff participated in development and presentation of a lobster v-notching training module for MEP. Staff also developed and recorded a training presentation on lobster biology, management, and regulations for the Massachusetts Shellfish Officers Association.

Horseshoe Crab Monitoring

Fisheries-Independent Surveys

DMF and numerous volunteer organizations conducted spawning beach surveys at 16 beaches along the South Coast, Cape Cod, and the islands in 2025. Surveys were conducted at high tide two days prior, the day of, and two days after the new and full moons from May to the end of June. DMF staffed 24 surveys at Swift's Beach in Wareham, seven at Bass River, and 20 at Stage Harbor, and analyzed data from all 16 survey beaches. The density of female crabs observed in 2025 was above time series medians for 71% of surveys in 2025 ([Table 19](#)). 90% of survey indices have an increasing trend over the last 10 years, and 71% are increasing over the last 15 years.

Table 19. Summary of the 2025 Massachusetts Horseshoe Crab Spawning Beach Survey. Survey beaches are grouped by region with day and night surveys treated independently for beaches that conduct surveys at both time periods. A Mann-Kendall test was used to determine whether each survey had a positive or negative trend and whether those trends were statistically significant. Those with a positive trend are shaded green; those with a negative trend are shaded red. Significant trends are specified in the table. N/A is shown for surveys with insufficient data (e.g., not surveyed long enough for trend analysis or missing data).

Region	Beach (Town)	Time of Day	2025 vs Median	15-year Trend	10-year Trend
Cape Cod Bay	Duxbury (Duxbury)	Day	Above	Negative	Negative
Cape Cod Bay	Duxbury (Duxbury)	Night	Above	Negative	Positive
Cape Cod Bay	Long Beach (Plymouth)	Day	Equal	N/A	N/A
Cape Cod Bay	Long Beach (Plymouth)	Night	Equal	N/A	N/A
Cape Cod Bay	Millway (Barnstable)	Day	Below	Positive	Positive
Cape Cod Bay	Millway (Barnstable)	Night	Above	Positive (Significant)	Positive (Significant)
Cape Cod Bay	Long Pasture (Barnstable)	Day	Above	Positive	Positive (Significant)
Cape Cod Bay	Sanctuary Beach (Wellfleet)	Day	Below	Negative	Positive
Cape Cod Bay	Indian Neck (Wellfleet)	Day	Above	Positive	Positive
Cape Cod Bay	Indian Neck (Wellfleet)	Night	Below	Positive	Positive
Cape Cod Bay	Great Island (Wellfleet)	Day	Above	Positive	Positive
Outer Cape Cod	Priscillas Landing (Orleans)	Day	Above	Positive (Significant)	Positive (Significant)
Outer Cape Cod	Marsh 2-3 (Orleans)	Day	Above	N/A	Positive (Significant)
Outer Cape Cod	Erica's Beach (Orleans)	Day	Above	Positive	Positive
Nantucket Sound	Stage Harbor (Chatham)	Day	N/A	N/A	N/A
Nantucket Sound	Stage Harbor (Chatham)	Night	N/A	N/A	N/A
Nantucket Sound	Bass River (Dennis)	Day	Above	N/A	Positive
Nantucket Sound	Bass River (Dennis)	Night	Above	N/A	Positive
Nantucket Sound	Monomoy (Nantucket)	Day	Above	Positive	Positive
Nantucket Sound	Monomoy (Nantucket)	Night	Above	Positive	Positive
Nantucket Sound	Warrens Landing (Nantucket)	Day	Below	Positive (Significant)	Positive
Nantucket Sound	Warrens Landing (Nantucket)	Night	Above	Positive (Significant)	Positive (Significant)
Nantucket Sound	Tashmoo (Tisbury)	Day	Above	N/A	Positive
Nantucket Sound	Tashmoo (Tisbury)	Night	Above	N/A	N/A
Buzzards Bay	Swifts Beach (Wareham)	Day	Above	Negative	Positive
Buzzards Bay	Swifts Beach (Wareham)	Night	Below	Negative (Significant)	Negative

Commercial Fishery Sampling

DMF has monitored the commercial bait and biomedical harvests of horseshoe crab in accordance with the interstate FMP since 2000, collecting prosomal width measurements during market sampling trips. Data collection expanded to include source information in 2008 (i.e., harvest location, harvest method, sampling location, and whether a crab was harvested for bait or biomedical). DMF greatly increased sampling of the biomedical fishery starting in 2022 at the request of the public and fishery participants, and expanded sampling in 2023 to include at-sea biomedical collection trips, in-water holding systems (e.g., pens), and biomedical release trips (crabs collected under the authority of a biomedical horseshoe crab permit must be returned to the area they were collected).

Forty-eight horseshoe crab sampling trips were conducted in 2025 (Table 20), which is more than DMF conducted for any fishery other than groundfish and lobster. Forty-one of these sampling events were of the biomedical fishery. For all biomedical sampling trips, the number of live and dead crabs was recorded by sex. For bait market sampling, biomedical market sampling, and biomedical collection trips, data collected also included sex, prosomal width, maturity stage (males only), molt stage, and injuries. Pre-bleeding mortality (from collection until arrival at the biomedical labs) observed in our biomedical sampling was 0.1% for both males and females. The mortality rate of bled crabs during DMF-observed biomedical release trips was 1.0% and 0.7% for males and females, respectively.

Table 20. Number of fishery-dependent sampling trips for horseshoe crabs conducted by DMF staff in 2025 and the number of crabs sampled by sampling trip type.

Trip type	Number of 2025 trips	Number of crabs observed
Bait market sampling	7	1,942
Collection sampling trips	6	3,318
Pen Samples	9	1,778
Biomedical market sampling	13	2,950
Release trips	13	2,845
Total	48	12,833

Assessment, Management Support, and Outreach

In 2025, staff served on the ASMFC Horseshoe Crab Technical Committee and the ASMFC Horseshoe Crab Stock Assessment Committee. Staff also prepared and submitted the annual Massachusetts Horseshoe Crab Compliance Report to ASMFC.

Staff gave presentations on horseshoe crab biology, stock status, regulations, and regulatory background to the Massachusetts Environmental Police, an overview of the Massachusetts Horseshoe Crab Spawning Survey to the ASMFC Spawning Survey Working Group, a review of a proposal by an advocacy group to close Plymouth/Kingston/Duxbury Bay to horseshoe crab harvest to the MFAC, DMF's monitoring of horseshoe crab populations and fishery sampling to the Cape Cod Museum of Natural History, the importance of Massachusetts horseshoe crabs to attendees of DMF's Marine Quest, and an overview of horseshoe crab biology and population trends to the DMF Habitat and Environmental Review Programs. Staff hosted a hybrid symposium for the 2025 Massachusetts Horseshoe Crab Science Meeting, which is hosted annually by DMF to review horseshoe crab survey trends and other relevant information. Speakers at the symposium were from DMF, Plymouth State

University, Rhode Island Division of Marine Fisheries, and the International Union for the Conservation of Nature (IUCN).

Jonah Crab Research and Monitoring

Commercial Fishery Sampling

Monitoring the commercial Jonah crab catch has been required by the interstate FMP since 2015. Most crabs landed in Massachusetts are harvested in waters south of Martha's Vineyard and east to Georges Bank. In 2025, project staff conducted 13 port sampling trips with seven different boats to collect size frequency and sex ratio data, sampling a total of 6,981 crabs (Figure 26). Male crabs comprised most of the catch, and their mean carapace width (145 mm) was larger than all years except 2024 (146 mm). This may be due to changes in market selectivity, or increased availability of larger crabs.



Figure 26. DMF Biologist, Jillian Swinford, measuring Jonah crab during a port sampling trip as a vessel unloads their catch.

Assessment and Management Support

Staff represented Massachusetts on the ASMFC Jonah Crab Plan Review Team and Technical Committee. Staff also submitted the annual state compliance report to ASMFC and provided data for the annual ASMFC Jonah crab stock indicator update.

Whelk Research and Monitoring

Commercial Fishery Sampling

Staff conducted four sampling trips aboard commercial vessels fishing whelk pots for channeled whelk. All trips took place in Nantucket Sound, from which 64% of Massachusetts whelk landings originate on average. 4,604 whelk were sampled from 234 traps hauled, 99.7% of which were channeled whelk.

Management Support

Staff provided DMF leadership with a review of recently published literature on whelk size at maturity.

Northern Shrimp Research and Monitoring

Assessment and Management Support

DMF staff served on the ASMFC Northern Shrimp Plan Development Team to formulate Amendment 4 to the Interstate FMP. Amendment 4, approved in May, recognizes the influence of environmental conditions on stock productivity, lengthens the amount of time the Northern Shrimp Section can set a harvest moratorium, and adds management triggers. Staff also served on the ASMFC Northern Shrimp Technical Committee, which provided an update on stock conditions. Additional work included facilitating the development and implementation of a 2025 pilot industry-funded winter sampling program with a research set-aside quota of 26.5 metric tons, with participation by the Massachusetts trawler F/V *Mystique Lady*. Staff processed the few shrimp samples collected from the Massachusetts participant; only two were identified as northern shrimp. Data were provided to ASMFC.

Other Program Activities

Program staff maintain a series of *in situ* bottom temperature data loggers at nine locations along the coast. Data collected represent the longest fixed bottom temperature time series in coastal New England. Loggers are swapped out annually by divers, and Program staff manage all the data, which are now publicly available online in a [map of Massachusetts ocean bottom temperatures](#). DMF acoustic receivers adjacent to the temperature monitor locations are also changed out by Program divers. In July 2025 a VR2AR Acoustic Release Receiver was deployed at the monitoring location at the Mars tugboat wreck off Manomet Point, removing the need for divers to access this relatively deep site.

Staff completed a comprehensive new database to house data collected from multiple Invertebrate Fisheries sampling programs. Program staff participated in the inaugural Marine Quest event, contributing two presentations and overseeing the highly acclaimed green crab races ([Figure 27](#)). Staff also acted as reviewers for several peer-reviewed journals, and served on the dissertation committee for a graduate student at the University of Maine.



Figure 27. Program staff cheering on contestants in the green crab races at the inaugural Marine Quest.

Protected Species Program

Personnel

Erin Burke, Program Manager
Dr. Leah Crowe, Science and Monitoring Lead
Manali Rege-Colt, Acoustician
Emma Fowler, Protected Species Specialist
David Chosid, Gear Specialist
Brendan Reilly, Gear Specialist

Overview

In 2025, the Protected Species Program expanded our scope of work and added new staff members. The additional research included the expansion of monitoring of North Atlantic right whales through increased aerial surveillance and the implementation of a passive acoustic monitoring network, along with the initiation of an on-demand gear research project. The overall Program is focused on research, management, applied conservation projects and policy development to minimize and mitigate human impacts from entanglement in fixed fishing gear and vessel collisions. Additional tasks include grant writing and administration, and participation in Take Reduction Teams and committees related to offshore wind energy development.

Activities

Right Whale Aerial Surveillance

In 2025, DMF partnered with the Center for Coastal Studies (CCS) and NOAA Fisheries to carry out the 27th year of the Right Whale Surveillance Program. The program conducts aerial surveillance and habitat monitoring of right whales in Cape Cod Bay, Massachusetts Bay, and adjacent areas during the winter and spring. Our understanding of the distribution and abundance of right whales in Massachusetts waters informs critical management decisions, including the dynamic management of fixed gear closures and speed restrictions. Visual aerial surveillance primarily occurs in the Massachusetts Restricted Area (MRA), a seasonal trap closure to protect aggregations of right whales from entanglement. The team documented 47% (n=182) of the known right whale population in Cape Cod Bay and adjacent waters, including Massachusetts Bay ([Figure 28](#)). Cape Cod Bay and adjacent Massachusetts coastal waters continue to be an important seasonal habitat for right whales, which is especially significant given that the population currently numbers around 380 individuals.

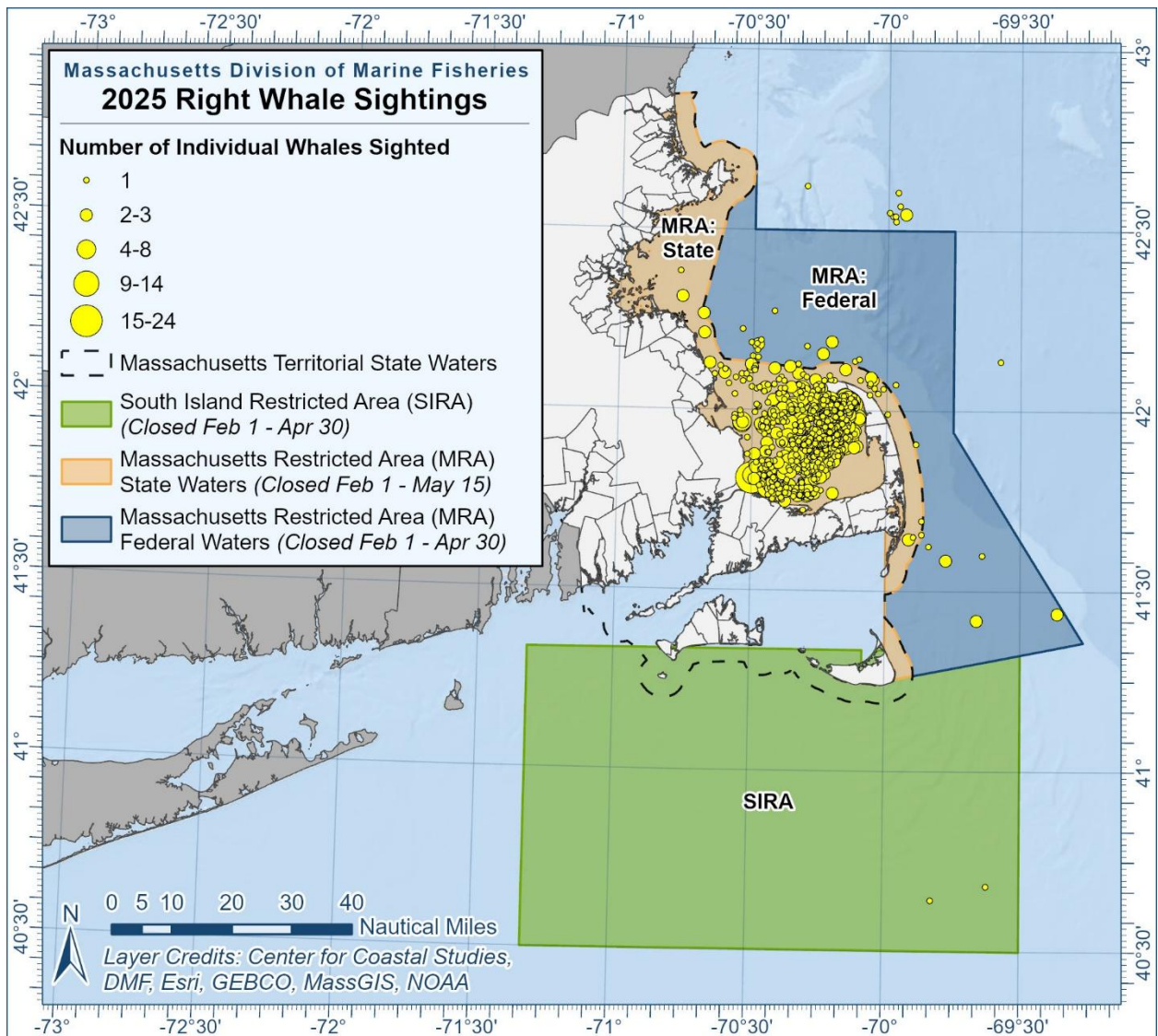


Figure 28. North Atlantic right whale aerial detections, October 2024–2025 (CCS data).

The highest count in a single day occurred on April 18, when 88 right whales were observed during a partial survey of southern Cape Cod Bay. Over the course of the season, seven of the 11 known mother/calf pairs of the year were documented in Cape Cod Bay. Based on the lingering presence of right whales, DMF extended the MRA closure and small vessel speed restriction in state waters through May 14. The high abundance of right whales visiting Cape Cod Bay and adjacent areas demonstrates how critical Massachusetts waters are to the population and the importance of state protections.

In 2025, Project Staff administered the NOAA Fisheries grant that supports aerial surveillance and habitat monitoring and assisted in coordination of all large whale conservation activities.

Passive Acoustic Monitoring

The Passive Acoustic Monitoring project to detect large whales off coastal Massachusetts was launched in early 2025. In collaboration with the Woods Hole Oceanographic Institution, two near-real-time monitoring buoys were deployed in February: one in Cape Cod Bay and one off Cape Ann (Figure 29).

At these platforms, classified acoustic detections are relayed to land via satellite every two hours, and an analyst verifies the acoustic signal source. Both systems were down for a period over the summer due to equipment failure, and when they were replaced, we opted to move the Cape Ann buoy into state waters off Salem Sound. While this technology provides detections of four large whale species, we are most concerned with detecting the presence of North Atlantic right whales. In 2025, there were two days of right whale detections on the Cape Ann buoy (in April), while on the Cape Cod buoy, right whales were detected essentially every day from the end of February through the beginning of May as well as 32 days between mid-November and the end of the year.

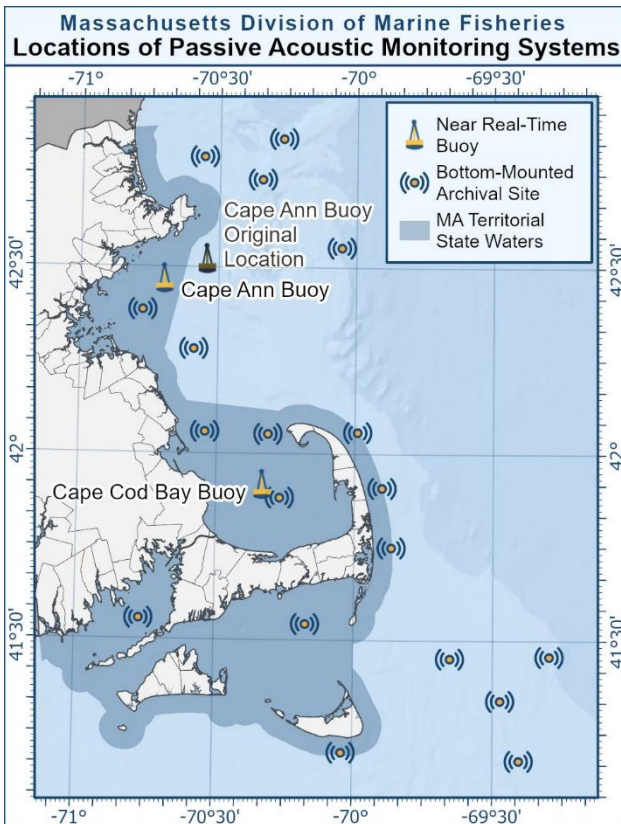


Figure 29. Left: Map of DMF passive acoustic monitoring sites during the reporting period. Right: One of the near-real-time acoustic monitoring systems sponsored by DMF.

We also initiated an archival passive acoustic monitoring network in March 2025 consisting of 17 bottom-mounted systems throughout different habitats around Massachusetts (Figure 29). These stations record broad-spectrum sound continuously over the five months they are deployed. Data are offloaded from recovered instruments and are analyzed for target vocalizations in the lab with the use of a signal classifier algorithm. This acoustic monitoring array provides finer scale information on acoustic whale presence to supplement the real-time and visual survey detection information. At the end of 2025, we recovered our first batch of recordings and began validating the classified signals. Acoustic monitoring is expected to continue through at least the end of 2028 with the goal of improving our understanding of right whale habitat use to inform effective conservation measures. More details can be found in [DMF's acoustic monitoring project application](#).

Large Whale and Sea Turtle Disentanglement

DMF and CCS' Marine Animal Entanglement Response team cooperatively administer large whale and sea turtle disentanglement efforts around Massachusetts through grants from NOAA Fisheries and the Massachusetts Environmental Trust. The 24-hour hotline and rapid response program is critical to reducing the potential for injury and mortality caused by entanglements, while also collecting information on entangling gear for management purposes. Project staff assisted in analysis of entangling gear, data management, and performed all grant management activities.

Eight whales were reported as entangled within the CCS response area, including two right whales, four humpback whales, one fin whale, and one whale not identified to species. The team was able to partially disentangle two right whales (5110 and 5217). Additionally, there were five reported entangled sea turtles: four leatherbacks (three of which were disentangled) and one Kemp's ridley (fully disentangled). Various factors affected the ability to perform disentanglement efforts, including the time of day reported, distance to a response team, weather conditions, and animal re-sightings or lack thereof.

Derelict Fishing Gear Removal

DMF continued an on-going cooperative program to locate and remove abandoned, lost, and illegally fished gear (collectively referred to as derelict fishing gear) in the MRA prior to the arrival of right whales. DMF partners with MEP, commercial fishermen, and CCS to locate and remove all buoyed derelict trap gear within the Massachusetts state waters portions of the MRA that are closed for right whale protection from February–May 15 each year. The derelict gear removal efforts not only ensure that the seasonal state waters closure is effective in reducing entanglement risks for whales, but it also provides an opportunity to monitor compliance with the closure and requirements for weak rope/contrivances, maximum rope diameter, and gear marking schemes.

In 2025, DMF completed 17 gear removal trips with seven contracted vessels along with the aid of MEP officers. Southern Cape Cod Bay and Boston Harbor/Mass Bay continued to be the locations with the most derelict gear. A total of 516 traps and 293 vertical lines were removed, including 368 traps and 130 vertical lines designated as commercial gear and 148 traps and 163 vertical lines designated as recreational gear (Figure 30). The traps removed were composed of 474 lobster traps and 42 conch traps. By format, the gear removed was composed of 37 trawls and 195 singles.

All removed gear was inspected for violations in gear marking and weak link compliance. If the traps were compliant and clearly lost, they are returned to the owner. Any accompanying ticket for leaving gear out in the closure is at the discretion of the MEP. If the gear was unable to be identified, in unusable shape, or requested disposed by the owner, the gear was disposed. Staff had a log splitter custom fitted into a trap crusher to more efficiently process disposed gear. Gear that is labeled as non-compliant is seized and brought back to a secure location for further inspection. Our team assesses the gear for final judgment on the conditions of a violator's permit moving forward. In 2025, 278 traps and 65 vertical lines were returned; 167 traps and 183 vertical lines were destroyed; and 71 traps and 45 vertical lines were seized for violations. Violations included missing contrivances, inadequate markings and gear left out beyond the closure.

Staff participated in the Massachusetts Derelict Fishing Gear Task Force to study the issue of derelict gear in Massachusetts waters and to develop solutions for the removal of such gear. From this task force's discussion and proceeding public hearing, we were able to enact regulations that allow for the ease of cleaning up during the closure as well as areas impacted by large amounts of derelict gear. Commercial gear is designated as such as long as it includes four qualifying characteristics: 1) buoy permit number; 2) compliant vertical line; 3) current trap tags; and 4) biodegradable escape vents. If two of these qualifying characteristics are not present, the gear is designated as derelict and abandoned. This gear can be disposed of without relying on a chain of command with the owner, collector, and regulatory body. Additional information on the task force is provided in the [Fishery Policy and Management Program Section](#).

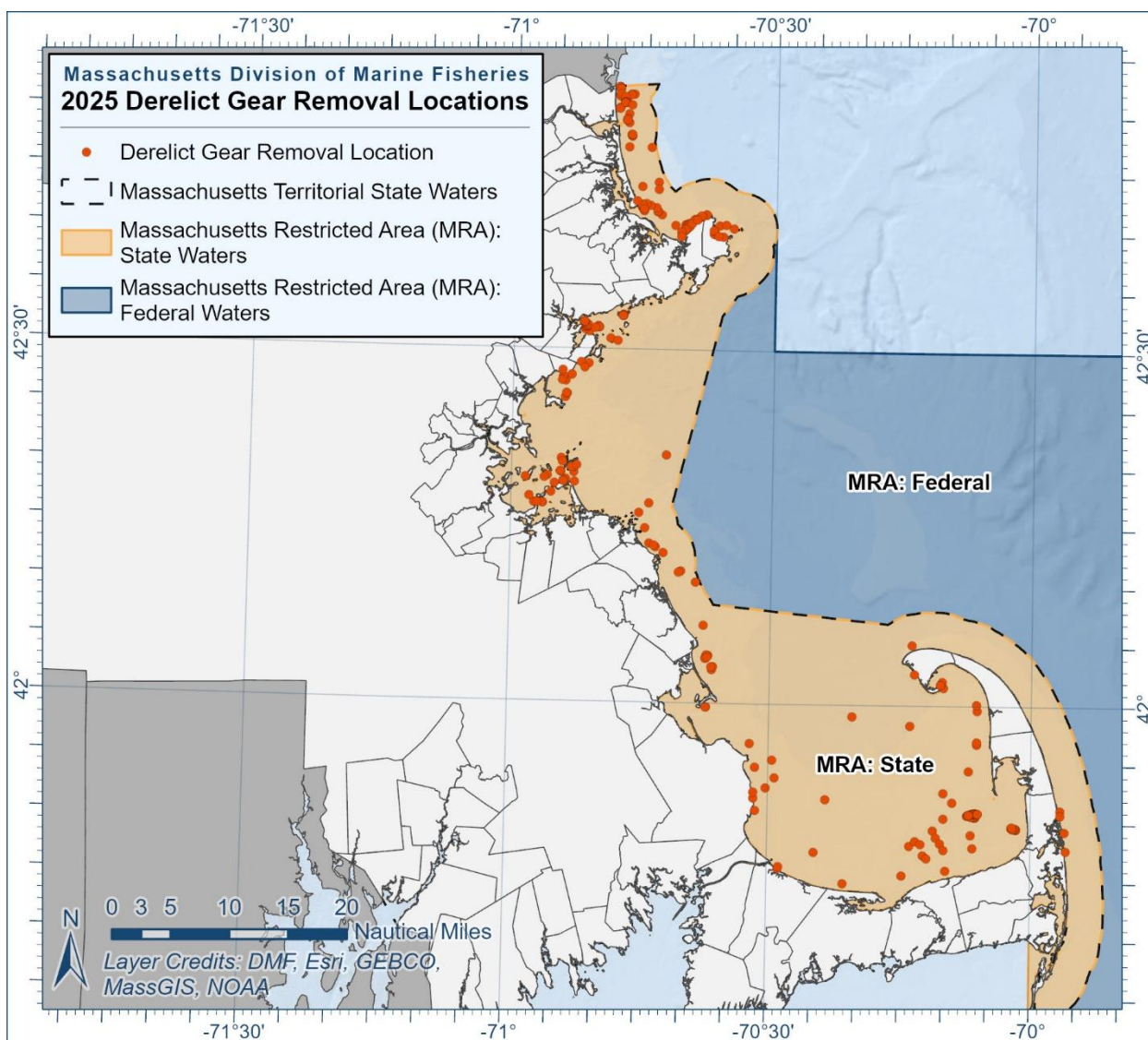


Figure 30. Maps of all Recreational/Unknown and all Commercial gear removed in 2025, shown as red dots on the map.

On-Demand Gear Research

On-demand gear (ODG) or “ropeless” fishing systems provide an opportunity for fishers to access seasonal trap gear closure areas. This innovative technology uses acoustic systems to release stowed buoy lines to bring the gear to the surface. ODG is an alternative to traditional buoy lines in the water column which can cause entanglements of protected species and are a primary cause of human-induced injury and mortality for the North Atlantic right whale. However, there are a wide range of concerns regarding the impacts of using this technology on a broad scale, including technological, operational and economic issues, as well as impacts on gear density and gear conflicts. DMF’s Protected Species Program has been investing in and supporting research to understand how ODG may impact the industry across these areas of concern, with a focus on on-demand gear density testing and economic modeling (see below). Additionally, we have implemented grant programs and permitting approaches to facilitate the use and/or visualization of on-demand gear by fixed-gear and mobile gear fishers (see below). We also provide troubleshooting and feedback to developers and manufacturers of the emerging technologies. Staff participate in meetings related to ODG which have included the NEFMC On-Demand Gear Conflict Working Group meetings (including the Plan Development Team’s alternative gear markings meetings), the Push Ropeless Forward group meeting, the Atlantic Large Whale Take Reduction Team meeting on “On Demand Gear Research and Development”, the Ropeless Consortium meeting, the North Atlantic Right Whale Consortium meeting, multiple progress update meetings with the NEFSC, and groups maintaining ODG cloud database systems such as the rmwHub and Earth Ranger.

On-Demand Gear Density Study

Gear conflicts are a major nuisance to fixed-gear fishers and can usually be avoided while using standard gear with buoys. Set ODG, which are detected through chart marks or with acoustic equipment, may require considerably greater distance between neighboring fixed-gear trawls than standard trawls to avoid gear conflicts. The purpose of this research is to identify the minimum effective distance possible to fish ODG trawls without gear conflicts, so that we can assess the impacts to the industry with regards to time, space, and cost needs.

DMF completed a first season of ODG density testing in 2025, utilizing its newly acquired Edgetech ODG system with 12 release units. We worked with three fishermen to deploy and retrieve trawls, with ODG units at one end of each trawl, at spacing distances of 100 ft, 50 ft and 35 ft. Fieldwork was conducted in Buzzards Bay as this area provided relatively good protection from high winds, flat and featureless bottom (sand and/or mud), had desirable project work depths, had low chances of gear conflicts from other fishing industry members, and was easy to access for industry participants and researchers. ODG trawls were investigated for the number of conflicts (overlapping trawls), actual trawl spacings, and the individual trawl lengths. A total of 109 gear density trials with 545 trawl sets were completed during 18 trips ([Figure 31](#)). Each vessel completed at least 12 trials per nominal trawl spacing.

We found that it was possible to operationally set and retrieve gear at all the target trawl spacings tested although these spacings were a significant factor for the incidence of trawl conflicts. Most conflicts occurred at the 35 ft spacing. We also detected that significant vessel effects were present in these conflict results. Learning was an important outcome; as vessel captains became more familiar

with the ODG and the work procedures, they generally improved their precision at setting and retrieving ODG. At the conditions that were tested (including mean depths ~58 ft) and the level of experience for the captains, 35 ft may be near the edge of the workable spacing for trawls, although the number of “acceptable” conflicts using buoyed gear has not been researched. Additional practice and improved technologies might improve the users’ setting accuracy as well as precision, further reducing the number of conflicts.

Additional work on this project included contracting, budgeting, equipment maintenance, troubleshooting and providing input on new technologies, and outreach efforts. In 2025, this work was presented at the Ropeless Consortium Meeting. Continued work for 2026 will focus on repeating the density study at deeper depths.

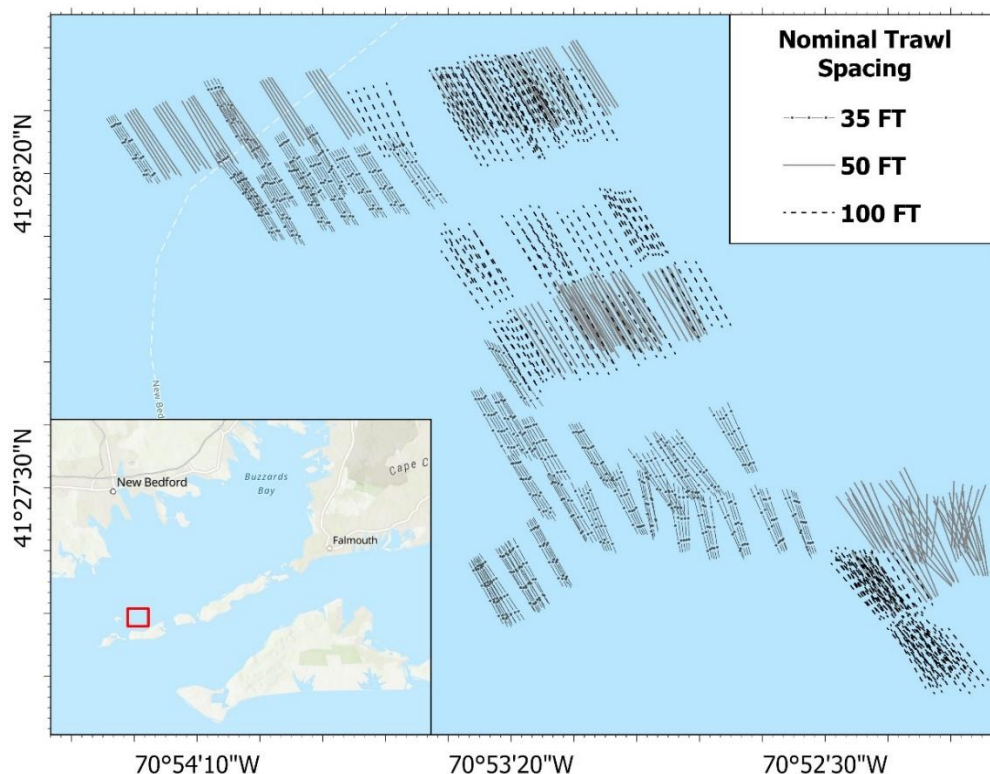


Figure 31. Map of set trawls (degrees-minutes-seconds), from all vessels, in Buzzards Bay. Line patterns show the nominal trawl spacings (35 ft, 50 ft, and 100 ft). The key in the bottom left shows the larger area of southern Massachusetts waters with the area of detail (main map) boxed in red.

On-Demand Fishing Economic Model

In 2025, DMF continued work on the ODG Socioeconomic Modeling Project, in partnership with Homarus Strategies, an effort intended to support the information needs of managers and the fishing industry while also addressing conservation issues. The implementation of on-demand fishing could have significant impacts on the economics of the lobster industry such as the cost of the new gear, changes in hauling efficiency and catch rates, and the implications of gear conflict and gear loss. DMF staff have continued productive discussions with regional and federal partners, including West Coast program managers, focused on improving our economic modeling. This work helps establish a

foundation for developing science-based policies to reduce the risk of serious injury and mortality to the North Atlantic right whale, and its increased relevance to upcoming Take Reduction Team (TRT) deliberations means our findings will be a timely resource for our engagement. The project team is committed to updating our models and methods based on new information and feedback to ensure the economic models are as robust and accurate as possible.

To provide the public with information and support the fishing fleet, we have been employing advanced methodologies and integrating comprehensive, up-to-date datasets. This includes successfully compiling and integrating key fishing data, such as harvester trip reports and supplemental economic data, alongside an effort to incorporate more advanced spatial data. These higher-resolution datasets allow us to build an enhanced model that captures the economic impacts of a transition to on-demand gear across various vessel types and time/area scenarios. The model will allow us to analyze complex scenarios, such as the effects of closed area fishing access. DMF is committed to a rigorous process to ensure future regulatory alternatives are informed by the best possible economic analysis, supporting the industry and its heritage, and the people of the Commonwealth.

On-Demand Gear Grant Program

To support the use of ODG and to reduce the risk of gear conflict, DMF allocated funds to a grant program to reimburse fixed and mobile gear fishers for equipment and services applicable to on-demand fishing, including that used to mark and visualize ODG. The grant serves the fixed gear fishermen who are actively testing ODG and the mobile gear fleet who fish in the same areas. For an applicant to be accepted into the fixed gear grant, they must be either a part of our own ODG Experimental Fishing Permit (EFP), the EFP being utilized by the Northeast Fisheries Science Center, or under an individual letter of authorization from DMF. A total of \$25,000 (increased to \$35,000 in October) in applicable reimbursements is available to fixed gear grant recipients. For an applicant to be accepted into the mobile gear grant, they must fish around areas where ropeless is often being tested. A total of \$6,000 in applicable reimbursements is available to mobile gear grant recipients.

The grant started in January of 2025, and since then we have taken on 34 applicants: 16 from the fixed gear sector, of which 14 have been served and reimbursed; and 18 from the mobile gear sector, of which 14 have been served and reimbursed. We expect to fulfill all 34 applicants' reimbursements, and will continue to take applications until November 2026 when the contracted amounts for applicants will expire. Items that are often submitted for reimbursement are TimeZero navigation software, Satellite internet service, electronic overhauls, new differently marked vertical lines, and ropeless traps. We have full intentions of continuing the grant in a format that will be discussed as we discover the successes and failures of the current operation.

Compliance Assistance

Entanglement in fishing is a major source of serious injury and mortality for right whales. The severity of injuries caused by entanglement can be reduced by using line that breaks at 1,700 pounds or less. DMF and NOAA Fisheries have implemented regulations requiring the use of reduced breaking strength ropes ("weak rope") or other contrivances that break at the same approximate 1,700-pound pressure in the lobster fishery. DMF requires fishers to use fully formed weak rope for their buoy lines or to use weak contrivances every 60 feet, as well as requiring color-coded marking of buoy lines to identify gear as originating from Massachusetts.

To assist fishers in complying with the required weak rope contrivances and buoy line marking regulations, DMF staff conducted outreach distributing gear to fishers through directed gear give-away events, adjacent events such as the Massachusetts Lobstermen Association meeting, direct deliveries to organizations, or by meeting with individual permit holders (Figure 32). Weak rope, weak contrivances, and marking materials were purchased for distribution from regional suppliers. In 2025, at least 448 permit holders were provided with goods.



Figure 32. Gear compliance give-away event hosted by the Massachusetts Lobstermen's Association at their office in Scituate, MA. (April 29, 2025). Staff assessed the weak contrivance and marking material preferences based on fishing industry constituents' feedback and personal use of the evolving available materials. DMF purchased newly developed and approved weak contrivances and marking materials, such as the Novabraid and Coastal Cordage stitched loops, to provide more options for fishers and to encourage further development.

Outreach events were attended by DMF staff to inform the public about compliance-related issues. DMF continues to work with constituents to clarify and simplify the compliance regulations. We have worked internally and with the NEFSC to advise, produce, and distribute outreach materials and information, physically and through emailed and web-posted announcements. In 2025 DMF produced a pamphlet titled "Commercial Trap & Pot Gear Compliance Guide". We continue to work with industry organizations and individuals to help them rig their gear correctly, in their preferred method.

Due to our large purchases of weak contrivances and marking materials, DMF continued pursuing improvements towards our storage infrastructure including forklift shelving solutions (the forklift was purchased through this funding in 2024). A forklift charging station was installed and DMF staff received training and were certified in using the forklift in 2025.

Training to understand rope compliance issues was provided to DMF staff who engage in removing derelict trap gear from the Massachusetts Restricted Area during the seasonal closure period. Additional duties in this project included gear maintenance, compliance gear preparations, data entry and analyses, budgeting, website updates, inventory updates, and contracting.

Other Activities

Staff participated as a member of the Massachusetts Habitat Working Group. This body assists EOEAA, the federal Bureau of Ocean Energy Management, and the Massachusetts Clean Energy Center with analysis of natural resource data as it relates to potential impacts in the Massachusetts Wind Energy Area. State and federal governments are assessing the potential impact of wind energy development on marine mammals that inhabit the area south of Martha's Vineyard and Nantucket. A staff member is also part of the Sea Turtle Subcommittee for the Regional Wildlife Science Collaborative for Offshore Wind which serves as a coordination hub for offshore wind research to increase collaboration and data sharing.

Staff assisted CZM in updating the Massachusetts Ocean Management Plan with the most up-to-date estimates of special, sensitive, and unique habitat for large whales.

Staff participated in two NOAA Gulf of Maine Marine Debris Action Plan working groups, "Fishing Gear" and "Research, Information, and Risk Assessment for Wildlife and Habitat", which re-evaluated and updated the action plan. The Gulf of Maine Action Plan, originally published in November 2019, establishes a comprehensive framework for strategic action to ensure the Gulf of Maine and its coasts, people, and wildlife are free from the impacts of marine debris. This Action Plan is one of several implemented in coastal regions across the country. Staff presented recent Massachusetts legislature changes and planned DMF regulation changes concerning the definitions of derelict fishing gear and the ability to remove such gear from Massachusetts waters to the Fishing Gear working group. Details of the changes are covered in the [Fishery Policy and Management Program Section](#).

At the end of 2025, DMF began seeking applicants from organizations and municipalities to participate in the DMF Derelict Fishing Gear Removal/Disposal Earmark Program. This program aims to reduce derelict fishing gear from Massachusetts coasts, which helps maintain navigable waterways, minimize gear conflicts and ghost fishing, and protects marine mammals and sea turtles from entanglements. The program also aims to support fishers by providing safe, accessible disposal options for unwanted commercial fishing gear. The program was advertised through the DMF website and through email announcements. Proposal assessments and implementations of projects will begin in 2026.

Recreational Fisheries Program

Personnel

Ben Gahagan, Program Leader
John Boardman, Marine Fisheries Biologist
Matt Ayer, Marine Fisheries Biologist
Ross Kessler, Public Access Coordinator
David Martins, MRIP Coordinator
Kristen Thiebault, MRIP/FHTS Sampler
Neil McCoy, Information & Education Coordinator

Overview

The **Recreational Fisheries Program** works to preserve, enhance, and promote the Commonwealth's marine recreational fisheries. Goals include conserving key recreational species through science-based monitoring and management; supporting the recreational fishing community, including local recreational fishing businesses; and educating the Commonwealth's citizens on the features and benefits of local recreational fisheries resources. Program personnel participate in Division-led research, measure abundance, length frequency, and age classes of key finfish populations; assess habitat and prey needs of key species; measure harvest and release of key species; facilitate purchase and maintenance of access sites, much of which is funded by recreational fishing permit sales; and disseminate information on all aspects of recreational species and fisheries to the public.

MRIP Sampling Project

Since 1983, recreational fisheries catch and effort data have been collected along the Atlantic Coast through NOAA Fisheries' Marine Recreational Information Program (MRIP). MRIP is vitally important to both fisheries scientists and managers who use the information to assess how catch levels affect fish population size and to develop measures for sustainable fishing. DMF has managed the at-sea catch sampling of head boat anglers in Massachusetts since 2003 and the shore-side Access Point Angler Intercept Survey (APAIS) catch sampling of charter vessels, shore anglers, and private/rental vessel anglers since 2013, and administered the For-hire Telephone Survey (FHTS) of charter and head boat effort levels since 2020. The benefits of doing so include the ability to increase sample sizes and improve the precision of catch estimates.

To conduct the APAIS in 2025, DMF trained 20 seasonal field interviewers, scheduled trips, logged data, maintained equipment, attended data review meetings, and maintained regular communication with ACCSP, which administers the program for NOAA Fisheries, regarding survey performance and sampling. Throughout the year, MRIP field interviewers completed 1,275 shore-side assignments out of 1,330 scheduled for a total of 4,862 angler intercepts: 3,318 from private vessels, 608 from charter vessels, and 936 from shore anglers. DMF also collected head boat catch data during 54 at-sea head boat trips in which 1,049 anglers were interviewed. In 2025, there was an increase in the number of interviews collected in June, July, and August, compared to 2024. The FHTS completed 1,757 surveys

with charter and head boat representatives. FHTS staff also worked to update and improve the federal charter and head boat vessel directory to ensure survey precision and accuracy as well as sampling efficiency each year.

Recreational Fishing Derby

Project staff administered the state's Saltwater Fishing Derby. Formally known as the Governor's Cup and hosted by the Division of Tourism, the derby was moved to DMF in 1983. Following years of increased efforts to publicize the derby and a transition to the Commissioner's Cup, submissions nearly doubled in 2025. While no new state records were set in 2025, there were 39 winners and two Anglers of the Year among the 96 entries. Both Anglers of the Year were new winners, with each having at least four winning fish. Their names will be added to the base of the new Commissioner's Cup trophy (Figure 33) and they will be presented with custom awards, both created by Cape Cod artist Steve Swain. The derby winners will receive their awards at the New England Boat Show in January 2026. Beginning in 2026, the trophy will be on display at Bass Pro Shops in Foxborough, which will continue to raise the profile of the Commissioner's Cup. Administrative duties include creating, printing, and distributing derby rule pamphlets and entry forms; regular communications with weigh stations; preparation of press releases; and tracking derby standings on the website.



Figure 33. The Commissioner's Cup trophy and logo were both unveiled in 2025.

Public Access

The Public Access Coordinator position, which is funded by the sale of saltwater fishing permits, manages DMF saltwater fishing access projects, working closely with the DFG Office of Fishing and Boating Access, non-governmental organizations, towns, and other state and federal agencies to identify, plan, and implement projects that will enhance fishing access. The coordinator also serves as a liaison to the fishing public for all matters of saltwater fishing access, including advocating for beach and shore access. To fulfill these duties, staff worked throughout 2025 to develop proposals for the development and enhancement of public access sites; responded to inquiries regarding shoreside

fishing sites, public access rights, and future access projects; and represented the agency at meetings of various sportsmen's gatherings.

DMF started work to develop a new pier project in Somerset. The former Brightman Street bridge is scheduled for demolition, and in 2025 DMF actively worked with local partners to begin building a fishing pier on the remaining bridge abutment. This project will advance DMF's goal to provide Americans with Disabilities Act accessible fishing opportunities for Massachusetts anglers throughout the Commonwealth and complement the existing piers in New Bedford, the Cape Cod Canal, Oak Bluffs, Harwich, Deer Island, and Salem.

DMF's small grants public access program annually provides up to \$50,000 to assist municipalities with projects that promote or support local recreational fishing activities and access. DMF has funded 51 projects since 2012. These projects include boat ramp improvements, reclaiming public ways to water, and improvements to access paths. Two projects were funded in 2025: Tisbury was awarded funding to install lighting and web cameras at the Lagoon Pond Ramp; and Fairhaven received support to increase the size of several trailer parking spots at the Pease Park Boat Ramp, providing adequate parking for larger trailered vessels.

At Craven's Landing, a DMF-owned fishing and boating access site on Scorton Creek in Sandwich, periodic site monitoring and maintenance was required (Figure 34). Seasonal contractors were hired for site patrol and coordinated for weekly summer assignments. Each year, staff work closely with official plover monitors to comply with USFWS regulations. Access is limited at Craven's Landing after plover chicks are born, and re-opens after young plovers fledge or migrate out of a federally established buffer zone. Staff also continued to collaborate with the Massachusetts Natural Heritage Program and many other organizations to implement a Habitat Conservation Plan for alternative management options in piping plover habitat.

The agency also owns Leland Beach on Cape Poge in Edgartown, Martha's Vineyard (Figure 34). The Trustees of Reservations (TTOR) manages the Leland parcel through a Memorandum of Understanding. Following the drafting of a new Beach Management Plan with TTOR and other user groups, DMF supported access to Leland Beach in meetings with the Edgartown Conservation Commission and MassDEP to facilitate longer-term access to the site that corresponded to the appropriate protections under the Wetlands Protection Act, without unduly burdening anglers. The Division's focus remains to protect and enhance public access for anglers wherever legal and reasonable.



Figure 34. DMF-owned fishing access sites on the Massachusetts coast: (Left) the entrance to Craven's Landing in Sandwich at Scorton Creek; (Right) an angler enjoys a day of surf casting on Leland Beach in Edgartown on Martha's Vineyard.

Outreach

The Recreational Fisheries Program's outreach efforts are focused on engaging and informing the Massachusetts saltwater fishing community and the public. Activities are supported in large part by the sale of recreational saltwater fishing permits. The Information & Education Project focuses specifically on communicating information and establishing and maintaining meaningful connections with Massachusetts recreational saltwater anglers. Staff achieve this in the following ways.

Communications

Staff routinely answered public inquiries regarding recreational fisheries and attended meetings of the recreational fishing community, including several regional fishing and boating trade shows. Staff also continued to create and maintain online content and resources on the Mass.gov website. Existing Recreational Fishing web content was reviewed and updated, new webpages for events, information, and projects were built, and website analytics were tracked. Staff used GovDelivery and Constant Contact email bulletins to regularly communicate with an audience of more than 140,000 subscribers. Bulletins were used to communicate information that impacted recreational anglers, including advisories, updated regulations, upcoming events, public hearings, surveys, and newsletters.

Social Media

Social media was an important communication tool to connect with our audiences in 2025. We actively shared content through our social media platforms, primarily on Facebook and Instagram (Figure 35). Followers and engagement continued to increase across both platforms, but especially on Instagram where we added over 1K new followers in 2025. Content across platforms included regulatory advisories, recreational fishing topics, saltwater derby activity, highlights from field research, angler education events, seafood recipes, and more. We used social media to promote several new public-facing events and highlights for our program, including Marine Quest, the Commissioner's Cup, the Striper Conservation Low-number License Plate Auction, and our redesigned FishMA stickers.

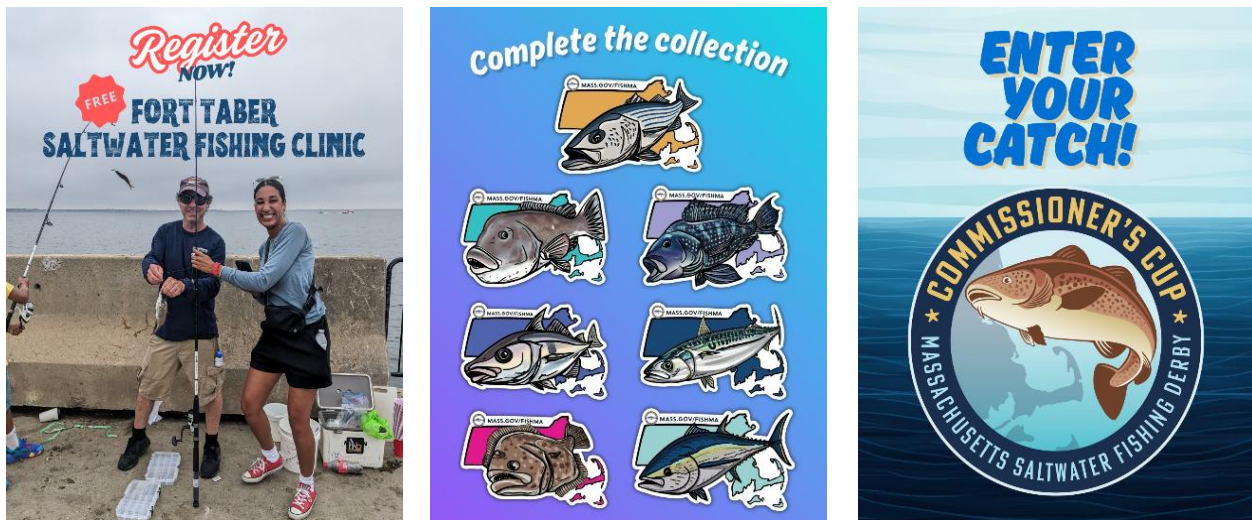


Figure 35. Examples of the social media graphics we used to engage our audience on Facebook and Instagram. From left to right, posts encouraged anglers to participate in saltwater fishing clinics, shared a new Fish MA sticker collection, and

Videos

We partnered with *On the Water Media* to produce a new 2025 video campaign titled *Striped Bass Tactics* (Figure 36). In a three-part series, DMF Recreational Fisheries program staff teamed up with captains, anglers, and fishing guides to share their expertise on fishing for striped bass with an emphasis on safe and responsible catch and release techniques to reduce post-release mortality. The videos are hosted on DMF's YouTube channel and have been shared broadly on our social media, website, and in our newsletter. Both the *Boat Fishing* and the *Kayak Fishing* episodes were viewed over 8,000 times each, and the *Surf Fishing* episode was viewed over 32,000 times.



Figure 36. Striped Bass Tactics, a fun and engaging three-part video series, offers anglers guidance on how to best fish for striped bass from boats, kayaks, and from the shore.

Poster, Publications, and Design

In 2025, we re-imagined the signature FishMA sticker of the Recreational Fisheries Program. Collaborating with talented artist Jay Talbot, we commissioned a series of seven illustrated popular saltwater species and designed a set of vibrant, die-cut glossy stickers branded with the DMF logo and a web URL to our recreational fishing hub, mass.gov/fishMA. The stickers were an immediate hit for our outreach efforts, including angler education, at shows and events, and at permitting offices. We printed 15,600 stickers in 2025, most of which were distributed.

The Massachusetts Saltwater Fishing Derby was also rebranded in 2025, which we launched with the announcement of the Commissioner's Cup. We designed a Commissioner's Cup logo and produced stickers and 12x18 in. posters to promote the derby.

In addition to routine annual information and outreach materials, program staff had the opportunity to design a new set of four large-format, glossy foam core posters for the inaugural Marine Quest Festival at the Cat Cove Laboratory. The posters were designed to share the full scope of our work to the public, highlighting everything we do, from research and monitoring to education and public access.

The 2025 Massachusetts Saltwater Recreational Fishing Guide was prepared and distributed to over 140 bait and tackle shops and to requesting anglers by mail and website downloads (Figure 37).

Featured content included the re-opening of the Salem Willows Fishing Pier, the Striped Bass Citizen Science Project, Where Do Your Permit Fee Dollars Go? infographic, and a Striped Bass Management Status Update.



Figure 37. Massachusetts 2025 recreational saltwater fishing guide cover.

Routine reorders of existing program materials, including activity books, were completed to fulfill distribution needs at events. Additional educational materials and promotional items for the Take Me Saltwater Fishing initiative were designed and produced, including event flyers.

2025 marked the beginning of an ongoing digital accessibility initiative to make all web-based content accessible. Staff worked on identifying and remediating recreational fisheries PDF publications and content available on the website, as well as on improving the accessibility of other digital content, both on social media and program webpages.

Events

In January, our staff kicked off 2025 by hosting the annual Massachusetts Saltwater Derby Awards Ceremony (for 2024 winners) during the New England Boat Show. At the ceremony we announced the rebranding of the derby with a newly designed logo and the launch of the Commissioner's Cup. Later in the season, when the Commissioner's Cup sculpture display was completed, it went on tour to select fishing shows to build awareness and excitement for the 2025 derby season. Staff hosted a DMF booth at several events, including the Castafari Offshore Fishing Seminar, New England Saltwater Fishing Show, Plum Island Surfcasters Fishing Show, Tried & True Fishing Expo, StriperFest, and the Topsfield Fair. At each event, we shared a variety of educational and outreach materials, including FishMA stickers, activity books, posters, recreational fishing guides, youth fishing field guides, Commissioner Cup saltwater fishing derby promos, How Old is My Striper? handouts, and promotional striper license plate instructions. 2025 also featured two exciting new events for our program. First, in June, we

helped host DMF's first ever Marine Quest, a day-long family festival on DMF's Cat Cove campus with hundreds of visitors. Our program staffed several tables and activities, including an angler education hands-on clinic and a striped bass research seminar. Later in October, we collaborated with the Massachusetts Environmental Trust to launch our first online low-number plate auction for the Striped Bass Conservation License Plate. The auction was a huge success and raised over \$50,000 for the fund.

Saltwater Angler Education Program

The Saltwater Angler Education Program's mission is to teach responsible fishing in an enthusiastic environment, recruit new anglers, and make saltwater fishing accessible and inclusive for everyone. Our program engages the public in the following ways: fishing clinics, fishing festivals, and training seminars.



Figure 38. DMF biologists teach fish identification and measurement (left) and demonstrate proper handling and release techniques (right).

In 2025, the Saltwater Angler Education Program hosted, participated in, or supported 19 events and one multi-day summer camp clinic (Figure 38). The events, listed below (Table 21), occurred from May through September, and were free to the public and open to beginning anglers of all ages. At these events, DMF staff taught basic angling skills, how to responsibly handle fish, and other fun activities such as knot tying and fish identification. Educational handouts were distributed to the public in both English and Spanish. These introductory fishing clinics were intended to give participants the skills and confidence to go saltwater fishing on their own. With the support of a \$10,000 award from the Striped Bass License Plate sales fund, the Saltwater Angler Education Program purchased 200 rods and starter tackle kits for select clinics. Registered participants were invited to take home their gear and tackle after the clinic in hopes that they would recreate the experience on their own or with friends and family. Extra gear will be used and distributed at 2026 saltwater angler education fishing clinics. The Saltwater Angler Education Rod and Tackle Loan Program also loaned gear to six organizations (Table 22). Gear was used for both single day and summer long saltwater fishing programs.

Table 21. 2025 Saltwater Angler Education Fishing Events

Event	Partnering Organization(s)	Location	Participants
Girl Scouts Fishing Clinic	Girl Scouts	Bass River, Yarmouth	16
Girl Scouts Fishing Clinic	Girl Scouts	Cape Cod Canal, Sandwich	14
Youth Fishing Day	Nickerson Park	Flax Pond, Brewster	204 (kids and parents)
Fishing Festival	Mass Beach Buggy Assoc. & National Park Service (NPS)	Provincetown	42
Fishing Derby	Fairhaven Parks and Recreation Department	Fairhaven	40
Boston Harbor Island Summer Series	NPS, Boston Harbor Now, MWRA, Fish and Wildlife	Nut Island, Quincy	200
Family Fishing Clinic	Gloucester Harbormaster, Harbor Loop	Gloucester	38
Surfcasting Clinic	Salt Pond	Eastham	27
Hill to Harbor Discovery Camp (week-long event)	National Parks of Boston, YMCA	Peddocks Island	196
Take Me Saltwater Fishing Clinic	Fort Taber	New Bedford	21
Evening Family Fishing Clinic	Cape Cod Canal Visitor Center	Cape Cod Canal, Sandwich	40
End of Summer Fishing Clinic	National Park Service	Nut Island, Quincy	10
Family Fishing Clinic-Salem	Salem Willows	Salem	34
Cops and Bobbers	Somerset Police Department	Somerset	49
Take Me Saltwater Fishing	Cape Cod Salties	Bass River, Yarmouth	52
Cops and Bobbers	Fall River Police Department	Fall River	41
Boston Harbor Island Summer Series	NPS, Boston Harbor Now, MWRA, Fish and Wildlife, Trustees	Deer Island, Boston	100
Surfcasting Clinic	N/A	Mashpee	30
Cops and Kids (summer-long event)	Gloucester Police Department	Gloucester	80

Table 22. 2025 Saltwater Angler Education Staff Training and Loan Program

Event	Partnering Organization(s)	Location	Participants
Surfcasting Clinic (Multiday Event)	Buzzards Bay Coalition	Westport and Falmouth	64
Discovery Camp Staff Training Seminar	Naval Shipyard	Charlestown	15
Summer Program-Staff Training	Boys and Girls Club	New Bedford	10 kids per week
Summer Program-Staff Training	Youth Opportunities Unlimited	New Bedford	14 kids per week
The Phoenix School – Staff Training	The Phoenix School	Salem	15
The Brandon School Staff Training Summer Program	The Brandon School	Natick	10

Large Pelagics and Diadromous Fisheries Program

Personnel

Dr. Gregory Skomal, Program Manager
Brad Chase, Diadromous Fisheries Project Leader
John Sheppard, Diadromous Fisheries Biologist
Stephanie Berkman, Diadromous Fisheries Biologist
Joseph Holbeche, Diadromous Fisheries Biologist
Micheal Burgess, Diadromous Fisheries Biologist
Edward Clark, Fishway Crew (*retired 2025*)
James Rossignol, Fishway Crew

Overview

The **Large Pelagics Fisheries Project** conducts research to enhance our understanding of the ecology, life history, and relative abundance of sharks, tunas, and billfish off the coast of Massachusetts, where extensive recreational fisheries for these species occur. In addition to this research, the project's goals are to foster cooperative research; participate in the state, regional, federal, and international management processes; and provide public education and technical information on the biology, management, and utilization of highly migratory species.

The **Diadromous Fisheries Project** works to sustain and improve sea-run fish passage, habitat, and populations. The project also conducts fish biology monitoring and research that contributes to fisheries management. Fish passage and habitat restoration are accomplished through coordinated efforts of DMF staff, state and federal agencies, municipalities, and private groups to facilitate, design, and execute projects to enhance diadromous fish populations. Technical assistance is provided as needed for individual restoration projects and coastal watersheds. Project efforts cover 10 species of diadromous fish stocks in Massachusetts, with a focus on river herring, American shad, rainbow smelt, and American eel. These species are monitored for run counts, indices of population abundance, size and age composition, harvest, and restoration potential. The information generated by this project is necessary for the sustainable management of diadromous fish populations as required by state and federal laws.

Large Pelagics Fisheries Project

Shark Research

DMF began shark research in 1987 to better understand the ecology, distribution, and relative abundance of sharks that are subject to fisheries off the coast of Massachusetts. Staff conduct field research and opportunistically collect data from recreational and commercial fishermen's catch. Biological parameters are examined through the dissection and tagging of sharks. The goals are to foster cooperative shark research; participate in state, regional, federal, and international management processes; and provide public education and technical information on the biology, management, and utilization of sharks.

White Sharks

The aggregation of white sharks off the coast of Massachusetts is one of only a handful of hotspots in the world and unique along the east coast of the US. Consequently, the state of Massachusetts and in particular the towns on Cape Cod are faced with a growing potential for negative interactions between this species and people utilizing our coastal waters. As a result, DMF has intensified its research on the fine-scale predatory behavior of white sharks off the coast of Massachusetts using a variety of high-tech tags, including acoustic telemetry, satellite-linked tags, and biologgers.

Our acoustic receiver array has been expanded to fill gaps around Cape Cod and to include most towns along the Massachusetts coastline. To notify public safety officials of the presence of tagged white sharks, four real-time acoustic receivers were deployed off popular Outer Cape swimming beaches including Newcomb Hollow and Lecount Hollow (Wellfleet), Nauset Beach (Orleans), and North Beach (Chatham). These receivers provided beach managers and lifeguards with immediate notifications when acoustically tagged white sharks were detected close to these beaches. Acceleration biologging camera tags were deployed on white sharks to record very fine-scale movements at sub-second intervals, including tailbeat frequency, amplitude, body posture, and swimming depth. These data are being used to examine predatory patterns (e.g., traveling, resting, hunting, foraging, mating), bioenergetics, and, ultimately, provide estimates of the intensity of white shark predation on gray seals. Lastly, drone camera systems were utilized off the Outer Cape to observe nearshore white shark behavior in response to vessel traffic.



Figure 39. A white shark tagged with an acoustic transmitter off the coast of Cape Cod.

As a result, 22 white sharks were tagged with acoustic transmitters, pop-up satellite tags, and/or biologging camera tags off the Outer Cape (5) or Cape Cod Bay (17) in 2025 (Figure 39). When combined with collaborative tagging efforts off Canada (1), New York (1), New Jersey (1), North Carolina (3), South Carolina (40), and Florida (1), this brings the total to 411 individuals tagged since 2009. These efforts were conducted with funding and logistical support from local non-profits, primarily the Atlantic White Shark Conservancy. Data collected in 2025 will be used to enhance our understanding of white shark predatory behavior in these areas of high shark-human overlap to better inform public safety practices.

Shark Management

Staff participated in state, interstate, federal, and international shark management processes. During 2025, staff served on the ASMFC Coastal Sharks and Spiny Dogfish Technical Committees; the International Commission for the Conservation of Atlantic Tunas Advisory Committee, Swordfish and Shark Working Group; and NOAA Fisheries Highly Migratory Species Advisory Panel.

Outreach, Media, and Publications

To meet the public demand for information on sharks, especially white sharks, numerous presentations were delivered. Technical information on sharks was also provided to several media outlets.

As adjunct faculty to SMAST, the UMass Dartmouth Biology Department, and the Woods Hole Oceanographic Institution, staff co-advised and served on the committees of 10 graduate students who are working with DMF to study the relative abundance, life history, movements, and physiology of sharks.

Staff co-authored 12 articles published in scholarly journals in 2025. Topics included: broadscale movements of great hammerhead and common thresher sharks, the occurrence of white sharks in Maine and Canada, large pelagic species movements and distribution models, dusky shark predation on seals, and white shark population genomics.

Diadromous Fisheries Project

Diadromous fishes migrate between fresh and marine waters to complete their life history. They are valued for the forage they provide for a wide range of wildlife and were formerly important for traditional small-scale fisheries in coastal towns. DMF is not only responsible for the management of diadromous fish populations in the coastal rivers of Massachusetts, but also the restoration, improvement, and maintenance of their migratory pathways.

Biological Assessments for River Herring

The alewife is the most abundant and well-known anadromous fish in Massachusetts. Along with the closely related blueback, both species are known commonly as river herring. River herring have had high cultural and economic importance historically, but present populations are well-below former levels, and harvest has been banned since 2006. As a result, DMF has increased monitoring efforts over the past decade to meet management goals of restoring populations and harvest in coastal towns.

Current monitoring is comprised of at least one station collecting river herring spawning run counts and biological data in each of the major coastal drainage areas. Project staff provide technical assistance to towns and watershed groups for electronic and video counting systems, as well as the design and data processing for volunteer visual counts of river herring. DMF staff have designed, fabricated, and installed over 20 electronic and video counting systems in river herring runs ([Table 23](#)). In addition, DMF annually collects biological samples of river herring at eight of the rivers with counting stations.

In 2025, river herring counts ranged from 0 fish (Concord River, North Billerica) to 815,926 fish (Mystic River, Medford) at 44 rivers in 38 towns where counts occurred. The counting stations not listed in [Table 23](#) were volunteer visual counts managed by local groups. A majority of the runs declined in 2025

from 2024; however, some long-term stations posted time-series highs, including the Mystic River, Sippican River, Agawam River, and the Wankinco River. The Mystic River count was the top count in 2025, for the second consecutive year, and one of two sites (along with the Nemasket River) to exceed half a million river herring.

Table 23. River herring monitoring stations managed or supported by DMF.

River	Biological	Counts
Merrimack River, Lawrence	Yes	Fish Lift/Video
Concord River, North Billerica	No	Video
Parker River, Newbury	Yes	Video
Essex River, Essex	No	Electronic
Mystic River, Medford	Yes	Video
Back River, Weymouth	Yes	Electronic
Herring Brook, Pembroke	No	Electronic
Town Brook, Plymouth	Yes	Video/Visual (<i>Volunteer</i>)
Nemasket River, Middleborough	Yes	Visual (<i>Volunteer</i>)
Sippican River, Rochester	No	Electronic
Mattapoissett River, Mattapoissett	No	Electronic
Acushnet River, Acushnet	No	Electronic
Agawam River, Wareham	No	Electronic
Wankinco River, Wareham	No	Electronic
Monument River, Bourne	Yes	Electronic
Cedar Lake, Falmouth	No	Electronic
Stony Brook, Brewster	No	Electronic
Herring River, Harwich	Yes	Electronic
Pilgrim Lake, Orleans	No	Video/Visual (<i>Volunteer</i>)
Herring Creek, Aquinnah	No	Video
Mill River, Taunton	No	Video

River Herring Stocking

DMF collects and transports river herring to assist efforts to re-establish and enhance river herring runs, subject to the guidance of our [Stocking Protocol Policy](#). In 2025, five stocking trips transferred approximately 5,338 adult river herring as follows: 2,000 herring from the Monument River to Tom Matthews Pond, Yarmouth; 2,000 herring from Herring Brook, Pembroke to Island Creek, Duxbury; 500 herring from the Santuit River to Little Sandy Pond, Yarmouth; 500 herring from the Coonamessett River to Bourne Pond, Falmouth; and 338 herring from the Parker River in Byfield to Hood Pond, Topsfield.

Technical Assistance

Project staff provided technical assistance to local authorities, private organizations, the DMF Habitat Program (environmental permit review), and other agencies on topics related to diadromous fish

resources. Numerous requests are received each year, especially during the spring, requiring a wide range of responses. Technical assistance associated with larger efforts in 2025 are described below.

Environmental Review

Staff biologists routinely provide technical assistance to the Habitat Program's review of environmental permit applications in diadromous fish runs. This activity includes field site visits and can involve extensive reviews of project designs and permit applications.

River Herring Habitat Assessment

DMF river herring habitat assessments are conducted over two years, from May–September, to assess the suitability of habitats for river herring life history and restoration potential, and to contribute to habitat and water quality remediation efforts. Three habitat assessments concluded in 2025 at the Cole River watershed in Swansea, Stony Brook watershed in Brewster, and the Ipswich River Watershed in Ipswich. In addition, two habitat assessments were initiated at the Dam Pond in Falmouth and Bourne Pond in Bourne. Data processing continued with the goal of preparing assessment summary reports and a manuscript to summarize all habitat assessments. [The Back River assessment report \(TR-85\)](#) was published by the DMF Technical Report series in 2025.

Diadromous Fish Restoration Priority List/MassDOT Diadromous Fish GIS Data Layer

Efforts continued to maintain and update the [Diadromous Fish GIS data layer](#), published by MassGIS, which documents the status of fish passageways and prioritizes restoration projects. Although the list focuses on passageways for river herring, other diadromous fish species and watershed connectivity are also taken into consideration. The data layer contains over 500 fishways, impediments, and potential restoration sites, ranked by restoration potential within the major coastal regions of Massachusetts. The GIS data layer supports transportation infrastructure planning and environmental review activities conducted by MassDOT/DMF and restoration planning by DMF and MassDEP.

[Diadromous Fish Research Studies](#)

Diadromous Fish Monitoring, Mill River

Project staff monitored migrations of multiple diadromous species at Taunton's Lake Sabbatia dam and fishway as part of a continuing cooperative restoration effort in the Mill River watershed. An underwater video camera at the fishway exit recorded fish passage and a collection tank at an eel ramp was checked daily from spring through summer. As part of the ongoing diadromous fish restoration response in the Mill River, an annual lamprey nest survey was conducted in the Mill River and a mark/recapture study was conducted in Lake Sabbatia in 2025 to estimate the eel population size using eel pot sampling and passive integrated transponder tags.

[American Shad Monitoring](#)

Merrimack River Monitoring

American shad are monitored in cooperation with MassWildlife each spring and summer at the Essex Dam fish lift on the Merrimack River in Lawrence, per interstate FMP requirements. The count of American shad in 2025 increased from 2024. This monitoring also includes other diadromous fish

species. Project staff led an acoustic tagging project of American shad examining the passage efficiency of the fish ladder at the hydroelectric dam in Lowell.

Taunton River Monitoring

A cooperative American shad stocking project was initiated in the Taunton River with USFWS and MassWildlife in 2022. 2025 marked the fourth year of stocking, with over two million juvenile American shad released by USFWS from May to June in five locations. DMF contributed to ongoing pre- and post-stocking monitoring. The beach seine survey targeting juvenile American shad was conducted monthly at five fixed locations from June through October, although no Juvenile American shad were caught. DMF staff joined USFWS staff to fish for shad in the Taunton River to collect genetic samples from adult shad on their spawning migration (Figure 40); 60 samples were collected.



Figure 40. American shad captured by DMF's Cathy Barba for genetic sample at the Taunton River.

Electrofishing Survey

In the spring of 2025, project staff completed the eighth season of monitoring the presence and abundance of American shad in the Indian Head River, Pembroke. The South River was not surveyed in 2025 due to a large restoration effort to remove a dam and replace the existing fish ladder at the Veteran's War Memorial Park in Marshfield. Monitoring was conducted in the Indian Head River from the head of tide to the first obstruction using stream electroshocking surveys to detect the presence of spawning adult shad. Seventeen sampling trips were conducted between April and June, resulting in 56 shad captured and processed for size, age, and genetic sampling. Scale-based aging indicated that these shad ranged from 3–9 years, with some fish having spawned up to five times previously. Catch-per-unit-effort indices of abundance were calculated for each river. Monitoring is expected to continue

in 2026 with the intent of developing biological and catch-per-unit-effort indices of population abundance.

American Eel Monitoring

All US east coast states conduct standardized monitoring of young of year (YOY) American eels under mandatory ASMFC protocols to contribute indices of relative abundance. DMF has monitored the spring migration of YOY eels in the Jones River (Kingston) using a Sheldon trap since 2001 and in the Essex River (Essex) with a fyke net since 2014, however only the Jones River dataset has been accepted as an index of YOY abundance for the ASMFC eel stock assessment. The 2025 Jones River trap catch-per-haul was 216 YOY eels, which is below the 25-year time series of 266.

Project staff have fabricated and installed 13 eel ramps in coastal rivers since 2007 to provide eel passage over barriers. Most ramps are managed cooperatively with local groups and include a collection tank to evaluate the performance of the eel ramp and to monitor counts of YOY or older eels. Data for the Saugus River eel ramp, the first eel ramp in coastal Massachusetts, were accepted by ASMFC as an age-1+ index of abundance for the 2022 eel stock assessment. Collectively, between the deployment of eel ramps and an increase in coastal river dam removals, DMF expects that juvenile eel passage has improved in some watersheds in the last 15 years. In 2025, high glass eel catches continued at the Wankinco River and Pilgrim Lake eel ramps, following a trend of time-series high catches in the last few years at these sites.

Rainbow Smelt Population and Habitat Monitoring

Rainbow smelt population declines since the 1980s prompted DMF to initiate spawning run monitoring using in-stream fyke nets in 2004. This monitoring continues as an annual data series to provide a relative index of abundance and size and age data. The project currently maintains three stations at the Fore River in Braintree, the Jones River in Kingston, and the Weweantic River in Wareham ([Figure 41](#)). A Parker River fyke station in Newbury was discontinued after 2024 due to low catches. The smelt catches in the Fore River continued to be the highest among stations in 2025, with 5,874 smelt, which is the second-highest total catch observed and more than double the time-series average for catch-per-haul. Smelt catches at the other stations continue to show a significant declining trend, with Jones River catching 122 smelt and the Weweantic River catching one smelt. Collectively, the fyke nets have caught over 40 species of fish in total, including 10 diadromous species, with potential indices of abundance for data-poor species such as eel, white perch, Atlantic tomcod, and lamprey. The American eel bycatch data from the Fore River fyke net were accepted by ASMFC as a yellow eel index of abundance for the 2022 eel stock assessment.



Figure 41. Smelt fyke net sampling in Fore River, Braintree.

Fish Passage and Habitat Restoration Projects

Numerous projects to improve and maintain diadromous fish passage, habitats, and populations are underway each year. In 2025, project staff devoted time to over 15 individual projects in various stages of development and implementation. Additionally, six DMF Fishway Crew jobs were completed in 2025: four small, one-day projects and two larger, week-long fishway repairs.

DMF Fishway Crew

Diadromous Fish Restoration Funding

DMF received a budget allocation in 2025 to specifically support the efforts of the DMF Fishway Crew to advance diadromous fish habitat restoration. A Municipal Request for Responses was prepared to allow the transfer of these funds to towns in support of larger restoration projects. Funds were provided to support five projects in 2025, fund USFWS fish passage engineering fishway designs and reviews, and to buy materials for the following projects conducted during the fishway construction season (summer/fall).

The funds were allocated to (1) contracting design services for the removal of a concrete culvert flume at the Burrage Pond Wildlife Management Area, on Stump Brook, Halifax; (2) Bourne Pond fishway daylighting project in Falmouth (below); (3) Phase II Engineering services for a fishway at the Lake Noquochoke Dam on the Westport River in Dartmouth; (4) a feasibility study on fish passage improvements in the Mill River, Weymouth; and (5) contracting design services for the Pilgrim Lake fishway replacement in the Town of Orleans under the Natural Resources Conservation Service (NRCS) Cape Cod Conservation District (CCCD) Cape Cod Water Resources Restoration Program.

Monument River Fishway, Bourne

The DMF Fishway Crew continued working with the Army Corps of Engineers (USACE) to rehabilitate their fishway in the Monument River running along the Cape Cod Canal. The seven concrete weirs in this fishway were built in 1938, with several showing significant degradation. Three weirs were replaced in 2025, with the USACE providing funding for materials and much-needed crane and labor assistance. Given tidal and river flows, water control at this site was difficult, requiring two pumps along with upstream flow management for the five-day job. Two weirs were replaced prior to 2025, and the Crew will return in 2026 to reconstruct the final two weirs.

Third Mill Pond Fishway, Pembroke

The dam and Alaskan Steeppass fishway at Third Mill Pond on Herring Brook in Pembroke were replaced in 2011 by a contracted project funded and managed by the DMF Fishway Crew. The main spillway contains a wood weir to create a plunge pool for adult and juvenile river herring moving downstream. This wood weir and temporary rock and sand bag weirs downstream of the spillway were damaged and disrupted by recent high stream flows. The DMF Fishway Crew worked with the Pembroke Herring Fisheries Commission in 2025 to rebuild the wood plunge pool weir and reset the downstream channel weirs.

Herring River, Harwich

Two small fishway repairs were conducted for Herring River fishways in Harwich in cooperation with the Town Department of Natural Resources during 2025. All wood boards in the Hinckley Pond fishway (DMF Fishway Crew construction, 1982) were replaced, and a staff gauge was installed and surveyed at the fishway (Figure 42). In the fall, the Crew visited the West Reservoir fishway to remove a failed concrete weir, replace the weir with wood boards, and repair concrete cracks in the fishway walls.

Fore River Watershed, Braintree

Following the completion of multi-decadal effort to restore diadromous fish to the Fore River Watershed, 2025 marked the first spring that river herring could advance past four former obstruction. The migrating fish made a splash as they were seen at three upstream locations for the first time in over 200 years. There was much excitement in the Town of Braintree over the sightings that included the amazing scene of over a thousand herring spawning in the channels of the Cochato River at the Braintree Municipal Golf Course. Work continued in 2025 as the movements of herring informed DMF and the Town's newly formed Herring Fishery Commission to make adjustments at three locations. A metal plate at the Sunset Lake dam was replaced with wood boards to allow passage management into the lake, along with installing a pond level staff gauge. A metal plate was removed from the Cochato River dam at the golf course to allow upstream passage. Finally, work was done at the McCusker Drive culvert to selectively remove debris at the culvert's four bays to allow herring passage upstream.

Bourne Pond Daylighting Project, Falmouth

The Town of Falmouth led a construction contract to remove a clay pipe that connected flow from Bourne Pond to Bog Pond and install a daylighted fishway (Figure 42). The DMF Fishway Crew installed a new fishway at the Bog Pond dam and removed a former bog dam in 2016, working cooperatively with the Town. This allowed herring passage to the previously obstructed Bourne Pond. Low numbers of river herring have been observed making it to Bourne Pond after 2016, and DMF has stocked the pond with herring in recent years. However, the 80-ft clay pipe was undersized and damaged. The project in 2025 installed an open-air concrete channel with five fishway weirs to manage flow and allow suitable passage for herring and eel.



Figure 42. Two DMF Fishway Crew diadromous passage restoration projects in 2025. (Left) Installation of a new daylighted fishway at Bourne Pond, Falmouth; (Right) Repairs to Hinckley Pond fishway on Herring River, Harwich.

Cooperative Restoration

Large Fish Passage Collaborations

There was much activity in 2025 with large fish passage collaborations, in part due to ongoing federal funding sources. The debut fish passage seasons for completed projects at the Fore River watershed, Braintree and Sesuit Creek, Dennis, contributed to the excitement over fish passage improvements in 2025. DMF staff held a range of roles in these projects, from minor technical assistance related to fish passage requirements to active participation as project partners. For the Cape Cod region, the NRCS/CCCD Cape Cod Watershed Restoration Plan had several projects under design in 2025 for which DMF provided technical support. Additionally, large cooperative projects were ongoing in the Herring River, Wellfleet; Westport River; Ipswich River; the Talbot Mills Dam, Concord River, North Billerica; and at Horn Pond, Aberjona River, Woburn.

South River, Veteran's Park, Marshfield

The Veteran's Park Dam on the South River in Marshfield was removed in 2025 and replaced with an in-stream, nature-like fishway. This project was under development for over 10 years and was a complex design due to the need to maintain elevations and water controls for park water features. The project included an innovative bypass channel that allowed fish passage during construction in the spring of 2025. DMF assisted with this design and conducted routine construction monitoring (Figure 43). The application of a USFWS scoping design for the nature-like fishway and the application of the bypass channel were unique features that not only served this challenging site restoration well but also contributed to fish passage design knowledge. The project was led by the Town of Marshfield, with contributions from state, federal, and local partners.



Figure 43. DMF staff monitoring water velocity in bypass channel for Veteran's Park fish passage improvements on the South River, Marshfield.

Larkin Mill Dam, Parker River, Byfield

The Larkin Mill Dam on the Parker River in Byfield was removed in 2025 under a cooperative effort with numerous state, federal and local partners. The dam and fishway were long considered both in poor condition and design for fish passage. This project was over ten years in development and one of the highest-ranked restoration priorities for the North Shore region in the DMF Diadromous Fish Restoration Priority List.

Stony Brook, Brewster

The Town of Brewster, with support from the NRCS/CCCD Cape Cod Water Resources Restoration Program, reconstructed the lower mill fishway weirs at the iconic Stony Brook Mill run in 2025. Finishing touches on the project are expected for the winter of 2026, allowing river herring to pass through the new weirs in the spring. The lower mill fishway weirs were last constructed by the DMF Fishway Crew nearly 40 years ago, and the upper mill fishway weirs were reconstructed by the Crew in 2011. DMF provided funding assistance with the lower mills project permitting in 2025, and technical assistance with the design and construction monitoring.

Diadromous Fish Coast-Wide Survey

A coast-wide survey of diadromous fish passage in Massachusetts continued in 2025. The survey is an update of sea-run fish surveys first conducted by DMF's precursor, the Division of Fisheries and Game, and reported in Dr. David L. Belding's seminal report "Alewife Fisheries of Massachusetts" in 1921. The survey was next conducted in 1967 by DMF and repeated in 2001–2002. These surveys focused on fishways and dams in river herring runs. The surveys have been invaluable for documenting the status of sea-run fish in coastal rivers and making recommendations on improvements. The present survey update will broaden the focus to include additional types of fishways and more information on migratory habitats and other species. Further, the survey will be directly integrated into DMF's Diadromous Fish Restoration Priority List and the Diadromous Fish GIS data layer that was developed

by DMF and MassDOT and published in 2023 by MassGIS. The integrated survey, priority list, and GIS Data Layer should become valuable tools for aquatic restoration, resiliency, and transportation planning at local, state, and federal levels.

River Herring Stream Channel Maintenance

Project staff routinely encounter stream channel blockages during field investigations and receive requests from towns to assist in maintaining passageways for river herring. The work can involve developing cooperative plans for removing debris jams and excessive plant growth in channels or responding quickly during the migration season to remove blockages that threaten sea-run fish survival. Our Stream Maintenance Protocol for Diadromous Fish Passage provides coastwide guidance for these practices. A large cooperative effort was made with MassDEP to develop a policy to connect the Wetland Protection Act to stream maintenance for diadromous fish runs; this policy was issued in 2022. No new plans were developed in 2025. The Fore River Watershed plan was updated in 2025 (draft) and a report for 2022-2024 activity under the prior plan was prepared for the Braintree Conservation Commission. Project staff worked in 11 rivers on stream maintenance with local partners in 2025. Winter storms in 2024/2025 contributed to significant tree fall and debris jams in some rivers.

Fishway Operation and Maintenance Plans, Permits and Memorandum of Understanding

The DMF Director issues Fishway Operation and Maintenance (O&M) Plans for all new and reconstructed fishways per the authority granted under Chapter 130, Section 19 of Massachusetts General Laws. Two O&M plans were finalized in 2025: Acushnet Reservoir, Acushnet River, Acushnet; and Wequaquet Lake, Centerville River, Barnstable. A large effort commenced in 2025 to prepare fishway O&M plans for all fishways in the Herring River, Harwich, and the Monument River, Bourne. DMF issues Fishway Construction Permits following the review of engineering plans to construct, rebuild, or alter fishways. During 2025, Fishway Construction Permits were issued for the Larkin Mill Dam, Newbury, and the Jenney Grist Mill, Town Brook, Plymouth. Draft Fishway Memorandums of Understanding were prepared for property owners for the Willowdale Dam on the Ipswich River, Ipswich and the Lake Noquochoke Dam, Westport River, Dartmouth.

Other Activities

Technical Committee Participation

Staff actively participated on management and technical committees related to diadromous fish, including the ASMFC technical committees for river herring, American shad, American eel, sturgeon, and fish passage. Annual ASMFC compliance reports were prepared for American eel, river herring, American shad, and Atlantic sturgeon. Staff also served on the NOAA Fisheries River Herring Technical Expert Working Group, technical committees for the Connecticut River Atlantic Salmon Commission, Anadromous Fishery Management of the Merrimack River Basin, and ASMFC River Herring and Shad Stock Assessment Sub-Committee.

Presentations

Project staff are routinely requested to provide presentations related to diadromous fish for education, outreach, and constituency groups. Approximately 20 formal presentations were given by project staff in 2025, with participation in several other education/outreach events.

ADMINISTRATION

Kevin Creighton, Chief Fiscal Operator, Section Leader

Personnel

Finance

Darlene Pari, Accounts Payable Coordinator (retired in March)
Sarah Ferrara, Fiscal Administration and Operations Manager (started in June)
Kim Trotto, Accounts Payable Coordinator (effective August)
Jeanne Hayes, Accounts Receivable Coordinator
Shannon Davis, Program Coordinator
Whitney Sargent, Procurement Coordinator (through December)

Administrative Support

Lynne Besse, Administrative Support
Vicki Oliveira, Administrative Support

Grants Management

Cecil French, Project Leader – Clean Vessel Act and Boating Infrastructure Grant
Maren Budrow, Assistant Federal Aid and Grants Coordinator
Melanie Griffin, Revolving Loan Fund and State Fishery Management & Technical Assistance
Amanda Meli, Program Coordinator – Grants Specialist

Seafood Marketing

Wendy Mainardi, Marketing Coordinator

Scientific Diving

Vincent Malkoski, Diving Safety Officer (retired in February)
Ashley P. Bueche (started in April)

Capital Assets and Facilities Management

Brian Castonguay, Gloucester Office, Head of Facilities and Capital Assets
Lucas Cunningham, Gloucester Office, Facilities Support
Vincent Malkoski, New Bedford Office, Facilities and Capital Assets (retired in February)
Sarah Ferrara, Fiscal Administration and Operations Manager (started in June)

Overview

DMF Administration is responsible for the Division's fiscal functions, grants management, capital assets, scientific diver management, and seafood marketing. Staff develops, analyzes, and manages the Division's financial planning and resource allocation activities, including budget submission to the Legislature. The program is responsible for collecting fees and reconciling revenue. Staff also provide all fiscal oversight and reporting on grants, contracts, and mitigation projects. Facilities and capital assets are procured, inventoried, managed, and maintained with the intent to provide a healthy and

productive working environment. Seafood Marketing efforts support and promote Massachusetts seafood and the commercial fishing industry.

Budget

Overall, state-appropriated funds saw an increase of 3.01% from Fiscal Year (FY) 2024 to FY2025 (Table 24). The increase can be attributed primarily to personnel costs (Table 26).

Table 24. Fiscal Year 2024 and 2025 appropriations (available funds for operations), by type and account (acct.).

Title	Account Type	Acct. Number	FY2024	FY2025	Change
General Operating	General Fund	2330-0100	¹ \$8,411,345	³ \$8,689,373	+3.31%
Sportfish Program	General Fund	2330-0120	² \$966,565	⁴ \$994,465	+2.89%
Sportfish Restoration	Retained Revenue	2330-0121	\$217,989	\$217,989	0.00%
Purification Plant	Retained Revenue	2330-0150	\$3,934	\$0	-100.00%
Ventless Trap	Retained Revenue	2330-0199	\$250,000	\$250,000	0.00%
Sportfish Licensing	Special Fund	2330-0300	\$2,116,721	\$2,182,018	+3.08%
Seafood Marketing	Special Fund	2330-0104	\$250,000	\$250,000	0.00%
Accounts Total	N/A	N/A	\$12,216,554	\$12,583,845	+3.01%

¹ The final budget FY2024 in Chapter 28 of the Acts of 2023 for appropriation 2330-0100 was \$10,041,345. DMF's general operating budget was affected by: 1) earmarks totaling \$1,625,000 (\$550,000 to SMAST; \$200,000 for the Great Marsh Green Crab Trapping and Coastal Marsh Restoration Program; \$150,000 for shellfish propagation in Barnstable, Dukes, and Nantucket counties; \$100,000 to the Center for Coastal Studies for a shark ecology program; \$200,000 for the Gloucester Marine Genomics Institute to characterize the impact of offshore wind on economically important species using acoustic telemetry and eDNA; \$50,000 for the Town of Saugus's Harbor Masters office to purchase a vessel; \$375,000 for a grant program to assist commercial fishers for the purchase and maintenance of safety gear; 2) \$381,114 made available from a reserve draw account to cover union raises; 3) \$5,000 that was moved by ANF for the purpose of debt reduction; and 4) \$150,000 supplemental funding approved for the diadromous fisheries program.

² The final budget FY2024 in Chapter 28 of the Acts of 2023 for appropriation 2330-0120 was affected by \$58,739 made available from a reserve draw account to cover union raises.

³ The final budget FY2025 in Chapter 140 of the Acts of 2024 for appropriation 2330-0100 was \$9,723,785. DMF's general operating budget was affected by: 1) earmarks totaling \$1,125,000 (\$575,000 to SMAST; \$200,000 for the Great Marsh Green Crab Trapping and Coastal Marsh Restoration Program; \$150,000 for shellfish propagation in Barnstable, Dukes, and Nantucket counties; \$200,000 for the Gloucester Marine Genomics Institute to characterize the impact of offshore wind on economically important species using acoustic telemetry and eDNA; 2) \$90,588 made available from a reserve draw account to cover union raises.

⁴ The final budget FY2025 in Chapter 140 of the Acts of 2024 for appropriation 2330-0120 was \$981,753. Total available funds were affected by \$12,712 made available from a reserve draw account to cover union raises.

State-appropriated funds can be categorized into three categories: General Fund, Retained Revenue, and Special Fund. General Fund account appropriations increased by 3.26% overall.

Retained Revenue accounts are created by the Legislature and allow funds from a particular source to be retained by the agency for expenditure on a particular purpose; DMF has three such accounts. . Funding from retained revenue accounts decreased overall by 0.83% in FY25. The Sportfish Restoration account allows for the deposit of federal Wallop-Breaux reimbursements (a sportfish restoration program), which may then be spent on other Wallop-Breaux reimbursable projects. The Ventless Trap

account allows for the deposit of funds generated from the sale of lobster permits, which are then used to fund research on commercially important invertebrate species. The Shellfish Purification Plant account allows for the deposit of funds collected from shellfish depuration and de-sanding at DMF's Newburyport facility, which may then be spent on plant maintenance and operation. The Shellfish Purification Plant closed permanently in FY2025, and this revenue source will no longer contribute to DMF's available funding

Appropriations from Special Fund accounts increased by 2.76% overall. The Legislature slightly increased the appropriation for the Saltwater Sportfish Licensing account to adjust for increased personnel. This account is funded by recreational saltwater fishing permit sales and supports recreational fishery improvements. The Seafood Marketing Program, funded by revenue collected from the issuance of commercial fisherman and seafood dealer permits, remained level-funded.

Table 25. FY2025 expenditures (including earmarks) by account type and primary spending category.

Expenditure	General Fund	Retained Revenue	Special Fund	Total
Salaries	\$7,864,748	\$123,086	\$750,082	\$8,737,916
Employee Expenses	\$21,957	\$3,854	\$8,971	\$34,782
Contracted Employees	\$80,050	\$21,844	\$311,561	\$413,455
Contracts	\$267,970	\$214,701	\$106,694	\$589,365
Facility Maintenance	\$100,936	\$11,398	\$653,389	\$765,723
Field & Lab Supplies	\$139,372	\$51,593	\$145,747	\$336,711
Fringe Costs	\$130,281	\$2,312	\$16,494	\$149,087
Fuel	\$46,509	\$0	\$0	\$46,509
Utilities	\$100,790	\$0	\$0	\$100,790
Lease/Rent	\$228,242	\$0	\$0	\$228,242
Maintenance/Repair	\$138,340	\$885	\$2,526	\$141,751
Office & Administrative	\$222,444	\$32,323	\$36,564	\$291,331
Outside Agencies	\$167,435	\$297	\$170	\$167,902
Grants	\$1,207,696	\$0	\$25,728	\$1,233,424
Total	\$10,716,768	\$462,292	\$2,057,927	\$13,236,987

Staffing

Staffing levels were slightly up in CY25 as compared to CY24 (Table 26).

Table 26. Calendar Year 2024 and 2025 Authorized Personnel Levels.

Title	Acct. Number	CY2024	CY2025
DMF General Operating	2330-0100	71	76
Sport Fish Program	2330-0120	10	10
Saltwater Sport Fish Licensing	2330-0300	9	9
Federal Grants and Trust Account	2330-XXXX ¹	16	19
Total Employees in All Appropriations	N/A	106	114

¹ multiple account numbers

Revenue

General Fund Revenue

DMF collects fees primarily from permit issuance. A total of 28,836 permits and endorsements were issued by the Permitting Project for the categories of commercial fishing, seafood dealers, and special permit types, producing General Fund revenue of \$2,137,865 in 2025 (Table 27). Overall, there was a slight decrease in permit revenue collected by approximately 1.23% as compared to 2024.

Table 27. Calendar Year 2024 and 2025 General Fund Permitting Revenue.

Permit Categories	CY2024	CY2025	Change
Commercial Fishing	\$1,229,065	\$1,219,255	-0.80%
Seafood Dealer	\$177,840	\$182,130	+2.41%
Special	\$757,585	\$736,480	-2.79%
Total General Fund Permit Revenue	\$2,164,490	\$2,137,865	-1.23%

Dedicated Fund Revenue

In addition to General Fund revenue, DMF generated \$1,702,283 in revenue for the Marine Recreational Fisheries Development Fund in 2025 (Table 28). Revenue is primarily from the issuance of recreational saltwater fishing permits but also includes direct donations to the fund and miscellaneous funds for programs such as MRIP. By law, all fees collected from the sale of recreational saltwater fishing permits, including permits issued to the for-hire fleet, are dedicated to the improvement of recreational saltwater fishing in Massachusetts. In 2025, the count of recreational permits issued was significantly lower as compared to 2024 resulting in a decline of about 11% in revenue. Donations to the Fund have continued to increase over the past 2 years and were up over 11% in 2025 as compared to 2024.

Table 28. CY2024 and CY2025 Marine Recreational Fisheries Development Fund Revenue.

Revenue Category	CY2024	CY2025	Change
Recreational Saltwater	\$1,234,770	\$1,095,010	-11.32%
For-Hire (charter & head boat)	\$64,675	\$67,665	+4.62%
Recreational Fund Donations	\$41,822	\$46,702	+11.67%
Other Sources (MRIP, Misc.)	\$481,388	\$492,906	+2.39%
Total Recreational Fisheries Fund Revenue	\$1,822,655	\$1,702,283	-6.6%

Grants

In FY2025, DMF spent approximately \$7.53 million on mitigation projects operating out of the DMF Trust Account and federal grants. Spending increased in most grant programs, with overall expenditures in FY2025 up by over 11% as compared to FY2024 (Table 29). The largest growth was in spending on a Protected Species grant, an Age and Growth grant, and on a federally funded right whale grant program that is administered through the DMF Trust.

Table 29. Grant Expenditures in Fiscal Year 2024 and 2025.

Title of Federal Grant or Trust	Account No.	FY2024	FY2025
Clean Vessel Act	2330-9222	\$1,102,000	\$1,056,000
Fisheries Statistics	2330-9712	\$150,000	\$165,000
Interstate Fisheries	2330-9730	\$528,000	\$489,000
ACCSP	2330-9732	\$4,000	\$8,000
Turtle Disentanglement/Protected Species	2330-9739	\$822,000	\$966,000
Fish Age & Growth	2330-9742	\$298,000	\$398,000
Sport Fish Coordination	2330-9743	\$138,000	\$187,000
Sea Grant Lobster	2330-9745	\$17,000	\$1,000
Marine Fisheries Research Trust	2330-0101	\$3,698,000	\$4,232,000
Total	N/A	\$6,756,000	\$7,527,000

Massachusetts Shellfish Depuration Relief Program

On November 24, 2023, DMF suspended operations at its Newburyport Depuration Plant after severe coastal erosion destroyed the plant's saltwater wells. A subsequent storm in December 2023 inundated the plant itself. In response, DMF developed a program to reopen the fishery by subsidizing the cost for shellfishers to use a nearby depuration facility in Eliot, Maine, while the Newburyport plant remains closed. DMF also secured funding to provide temporary financial relief to shellfishers who lost income as a result of the closure.

DMF completed its first relief program for shellfishers in 2024 and secured funding for a second relief program in 2025. To qualify for the second program, fishers were required to have held a 2022 or 2023 master or subordinate digger permit, document average income from the depuration fishery during the qualifying period, and be in good standing with all state and federal regulatory agencies. The qualifying period was based on income earned during the months of May through December from December 2020 through November 2023. These months corresponded to the period of the plant closure not covered by the first relief package, prior to the fishery reopening in January 2025.

On April 25, 2025, DMF notified all active permit holders of the second relief program and its eligibility requirements. A total of 25 shellfish diggers were determined to be eligible. DMF also established an appeals process for permit holders who disagreed with the information DMF had on file.

In total, DMF distributed 19 payments to eligible shellfish diggers, ranging from \$83 to \$54,000. Payments totaled \$178,643 and were issued between May 23 and June 30, 2025.

State Fishery Management and Technical Assistance

Staff provide technical assistance and support to the New England Fishery Management Council (NEFMC) in the development, implementation, and monitoring of fishery management plans (FMPs). These cooperative activities enhance the management of fisheries occurring in state and federal waters. Since 2018, the NEFMC has provided the Commonwealth with \$80,000 biennially, split evenly between the two years. Beginning in 2022, the NEFMC increased the biennial allocation to \$90,000. The \$45,000 allocated to state fiscal year 2025 (July 2024–June 2025) supported the Commonwealth's

participation in NEFMC meetings and other committee meetings. Some of this work is summarized in this annual report's [Fisheries Policy and Management Section](#). DMF also submitted to the NEFMC a summary report of the State's technical assistance activities during the year.

The Clean Vessel Act Program

DMF administers the Clean Vessel Act Program (MA-CVA) to ensure that adequate, convenient pumpout facilities are provided to meet the needs of recreational boaters in Massachusetts coastal waters. This is achieved by monitoring the need for new or replacement coastal pumpout equipment and providing operation and maintenance funds to pumpout facilities offering free pumpout service to recreational boaters. Responsibilities include the identification of appropriate sites for needed pumpout equipment, providing technical assistance and information to boaters and others in need of MA-CVA information, and agency coordination with public and private parties.

In 2025, the 31st year of our participation, MA-CVA continued to support Massachusetts' status as a No Discharge Zone (NDZ). With the Massachusetts coastline's hundreds of bays, coves, and inlets, it is challenging to provide adequate shoreside pumpout support, especially with our short, intense New England boating season. Consequently, we have been a leader in the implementation of pumpout vessel use. Our matrix of pumpout vessels and shoreside pumpouts, along with dump stations, has created much wider boater access along the coast than twice the number of conventional shore-side facilities could have provided, and has been instrumental in Massachusetts' establishment of a statewide NDZ. To date, the MA-CVA Program has kept over 11 million gallons of effluent from state coastal waters.

Our capital reinvestment program has enabled MA-CVA to expand with minimal cost to new pumpout operators that lack the capital for investment in new infrastructure. Through this program, when an operator replaces an existing MA-CVA pumpout boat or fixed-location station, the replaced equipment can be provided to another new or existing operator who can pay to have it refurbished at a fraction of the cost of new equipment.

In 2025, our CVA-funded pumpout facilities included 46 private marinas, one non-profit organization, and 49 cities and towns. MA-CVA staff stayed in close contact with all our pumpout operators, assessing programmatic needs. We addressed existing equipment concerns and facility growth requests as allowed by available federal funds ([Table 30](#), [Figure 44](#)). Total reimbursement for all new and replacement equipment was \$225,444. An additional \$630,429 was spent on facility operation and maintenance costs in support of 65 pumpout boats, 84 fixed-location pumpout stations, and 13 mobile pumpout carts available to the recreational boating public along the Massachusetts coastline. Recreational boater outreach remained a critical component of MA-CVA. Over 8,000 pumpout location guides were distributed to the public at marinas and other boating or fishing-related outreach events.



Figure 44. Nantucket pumpout boat, funded by DMF's Clean Vessel Act Program.

Table 30. New and Replacement MA-CVA Infrastructure, 2025.

Recipient	Equipment
Harwich	Replacement pumpout engine
Mattapoisett	Replacement pumpout engine
Quissett Harbor Boatyard	Replacement pumpout engine
Salisbury	Replacement pumpout engine
Sandwich Marina	Replacement pumpout engine
Scituate	New pumpout station and float
Somerset	Replacement pumpout station
Wellfleet	Replacement pumpout boat

Boating Infrastructure Grant Program

The Massachusetts Boating Infrastructure Grant Program (MA-BIG) is a two-tiered federal grant program, directed through the USFWS and administered by DMF. MA-BIG is funded by the Sport Fish Restoration Fund which in turn is funded by a small percentage of the Federal Gasoline Tax (an amount representing fuel purchased by boaters across the nation). MA-BIG is designed to provide grants to upgrade or install facilities for transient recreational boats 26 feet or more in length at public or partnered private facilities.

Under Tier I, MA-BIG may receive funding for eligible projects up to \$300,000 annually. Proposed projects filed under Tier II can be much larger in scope, but unlike Tier I, Tier II proposals are judged in a nationally competitive process based on a strict point system. Both grant tiers are reimbursement grants, meaning that payments are made upon the submission of invoices for work accomplished. Selected applicants provide at least a 25% match for Federal funds received; all payments are based on 75% reimbursement of invoices from work completed.

During 2025, one Tier II BIG grant was under construction for the town of Manchester by the Sea. The Tier II project extends the existing MA-BIG-funded dock to accommodate additional transient boaters (Figure 45). The \$600,000, three-year project includes the construction of an additional 500 feet of transient boater dock, including electrical and water service (to both old and new tie ups), and an

additional fixed pump-out station at the facility. This project helps address the ongoing significant lack of transient docking opportunities available in Manchester Harbor, and the greater Cape Ann region.

The City of Fall River was awarded \$281,236 for a Tier I BIG grant in 2025 to construct 15 transient boater moorings and a 475-foot dinghy dock at the Senator Thomas Norton City Pier on the Taunton River. The project will improve transient boater access to the City of Fall River.



Figure 45. Barge installs Manchester by the Sea transient boater floats and piles funded by DMF's MA-BIG.

Seafood Marketing

DMF's Seafood Marketing Program seeks to increase consumer awareness and preference for local seafood products. The program supports the state's commercial fishing and seafood industries and communities. Its programming is funded in large part by revenue collected from the issuance of commercial fishing and seafood dealer permits.

Marketing and Outreach

Seafood Recipe Collections

The Seafood Marketing Program posted 15 new one-minute inspirational cooking videos once a week throughout the summer and fall of 2025. Laura Foley Ramsden, a fourth-generation fish mongress, generously donated her time during the winter and spring of 2024 to star in and host the filming of these videos that you can find on DMF's YouTube channel ([Figure 46](#)). These videos were produced by project staff and On the Water Magazine and feature a variety of species with a focus on flatfish.

The Seafood Marketing Program partnered with New England Registered Dietitian, seafood enthusiast, and seafood cookbook author Jenny Shea Rawn for a new six-part series of holiday recipes featuring Massachusetts seafood ([Figure 46](#)). Through this collaboration, we hope to inspire celebration of the holidays with our sustainably sourced and nutrient-rich seafood so that we can support our commercial fishing and seafood industries and communities.



Figure 46. Delicious seafood dishes prepared as part of DMF's seafood recipe education efforts; (Left) steamed mussels and clams by Laura Foley Ramsden; (Right) Thanksgiving "seacuterie" board by Jenny Shea Rawn.

Seafood Promotional Events

Program staff attended numerous events in 2025 to promote Massachusetts seafood.

The Sustainable Business Network's 2025 Local Food Trade Show took place on January 28 at Russell's Garden Center in Wayland, Massachusetts, featuring nearly 100 local food exhibitors. The event connected wholesale buyers with New England-based farmers and food producers, and several seafood industry members were also in attendance. Highlights included networking sessions, workshops, and a strong focus on building a resilient local food economy.

Seven seafood businesses made up Mass. Ave. at Seafood Expo North America 2025. This cluster of businesses from the Commonwealth received 50% cost-share for the show via the Massachusetts Department of Agricultural Resources (MDAR) and the USDA, and is promoted by the Seafood Marketing Program. DFG's Commissioner and Deputy Commissioner and MDAR's Commissioner visited with those businesses and other Massachusetts businesses throughout the show in March. A DMF grant-supported project by St. Ours was a finalist in the New Product Showcase using green crabs for seafood broth.

More than a half dozen seafood businesses attended the 2025 New England Restaurant and Bar Show as part of the Massachusetts Seafood Pavilion March 30–31 at the Boston Convention and Exhibition Center. Over 300 exhibitors showcased the latest products, services, and technologies, and networking was great for our seafood industry attendees.

The Seafood Marketing Program attended the Massachusetts Library Association Conference at the Sea Crest Hotel in Falmouth for the first time, May 30-31. Libraries are a hub for all-ages education and DMF wanted to inform librarians of the resources available online as well as our printed educational material and programming opportunities. Librarians were very interested in speakers from DMF for both in-person and on-line programming.

Boston Local Food Festival Seafood Sampling

Program staff participated in DMF's inaugural Marine Quest at the Cat Cove Marine Laboratory in Salem in June. This was the first event at which the Seafood Marketing Program offered fresh seafood

samples for consumption, having newly acquired the necessary certifications. Cooked and cooled whole Jonah crabs were offered and enthusiastically received. The Program followed up this trial by sampling over 500 pounds of cooked and cooled whole Jonah crabs at the Boston Local Food Festival in September (Figure 47). The crab was purchased from Cape Ann Lobstermen in Gloucester.



Figure 47. Visitors enjoy cooked and cooled Jonah crab at DMF's tent at the Boston Local Food Festival in September 2025.

New England Regional Marketing Collaboration Meeting

Massachusetts' and Rhode Island's Seafood Marketing Programs convened all other coastal New England states' programs to share best practices and brainstorm seafood marketing strategies. Though all states have different seafood landscapes, everyone was interested in collaborative work and saw potential for a joint grant application in the future. The meeting was held at MassWildlife's Westborough headquarters in October.

Scientific Diving

Scientific Diving is responsible for managing all scientific diving activities conducted by DMF. First organized in 1972, the program has evolved to meet the standards of the Occupational Safety and Health Administration's Scientific Diving exemption. This structure sets high standards for DMF's training and diving operations, affording Division divers greater protection from accidental injury and helping to ensure the success of research performed by diving.

DMF's 2025 Scientific Dive Team roster included 14 scuba divers, including the Dive Safety Officer, and three snorkelers (Figure 48). A total of 417 scuba dives and 165 skin dives (snorkels) were conducted over a total of 247 dive days. Scientific Diving supported ongoing monitoring, projects, and research across the agency including:

- Eelgrass Research and Restoration: 231 dives (scuba and snorkel)
- Early Benthic Phase Lobster Suction Surveys: 56 dives
- Bottom Temperature Monitor and Acoustic Receiver Maintenance: 55 dives

- Habitat Research and Monitoring, Artificial Reefs: 54 dives
- Diver Training and Proficiency Dives: 27 dives
- New Bedford Superfund Site Specimen Collections (in partnership with MassDEP): 24 dives
- Shellfish and Aquaculture Program Support: 13 dives

Notable dive program efforts included:

- Hand collection of over 11,000 eelgrass reproductive shoots, containing approximately one million seeds, in Salem Sound (10 divers, five surface support personnel, two vessels) in collaboration with MassBays National Estuary Partnership and the USEPA.
- Drysuit training for two DMF Dive Team members, culminating in dives at Woods Hole Oceanographic Institution.
- SCUBA in a Bucket at DMF's inaugural Marine Quest, where over 40 youth started their SCUBA journey by taking their first underwater breaths.

Routine maintenance and replacement of DMF diving equipment, in addition to new equipment, continued in 2025 at a cost of nearly \$32,000. Sixty air cylinders were inspected in-house, saving \$2,700. Additionally, in-house first responder training was provided for 36 DMF divers, dive tenders, and boat operators. This amounts to savings of \$9,000.

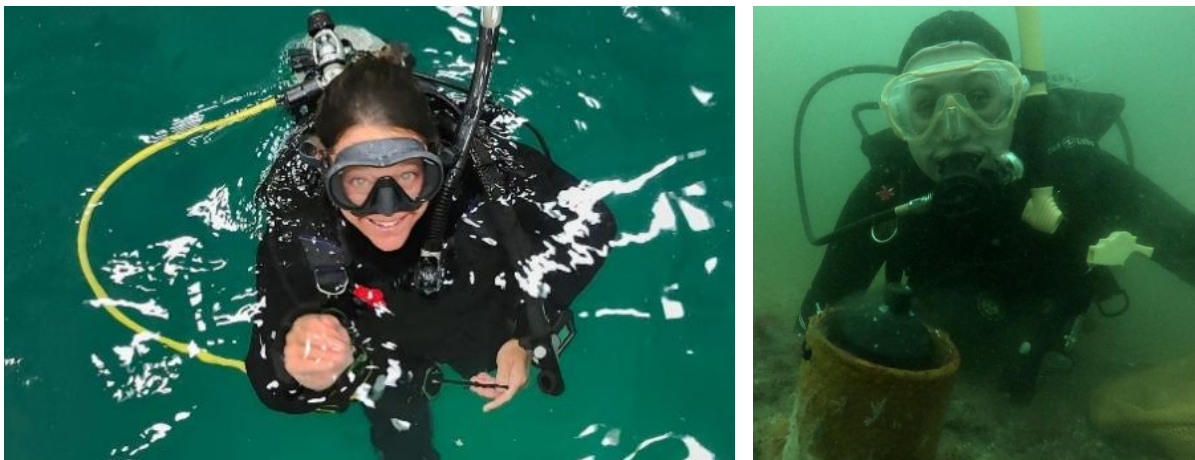


Figure 48. Members of DMF's Scientific Dive Team: (Left), the new Diving Safety Officer, Ashley Peach Bueche, who oversees the program.; (Right) Invertebrate Fisheries Biologist Laura Tomlinson, next to an acoustic receiver at Manomet Boulders.

Capital Assets and Facilities Management

Facilities

DMF maintains facilities at several locations throughout the state. The two primary field stations are in Gloucester and New Bedford, with smaller facilities that include the Shellfish Purification Plant in Newburyport, the Cat Cove Marine Laboratory in Salem, a storage and field support facility in New Bedford, and a subsidiary field office and storage facility in Sandwich. In 2025, DMF decommissioned the Shellfish Purification Plant in Newburyport and, working with the Division of Capital Asset Management & Maintenance, began the process to allow for the transfer of this state building.

In FY2025, DMF continued outdoor renovations of the 50-year-old Cat Cove Marine Laboratory, which included updates to the seawater lab, kitchen renovations, installation of security fencing, electrical upgrades, and some site work. DMF began to develop a master plan to utilize the Cat Cove Marine Laboratory as a center of excellence for coastal habitat restoration. Other major projects at the Gloucester facility included the installation of new roofs on both the main building and the shellfish lab, asbestos remediations with new flooring, new cubicle furniture, creation of new office space in the main building, shower room renovations, and expansion of ethernet and Wi-Fi capabilities through the facilities. In the New Bedford office, DMF began an expansion to the shellfish office and major renovations and an expansion of the bacteriological laboratory. DMF was also able to provide new tagging equipment, scales, nets, drifters, and servers for our various research programs. In total, DMF spent about \$1.36M on facility planning, infrastructure maintenance, emergency repairs, vessel maintenance, and upgrading scientific instruments.

Vehicles and Boats

DMF maintains a fleet of 35 vehicles and 16 boats. In 2025, \$153,000 was paid to the Office of Vehicle Management (OVM) for lease vehicles, and an additional \$160,000 was spent on upgrades, maintenance and repairing all stock (vehicles and boats). OVM is working to both reduce and “green” the overall size and composition of the fleet of vehicles operated by the Commonwealth in compliance with Executive Order 594. To meet those goals, benchmarks have been established that require 5% of the Commonwealth fleet of vehicles to be EV by the end of FY2025 and 20% by the end of FY2030. To meet those goals DMF has been switching from combustion engines to EV wherever practical and possible. Through 2025, 23% of the DMF fleet are EV.

Appendix A. 2025 Publications

DMF Technical Reports

Chase, B.C. 2025. River Herring Spawning and Nursery Habitat, Weymouth-Back River Watershed, 2011-2012. Mass. Div. Mar. Fish. Tech. Report, TR-85.

Contributions

Chosid, D., Reilly, B., Burke, E., Fowler, E. (2025) Functional trawl densities using on-demand gear. Presentation at the 2025 Annual Meeting of the Ropeless Consortium, New Bedford, Massachusetts, USA

LeBlanc, N.M., **Gahagan, B.I.**, Anderson, E.C., Whiteley, A.R., and S.A. Pavey. 2025. [Development of a high-throughput single nucleotide polymorphism panel for genetic stock identification of Striped Bass](#). *Transactions of the American Fisheries Society*. doi.org/10.1093/tafafs/vnaf010.

Logan JM, Butler CM, Fuller L, Staudinger MD, Hoffmayer ER, Hanisko D, Varela JL, Medina A, De La Serna JM, Godoy D, Macías D, Golet W, **Chase B**, MacKenzie BR, Olafsdottir D, Nadeau S, Rodríguez-Marín E, Ciavaglia E, Tinti F, Battaglia P, Romeo T, Andaloro F, Sinopoli M, Karakulak FS, Salman A, Pleizier N, Goñi N, Arrizabalaga H, Itoh T, Ortiz De Zárate V, Jansen T (2025) Characterizing the diet of Atlantic bluefin tuna *Thunnus thynnus* across its spatial range: a metadata analysis spanning over three decades. *Marine Ecology Progress Series* 763:127–155.

Nadeau S, **Logan JM**, Carlucci J, Zydlewski G, Golet WJ (2025) Dietary shifts and energetics of Atlantic bluefin tuna (*Thunnus thynnus*) in the Gulf of Maine. *Marine Ecology Progress Series* 759:71–87.

Rocker, M., R. Yoshioka, K. Johnston, N. Record, K. Reardon, H. Glon, **T.L. Pugh**, H Small, and M Groner. 2025. [Population and temperature dependent variation in molt phenology and disease susceptibility shape epidemiological outcomes in American lobster \(*Homarus americanus*\)](#). *ICES Journal of Marine Science*, 82(12). doi.org/10.1093/icesjms/fsaf233.

Weiss, M., Holland, A.R., D'Amato, A.W., Deegan, L.A., Farmer, W.H., Hoving, C., Karmalkar, A.V., Latzka, A., Magee, M., McIntyre, P.B., Morelli, T.L., Notaro, M., Olmstead, N., Palmer, R.N., Pau, N., Renfrew, R., Ribic, C.A., **Sheppard, J.**, Staudinger, M.D., Zuckerberg, B., Bradley, B.A. (2025). [Relationship-centered engagement bridges the divide between science and management, and enhances climate adaptation](#). *BioScience*, biaf087. doi.org/10.1093/biosci/biaf087. DMF Contribution No. 193.

Winton, M.V., Novak, A.J., Migneco, V.L., Chisholm, J., and **G.B. Skomal**. 2025. [Dusky sharks actively prey on gray seals](#). *Environmental Biology of Fishes*. doi.org/10.1007/s10641-025-01736-1.

Other Reports

- [Division of Marine Fisheries Newsletter, Quarters 1 and 2, 2025](#)
- [Division of Marine Fisheries Newsletter, Quarters 3 and 4, 2025](#)
- [Division of Marine Fisheries 2024 Annual Report](#)