

## NOAA In Your State

# New Hampshire

***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 New Hampshire](#)

<a href="#">Ocean Exploration Cooperative Institute</a>	Durham	NH-1
<a href="#">Great Bay National Estuarine Research Reserve</a>	Durham	NH-1
<a href="#">NOAA Ship <i>Ferdinand R. Hassler</i></a>	New Castle	NH-1
<a href="#">New England Bay Watershed Education and Training Program</a>	Statewide	NH
<a href="#">Bipartisan Infrastructure Law (BIL) / Inflation Reduction Act (IRA) Projects</a>	Project Specific	NH

The state of New Hampshire also has one Cooperative Institute, one Regional Office, one Science on a Sphere® exhibition, and one National Estuarine Research Reserve.

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## Science On a Sphere®

Concord

NH-2

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 St. Paul's School in Concord.

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### **NH-1** **Durham**

#### **Office of Oceanic and Atmospheric Research (OAR) - U.S. Climate Reference Network**

The US Climate Reference Network (USCRN) is an operationally viable research network of more than 138 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS). ARL/ATDD manage the USCRN in partnership with NOAA's NESDIS/NCEI.

#### **National Ocean Service (NOS) - Joint Hydrographic Center**

The University of New Hampshire was awarded a new 5-year grant in 2021 to collaborate through the Joint Hydrographic Center (JHC) to expand research and education in the hydrographic and ocean mapping sciences. A national center of expertise, the JHC is challenging a new generation of upcoming hydrographers and ocean mapping scientists to meet emerging public and private needs for acquiring ever more precise data about ocean floors and the marine environment. The JHC is particularly valuable in research and development efforts to improve scientific understanding and technical capabilities for surveying and mapping, particularly with respect to unmanned systems. NOAA contributes personnel and significant appropriation through grants funding to the JHC; the University of New Hampshire contributes funding, faculty and staff, lab and office space, supplies and services. NOAA's Integrated Ocean and Coastal Mapping (IOCM) Processing Center is co-located at JHC. Employees at the IOCM center help create products derived from hydrography for non-navigation products such as marine debris evaluations and seafloor backscatter maps.

#### **National Ocean Service (NOS) - Center of Excellence for Operational Ocean and Great Lakes Mapping**

NOAA's Center of Excellence for Operational Ocean and Great Lakes Mapping (CoE) located on the campus of the University of New Hampshire will work across NOAA Line Offices to support and grow the Nation's deep water, shallow water, and coastal mapping capabilities and data holdings, in partnership with industry. The Center of Excellence (CoE) has been established by NOAA with designated funding from Congress to address significant unmet needs in NOAA's statutory and treaty-based hydrographic and ocean and Great Lakes mapping responsibilities.

The CoE will support the full range of NOAA's ocean, coastal, and Great Lakes mapping enterprise and requirements, including the goals of the National Ocean Mapping, Exploration, and Characterization strategy (NOMECS), Seabed 2030,

the Ocean and Coastal Mapping Integration Act, and the Hydrographic Services Improvement Act. This will benefit not only traditional users of mapping data such as nautical charting and ocean exploration, but also emerging users such as habitat mapping, marine modeling, and all users of marine geospatial infrastructure.

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

The National Estuarine Research Reserve System is a network of protected areas focused on long-term research, monitoring, stewardship, education, and training. NOAA's Office for Coastal Management provides funding and national guidance, and each site is managed on a daily basis by a lead state agency or university with input from local partners. The 10,235-acre Great Bay Research Reserve, designated in 1989 and managed by the New Hampshire Department of Fish and Game, is a "drowned river valley" estuary composed of upland forest, salt marsh, mudflats, tidal creeks, rocky intertidal, eelgrass beds, and upland field habitats. The Bay's cultural heritage is equally diverse, from paleo-Indian villages dating to 6,000 years ago to colonial transportation and industrial use, to a proposed oil refinery in 1973.

**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 Great Bay National Estuarine Research Reserve will focus their research on the potential impacts of river herring restoration on the feeding and growth of coastal fishes.

**National Ocean Service (NOS) - [Coastal Response Research Center](#)**

Located at the University of New Hampshire, the Coastal Response Research Center was established as a partnership between NOAA, through the Office of Response and Restoration (OR&R), and the University of New Hampshire (UNH). The Center is administered by and located at the UNH campus in Durham, New Hampshire. This partnership stimulates innovation in spill preparedness, response, assessment, and implementation of optimum spill recovery strategies. The primary purpose of the Center is to bring together the resources of a research-oriented university and the field expertise of OR&R to conduct and oversee basic and applied research, conduct outreach, and encourage strategic partnerships in spill response, assessment and restoration. The Center involves individuals and institutions, public and private, at local, regional, national and international levels in identifying needs, evaluating and demonstrating promising technologies, and fostering their use as part of new approaches to response and restoration.

**Office of Oceanic and Atmospheric Research (OAR) - [Ocean Exploration Cooperative Institute](#)**

NOAA Ocean Exploration's presence in Durham, NH is based on the campus of the University of New Hampshire (UNH), where the office supports the Ocean Exploration Cooperative Institute, headquartered at URI, which amplifies exploratory science and technology, and expands NOAA's capabilities for its ocean exploration portfolio. The Ocean Exploration Cooperative Institute (OECI) is a unique consortium of top oceanographic institutions—several graduate degree-granting institutions, an ocean exploration non-profit, and task-specific affiliates. The membership includes the University of Rhode Island, the University of New Hampshire, the University of Southern Mississippi, Woods Hole Oceanographic Institution, and Ocean Exploration Trust. They work as one to advance the core priorities of NOAA Ocean Exploration and have a mission to explore, map, and characterize the nation's vast ocean territory, to develop and implement new technologies, and to engage future generations of ocean scientists, engineers, and stakeholders. At this location, the NOAA Ocean Exploration mapping team works with the [Center for Coastal and Ocean Mapping/Joint Hydrographic Center](#) and the Integrated Ocean and Coastal Mapping program to plan and coordinate expeditions in support of NOAA Ship Okeanos Explorer missions, and the U.S. Extended Continental Shelf Project. The program also collaborates with scientists and students to innovate improvements in ocean acoustic and video imaging methods, visualizations and tools. The University of New Hampshire, Under the Center for Ocean Mapping and NOAA-UNH Joint Hydrographic Center, is home to the

Research Vessel Gulf Surveyor, Autonomous Surface Vehicle C-Worker 4 “BEN” (Bathymetric Explorer and Navigator), and Unmanned Surface Vehicle DriX.

### **Portsmouth**

#### **National Ocean Service (NOS) - [Portsmouth PORTS®](#)**

A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community in Portsmouth Harbor with real-time data quality-controlled and disseminated to local users for safe and efficient navigation. Real-time water level and meteorological observations are available from one station and currents at one location.

### **New Castle**

#### **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 a New Hampshire field office in New Castle.

#### **Office of Marine and Aviation Operations (OMAO) - [NOAA Ship \*Ferdinand R. Hassler\*](#)**

The NOAA Ship *Ferdinand R. Hassler* is managed by NOAA's Marine Operations Center-Atlantic in Norfolk, Virginia, and is homeported at the University of New Hampshire Judd Gregg Marine Pier in New Castle, New Hampshire. The ship is a Coastal Mapping Vessel utilizing the Small Waterplane Area Twin Hull (SWATH) design for improved stability and seakeeping. The newest addition to NOAA's hydrographic charting fleet, the ship is designed to operate from the Great Lakes to the Gulf of Mexico. Its primary mission is hydrographic survey in support of NOAA's nautical charting mission. The ship is also capable of performing Automated Underwater Vehicle (AUV) operations, Remotely Operated Vehicle (ROV) operations, buoy deployment and recovery, and general oceanographic research. The NOAA Ship *Ferdinand R. Hassler* supports NOAA's mission to protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management.

The vessel is operated under the direction of officers from the NOAA Commissioned Officer Corps in concert with NOAA Professional Mariners. The NOAA Corps today provides a cadre of professionals trained in engineering, earth sciences, oceanography, meteorology, fisheries science, and other related disciplines. Officers operate ships, fly aircrafts, conduct diving operations, and serve in other NOAA staff positions. NOAA Professional Mariners perform the deck, engineering, steward, and survey tech functions aboard NOAA vessels, providing critical support to NOAA missions.

### **Rye [Isle of Shoals]**

#### **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 bi-weekly 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>, other greenhouse gasses, and ozone depleting substances. These data improve our understanding of the distribution of

greenhouse gasses 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.

## **NH-2**

### **Concord**

**NOAA Office of Education - [Science On a Sphere®](#)** at St. Paul's School.

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.

### **Nashua**

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

Housed in the Federal Aviation Administration's Boston Air Route Traffic Control Center (ARTCC), the NWS Center Weather Service Unit (CWSU) in Nashua provides forecasts and other weather information to ARTCC personnel for use in directing the safe, smooth flow of aviation traffic. The area covered includes Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, most of Connecticut, and all of New York except the western part, and eastern Long Island, New York.

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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) - [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 is one stranding network member 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, including one for \$44,687 in New Hampshire to Seacoast Science 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. New Hampshire received funding for one project in FY22, as well as funds to build the state's capacity to protect its coastal communities and resources.

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

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in Maine. 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. They help identify the navigational challenges facing marine transportation in Maine 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 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. NOAA awarded nine grants in New Hampshire, 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 New Hampshire Department of Environmental Services to implement the National Coastal Zone Management Program in New Hampshire. 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 New Hampshire Coastal Program is hosting a fellow from 2022-2024 who is working to build the capacity of the New Hampshire Coastal Adaptation Workgroup to advance emerging priorities, empower local climate adaptation champions and practitioners, and enhance engagement opportunities.

**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 New Hampshire, six projects have been funded, one each in FY18-20, two in FY21, and one in FY22.

**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, New Jersey, 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 trade-offs, best practices, resources at risk, and chemical hazard assessment to reduce risks to coastal habitats and resources. The SSC for New Hampshire is based in Gloucester, Massachusetts.
- 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) – 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®) 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) - [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) - [Marine Debris Projects and Partnerships in New Hampshire](#)**

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 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 remove marine debris. In New Hampshire, the MDP is working with the Center for Coastal Studies, using funding provided under the Inflation Reduction Act, to lead a new coalition of New England nongovernmental organizations to remove, document, and recycle, repurpose, or properly dispose of abandoned, lost, or otherwise discarded fishing gear and end-of-life fishing gear from the Gulf of Maine's water and shorelines. 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) - [U.S. Integrated Ocean Observing System \(Northeastern Regional Association of Coastal Ocean Observing Systems\)](#)**

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 Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS) is one of the 11 Regional Associations and 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 to the National Weather Service in Long Island Sound and the Gulf of Maine.. These platforms also support current and dissolved oxygen sensors that provide critical information for management of hypoxia and harmful algal bloom. 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.

**National Weather Service (NWS) - [National Data Buoy Center 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.

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**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 a competitive grants program that provides funding for locally relevant environmental education projects for K-12 audiences. 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 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

regional grant competitions are responsive to local education and environmental priorities. Please see the funding opportunities for specifics.

**National Marine Fisheries Service (NMFS) - [Greater Atlantic Regional Office](#), [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 miles 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. Through Community-based Restoration Program projects, many acres of fisheries habitat have been restored, rehabilitated, and protected and hundreds of miles of streams have been opened to migratory fish since 2000. The local community supported these restoration efforts through the time and effort of over 1,000 volunteers. The Restoration Center works with private and public partners in New Hampshire to construct fish ladders, remove dams, widen bridges and culverts to improve tidal flushing in coastal wetlands, restore shellfish and submerged aquatic vegetation beds, and control invasive species. All of these projects are focused on restoring and enhancing migratory passage to spawning habitat for

anadromous blueback herring and alewife. 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.

In addition, the Office of Habitat Conservation is responsible for executing an unprecedented \$1.4 billion in funding under [Bipartisan Infrastructure Law and Inflation Reduction Act for habitat restoration and fish passage](#). We are working with our partners to do this through our expert technical assistance and four funding competitions: Fish Passage, Tribal Fish Passage, Transformational Habitat Restoration, and Habitat Restoration for Tribes and Underserved Communities. We have funded 214 awards totaling \$985M in rounds one and two with more to come in round 3. We are funding work all over the country, [explore them on our 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) – [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 including New Hampshire. 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) - [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 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, thunderstorm, and fog. There are seven ASOS stations in New Hampshire.

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

The National Weather Service (NWS) Cooperative Observer Program (COOP) is comprised of more than 10,000 volunteers who 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, usually consisting of daily maximum and minimum temperatures, snowfall, and 24-hour precipitation totals, 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. 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 52 COOP sites in New Hampshire.

**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 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 New Hampshire.

**Office of Oceanic and Atmospheric Research (OAR) – [New Hampshire 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 New Hampshire Sea Grant College Program provides support, leadership and expertise for marine research, education and extension in northern New England. It is dedicated to promoting the understanding, development, wise use and conservation of our ocean and coastal resources. Research focuses on aspects of marine economic development, including a range of fisheries and aquaculture topics, and coastal ecosystem health issues. Current projects focus on healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies, and environmental literacy and workforce development. Administrative offices are in Durham. Extension agents are located in Lee and New Castle. Get involved with Sea Grant through state and national opportunities like the John A. Knauss Marine Policy Fellowship program at [seagrants.noaa.gov](http://seagrants.noaa.gov).

**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 Ocean Service (NOS) - [NOAA Ocean Guardian Youth Ambassador Program](#)**

Youth aged 13-18 from across the United States and its territories that are committed to ocean conservation and stewardship of our blue planet can apply to become a NOAA Ocean Guardian Youth Ambassador. This year-long program looks for enthusiastic youth with new ideas and a unique perspective who want to learn more about [America's underwater treasures](#) and share their passion with others. Youth learn how to become a leader at their school or in their local community to make a difference in the conservation of the ocean through marine protected areas.

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### **[Bipartisan Infrastructure Law \(BIL\) / Inflation Reduction Act \(IRA\) Projects](#)**

The National Oceanic and Atmospheric Administration (NOAA) was entrusted with billions of supplemental federal funding dollars with passage of the Bipartisan Infrastructure Law on November 15, 2021 and the Inflation Reduction Act on August 16, 2022. This historic infrastructure funding has been invested in communities across the nation to build resilience in the face of climate change. NOAA distributed funding to communities, tribal, state and local governments, higher education programs, businesses, non-profit organizations, and facilities in need. NOAA funded billions of dollars in grants and cooperative agreements across the country to fund projects that enhance climate resilience, restore coastal and marine habitats, improve safety, and create jobs. For an interactive map of NOAA BIL and IRA investments in your state, visit <https://www.noaa.gov/bil-ira-awards-explorer>.

#### **[BIL](#)**

### **Restoration of the Oyster River Herring Run Through Removal of the Mill Pond Head-of-Tide Dam and Installation of Fish Passage on the Oyster Reservoir Dam, \$3,500,000**

The project will design and implement removal of the Mill Pond Dam and install a fish ladder on the Oyster Reservoir Dam to improve fish passage on the Oyster River. In addition to reopening access to habitat, removal of the Mill Pond Dam will increase community resilience, as the dam does not currently meet regulations to safely withstand a 50-year storm event.

### **Advancing Atmosphere-Land-Ocean Model Coupling Technology to Improve Coastal Inundation Forecasts, \$693,000**

The overarching goal of this project is to improve the prediction of the combined effects of land processes (riverine input/land runoff) and ocean circulation (wind/waves/tides) on coastal inundation through the implementation and validation of coupled terrestrial hydrologic and ocean 3D circulation models.

### **Strengthening ocean observing infrastructure in the changing Northeastern U.S., \$1,169,000**

A diverse scope of work proposed for NERACOOS to modernize and build resilience into the regional observing system in the Northeast. *This award supports work in CT, RI, MA, VT, ME, NH.*

### **Great Bay NERR Capacity Building for Coastal Habitat Protection and Restoration, \$295,519**

This funding will build the capacity of the Great Bay National Estuarine Research Reserve (GBNERR) within the New Hampshire Department of Fish and Game to plan for and implement habitat restoration and conservation projects proposed through funding opportunities connected to the Bipartisan Infrastructure Law. Specifically, GBNERR will use these funds to hire a new Biologist position to assist with coordination of the Saltmarsh Task Force; develop a draft approach and data management strategy for field assessment and monitoring of New Hampshire salt marshes to inform restoration planning and projects; pilot, refine, and implement field assessment and monitoring approaches; and conduct outreach to partners and landowners.



**New Hampshire CZM IIJA Capacity, \$450,000**

This funding will build the capacity of the New Hampshire federally-approved coastal management program within the New Hampshire Department of Environmental Services to plan for and implement habitat restoration and conservation projects proposed through funding opportunities connected to the Bipartisan Infrastructure Law. Specifically, the New Hampshire Coastal Program will use these funds to improve and optimize saltmarsh monitoring, assessment and data management in order to support the protection and restoration of New Hampshire saltmarshes. The New Hampshire Coastal Program will also work with the Great Bay Resource Protection Partnership to support land conservation planning and conservation project development.

**NHCZM IIJA Competitive: Resilient Tidal Crossings Project-Building Resilience through Upgraded Replacements of High Priority Tidal Culverts, \$2,988,122**

This award will replace three undersized tidal culverts on state roads in the towns of Stratham and Rye, New Hampshire. Repairing these tidal crossings was identified as a high priority via the New Hampshire Resilient Tidal Crossings Project, which scored 118 tidal crossings for ecosystem compatibility, flood resilience, and structure condition. The proposed project will include final engineering and permitting work, and will proactively replace the existing culverts at these sites with upgraded alternatives to achieve beneficial outcomes for ecosystem and infrastructure resiliency.

**Arctic Sea Ice Thickness Observations: Augmented Seasonal Ice Mass Balance Buoys, \$172,830**

The Arctic sea ice cover is in transition, entering a new regime characterized by significant decreases in sea ice extent, thickness, and age. The overarching goal of this project is to contribute to the Arctic Observing Network (AON) by collecting data to explore what ice thickness changes are occurring in the Arctic sea ice cover and to understand how these changes occur. Data is collected using autonomous Seasonal Ice Mass Balance buoys (SIMB) that provide a time series of snow accumulation and ablation, ice growth, ice surface and bottom melt, internal ice temperature fields, position, barometric pressure, and temporally averaged estimates of ocean heat flux.

**IRA**

**FY 2022 US Marine Life Observations: Coordinated Marine Biodiversity Observation Network (MBON) and Animal Telemetry Network (ATN) Activities to Ensure Resilient, Productive Ecosystems and Human Communities, \$1,746,998**

This award will support the expansion of the Gulf of Main Marine Biodiversity Observation Network (GoM MBON). The core observations are biodiversity and oceanographic sampling at time series stations along the Maine Coastal Current and in the deep Wilkinson Basin, where most *C. finmarchicus* overwinter. This program provides unique information on ecosystem change needed to identify phenological and biodiversity shifts and allows timely assessment. We will observe and describe lower trophic levels including bacteria and primary producers using both traditional and novel sampling techniques such as eDNA metabarcoding and high-throughput imaging with automated identification. We will further develop detailed MBON Seascapes for the GoM to describe change in oceanographic conditions and phytoplankton diversity. Specifically, data will be used to track and map the regional lipidscape as a basis for estimating available energy in the GoM and predicting distributions and condition of forage fish and North Atlantic Right Whale.

**Modernizing IOOS in the Northeast to Build Equity and Resilience in a Changing Climate, \$5,000,000**

NERACOOS will use this funding for projects in Maine, New Hampshire, Massachusetts, Rhode Island and Connecticut that support the enhancement of the regional buoy network. The projects aim to provide improvements to NERACOOS's data management system — including the addition of community-tailored products and services, expanded capabilities for the Northeast Coastal Ocean Forecast System and improvements to biodiversity observations and assessments that benefit Indigenous communities. *This award supports work in ME, NH, MA, RI, CT.*



**Streamlining Integration and Distribution of Metocean Data from OffshoreWind Operations for Marine Stakeholders, \$1,989,353**

The primary goal of this project is to transition the robust and modular data ingestion and management pipelines used by NERACOOS, MARACOOS, and the GliderDAC into a common cyberinfrastructure that leverages a best-of-breed approach for acquisition, processing, integration, and dissemination of metocean data. Private and public data providers will benefit from this effort because there will be a documented, standards based, scalable cyberinfrastructure for them to efficiently deliver data through the myriad of data consumers will also benefit because they will be able to access the growing volume of data through standard services and existing products.

**NOAA build-a-buoy: meeting the operational and scientific needs in StellwagenBank National Marine Sanctuary through innovation and collaboration, \$1,193,403**

The primary goal is to collaboratively design, construct, deploy, and test a new long-term ecosystem monitoring mooring in Stellwagen Bank National Marine Sanctuary to provide in situ real-time information on the meteorological, physical, chemical, and biological environment to meet NOAA and other stakeholder needs. The secondary goal is to pilot a replicable approach to monitoring that draws upon the inherent mission overlap across NOAA programs and regional expertise to more holistically and cost-effectively monitor our marine environment. *This award supports work in NH and MA.*

**New Hampshire CZM IRA Capacity Building Funding, \$300,000**

This funding will build the ability of the state's federally-approved coastal management program within the New Hampshire Department of Environmental Services (NHDES) to implement projects, initiatives, and programs that increase the climate resilience of coastal communities within coastal counties. Specifically, NHDES will use these funds to support the collaborative and inclusive 5-year update to the 2019-2020 New Hampshire Coastal Flood Risk Summary. The goals of this project are to (1) update the New Hampshire Coastal Flood Risk Summary (NHCFRS), in accordance with the requirements of RSA 483-B:22, and (2) implement inclusive engagement and training to enable use of the NHCFRS.

**National Estuarine Research Reserve System Inflation Reduction Act Non-Competitive Award - Great Bay NERR, \$399,963**

This funding will build the ability of the Great Bay National Estuarine Research Reserve (NERR) within the New Hampshire Fish and Game Department (NHFG) to implement projects, initiatives, and programs that increase the climate resilience of coastal communities within coastal counties. Specifically, the funds will support on-the-ground habitat conservation projects, including removal of invasive species, promotion of riparian buffers, and planting natural shorelines. The Great Bay NERR will also coordinate with the Saltmarsh Task Force to develop monitoring protocols, field plans, and restoration strategies. Additionally, the funds will be used to assess potential restoration sites, conduct pre and post monitoring of projects, and provide technical support to partners and communities for enhancing resilience in natural and built environments.

**Elevation Plane Residential Lifting Safety Sensor System, \$175,000**

RESILIFT will develop the Residential Lifting Safety Sensor System (RLS3), a house-lifting technology offering accessible flood mitigation for homeowners. With 14.6 million properties in the 100-year floodplain facing a 26% risk of flooding, effective structural lifting is essential. Current methods are inefficient and hazardous. Our goals include developing a prototype, testing the RLS3, and assessing market feasibility. This project aims to improve community preparedness and shift to mitigative retrofits, targeting a \$1.168 trillion market and exploring financing for homeowners and 400,000 U.S. home-building businesses.

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