



## NOAA In Your State



# Massachusetts



***NOAA is an agency that enriches life through science. Our reach goes from the surface of the sun to the depths of the ocean floor as we work to keep citizens informed of the changing environment around them. From daily weather forecasts, severe storm warnings, and climate monitoring to fisheries management, coastal restoration and supporting marine commerce, NOAA's products and services support economic vitality and affect more than one-third of America's gross domestic product. NOAA's dedicated scientists use cutting-edge research and high-tech instrumentation to provide citizens, planners, emergency managers and other decision makers with reliable information they need when they need it.***

***The following is a summary of NOAA facilities, staff, programs, or activities based in, or focused on, your state or territory: Starting with highlights, then by [congressional districts and cities or towns](#), [coastal programs](#), and then [statewide programs](#).***

### ***Highlights of NOAA in Massachusetts***

<a href="#">Waquoit Bay National Estuarine Research Reserve</a>	Waquoit	MA-9
<a href="#">Woods Hole Laboratory</a>	Woods Hole	MA-9
<a href="#">Office for Coastal Management</a>	Statewide	MA
<a href="#">New England Bay-Watershed Education and Training Program</a>	Statewide	MA
<a href="#">Northeast Fisheries Science Center</a>	Statewide	MA
<a href="#">Greater Atlantic Regional Fisheries Office</a>	Statewide	MA

The state of Massachusetts also has one Cooperative Institute, one Weather Forecasting Offices, four Labs and Field Offices, one Science on a Sphere® exhibitions, and one National Estuarine Research Reserve.

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### [Weather Forecast Offices](#)

Boston MA-8

[National Weather Service \(NWS\) Weather Forecast Offices \(WFO\)](#) are staffed 24/7/365 and provide weather, water, and climate forecasts and warnings to residents of Massachusetts. There are 122 [WFOs nationwide](#) of which one is in Massachusetts. Highly trained forecasters issue warnings and forecasts for weather events, including severe thunderstorms, tornadoes, hurricanes, winter storms, floods, and heat waves to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including wireless emergency alerts, social media, [weather.gov](#), and NOAA Weather Radio All Hazards. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and educational programs that strengthen working relationships with local partners in emergency management, government, the media and academic communities. Forecasters provide Impact-based Decision Support Services (IDSS), both remotely and on-site during critical emergencies such as wildfires, floods, chemical spills, and major recovery efforts. To gather data for forecasting and other purposes, NWS WFO staff monitor, maintain and use Automated Surface Observing Stations and Doppler Weather Radar. In addition to the WFOs, NWS operates specialized national prediction [centers](#) and regional headquarters throughout the U.S. for a total of 168 operational units. Over 85% of NWS' workforce is in the field. For current Massachusetts weather, visit [www.weather.gov](#) and, on the national map, click on the relevant county or district.

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### [Science On a Sphere®](#)

New Bedford MA-9

[Science On a Sphere \(SOS\)](#) is a room-sized global display system that uses computers and video projectors to display planetary data onto a six-foot diameter sphere, analogous to a giant animated globe. Researchers at NOAA developed Science On a Sphere® as an educational tool to help illustrate Earth System science to people of all ages. Animated images of atmospheric storms, climate change, and ocean temperature can be shown on the sphere, which is used to explain in a way that is simultaneously intuitive and captivating what are sometimes complex environmental processes. It is located at the Ocean Explorium in New Bedford

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### **[MA- 2](#)**

#### **[Petersham \[Harvard Forest\]](#)**

#### **Office of Oceanic and Atmospheric Research (OAR) - [Halocarbon Measurements](#)**

NOAA's Global Monitoring Laboratory (GML) operates a sampling network to measure the distribution and trends of the gases most responsible for human-caused depletion of the stratospheric ozone layer. Weekly samples are collected in high pressure flasks at fixed locations. The air sample flasks are delivered to GML in Boulder, CO for analysis. Some

locations conduct continuous surface measurements on site. Halocarbon measurements help determine the effectiveness of efforts to protect and restore the ozone layer - so it can protect us from the sun's ultraviolet radiation.

### **MA- 3**

#### **Worcester**

#### **Office of Oceanic and Atmospheric Research (OAR) - [Global Greenhouse Gas Reference Network; Halocarbon Measurements](#)**

NOAA's Global Monitoring Laboratory (GML) operates a small aircraft-based North American network of sampling sites to measure vertical profiles of important greenhouse gas concentrations. Air is sampled above the surface up to approximately 25,000 feet above sea level using a relatively small, light, and economical automated system developed by GML researchers. These air samples are delivered to GML in Boulder, Colorado for measurements of CO<sub>2</sub>, CH<sub>4</sub>, and other greenhouse gasses, and ozone depleted substances. These data improve our understanding of the distribution of greenhouse gases and models of the global carbon cycle. The measurements of ozone depleting substances help determine the effectiveness of efforts to protect and restore the ozone layer, which protects the surface from the sun's ultraviolet radiation.

### **MA- 4**

#### **Taunton**

#### **National Environmental Satellite, Data, and Information Service (NESDIS) - [National Centers for Environmental Information](#) - [Eastern Regional Climate Services Director](#)**

NOAA's six Regional Climate Services Directors (RCSDs), which are part of NCEI, support the development and delivery of a wide range of place-based climate science and information products and services to help people make informed decisions. RCSDs regularly communicate with stakeholders about climate information needs, and help build and strengthen active partner networks with public and private constituents. They play a primary role in integrating the work within NOAA and among its partners in developing and delivering climate services at the regional level. These efforts serve to increase the value of climate information to users and support more efficient, cost-effective delivery of products and services. The Eastern RCSD region encompasses Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Pennsylvania, Maryland, Ohio, West Virginia, Virginia, North Carolina, and South Carolina.

#### **National Weather Service (NWS) - [River Forecast Center](#)**

Co-located with the NWS Weather Forecast Office about 30 miles south of Boston in Taunton, the NWS Northeast River Forecast Center (RFC) performs continuous river basin modeling and provides hydrologic forecast and guidance products for rivers and streams in New England and New York. These products include forecasts of river stage and flow, probabilistic river forecasts, reservoir inflow forecasts, gridded precipitation estimates and forecasts, spring flood outlooks, and flash flood and headwater guidance. Some of the RFCs in the western and central U.S. also provide water supply forecasts. RFCs work closely with local, state and federal water management agencies, including the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, and U.S. Geological Survey, to provide water and flood information for critical decisions (aka Impact-based Decision-Support Services or IDSS).

#### **National Weather Service (NWS) - [Weather Forecast Office](#)**

Co-located with the NWS Northeast River Forecast Center, about 30 miles south of Boston in Taunton, this NWS Weather Forecast Office (WFO) is staffed around-the-clock every day, and provides the best possible weather, water, and climate forecasts and warnings to residents of Massachusetts and Rhode Island. Highly trained forecasters issue warnings and forecasts for events, including severe thunderstorms, tornadoes, winter storms, floods, and heat waves. This essential

information is provided to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and NOAA Weather Radio All Hazards.

Forecasters also provide Impact-based Decision-Support Services (IDSS), both remotely and on-site, during critical emergencies, such as wildfires, floods, chemical spills, and for major recovery efforts such as those following the Joplin and Moore tornadoes, Hurricanes Katrina and Sandy, and the Sept. 11, 2001, terrorist attacks in New York City and Washington D.C. The WFO collects and disseminates precipitation, river, and rainfall data, and prepares local climatological data. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and educational programs, which helps build strong working relationships with local partners in emergency management, government, the media and academic communities. The WFO operates Automated Surface Observing Stations (ASOS), as well as the local Doppler Weather Radar, which provides critical information about current weather conditions. The radar data enables forecasters to issue warnings for tornadoes, severe thunderstorms, and flash floods.

#### **MA- 6 Gloucester**

##### **National Marine Fisheries Service (NMFS) - Northeast [Inspection Office and Laboratory and National Training Section](#)**

NOAA's Seafood Inspection Program conducts a voluntary inspection program for fishery products on a fee-for-service basis. The Program offers a wide range of services to the area's fishermen, fish processors and fish brokers including process and product inspection, product grading, lot inspection, laboratory analysis, and training. All edible foodstuffs, ranging from whole fish to formulated products, as well as fishmeal used for animal foods, are eligible for inspection and certification.

##### **National Marine Fisheries Service (NMFS) - [Atlantic Highly Migratory Species Management Division](#)**

The Atlantic Highly Migratory Species Management Division manages Atlantic tuna, sharks, swordfish, and billfish under the Magnuson-Stevens Fishery Conservation and Management Act. In cooperation with an external advisory panel, the division develops and implements Fishery Management Plans for these species taking into account all domestic and international requirements under the Atlantic Tunas Convention Act, Marine Mammal Protection Act, the Endangered Species Act, and the Migratory Bird Treaty Act. The Gloucester office focuses primarily on Atlantic tuna fisheries, Atlantic bluefin tuna management and reporting, international trade, and recreational and commercial longline fishing.

##### **National Ocean Service (NOS) - [OR&R Preparedness, Response, and Restoration Coordinators](#)**

NOAA's Office of Response and Restoration (OR&R) is a center of expertise in preparing for, evaluating, and responding to threats to coastal environments, including oil and chemical spills, releases from hazardous waste sites, disasters, and marine debris. To fulfill its mission of protecting and restoring NOAA trust resources, OR&R provides scientific and technical support to prepare for and respond to environmental threats that coastal communities face; determines damage to natural resources from those releases; protects and restores marine and coastal ecosystems; and works with coastal communities to address critical local and regional coastal challenges.

The **Regional Preparedness Coordinator (RPC)** is strategically placed within the region to ensure that NOS and our partners are able to effectively prepare for, respond to, and recover from all hazards, including coastal disasters. The RPC serves as a liaison between NOS and its federal, state, and local disaster preparedness and emergency response partners. A key role of the RPC is to better understand the needs and opportunities within the region and to ensure partners have the tools and resources necessary to inform decision-making. The RPC has expertise across the spectrum

of emergency management and provides preparedness, response, and recovery services including planning, training, exercises, response coordination, continuous improvement, and long-term recovery. The RPC, based in Gloucester, Massachusetts, serves the Northeast region – Connecticut, Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and New York.

Eleven regionally based **Scientific Support Coordinators (SSC)** harness the input of a multi-disciplinary team to address issues such as oil slick trajectory forecasting, environmental tradeoffs, best practices, resources at risk, and chemical hazard assessment to reduce risks to coastal habitats and resources. The SSC in Massachusetts is based in Gloucester.

The **NOAA Marine Debris Program (MDP)** in the Office of Response and Restoration (OR&R) supports national and international efforts to reduce the impacts of marine debris. The MDP New England Regional Coordinator, based in Gloucester, Massachusetts, supports coordination efforts with regional stakeholders, provides support to grant-funded projects, tracks progress of projects, and conducts regional marine debris outreach to local audiences.

#### **MA- 8**

##### **Boston**

#### **NOAA Office of Education - Coastal Ecosystem Learning Centers (CELC) network**

In Massachusetts, NOAA's Office of Education provides support to the New England Aquarium in Suffolk County as part of the Coastal Ecosystem Learning Centers (CELC) network, which is made up of 25 aquariums and marine science education centers located throughout North America. The CELC network collaborates on a variety of initiatives, ranging from youth summits to multi-institution projects, with the goal of better engaging the public in understanding, appreciating, and protecting marine and freshwater ecosystems. Through the CELC network, the Office of Education provides guidance, resources, and scientific expertise to these institutions, which collectively reach an estimated 20 million people annually across North America. By coordinating with the CELC network, NOAA helps to further its mission of engaging the public in protecting and preserving coastal and marine ecosystems.

#### **MA- 9**

##### **Mashpee - Cape Cod**

#### **Office of Oceanic and Atmospheric Research (OAR) - Global Greenhouse Gas Reference Network**

NOAA's Global Monitoring Laboratory (GML) operates trace gas monitoring sites at tall towers in eight states, including Massachusetts. The sites were established to extend GML's monitoring network to provide data to aid estimation of the net carbon balance of the continent. Variations of trace gases, especially carbon dioxide, are largest near the ground, so we utilize existing tall towers as platforms for in situ and flask sampling for atmospheric trace gases. Flask samples are delivered to GML in Boulder, Colorado for analysis. These data improve models and our understanding of the distribution of greenhouse gases, including sources and sinks of carbon in North America.

##### **New Bedford**

#### **National Marine Fisheries Service (NMFS) - Port Agent Field Office**

The Greater Atlantic Region's Port Agent Team works directly with the fishing industries of the region to provide in-person advice and support to fishermen and seafood dealers. Port agents also serve as a conduit for industry to relay information to the Regional Administrator and other NOAA staff about fishing industry concerns, thoughts and activities. Team members assist seafood dealers and vessel operators and owners with data reporting requirements, in navigating the permitting process, and with other Agency regulations and processes. They collect biological samples of seafood landed by commercial fishermen for use in fisheries stock assessments. They also provide the general public with information on fisheries and the marine environment by attending public events and through ad-hoc interactions.

**NOAA Office of Education - [Science On a Sphere® at Ocean Explorium](#)**

Science On a Sphere® (SOS) is a room-sized global display system that uses computers and video projectors to display planetary data onto a six-foot diameter sphere, analogous to a giant animated globe. Researchers at NOAA developed Science On a Sphere® as an educational tool to help illustrate Earth System science to people of all ages. Animated images of atmospheric storms, climate change, and ocean temperature can be shown on the sphere, which is used to explain complex environmental processes in a way that is simultaneously intuitive and captivating.

***Plymouth***

**NOAA Office of Education - [Environmental Literacy Program](#)**

The Environmental Literacy Program (ELP), administered by NOAA's Office of Education, provides grants and support for formal (K-12) and informal education to advance the agency's mission. In Massachusetts, ELP funded a project by the Manomet in Plymouth County. The project aims to build the environmental literacy of children, youth, and adults so that they can become knowledgeable about ways to increase their community's resilience to extreme weather, climate change, and other environmental hazards, and be involved in achieving that resilience. To achieve this goal, the project integrates relevant state and local resilience plans and collaborates with stakeholders who are actively implementing these plans. The [Manomet project](#) employs NOAA resources and educational methods to promote community-level environmental literacy, enabling participants to better comprehend threats and implement solutions that build resilience to extreme weather, climate change, and other environmental hazards. Environmental literacy includes the knowledge, skills, and confidence to 1) reason about the ways that human and natural systems interact globally and locally; 2) participate in civic processes; and 3) incorporate scientific information, cultural knowledge, and diverse community values when taking action to anticipate, prepare for, respond to, and recover from environmental hazards, including mitigating and adapting to climate change.

***Waquoit***

**National Ocean Service (NOS) - [Waquoit Bay National Estuarine Research Reserve](#)**

The 2,837 acre Waquoit Bay Research Reserve, designated in 1988 and managed by the Massachusetts Department of Conservation and Recreation, studies the Cape Cod area in order to improve the understanding of coastal ecosystems and human influences on them, then translating that information to promote more informed decision making regarding coastal resources. Topics range from blue carbon and groundwater dynamics to green home practices, climate change, and ecological gardening techniques. Reserve staff work with local schools and help teachers implement classroom curricula on coastal topics.

**National Ocean Service (NOS) – [Margaret A. Davidson Graduate Fellowship](#)**

The Margaret A. Davidson Graduate Fellowship program funds graduate student research and professional development opportunities within the National Estuarine Research Reserve System. The program supports collaborative research addressing local management challenges that may influence future policy and management strategies. The Davidson Fellow at the Waquoit Bay National Estuarine Research Reserve will focus their research on interactive effects of altered hydrology, nitrogen loading, and restoration on salt marsh nitrogen cycling.

***Woods Hole***

**National Marine Fisheries Service (NMFS) - [Woods Hole Laboratory](#)**

The Northeast Science Center focuses on collection, analysis, and presentation of scientific information about the Northeast Shelf ecosystem, its condition, and its marine life. In addition to its five laboratories, the Center regularly uses three research vessels to support its work. They are the NOAA ship *Henry B. Bigelow*, and the small research vessels *Gloria Michelle*, and *Victor Loosanoff*. The Greater Atlantic Regional Office and the Science Center are responsible for the District of Columbia and the following states: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina; and the inland states of Vermont, Minnesota, Michigan, Wisconsin, Illinois, Indiana, Ohio, and West Virginia. NOAA's Northeast Fisheries Science Center's Woods Hole Laboratory is the nation's original federal marine fisheries laboratory. Research emphasis is on the natural and life history of the region's important seafood species, federally protected marine species, science supporting ecosystem-based resource management, and the sociological and economic condition of the fishing business. It also houses the Woods Hole Science Aquarium, the nation's oldest public display aquarium.

**Office of Oceanic and Atmospheric Research (OAR) - [Cooperative Institute for the North Atlantic Region](#)**

The Cooperative Institute for the North Atlantic Region (CINAR) was awarded to Woods Hole Oceanographic Institution (WHOI). CINAR serves as a mechanism to promote collaborative research between university scientists and those in NOAA. The mission of CINAR is to conduct and coordinate innovative and multidisciplinary research, engaging NOAA and academic scientists to enable informed decisions for sustainable and beneficial management of the U.S. Northeast continental shelf ecosystem. CINAR conducts research across five themes: (1) sustained ocean observations and climate research; (2) ecosystem research, observation, and modeling; (3) stock assessment research; (4) protected species research and recovery; and (5) ecosystem based fisheries management.

**NOAA Commissioned Officer Corps (NOAA Corps) and Office of Marine and Aviation Operations (OMAO) - [NEFSC Administrative and Operational Support](#)**

The NOAA Commissioned Officer Corps stations multiple officers alongside OMAO civilian employees with the Northeast Fisheries Science Center (NEFSC) in support of fisheries operations in the North and Mid-Atlantic. These individuals fill various roles, including the Chief of Staff for NEFSC, OIC and JOIC of the *Gloria Michelle*, and as facility management personnel. In these roles, NOAA Corps officers and OMAO civilians provide necessary functions, such as planning and managing budgets, directing both shoreside and underway logistics for all sizes of NOAA vessels, and liaising with local, State and Federal agencies to coordinate operations throughout the region.

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**[Coastal](#)**

**National Marine Fisheries Service (NMFS) - [Deep-Sea Coral Research and Technology Program](#)**

NOAA's Deep Sea Coral Research is administered by NOAA Fisheries' [Office of Habitat Conservation](#). Mandated by the Magnuson-Stevens Fishery Conservation and Management Act, it is the nation's only federal research program dedicated to increasing scientific understanding of deep-sea coral ecosystems. Deep-sea corals occur off of every coastal state in the country, and create important habitats for countless species, including many fish species. The Program collaborates closely with partners, including other NOAA offices, to study the distribution, abundance, and diversity of deep sea corals and sponges. This work then informs critical management decisions in the waters of the United States and its territories. These decisions enhance the sustainability of deep-sea fisheries and other ocean uses, while conserving deep-sea coral and sponge habitats.

The Program works with partners to complete multi-year regional fieldwork initiatives, as well as smaller projects around the country, centered on integrating new and existing information on these vulnerable and biologically diverse habitats.

The first research initiative took place from 2009 to 2011 in the U.S. South Atlantic region and provided valuable information to help decision-makers refine protected area boundaries. To date, the Program has completed one or more initiatives in each region of the United States.

**National Marine Fisheries Service (NMFS) - [Cooperation with States Program](#) and [Species Recovery Grants](#)**

Under the authority of section 6 of the Endangered Species Act, the Cooperation with States Program brings states, NMFS, and other partners together to recover threatened and endangered species. A total of 25 U.S. territories and coastal states, including Massachusetts, currently participate in this program. Competitive grants are awarded to states through the Species Recovery Grants to States Program to support management, monitoring, research and outreach efforts for species that spend all or a portion of their life cycle in state waters. The funded work is designed to prevent extinctions or reverse the decline of species, and restore ecosystems and their related socioeconomic benefits. The Massachusetts Division of Marine Fisheries has received multiple awards through this program, including grants to support projects focused on North Atlantic right whales and sea turtles.

**National Marine Fisheries Service (NMFS) - [Sea Turtle Salvage and Stranding Network](#)**

The Sea Turtle Stranding and Salvage Network (STSSN) was formally established in 1980 to collect information on and document strandings of marine turtles along the U.S. Gulf of Mexico and Atlantic coasts. The network, which includes federal, state and private partners, encompasses the coastal areas of the eighteen-state region from Maine to Texas, and includes portions of the U.S. Caribbean. Data gathered by the Network helps inform bycatch reduction efforts, monitor factors affecting turtle health, and provide other information needed for sea turtle management and population recovery.

**National Marine Fisheries Service (NMFS) - [National Marine Mammal Stranding Network](#) and [John H. Prescott Marine Mammal Rescue Assistance Grant Program](#)**

The National Marine Mammal Stranding Network and its trained professionals respond to dead or live marine mammals in distress that are stranded, entangled, out of habitat or otherwise in peril. Our long-standing partnership with the Network provides valuable environmental intelligence, helping NOAA establish links among the health of marine mammals, coastal ecosystems, and coastal communities as well as develop effective conservation programs for marine mammal populations in the wild. There are five stranding network members in the state. NOAA Fisheries funds eligible members of the Stranding Network through the competitive John H. Prescott Marine Mammal Rescue Assistance Grant Program. For fiscal year 2020, 43 competitive Prescott Grants were awarded for a total of \$3.7 million nationwide, with three awards totalling \$273,830 going to two recipients in Massachusetts: the International Fund for Animal Welfare and the National Marine Life Center, Inc.

**National Ocean Service (NOS) – [Bipartisan Infrastructure Law](#)**

The Bipartisan Infrastructure Law is helping coastal communities build the future they want to see. The legislation provides a historic investment in coastal protection and restoration that will increase community resilience to climate change and extreme weather events, and improve how we manage our ocean resources. Projects funded under this law protect and restore ecologically significant habitats, including conserving lands that play a critical role in helping communities become more resilient to natural hazards. Massachusetts received funding for two projects in FY22, as well as funds to build the state's capacity to protect its coastal communities and resources.

**National Ocean Service (NOS) - [National Water Level Observation Network](#)**



The National Ocean Service (NOS) operates ten long-term, continuously operating tide stations in the state of Massachusetts that provide data and information on tidal datum and relative sea level trends, and are capable of producing real-time data for storm surge warning. These stations are located at Boston Nantucket and Woods Hole. These stations also include meteorological sensors. Each station is associated with a set of tidal benchmarks installed in the ground that is used to reference the height of the water levels to help connect the water level to land. Station data feeds into many CO-OPS products that are used to support safe navigation, mitigate coastal hazards, and protect communities. Such products include:

- Coastal Inundation Dashboard - view water levels in real-time and during storms
- High Tide Flooding Outlooks
- Sea level trends and maps
- Real-time current measurements
- Hydrodynamic models
- Tidal and water level datums

**National Ocean Service (NOS) - [Cape Cod-Buzzards Bay PORTS®](#)**

A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community near Cape Cod. Real-time data are quality-controlled and disseminated to local users for safe and efficient navigation and include wave observations in Cape Cod and Buzzards Bay and tidal current observations at the West End of the Cape Cod Canal. Water level and meteorological observations from two locations are also included in this system.

**National Ocean Service (NOS) - [Navigation Manager](#)**

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in Massachusetts. They help identify the navigational challenges facing marine transportation in Massachusetts and provide NOAA's resources and services that promote safe and efficient navigation. Navigation managers are on call to provide expertise and NOAA navigation response coordination in case of severe coastal weather events or other marine emergencies. The Office of Coast Survey has a navigation manager in Narragansett, RI to support mariners and stakeholders in the Northeast region.

**National Ocean Service (NOS) - [Navigation Response Team](#)**

The Office of Coast Survey (OCS) maintains the nation's nautical charts and publications for U.S. coasts and the Great Lakes. OCS navigation managers are strategically located in U.S. coastal areas to provide regional support to federal and state agencies in order to assist with navigational challenges. The Office of Coast Survey's Navigation Response Branch (NRB) conducts routine and emergency hydrographic surveys; and working with the regional Navigation Managers, navigation response teams (NRT) work around-the-clock after storms to speed the reopening of ports and waterways. During emergency response, the NRTs provide time-sensitive information to the U.S. Coast Guard or port officials, and transmit data to NOAA cartographers for updating the Coast Survey's suite of navigational charts. NRT-New London is homeported in New London, CT and is able to respond in the Northeast region within 24 to 48 hours.

**National Ocean Service (NOS) - [Coastal and Estuarine Land Conservation Program](#)**

The Coastal and Estuarine Land Conservation Program brings conservation partners together to protect coastal and estuarine lands considered important for their ecological, conservation, recreational, historical, or aesthetic values. Subject to availability of funding, the program provides state and local governments with matching funds to purchase coastal and estuarine lands or obtain conservation easements for important lands threatened by development. Since 2002, the program has protected more than 110,000 acres of coastal land nationally, including over 16,000 acres protected as in-kind matching contributions. Six projects were successfully completed in Massachusetts, and these lands are protected in perpetuity.

**National Ocean Service (NOS) – [National Coastal Zone Management Program](#)**

Through a unique federal-state partnership, NOAA's Office for Coastal Management works with the Massachusetts Executive Office of Environmental Affairs to implement the National Coastal Zone Management Program in Massachusetts. NOAA provides the state coastal management program with financial and technical assistance to further the goals of the Coastal Zone Management Act and ensure coastal waters and lands are used in a balanced way to support jobs, reduce use conflicts, and sustain natural resources.

**National Ocean Service (NOS) - [Coastal Management Fellowship](#)**

This program matches postgraduate students with state and territory coastal zone programs to work on two-year projects proposed by the state or territory. The Massachusetts Coastal Management Program is hosting a fellow from 2022-2024 who is helping increase awareness of shoreline restoration opportunities and support the application of at least one project for State Coastal Resilience Grant Program funding.

**National Ocean Service (NOS) – [Digital Coast](#)**

The Digital Coast is a focused information resource developed to meet the unique needs of coastal communities. Developed and maintained by NOAA's Office for Coastal Management, content comes from hundreds of organizations, including federal, state, and local agencies, plus private sector and non-profit contributors. The Digital Coast website provides not only site-specific coastal data, but also related tools, training, and information needed to make these data useful for coastal decision makers. The Digital Coast Act authorizes the Digital Coast as a standing national program and supports NOAA's efforts to increase access to authoritative data, tools, and training that enable coastal communities to plan for long-term resilience, manage water resources, and respond to emergencies.

**National Ocean Service (NOS) – [National Coastal Resilience Fund](#)**

The National Coastal Resilience Fund is a partnership effort between NOAA and the National Fish and Wildlife Foundation (NFWF) to restore, increase, and strengthen natural infrastructure to protect coastal communities, while also enhancing habitat for fish and wildlife. In Massachusetts, the NCRF has awarded eleven projects, one in FY18, three in FY19, four in FY21, and three in FY22.

**National Ocean Service (NOS) - [Stellwagen Bank National Marine Sanctuary](#)**

Stellwagen Bank National Marine Sanctuary is an 842-square-mile open ocean site located at the mouth of Massachusetts Bay. Important as a fishing ground for over 400 years, the area has more recently gained fame by being designated as one of the world's top destinations for viewing whales, seabirds and other marine wildlife. In efforts to better understand and protect these marine animals, the sanctuary has become a leading force in research and monitoring. State-of-the-art non-invasive digital synchronous motion, acoustic and video recording tags have been revealing underwater feeding behaviors of whales while passive acoustic monitoring arrays provide data on calling animal distribution and the effects of anthropogenic noise on their communication. Sanctuary staff also conduct an extensive seabird research program, focused on using satellite telemetry, stable isotope and fecal analysis to identify habitat use and food habits of great shearwaters, an abundant summer resident. An active citizen science program assists in documenting seabird populations year-round. Additional research studies focus on sand lance, a key forage fish species, and the impact of climate change on sand lance abundance and distribution. Staff also protect north Atlantic right whale populations in the sanctuary through the Right Whale Corporate Responsibility Program, which actively monitors vessel compliance with Speed Management Areas. This program provides feedback on compliance directly to vessels and shipping companies. As a direct result of this program, speed management areas in Stellwagen Bank have the highest compliance rates in the US and that greatly reduces the risk of a shipstrike to these critically endangered whales.

Documentation of shipwrecks has resulted in the listing of seven shipwrecks at six sites on the National Register of Historic Places. Through education partnerships, sanctuary exhibits now reside in the New England Aquarium, Maritime Gloucester and several other sites in the sanctuary region. A volunteer program engages the public to augment the sanctuary's capacity to achieve its mission. The administrative office for this sanctuary is in Scituate.

**National Ocean Service (NOS) - OR&R [Atlantic Environmental Response Management Application](#) and [Response Tools for Oil and Chemical Spills](#)**

Assessing important spatial information and designing successful restoration projects rely upon interpreting and mapping geographic information, including the location, duration, and impacts from oil spills, other hazardous materials, or debris released into the environment. Atlantic Environmental Response Management Application (ERMA<sup>®</sup>) is an online mapping tool that integrates both static and real-time data, such as ship locations, weather, and ocean currents, providing an easy-to-use common operating picture for environmental responders and decision makers. ERMA staff continued to work closely with Federal and State agencies for drills, hurricane response, and incidents. Maintained habitat data for sensitive species. Ensured data was kept up-to-date and data collection methods were kept consistent. In addition to ERMA, the Office of Response and Restoration (OR&R) offers a suite of [tools](#) to support emergency responders dealing with oil and chemical spills. From Environmental Sensitivity Index (ESI) maps and data which provide concise summaries of coastal resources including biological resources and sensitive shorelines to GNOME, a trajectory and fate model that predicts the route and weathering of pollutants spilled on water, and so much more, these tools provide easy-access to critical data that support a wide range of needs for emergency responders, ultimately supporting our coastal communities.

**National Ocean Service (NOS) - [Marine Debris Projects and Partnerships in Massachusetts](#)**

The NOAA Marine Debris Program (MDP) in the Office of Response and Restoration (OR&R) leads national and international efforts to reduce the impacts of marine debris. The program supports marine debris removal, prevention, and research projects in partnership with state and local agencies, tribes, non-governmental organizations, academia, and industry. The MDP Northeast Regional Coordinator, based in Gloucester, Massachusetts, supports coordination efforts with regional stakeholders, provides support to grant-funded projects, tracks progress of projects, and conducts regional marine debris outreach to local audiences. The MDP also works with local communities and organizations to prevent and remove marine debris. The Center for Coastal Studies, in partnership with other coastal interest groups, is removing derelict fishing gear from the waters and shores of Cape Cod Bay and Cape Cod National Seashore in a two-year cleanup and public education effort. The Gulf of Maine Association, in partnership with the Center for Coastal Studies, Urban Harbors Institute at UMass Boston, Surfrider Foundation, Blue Ocean Society for Marine Conservation, Huntsman Marine Science Centre, and several additional partners, is reducing marine debris by conducting more than 100 shoreline cleanups, including along Cape Cod and mainland Massachusetts, and implementing actions to prevent marine debris from entering the Gulf of Maine. The MDP has also partnered with the National Park Service to install educational marine debris displays at Cape Cod National Seashore and the New Bedford Whaling National Historical Park to bring attention to the issue of marine debris. The Gulf of Maine Marine Debris Action Plan, covering Maine, New Hampshire, Massachusetts, and partners across the Canadian border, was published in 2019 and updated in 2022. This plan is facilitated by the MDP with the participation of nearly 30 different organizations. The plan 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.

**National Ocean Service (NOS) - [OR&R Regional Resource Coordinators](#)**

NOAA's Office of Response and Restoration (OR&R) is a center of expertise in preparing for, evaluating, and responding to threats to coastal environments, including oil and chemical spills, releases from hazardous waste sites, disasters, and marine debris. To fulfill its mission of protecting and restoring NOAA trust resources, OR&R provides scientific and technical support to prepare for and respond to environmental threats that coastal communities face; determines damage to natural resources from those releases; protects and restores marine and coastal ecosystems; and works with coastal communities to address critical local and regional coastal challenges.

OR&R identifies and quantifies environmental injury caused by releases of oil and hazardous materials. Our network of **Regional Resource Coordinators** work with multidisciplinary scientific, economic, and legal teams with the goal of securing the appropriate amount and type of restoration required to restore injured NOAA trust resources and compensate the public for their lost use. We collaborate with NMFS Restoration Center and NOAA General Council through the Damage Assessment, Remediation, and Restoration Program (DARRP) to ensure the process is efficient, legally defensible and restoration focused. The RRCs serving the Northeast/Great Lakes region are based in Boston, Massachusetts and New York, New York.

**National Ocean Service (NOS) - [U.S. Integrated Ocean Observing System \(Mid-Atlantic Regional Association Coastal Ocean Observing System and Northeastern Regional Association of Coastal Ocean Observing Systems\)](#)**

The U.S. Integrated Ocean Observing System, or IOOS®, is a federally and regionally coordinated observing system with 17 interagency and 11 regional partners. The System addresses regional and national needs for coastal, ocean, and Great Lakes data and information. This includes gathering and disseminating regional observations; data management; modeling and analysis; education and outreach; and research and development.

The Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS) is one of these Regional Associations and its coverage extends from Cape Hatteras to Cape Cod including the estuaries and the continental shelf waters in this region. MARACOOS provides the necessary ocean observing, data management, and forecasting capacity to systematically address prioritized themes maritime safety, ecosystem based management, water quality, coastal inundation, and offshore energy development.

The Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS) was established to network and expand the existing observing and prediction capacities of a multitude of institutions and agencies throughout New England and Maritime Canada. NERACOOS supports infrastructure that provides over-water meteorological and wave observations critical to safe navigation in Long Island Sound and the Gulf of Maine to the National Weather Service. These platforms also support current and dissolved oxygen sensors that provide critical information for management of hypoxia and harmful algal blooms. Fisheries managers, water quality specialists, the Coast Guard, and many others benefit from accurate and timely ocean observing infrastructure and related decision support tools. The region includes the coastal waters of Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut. There is overlap with the Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS), which also includes the coastal waters of Connecticut and Rhode Island. In addition, partners from the Canadian provinces of New Brunswick and Nova Scotia are involved.

**National Weather Service (NWS) - [Buoys](#)**

The National Weather Service (NWS), through its National Data Buoy Center (NDBC), develops, deploys, operates, and maintains the current national data buoy network of moored and drifting weather buoys and land stations that serve all of the Nation's coastal states and territories. Within this network, 110 of the buoys and 51 of the land stations are maintained directly by NDBC. Located at NASA's Stennis Space Center in Mississippi, supports weather and marine warning and

forecast services in real time by providing deep ocean and coastal meteorological and oceanographic observations. These data provide valuable information used by NWS supercomputers to produce computer-generated model forecasts of the atmosphere and climate. NDBC manages the Volunteer Observing Ship program to acquire additional meteorological and oceanographic observations supporting NWS mission requirements. NDBC also supports operational and research programs of NOAA and other national and international organizations.

## Statewide

### National Marine Fisheries Service (NMFS) - [New England Bay Watershed Education and Training Program](#)

The NOAA Bay Watershed Education and Training (B-WET) program is an environmental education program that promotes locally relevant, experiential learning in the K-12 environment. The New England B-WET program is administered by the Greater Atlantic Regional Fisheries Office on behalf of the NOAA Office of Education. New England B-WET currently serves Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut. The primary delivery of B-WET is through competitive funding that promotes Meaningful Watershed Educational Experiences. The New England B-WET program recognizes that knowledge and commitment built from firsthand experience, especially in the context of one's community and culture, is essential for achieving environmental stewardship. New England B-WET responds to regional education and environmental priorities through local implementation of competitive grant funds.

### National Marine Fisheries Service (NMFS) - [Greater Atlantic Regional Fisheries Office](#) and [Northeast Fisheries Science Center](#)

NMFS is responsible for the management, conservation and protection of living marine resources within the United States' Exclusive Economic Zone (water three to 200 mile offshore). Using the tools provided by the *Magnuson-Stevens Act*, NMFS assesses and predicts the status of fish stocks, develops and ensures compliance with fisheries regulations, restores and protects habitat and works to reduce wasteful fishing practices, and promotes sustainable fisheries. Under the *Marine Mammal Protection Act* and the *Endangered Species Act*, NMFS recovers protected marine species (e.g. whales, turtles). The Greater Atlantic Regional Fisheries Office (located in Gloucester, MA) includes divisions that promote sustainable fisheries, habitat conservation, and recovery of protected species, and conducts statistical analysis and programs supporting these divisions. Key fish species managed in the Greater Atlantic Region include the northeast "multispecies complex" (cod, haddock, yellowtail flounder etc.), Atlantic sea scallops, herring, lobster, and summer flounder. Key marine endangered species in this region are North Atlantic right whales, leatherback, loggerhead, and Kemp's ridley sea turtles, Atlantic salmon and Atlantic and shortnose sturgeon. NMFS is the lead agency coordinating the Large Whale and Sea Turtle Disentanglement Program activities and the Marine Mammal Health and Stranding Response Program activities. The core functions of these programs include coordinating volunteer networks to: respond to entanglements and strandings, investigate mortality events, and conduct biomonitoring, tissue/serum banking, and analytical quality assurance. The Office also fosters sustainable [aquaculture](#) in the region, with two Regional Aquaculture Coordinators that act as a liaison between federal and state agencies to assist in permitting and coordination activities, supporting aquaculture outreach and education, and collaborating with industry, academia and other stakeholders on regional marine aquaculture issues.

The Northeast Fisheries Science Center (headquartered in Woods Hole, MA) focuses on collection, analysis, and presentation of scientific information about the Northeast Shelf ecosystem, its condition, and its marine life. In addition to its five laboratories, the Center uses four research vessels to support its work. They are: the NOAA ships *Henry B. Bigelow*, and the small research vessels *Gloria Michelle*, *Victor Loosanoff*, and *Nauvoo*. The Greater Atlantic Regional

Fisheries Office and the Science Center are responsible for the District of Columbia and the following states: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina; and the inland states of Vermont, Minnesota, Michigan, Wisconsin, Illinois, Indiana, Ohio, and West Virginia.

#### **National Marine Fisheries Service (NMFS) - [Restoration Center](#)**

The [NOAA Restoration Center](#), within the [Office of Habitat Conservation](#), works with partners across the nation to restore habitat to sustain fisheries, recover protected species, and maintain resilient coastal ecosystems and communities. We have over 30 years conducting habitat restoration through competitive funding opportunities and technical assistance. We also work to reverse habitat damage from disasters like oil spills, ship groundings, and severe storms. NOAA's Restoration Center works with private and public partners in the Commonwealth of Massachusetts to construct fish ladders at dams, remove dams, widen bridges, modify culverts to improve tidal flushing in coastal wetlands, and restore submerged aquatic vegetation. We provide technical and financial assistance to help recover threatened and endangered species, support sustainably managed species, and reverse damage done by oil spills and toxic releases. We provide technical and financial assistance to help recover threatened and endangered species, support sustainably Most of these projects focus on restoring fish passage for anadromous river herring as well as projects designed to restore coastal wetlands. See the interactive [Restoration Atlas](#) to find habitat restoration projects near you. Site visits to see habitat projects may be available in your state, please inquire if interested.

#### **National Marine Fisheries Service (NMFS) - [Office of Law Enforcement](#)**

NOAA's Office of Law Enforcement is the only conservation enforcement program (Federal or State) that is exclusively dedicated to Federal fisheries and marine resource enforcement. Its mission is to protect global marine resources by enforcing domestic laws and international treaties and obligations dedicated to protecting wildlife and their natural habitat. Our special agents and enforcement officers ensure compliance with these laws and take enforcement action if there are violations. Additionally, the Cooperative Enforcement Program allows NOAA the ability to leverage the resources and assistance of 27 coastal states and U.S. territorial marine conservation law enforcement agencies in direct support of the Federal enforcement mission. Effective fisheries law enforcement is critical to creating a level playing field for U.S. fishermen and enabling sustainable fisheries to support vibrant coastal communities. The Office of Law Enforcement's Northeast Division is headquartered in Gloucester, MA., with field offices in New Bedford, Falmouth and Scituate.

#### **National Marine Fisheries Service (NMFS), and National Ocean Service (NOS), and NOAA General Counsel - [Damage Assessment, Remediation, and Restoration Program](#)**

NOAA's Damage Assessment, Remediation, and Restoration Program (DARRP) assesses and restores habitat, fisheries, protected species and recreational uses that have been harmed by oil spills, chemical releases, and ship groundings. Working with federal, state, and tribal entities, and responsible parties, we have recovered funding from responsible parties for restoration of critical habitats, fisheries, protected species and recreational uses nationwide. These projects promote recovery of the ecosystem and provide economic benefits from tourism, recreation, green jobs, coastal resiliency, property values and quality of life. Massachusetts is a co-trustee with NOAA for assessment and restoration after pollution incidents in Massachusetts For more information about our work in Massachusetts, visit: [DARRP in Your State](#) (and use the top menu to navigate to "Massachusetts") and this [interactive map](#).

#### **National Ocean Service (NOS) - [Office for Coastal Management](#)**

The NOAA Office for Coastal Management practices a partner-based, boots-on-the ground regional approach to coastal management, with staff available in the eight regions. Assistance is provided to local, state, and regional coastal resource management efforts. Constituent feedback and assessments are an important part of the effort. New England staff are

located in Durham, New Hampshire, Gloucester, Woods Hole, and Scituate, Massachusetts and Yarmouth, Maine. These employees represent NOAA on several regional ocean governance initiatives (e.g., Northeast Regional Ocean Council, Gulf of Maine Council, Northeast Regional Planning Body), coordinate NOAA involvement in ocean observing system activities, and support research reserves, coastal zone management, and other NOAA and state coordinated activities.

#### **National Ocean Service (NOS) - [Northeast Regional Ocean Council](#)**

To maintain quality constituent service, the NOAA Office for Coastal Management staff in this region work with the Northeast Regional Ocean Council and the coastal states on this board by representing NOAA and serving in leadership roles in three priority areas: ocean planning, coastal hazards resilience and ocean and coastal ecosystem health. These staff also coordinate the deployment of NOAA products and services in this region. With funding provided through the Bipartisan Infrastructure Law, NOAA will invest approximately \$56 million over five years to enhance and support the priorities of established regional ocean partnerships, including coordinating interstate and intertribal management of ocean and coastal management issues, and enhancing sharing and integration of data.

#### **National Ocean Service (NOS) – [Regional Geodetic Advisor](#)**

The Regional Geodetic Advisor is a National Ocean Service (NOS) employee that resides in a region and serves as a liaison between the National Geodetic Survey (NGS) and its public, academic and private sector constituents within their assigned region. NGS has a Regional Geodetic Advisor stationed in Barre, Vermont serving the Northeast region including Massachusetts. The Geodetic Advisor provides training, guidance and assistance to constituents managing geospatial activities that are tied to the National Spatial Reference System (NSRS), the framework and coordinate system for all positioning activities in the Nation. The Geodetic Advisor serves as a subject matter expert in geodesy and regional geodetic issues, collaborating internally across NOS and NOAA to ensure that all regional geospatial activities are properly referenced to the NSRS.

#### **National Ocean Service (NOS) - [Phytoplankton Monitoring Network](#)**

The Phytoplankton Monitoring Network (PMN) is a nationwide community-based volunteer program of citizen scientists monitoring for the presence of organisms that can lead to Harmful Algal Bloom (HAB) formation. Volunteers serve as data collectors for marine and freshwater blooms at more than 200 coastal and inland sites in the U.S. and Caribbean. Monitoring is conducted year-round and volunteers are trained to measure salinity, air and water temperatures, and how to collect phytoplankton samples using a plankton net. Samples are then analyzed for any HAB organisms via microscopy. Data collected by PMN volunteers enhances the Nation's ability to respond to and manage the growing threat posed by HABs by collecting important data for species composition and distribution in coastal and freshwater environments and creating working relationships between volunteers and professional marine biotoxin researchers. Event monitoring can assist state and federal agencies to issue timely warnings about shellfish consumption and other public health concerns.

#### **National Ocean Service (NOS) - [Aquaculture Phytoplankton Monitoring Network](#)**

The Aquaculture Phytoplankton Monitoring Network (AQPMN) is a volunteer-based network that works with coastal US aquaculture farms and organizations. The network has adapted its protocols to specifically monitor for species known to have adverse effects on shellfish and finfish aquaculture. Participating hatcheries and growers receive training on methods to collect and identify local phytoplankton and potential HAB species. NOAA supplies each network member with plankton nets, thermometers, salt refractometers and digital microscopes free of charge.

#### **National Ocean Service (NOS) - [Mussel Watch Program](#)**

The National Oceanic and Atmospheric Administration (NOAA) Mussel Watch Program (MWP) monitors the status and trends of chemical contaminants and biological stressors in the nation's coastal waters. MWP began in 1986, and is based

on the periodic collection and analysis of bivalves (oysters and mussels) and sediment from a network of more than 300 monitoring sites nationwide. Contaminants monitored at each site include the EPA's Priority Pollutant List of toxic substances and a suite of chemicals of emerging concern such as flame retardants, PFAS, pharmaceuticals, and current use pesticides.

**National Ocean Service (NOS) - Students for [Zero Waste Week](#)**

Students are inviting their local communities to "Go Green and Think Blue" by joining them in the annual *Students for Zero Waste Week campaign*. During this campaign led by the Office of National Marine Sanctuaries, students focus on reducing land-based waste in order to protect the health of local marine environments. These young leaders are raising awareness of how single-use plastic and other types of litter affect the health of local watersheds, national marine sanctuaries, and the ocean. In addition, some schools are looking at ways to reduce their energy use on campus with hopes of raising awareness of how the burning of fossil fuels also impacts the health of the ocean.

**National Weather Service - [NEXRAD \(WSR-88D\) Systems](#)**

NEXRAD is used to warn the people of the United States about dangerous weather and its location. This radar technology allows meteorologists to warn the public to take shelter with more notice than ever before. The NEXRAD network provides significant improvements in severe weather and flash flood warnings, air traffic safety, flow control for air traffic, resource protection at military bases, and management of water, agriculture, forest, and snow removal. NEXRAD radar has a range of up to 250 nautical miles, and can provide information about wind speed and direction, as well as the location, size, and shape of precipitation. There are 159 operational NEXRAD radar systems deployed throughout the United States and overseas, of which one is in Massachusetts.

**National Weather Service (NWS) - [Automated Surface Observing Systems Stations](#)**

The Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). ASOS serves as the Nation's primary surface weather observing network. ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year observing basic weather elements, such as cloud cover, precipitation, wind, sea level pressure, and conditions, such as rain, snow, freezing rain, thunderstorms, and fog. There are 19 ASOS stations in Massachusetts.

**National Weather Service (NWS) - [Cooperative Observer Program Sites](#)**

The National Weather Service (NWS) Cooperative Observer Program (COOP) is the Nation's weather and climate observing network of, by and for the people. More than 10,000 volunteers take observations on farms, in urban and suburban areas, National Parks, seashores, and mountaintops. The data are representative of where people live, work and play. The COOP was created to provide observational meteorological data required to define the climate of the United States and to help measure long-term climate changes, and to provide observational meteorological data in near real-time to support forecast, warning and other public service programs of the NWS. The data are also used by other federal, state and local entities, as well as private companies. In some cases, the data are used to make billions of dollars' worth of decisions. For example, the energy sector uses COOP data to calculate the Heating and Cooling Degree Days which are used to determine individuals' energy bills monthly. There are 63 COOP sites in Massachusetts.

**National Weather Service (NWS) - [NOAA Weather Radio All Hazards Transmitters](#)**



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service (NWS) forecast office. NWR broadcasts official NWS warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week. Working with the Federal Communication Commission's (FCC) Emergency Alert System, NWR is an "All Hazards" radio network, making it the single source for comprehensive weather and emergency information. In conjunction with federal, state, and local emergency managers and other public officials, NWR also broadcasts warning and post-event information for all types of hazards – including natural (such as earthquakes or avalanches), environmental (such as chemical releases or oil spills), and public safety (such as AMBER alerts or 911 Telephone outages). Known as the "Voice of NOAA's National Weather Service," NWR is provided as a public service by the NWS. NWR includes 1,100 transmitters covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. There are seven NWR transmitters in Massachusetts.

**Office of Oceanic and Atmospheric Research (OAR) - [Massachusetts Institute of Technology Sea Grant College Program](#)**

The National Sea Grant College Program (Sea Grant) is a federal-university partnership administered by NOAA that integrates research, extension outreach, and education. Sea Grant forms a national network of 34 programs in all U.S. coastal and Great Lakes states, Puerto Rico, and Guam. The Massachusetts Institute of Technology Sea Grant College Program sponsors marine research guided by local and national research needs. For maximal potential impact, research is focused on specific theme areas, including marine biotechnology, coastal management and utilization, technology development, non-indigenous species, and coupled ocean observation and modeling. Knowledge and creativity is applied to address relevant and timely issues in collaboration with researchers and academics from other Massachusetts universities and institutions. Early efforts to build inexpensive autonomous underwater vehicles (AUV) became a commercial success story, with innovative engineering then leading to the development of Robotuna, resulting in further improvements for AUV propulsion. The Marine Advisory Services focuses on water quality, invasive species, fisheries, and other issues vital to coastal communities as the climate changes. Education programs include hands-on training and mentoring of high school and college students to become the next generation of ocean science and engineering researchers. Community partners and advisory committees drawn from academic circles, non-government organizations, industry leaders, and state and local government, help establish priorities and shape the research program. Administrative offices are located in Cambridge. Get involved with Sea Grant through state and national opportunities like the John A. Knauss Marine Policy Fellowship program at [seagrant.noaa.gov](http://seagrant.noaa.gov).

**Office of Oceanic and Atmospheric Research (OAR) - [Woods Hole Oceanographic Institution Sea Grant Program](#)**

The National Sea Grant College Program (Sea Grant) is a federal-university partnership administered by NOAA that integrates research, extension outreach, and education. Sea Grant forms a national network of 34 programs in all U.S. coastal and Great Lakes states, Puerto Rico, and Guam. The Woods Hole Oceanographic Institution Sea Grant Program serves Massachusetts. Research targets healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies, and environmental literacy and workforce development. Projects in those themes include examining the effects of nitrogen loading on coastal ecosystems, developing an autonomous warning system for stranding of marine mammals, monitoring harmful algal blooms, and developing policy analysis and planning for community resilience. Extension and outreach activities include helping communities deal with coastal erosion and resilience planning, understanding disease processes in commercially important shellfish, working with communities on shellfish resource management, managing marine debris, and providing teacher workshops for math and science teachers throughout New England. The administrative offices are in Woods Hole. Extension agents are located in Barnstable. Get involved with Sea Grant through state and national opportunities like the John A. Knauss Marine Policy Fellowship program at [seagrant.noaa.gov](http://seagrant.noaa.gov).

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