



NATIONAL OCEANIC AND  
ATMOSPHERIC ADMINISTRATION  
UNITED STATES DEPARTMENT OF COMMERCE



## NOAA In Your State

# Delaware

**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 Delaware

[Delaware National Estuarine Research Reserve](#)      Dover      DE

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

### ***Claymont to Cape Henlopen***

National Ocean Service (NOS) - [Delaware River and Bay PORTS®](#)

A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community along the Delaware Bay and River at which real-time data are quality-controlled and disseminated to local users for safe and efficient navigation. Real-time data are available for water levels from eleven stations, meteorological data from eleven locations, tidal current data from two three locations, and air gap measurements from bridges at three locations.

## **Dover**

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

The 6,364-acre Delaware National Estuarine Research Reserve was designated in 1993 and is managed by the Delaware Department of Natural Resources and Environmental Control. The main site sits along Delaware Bay, approximately six miles outside Dover; a smaller unit is located 24 miles north along Blackbird Creek. This reserve features a full range of tidal wetlands within a historic 18th century plantation setting and contains nearly 100 species of birds. The reserve's mission is to preserve and manage natural resources through coastal stewardship, research, education, and outreach programs for coastal decision-making.

### **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 Delaware National Estuarine Research Reserve will focus their research on carbon sequestration in salt marshes.

## **Lewes, Reedy Point**

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

The National Ocean Service (NOS) operates two long-term continuously operating tide stations in the state of Delaware, which 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 Lewes and Reedy Point. 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 and helps 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

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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.

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 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. 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), National Ocean Service (NOS) - [Choptank Complex Habitat Focus Area](#)**

The Choptank Complex was selected as a [NOAA Habitat Focus Area](#) (HFA). HFAs are targeted places where NOAA addresses high priority habitat issues by collaborating with partners and communities. Over the past several years, NOAA, led by the [Office of Habitat Conservation](#), has selected 11 HFAs across the country which have achieved significant results for ecosystems and communities. While each HFA focuses on individual habitat conservation goals, the overarching goal is to leverage collective expertise and demonstrate results in a short time period. NOAA's Chesapeake Bay Office, Restoration Center, Greater Atlantic Regional Fisheries Office, National Centers for Coastal and Ocean Science, and Office of National Marine Sanctuaries are coordinating NOAA and partner programs within the Choptank River Complex Habitat Focus Area. Habitat Focus Areas are a non-regulatory, collaborative approach to habitat conservation that NOAA launched in 2013 to increase the effectiveness of NOAA's habitat conservation science and management efforts. The Choptank River is home to the largest native oyster restoration effort in the United States and contains among the most important habitat for striped bass populations. As such, the river's health is vital to ensuring sustainable fisheries and coastal economies. NOAA conducts mapping and acoustic surveys in tributaries of the Choptank River and Little Choptank River to support native oyster restoration, funds in-the-water oyster restoration, and supports research to understand ecosystem conditions, evaluate threats, and quantify the ecosystem services provided by the restored oyster reefs.

#### **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 Delaware, 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 Delaware Department of Natural Resources and Environmental Control has received multiple awards through this program to support projects focused on the recovery of Atlantic sturgeon.

#### **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 1 nationwide with one award for \$54,589 going to one recipient in Delaware: Marine Education Research & Rehabilitation Institute, Inc.

**National Marine Fisheries Service (NMFS), 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. Delaware is a co-trustee with NOAA for assessment and restoration after pollution incidents in Delaware. For more information about our work in Delaware, visit: [DARRP in Your State](#) (and use the top menu to navigate to "Delaware") and this [interactive map](#).

**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. Delaware received funding for one project in FY23, as well as funds in FY22 and FY23 to build the state's capacity to protect its coastal communities and resources.

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

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 11 Regional Associations extending from Cape Hatteras to Cape Cod, including the estuaries and the continental shelf waters. MARACOOS provides the necessary ocean observing, data management, and forecasting capacity to systematically address prioritized regional themes including maritime safety, ecosystem based management, water quality, coastal inundation, and offshore energy development.

**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. Two Delaware projects have benefited from this program, 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 Delaware Department of Natural Resources and Environmental Control to implement the National Coastal Zone Management Program in Delaware. 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) – [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 restores, increases, and strengthens natural infrastructure to protect coastal communities while also enhancing habitats for fish and wildlife. The National Fish and Wildlife Foundation (NFWF) executes this program in partnership with NOAA to invest in conservation projects that restore or expand natural features, such as coastal marshes and wetlands, dune and beach systems, oyster and coral reefs, forests, coastal rivers and floodplains, and barrier islands, which minimize the impacts of storms and other naturally occurring events on nearby communities. In Delaware, four projects have been funded: one each in FY18, FY20, FY21, and FY23.

#### **National Ocean Service (NOS) – Regional Ocean Partnerships: [Mid-Atlantic Regional Council on the Ocean](#)**

The Mid-Atlantic Committee on the Ocean (MACO) is a committee established by the [Mid-Atlantic Regional Council for the Ocean](#) (MARCO) to foster collaboration among states, federal agencies, the Mid-Atlantic Fishery Management Council, and federally recognized tribes to enhance the vitality of the region's ocean ecosystem and economy through increased communication and collaboration. To maintain quality constituent service, staff from NOAA Office for Coastal Management lead NOAA's engagement with MACO, MARCO and state coastal management programs to improve the delivery of NOAA products and services in this region. With funding provided through the Bipartisan Infrastructure Law, NOAA is investing approximately \$56 million nationwide 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) - [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.

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 for Delaware is based in Point Pleasant Beach, New Jersey at the USCG Station Manasquan.

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 RRC serving the Northeast region is based in St. Petersburg, Florida.

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 Charleston, South Carolina, serves the Southeast and Caribbean region – Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Puerto Rico, and the U.S. Virgin Islands.

#### **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 Environmental Sensitivity Index maps, ship locations, weather, and ocean currents, providing an easy-to-use common operating picture for environmental responders and decision makers. In the fall of 2012, Atlantic ERMA was employed as the Common Operational Picture for the U.S. Coast Guard's pollution response to Hurricane Sandy in New York and New Jersey waters. 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

#### **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) - [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) - [Marine Debris Projects and Partnerships in Delaware](#)**

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 Mid-Atlantic 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 prevent, research, and remove marine debris. The MDP is supporting two projects at the University of Delaware: One project examined microplastic exposure and risk to blue crab larvae in Delaware Bay and coastal waters. This project recently closed and project results can be found [here](#). The second project is investigating how marine debris enters and moves through the Delaware River and Bay and where it ends up based on data collection and observations in the field and modeling exercises. The Mid-Atlantic Marine Debris Action Plan, covering Delaware, Maryland, Virginia, New Jersey, the District of Columbia, and New York, was published in 2021. This plan is facilitated by the MDP with the participation of 96 organizations. The plan establishes a road map for strategic progress in making the Mid-Atlantic, its coasts, people, and wildlife free from the impacts of marine debris. The MDP is also currently working with state and local governments, and stakeholders, to maintain and exercise the Delaware Marine Debris Emergency Response Guide.

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

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. NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in Delaware. They help identify the navigational challenges facing marine transportation in Delaware 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 Norfolk, VA to support mariners and stakeholders in the Chesapeake and Delaware Bay 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 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.

NDBC also operates NOAA's network of Deep-ocean Assessment and Reporting of Tsunami (DART®) stations, for the early detection and real-time reporting of tsunamis in the open ocean. Data from the DART®s are used by the National Weather Service Tsunami Warning Centers in Alaska and Hawaii to provide tsunami forecasts, warnings, and information. NDBC, located at NASA's Stennis Space Center, supports weather and marine warning and forecast services in real time by providing deep ocean and coastal meteorological and oceanographic observations.

## **Statewide**

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

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. 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 six laboratories, the Center uses four research vessels to support its work. The Greater Atlantic Regional Fisheries Office and Science Center are responsible for 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) - [Chesapeake 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 [NOAA Chesapeake Bay Office](#), a division of NOAA Fisheries' [Office of Habitat Conservation](#), administers B-WET grants for the Chesapeake Bay watershed on behalf of the NOAA Office of Education. The Chesapeake 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. Chesapeake B-WET regional grant competitions are responsive to local education and environmental priorities and are supportive of partnerships between school districts and community organizations and institutions that are run by and/or serve marginalized groups, particularly minority communities. School district implementation grants are available to school districts with 25% or more landmass in the Chesapeake Bay watershed. State-level capacity building grants are typically available on an every-other-year basis. Please see the funding opportunities for specifics.

#### **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 coast states and U.S. territorial marine conservation law enforcement agencies in direct support of the Federal enforcement mission. The Office of Law Enforcement's Northeast Division, which covers Delaware, is headquartered in Gloucester, Massachusetts.

#### **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.

#### **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 Woodford, Virginia, serving the Mid-Atlantic region including Delaware. 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) – [Climate Resilience Regional Challenge](#)**

In July 2024, NOAA announced \$575 million in funding for the Climate Resilience Regional Challenge, provided by the Inflation Reduction Act, to invest in holistic, collaborative approaches to coastal resilience at regional scales. This grant program focuses on increasing resilience to extreme weather events, such as hurricanes and storm surge, and longer-term, chronic hazards such as sea level rise, drought, wildfire, extreme heat, and coastal erosion. The program awarded 19 grants that are part of NOAA's larger Climate-Ready Coasts initiative to forge new partnerships, protect coastal habitats, and close equity gaps. They will help scale up proven best practices across 17 states and territories to take resilience and adaptation plans off paper and into coastal communities across the country.

Delaware will benefit from \$1,973,267 awarded to establish a regional collaborative to support climate resilience in rural communities in the Delmarva region, where agriculture plays a key role in the local economy and culture. The Biological Systems Engineering Department of Virginia Tech received this grant, which will be leveraged collaboratively across the shore regions of the states of Delaware, Maryland, and Virginia. Project partners will conduct a needs assessment and a

series of community listening sessions to identify current capabilities, challenges, and opportunities to increase resilience, particularly in low-income, minority, and agricultural communities. The project will then design and implement educational programming to help address these challenges. This project will create enduring capacity among extension professionals and rural localities to initiate climate adaptation and resilience projects more effectively and engage with resilience-building efforts more broadly.

#### **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 Delaware.

#### **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 two ASOS stations in Delaware.

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

The National Weather Service (NWS) Cooperative Observer Program (COOP) is truly 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 formally created in 1890 under the NWS Organic Act 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 (including the Department of Homeland Security), state and local entities, as well as private companies (such as the energy and insurance industries). 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 7 COOP sites in Delaware.

#### **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 two NWR transmitters in Delaware.

#### **Office of Oceanic and Atmospheric Research (OAR) - [Delaware 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. Delaware Sea Grant, based at the University of Delaware, is a statewide network of research, education, and extension services focused on advancing the wise use, conservation, and management of marine and coastal resources. In addition to conducting research and outreach in ecosystems, sustainable coastal development, safe and sustainable seafood, and hazard resilience in coastal communities, the program promotes ocean and environmental literacy by working to translate complex scientific information to the public. Administrative offices are located in Lewes. 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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#### ***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***

##### **Strengthening Mid-Atlantic Infrastructure, Data Products and Services, \$1,569,000**

The Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS) will upgrade the Mid-Atlantic high-frequency radar system, support and improve the glider data assembly center and stakeholder-based product development, and create a pilot street-level coastal flooding observation testbed. High frequency radar throughout the MARACOOS region supports the safe and efficient maritime transportation as well as Coast Guard operations. Improvements to the Glider Data Assembly Center will improve user experience and efficiency while reducing overall costs. The coastal flooding map and new stakeholder-driven product development ensure that MARACOOS is addressing regional needs in an equitable way. *This award supports work in DE, NY, NJ, MD, VA, RI, and CT.*

##### **Delaware National Estuarine Research Reserve IIJA Capacity Funding, \$300,000**

This funding will build the capacity of the state within the Department of Natural Resources and Environmental Control (DNREC) to plan for and implement habitat restoration and conservation projects proposed through funding opportunities connected to the Bipartisan Infrastructure Law. Specifically, DNREC will use these funds to hire contractual staff to impact habitat restoration and conservation projects for the entirety of Delaware. During the period of this grant, funds will support the contractual hire and supplies needed for three Kent Conservation District employees who will increase the capacity of Delaware to prepare for, apply for, manage, and monitor IIJA funded restoration and land conservation projects.

##### **FY22-FY24 Delaware CZM Infrastructure Investment and Jobs Act Capacity Building Funding, \$450,000**

This funding will build the capacity of the state within the Department of Natural Resources and Environmental Control (DNREC) to plan for and implement habitat restoration and conservation projects proposed through funding opportunities connected to the Bipartisan Infrastructure Law. Specifically, DNREC will use these funds to hire contractual staff to impact

habitat restoration and conservation projects for the entirety of Delaware. During the period of this grant, funds will support the contractual hire and supplies needed for three Kent Conservation District employees who will increase the capacity of Delaware to prepare for, apply for, manage, and monitor IIJA funded restoration and land conservation projects.

**Coordinated Inter-Jurisdictional Ocean Management and Planning in the Mid-Atlantic Region Through the Mid-Atlantic Regional Council on the Ocean (MARCO), \$3,925,020**

The Coastal States Stewardship Foundation, serving as fiscal sponsor for the Mid-Atlantic Regional Council on the Ocean (MARCO) Regional Ocean Partnership will use these funds to advance inclusive, regional ocean planning through inter-agency coordination and stakeholder engagement; develop shared understanding across agencies, identify opportunities for collaboration, conduct focused stakeholder engagement. *This award supports work in DE, NY, NJ, MD, and VA.*

**Southbridge East Habitat Restoration Planning Project, \$333,558**

The City of Wilmington, in partnership with the DE DNRECCP, is requesting funding for the Southbridge East Habitat Restoration Planning Project, a habitat restoration planning, engineering, and design project. The goal of the project is to develop community supported, construction-ready designs and specifications for a 12.7-acre wetland restoration project to support community resiliency and provide benefits to ecological functions and serves to the surrounding community. The project also includes obtaining all required environmental permits, resulting in a 'shovel ready' project.

**Intergovernmental Coordination of Regional Ocean Management and Planning in the Mid-Atlantic Through the Mid-Atlantic Regional Council on the Ocean, \$1,962,800**

The Mid-Atlantic Regional Council on the Ocean will use these funds to advance inclusive, regional ocean planning through inter-agency coordination and stakeholder engagement with a focus on underrepresented groups and avoidance of conflicts for offshore wind development; build an understanding of coastal climate risks and climate mitigation opportunities through the Mid-Atlantic Coastal Acidification Network and through a regional blue carbon stock assessment; coordinate regional partners around marine debris prevention and reduction through convenings, community-based social marketing strategies, and outreach; identify policy, process, and regulatory efficiencies where applicable; and provide the best available spatial data and information to public stakeholders and decision-makers on the MARCO Portal. *This award supports work in DE, VA, MD, NJ, and NY.*

**IRA**

**Fish-finders for Stewardship: training volunteers to use side-scan sonar to find and remove derelict crab pots from Delaware's recreational blue crab fishery, \$169,325**

The Delaware Sea Grant was awarded \$169,325 to reduce the prevalence of derelict crab pots from waters used by the recreational crabbing industry in Delaware's Inland Bays through community education and volunteers. This project will transition Delaware's volunteer-based derelict crab pot round-ups from a highly university-dependent project to a primarily community-based activity while also supporting outreach and education programming for residents on responsible crabbing practices.

**Inflation Reduction Act (IRA) Climate Ready Fisheries Funding, \$1,426,875**

The Mid-Atlantic Fishery Management Council (MAFMC) will use funding to evaluate existing challenges and identify potential management strategies within the context of a changing climate and the discard implications due to changing stock distributions and fishing fleet behavior. Proposed activities will improve areas within existing programs, policies, and practices that contribute to bottlenecks or inefficiencies during the development of a fishery management action and enhance the Council's capabilities to respond to the systemic challenges posed by changing climate to our process. *This award supports work in DE, NY, NJ, PA, MD, VA, and NC.*

### **Enhancing Resilience, Equity, and Prediction of the Mid-Atlantic Ocean, Coast, and Estuaries, \$5,000,000**

MARACOOS will support projects that strengthen the delivery of data information services and provide equitable service delivery to support coastal resilience needs across the region. These needs include the expansion of ocean acidification and water quality sensing for ocean forecasting systems in the Mid-Atlantic Bight; the development of tailored, community-driven data tools; greater engagement with the off-shore wind community and schools and an expanded communications program. *This award supports work in NY, NJ, DE, MD, VA, NC*

### **Meeting Local Resilience Needs Through National and Pan-Regional Collaboration, \$40,157,012**

MARACOOS will serve as a coordination point for a national effort by all of the IOOS Regional Associations (over 30 states and territories) to build capacity and expertise in support of ecosystem change management and place-based planning, water level and wave observation and monitoring, optimization of product development and delivery and equitable service delivery.

### **Delaware CZM Inflation Reduction Act Non-Competitive Funding, \$341,000**

This funding will build the ability of the state's federally-approved coastal management program within the Department of Natural Resources and Environmental Control (DNREC) to implement projects, initiatives, and programs that increase the climate resilience of coastal communities within coastal counties. Specifically, The DNREC's Delaware Coastal Management Program will use these funds to provide technical support and help facilitate the stakeholder engagement process for the updating of the resilience sections of Delaware's Climate Action Plan.

### **Delaware National Estuarine Research Reserve IRA Capacity Building FY24-FY28, \$400,000**

This funding will build the ability of the Delaware National Estuarine Research Reserve (Delaware Reserve) within the Department of Natural Resources and Environmental Control (DNREC) to implement projects, initiatives, and programs that increase the climate resilience of coastal communities within coastal counties. Specifically, the Delaware Reserve will use these funds to: Improve community resilience outreach; improve DNREC staff resilience skills by providing trainings to DNREC staff and partners on effective science communication and resilience and restoration best management practices; foster the next generation of coastal and climate resilience experts by establishing an undergraduate resilience internship program; and support a needs assessment and engagement to inform the development of the 2028-2033 Reserve management plan with a resilience focus.

### **Leveraging Cooperative Extension to Build an Enduring Capacity for Equitable and Inclusive Rural Resilience across the Delmarva Region, \$1,973,267**

This project will establish a regional collaborative to support climate resilience in rural communities in the Delmarva region, where agriculture plays a key role in the local economy and culture. Project partners will conduct a needs assessment and a series of community listening sessions to identify current capabilities, challenges, and opportunities to increase resilience, particularly in low-income, minority, and agricultural communities. The project will then design and implement educational programming to help address these challenges. Led by the Virginia Polytechnic Institute and State University, this project will create enduring capacity among extension professionals and rural localities to initiate climate adaptation and resilience projects more effectively and engage with resilience-building efforts more broadly. *This project was funded through the [Climate Resilience Regional Challenge](#) and supports work across VA, MD, and DE.*

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