



NATIONAL OCEANIC AND  
ATMOSPHERIC ADMINISTRATION  
UNITED STATES DEPARTMENT OF COMMERCE



## NOAA In Your State



# North Carolina



**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 North Carolina

<a href="#">Beaufort Laboratory</a>	Beaufort	NC-3
<a href="#">Habitat Conservation Division Field Office</a>	Beaufort	NC-3
<a href="#">North Carolina National Estuarine Research Reserve</a>	Coastal	NC-3
<a href="#">Monitor National Marine Sanctuary</a>	Cape Hatteras	NC-3
<a href="#">Bipartisan Infrastructure Law (BIL) / Inflation Reduction Act (IRA) Projects</a>	Project Specific	NC

The state of North Carolina also has one Cooperative Institute, three Weather Forecasting Offices, one Regional Office, two Labs and Field Offices, one Cooperative Science Center, three Science on a Sphere® exhibitions, three National Estuarine Research Reserves, and one Habitat Focus Area.

### Weather Forecast Offices

Morehead City NC-3

Raleigh NC-2

Wilmington NC-7

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

### Science On a Sphere®

Wilson NC-1

Manteo NC-3

Durham NC-4

**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. They are located at the Imagination Station Science Museum in Wilson, the North Carolina Aquarium on Roanoke Island in Manteo, and the Museum of Life and Science in Durham.

**NC- 1**

**Wilson**

**NOAA Office of Education - [Science On a Sphere®](#)** at Imagination Station Science Museum.

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.

**NC-2**

**Raleigh**

**National Environmental Satellite, Data, and Information Service (NESDIS) - [National Centers for Environmental Information \(NCEI\)](#) - [Southeast Regional Climate Center](#)**

NOAA NCEI's six Regional Climate Centers (RCCs) support the development and delivery of a wide range of place-based climate science and information products and services to assist decision makers with making informed decisions. The RCCs are a federal-university cooperative effort that supports the operational production and delivery of climate data and information to decision-makers at regional levels. The RCCs also participate in basic and applied climate research as well as user engagement and outreach activities. The service provided by the RCCs has evolved through time to become an efficient, user-driven program with many of the components that have been cited for effective regional climate services. The Southeast RCC is collocated with the University of North Carolina-Chapel Hill and serves VA, NC, SC, GA, AL, FL, PR, U.S. VI.

**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 – North Carolina, Delaware, Georgia, Puerto Rico, Maryland, South Carolina, the Virgin Islands, Virginia, and Washington D.C. 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 Weather Service (NWS) - [Weather Forecast Office](#)**

Located at the Centennial Campus of North Carolina State University, this NWS Weather Forecast Office (WFO) is staffed around-the-clock every day, and provides the best possible weather, water, and climate forecasts and warnings to residents of the northern Piedmont, northern and central Coastal Plain, and the Sandhills of North Carolina. Highly trained forecasters issue warnings and forecasts for events, including severe thunderstorms, tornadoes, winter storms, floods, and heat waves. This essential information is provided to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and NOAA Weather Radio All Hazards. Forecasters also provide Impact-based Decision-Support Services (IDSS), both remotely and on-site, during critical emergencies, such as wildfires, floods, chemical spills, and for major recovery efforts such as those following the Joplin and Moore tornadoes, Hurricanes Katrina and Sandy, and the Sept. 11, 2001, terrorist attacks in New York City and Washington D.C. The WFO collects and disseminates precipitation, river, and rainfall data, and prepares local climatological data. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and

educational programs, which helps build strong working relationships with local partners in emergency management, government, the media and academic communities. The WFO operates Automated Surface Observing Stations (ASOS), as well as the local Doppler Weather Radar, which provides critical information about current weather conditions. The radar data enables forecasters to issue warnings for tornadoes, severe thunderstorms, and flash floods.

#### **Office of Oceanic and Atmospheric Research (OAR) - [Ultraviolet \(UV\) Monitoring Network](#)**

NOAA's Global Monitoring Laboratory (GML) operates an instrument at this site as part of the ultraviolet (UV) monitoring network site (NEUBrew). These measurements are part of GML's research on the Earth's surface radiation budget and are used in studies of variations in long-term radiation and meteorological parameters. Observations of spectral solar radiation can be used to infer the presence and quantities of atmospheric constituents and to investigate the interaction of ozone and solar radiation.

#### **Office of Oceanic and Atmospheric Research (OAR) - [Climate Adaptation Partnerships \(CAP\) Program](#)**

The Carolinas Collaborate on Climate, Health, and Equity (C3HE) is a cooperative agreement between NOAA's Climate Program Office (CPO) and North Carolina State Climate Office at North Carolina State University. It is one of several Climate Adaptation Partnerships (CAP), formerly Regional Integrated Sciences and Assessments (RISA) that contribute to the advancement of equitable climate adaptation through sustained regional research and community engagement. C3HE builds upon years of regional work on climate science, tools and assessments to move into a new phase that centers Justice, Equity, Diversity, and Inclusion (JEDI) principles at the forefront of NOAA-funded climate research and to deliver climate futures to more communities than have been previously served. They apply a bottom-up participatory action approach to develop a transferable model for end-to-end co-production of actionable and equitable climate resilience solutions in at-risk communities in the Carolinas. The team advances their goals by demonstrating their commitment to address the climate reality in a just and equitable way, while ensuring the inclusivity and diversity of all voices are represented in every aspect of their work in the Carolinas; building and enhancing local partnerships in underserved communities across the Carolinas to identify, test, and refine equitable solutions for climate resilience; understanding and predicting how co-occurring and consecutive hazards interact with exposure and vulnerability to shape climate risk; identifying and connecting the complex linkages between structures of power, intersecting social positions, and climate-health inequities in vulnerable communities; and designing and implementing community-sciences programs to track physical and social science metrics and build community-level climate resiliency literacy. Core partners of C3HE include the North Carolina State Climate Office at North Carolina State University, University of North Carolina Chapel Hill, Furman University, North Carolina Central University, North Carolina Sea Grant, South Carolina State University, and the North Carolina Museum of Life and Science.

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

The Environmental Literacy Program (ELP), administered by NOAA's Office of Education, provides grants and support for formal (K-12) and informal education to advance the agency's mission. In North Carolina, ELP funded a project by the City of Raleigh in Wake County. The project aims to give climate-vulnerable Raleigh residents the data and resources necessary to build their resilience, engage with decision makers, and build connections within their community. The Community Climate Education for a Resilient Raleigh (CCERR) Project has three activities. In activity one, the project will host six cohorts of a watershed learning network (two in Spanish) and three cohorts of a heat island learning network (one in Spanish). In activity two, the CCERR project will produce an emergency preparedness meeting-in-a-box, a toolkit of print and digital resources for community meetings to help neighborhoods plan, prepare for, and recover from extreme weather events and other emergency situations. Finally, in activity three, the CCERR project will collaborate with NOAA's Carolinas Climate Adaptation Partnership to identify neighborhood priorities for climate resilience and begin to integrate them into city planning processes.

**NC-3**

**Beaufort**

**National Marine Fisheries Service (NMFS) - [Southeast Fisheries Science Center Beaufort Laboratory](#)**

Southeast Fisheries Science Center personnel in Beaufort work with partners to provide independent, objective science to inform natural resource management. In particular, fisheries management councils and fisheries commissions depend on SEFSC science to make decisions that protect and conserve the region's living marine resources. SEFSC-Beaufort scientific pursuits include applied protected species research and monitoring studies, cross-regional scale fisheries-dependent and -independent scientific surveys, life-history studies, fishery stock assessments, and development and application of advanced technologies.

Southeast Fisheries Science Center activities that are based in Beaufort include the Southeast Fishery-Independent Survey (SEFIS) program, the 1972-originated Southeast Region Headboat Survey, and South Atlantic life-history efforts including production fish aging and life-history research. Life history research involves collaborating with state agencies and academic partners to generate and validate fish ages, and collect reproductive information to support stock assessments and improve fisheries management. We are also evaluating the use of advanced technologies and machine learning to improve timely delivery of high quality data for stock, population, and ecosystem assessments.

**National Marine Fisheries Service (NMFS) - [Southeast Regional Office, Habitat Conservation Division Field Office](#)**

The Southeast Regional Office has the Beaufort Field Office which is co-located with the National Ocean Service's Center for Coastal Fisheries Habitat Research and with the Beaufort Laboratory of NMFS Southeast Fisheries Science Center. This Office is responsible for implementing NMFS's habitat protection programs in North Carolina and in the adjacent waters of the Atlantic Ocean. In addition to conducting mandated essential fish habitat consultations associated with extensive coastal development activities, the Office participates in state and regional habitat conservation planning and restoration efforts, supports the infrastructure planning activities of North Carolina's Department of Transportation, participates in the planning processes for major federal water development projects such as port expansions, and restores diadromous fish habitat by working with the Federal Energy Regulatory Commission on hydropower licenses, ensuring fish passage, and with stakeholders to remove dams no longer needed.

**National Ocean Service (NOS) - [NOAA Beaufort Laboratory](#)**

The NOAA Beaufort Laboratory, opened in 1899, is the second oldest federal marine laboratory and home to scientists from NOAA's National Ocean Service and National Marine Fisheries Service. Operated by the National Centers for Coastal Ocean Science since 1999, this facility on Pivers Island is recognized for a variety of research endeavors. Expertise within NCCOS includes: coastal change, spatial ecology and modeling, ecology of harmful algal blooms, habitat mapping, and aquaculture planning. The lab also houses the North Carolina Coastal Reserve and National Estuarine Research Reserve, which serve as living labs for scientists and students to learn about coastal systems. The lab has a full SCUBA diving roster, small boats, running seawater systems, high-tech labs for cell analysis, necropsy facilities, electronics workshops, classrooms, and a large auditorium.

**Office of Oceanic and Atmospheric Research (OAR) and Office of the Chief Information Officer (CIO) - [N-Wave NOAA Science Network](#)**

N-Wave is NOAA's science network connecting NOAA, academic, and state research network communities to data and resources needed to advance environmental science.

## **Office of Oceanic and Atmospheric Research (OAR) - [Global Greenhouse Gas Reference Network and 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 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 gases, and ozone depleting substances. These data improve our understanding of the distribution of greenhouse gases and models of the global carbon cycle. The measurements of ozone depleting substances help determine the effectiveness of efforts to protect and restore the ozone layer, which protects the surface from the sun's ultraviolet radiation.

### **New Bern**

#### **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. 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 New Bern field office is part of the Office of Law Enforcement's Southeast Division.

### **Newport/Morehead City**

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

Located in Newport, this NWS Weather Forecast Office (WFO) is staffed around-the-clock every day, and provides the best possible weather, water, and climate forecasts and warnings to residents of northeastern North Carolina. This office also provides marine forecasts and warnings for most of the North Carolina coast including the Albemarle and Pamlico sounds. Highly trained forecasters issue warnings and forecasts for events, including severe thunderstorms, tornadoes, winter storms, floods, and heat waves. This essential information is provided to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and NOAA Weather Radio All Hazards.

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

### **Roanoke Island, Pine Knoll Shores**

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

In North Carolina, NOAA's Office of Education provides support to the [North Carolina Aquarium on Roanoke Island](#) in Dare County and the [North Carolina Aquarium at Pine Knoll Shores](#) in Carteret County as part of the Coastal Ecosystem

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

### **Cape Hatteras**

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

Since its designation in 1975 as the Nation's first national marine sanctuary, the *Monitor* National Marine Sanctuary (MNMS) has protected and preserved the wreck site of the Civil War vessel, the *USS Monitor*. For more than a century, the *Monitor* lay undiscovered and protected by nature in 76 meters of water just 25 kilometers off Cape Hatteras, N.C. In August of 1973, scientists aboard Duke University's research vessel *Eastward* located the *Monitor*. On January 30, 1975, Secretary of Commerce Frederick Baily Dent, after approval by President Ford, formally designated the remains of the *USS Monitor* and a column of water one-mile in diameter surrounding the vessel as the nation's first national marine sanctuary. The designation was also novel in that it protected cultural, rather than natural, resources. At the time of designation, the wreck was located on the high seas beyond the then-recognized three nautical miles territorial sea and the six nautical miles contiguous zone, which was expanded to 24 nautical miles in 1999. In many ways, the designation set the tone for the future of the NMSA, both in its recognition of the importance of U.S. maritime heritage and in its emergence as a way to protect the nation's underwater treasures. Twelve years later, on March 9, 1987, at the 125th anniversary of the Battle of Hampton Roads, Secretary of the Interior Donald Hodel designated the *USS Monitor* shipwreck as a National Historic Landmark. Continuing in the spirit of preserving America's maritime heritage, MNMS worked with state and federal partners to conduct maritime cultural landscape studies off the North Carolina coast to document and survey other historically significant shipwrecks in the area surrounding the sanctuary.

In 2022, the NOAA ship *Nancy Foster* hosted the Valor in the Atlantic Telepresence Expedition in partnership between NOAA's Office of National Marine Sanctuaries (ONMS) and the Global Foundation of Ocean Exploration (GFOE). Field teams from NOAA's Monitor National Marine Sanctuary (MNMS), NOAA's National Centers for Coastal Ocean Science (NCCOS) and North Carolina's Office of State Archaeology (OSA) conducted the first in-depth, multidisciplinary survey of the iconic Civil War ironclad *USS Monitor* since NOAA and the U.S. Navy recovered the warship's famous gun turret in 2002. Using remotely operated vehicles to document *Monitor* and other shipwrecks off the North Carolina coast, and streaming it live through the internet, NOAA is increasing access to special places in remote areas, achieving a goal of the Biden-Harris Administration's America the Beautiful initiative. The ROV dives and echosounder surveys also revealed a surprising diversity and abundance of fish occupying the reef and wreck sites. Collaborating with museums, aquariums, and educators, the broadcast showcased these nationally significant historic sites and their biological communities, and through expert interpretation brought the excitement of exploration and the wonders of these ocean treasures to life for students, educators, scientists, and the public worldwide. In 2023, Monitor National Marine Sanctuary launched a three-year campaign to celebrate the 50th anniversary of its designation as the nation's first national marine sanctuary. 2023 marks the 50th anniversary of the *Monitor* shipwreck's discovery, 2024 is the 50th anniversary of the wreck's discovery announcement, and the celebration culminates in 2025 with the 50th anniversary of the sanctuary's designation. These dates will be honored through a series of outreach events with partners to help share America's most famous shipwreck with the public. Throughout the year the sanctuary will hold events and host programs that honor the ship's historic legacy, while demonstrating its leadership role in interpretation and heritage management by using innovative virtual products to share *Monitor*'s stories with the public in new and innovative ways.

## **Manteo**

### **NOAA Office of Education - [Science On a Sphere®](#)** at North Carolina Aquarium on Roanoke Island.

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.

## **NC-4**

### **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.

#### **NOAA Office of Oceanic and Atmospheric Research (OAR)- [National Integrated Heat Health Information System \(NIHHIS\) Center for Collaborative Heat Monitoring](#)**

The National Integrated Heat Health Information System (NIHHIS) Centers of Excellence, made available through funds appropriated to NOAA by the Inflation Reduction Act, allow NIHHIS to enhance community science observations and data collection on extreme heat, and provide assistance to communities planning for and evaluating equitable heat resilience projects. The Center for Collaborative Heat Monitoring will support community science observations and data collection on extreme heat so communities can observe, monitor and evaluate factors influencing heat risk at a local scale. The center will be based at the Museum of Life and Science in Durham, N.C. with additional technical support from CAPA Strategies, Utah State University, and AQUEHS Corp. The center will also include three additional geographically dispersed sites, each serving a different region of the U.S. Each of these sites will help manage a network of urban heat island mapping campaigns in their region, tailoring the campaigns to unique local characteristics, engaging regional communities, and connecting with existing networks for public education and engagement. In addition to the Museum of Life and Science, these hubs include the Arizona Science Center, the Oregon Museum of Science and Industry and the Museum of Science in Boston. The center will build on eight years of NIHHIS efforts to map urban heat islands in over 80 U.S. and international communities. NIHHIS is an integrated information system supporting equitable heat resilience run out of NOAA's Climate Program Office. The NIHHIS Centers of Excellence will work alongside community members and community-based organizations to advance place-based heat information and decision-making, so they can reduce heat-related illness and death, harmful infrastructure impacts and other heat risks.

### **Durham**

#### **NOAA Office of Education - [Science On a Sphere®](#)** at Museum of Life and Science.

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.

## NC-5

### Boone

#### Office of Oceanic and Atmospheric Research (OAR) - [Surface Aerosol Monitoring](#)

NOAA's Global Monitoring Laboratory (GML) operates surface-based aerosol monitoring sites in six states and one territory (Puerto Rico). Guiding the location of these instruments is the finding that human activities primarily influence aerosols on regional/continental scales rather than on global scales. Aerosols create a significant perturbation of the Earth's radiative balance on regional scales. The measurements made include aerosol optical properties (how the particles absorb and scatter solar radiation), aerosol number concentration and chemical composition of the aerosol particles. The site is a partnership with Appalachian State University.

## NC-7

### Wilmington

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

Located in Wilmington, this NWS Weather Forecast Office (WFO) is staffed around-the-clock every day, and provides the best possible weather, water, and climate forecasts and warnings to residents of southeastern North Carolina and northeastern South Carolina. Highly trained forecasters issue warnings and forecasts for events, including severe thunderstorms, tornadoes, winter storms, floods, and heat waves. This essential information is provided to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and NOAA Weather Radio All Hazards. Forecasters also provide Impact-based Decision-Support Services (IDSS), both remotely and on-site, during critical emergencies, such as wildfires, floods, chemical spills, and for major recovery efforts. The WFO collects and disseminates precipitation, river, and rainfall data, and prepares local climatological data. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and educational programs. The WFO operates Automated Surface Observing Stations (ASOS), as well as the local Doppler Weather Radar. The radar data enables forecasters to issue warnings for tornadoes, thunderstorms, and flash floods.

### New Hanover

#### NOAA Office of Education - [Coastal Ecosystem Learning Centers \(CELC\) network](#)

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

## NC-11

### Asheville

#### 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.

## **Office of Oceanic and Atmospheric Research (OAR) and Office of the Chief Information Officer (CIO) - [N-Wave NOAA Science Network](#)**

N-Wave is NOAA's science network connecting NOAA, academic, and state research network communities to data and resources needed to advance environmental science.

### ***Asheville***

#### **National Environmental Satellite, Data, and Information Service (NESDIS) - [Office of Satellite and Product Operations \(OSPO\)/Office of Common Services \(OCS\)](#) - [Comprehensive Large Array-data Stewardship System \(CLASS\)](#)**

The Comprehensive Large Array Storage System (CLASS) is NOAA's premiere online facility for the distribution of NOAA and the US Department of Defense Polar-orbiting Operational Environmental Satellite data, NOAA's Joint Polar Satellite System data, the joint NOAA-NASA Suomi National Polar Partnership data, NOAA's Geostationary Operational Environmental Satellite, and derived data, and other large data sets. The Asheville, NC site is the primary location of NOAA data archive holdings. The site takes in approximately 8.5 terabytes (TB) of environmental data daily and disseminates 800 TB monthly to academia, industry, and other government agencies. These on premises systems are in the process of being decommissioned as CLASS functionality is now fully operational in the cloud.

#### **National Environmental Satellite, Data, and Information Service (NESDIS) - [National Centers for Environmental Information \(NCEI\)](#)**

NOAA's National Centers for Environmental Information (NCEI) are responsible for hosting and providing access to one of the most significant archives on earth, with comprehensive oceanic, atmospheric, and geophysical data. NCEI is the Nation's leading authority for environmental information by maximizing the Federal government's billion-dollar investment in environmental data, NCEI remains committed to providing products and services to private industry and businesses, local to international governments, academia, as well as the general public. NCEI headquarters are located in Asheville, North Carolina with other major locations in Boulder, Colorado; Silver Spring, Maryland; and Stennis Space Center, Mississippi.

#### **National Environmental Satellite, Data, and Information Service (NESDIS) - [Cooperative Institute for Climate and Satellites \(CICS\)](#)**

In 2009, the Cooperative Institute for Climate and Satellites (CICS) was formed through a national consortium of academic, non-profit, and community organizations, with leadership from the University of Maryland College Park (UMCP) and North Carolina State University. CICS is administered as part of the Cooperative Research Program Institutes. This is the first experiment by NOAA and academic institutions with a geographically diverse set of more than 20 partner institutions across the country to address environmental change, their prediction, and potential impacts. CICS-NC is an Inter-Institutional Research Center with the University of North Carolina System, where it is known as the North Carolina Institute for Climate Studies. CICS-NC is co-located with NOAA's National Centers for Environmental Information in Asheville, NC.

---

### ***Coastal***

#### **National Marine Fisheries Service (NMFS) - [Cape Fear River Partnership](#)**

NOAA has formed a unique partnership of key federal, state, local, academic, and other organizations in North Carolina to develop a multi-year action plan that will use a broad range of tools and capabilities to provide long-term habitat-based solutions for the most pressing challenges for migratory fish in the Cape Fear River Watershed. Building on the momentum created by constructing a fishway on the first barrier on the river—the Army Corps' Lock and Dam #1—we will

address other issues affecting fish and recreational use of the Cape Fear River. The action plan will identify threats to healthy migratory fish populations, outline actions to improve water quality, habitat conditions, and fish passage, and determine community and economic benefits of improved migratory fish populations.

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

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

The Program works with partners to complete multi-year regional fieldwork initiatives, as well as smaller projects around the country, centered on integrating new and existing information on these vulnerable and biologically diverse habitats. The first research initiative took place from 2009 to 2011 in the U.S. South Atlantic region and provided valuable information to help decision-makers refine protected area boundaries. To date, the Program has completed one or more initiatives in each region of the United States.

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

Under the authority of section 6 of the Endangered Species Act, the Cooperation with States Program brings states, NMFS, and other partners together to recover threatened and endangered species. A total of 25 U.S. territories and coastal states, including North Carolina, 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 North Carolina Wildlife Resources Commission has received funding through this program to support the recovery of Atlantic sturgeon, shortnose sturgeon, and sea turtles. .

#### **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. NOAA Fisheries funds eligible members of the Stranding Network through the competitive John H. Prescott Marine Mammal Rescue Assistance Grant Program.

#### **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 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. North Carolina received funding for one project in FY22, 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) - [National Water Level Observation Network](#)**

NOS operates six long-term, continuously operating tide stations in the state of North Carolina 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 Duck, Oregon Inlet, USCG Cape Hatteras, Beaufort (Duke Marine Lab), Wilmington, and Wrightsville Beach. 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

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

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in North Carolina. 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 North Carolina 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 Charleston, South Carolina to support mariners and stakeholders in the Southeast 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-Fernandina is homeported in Fernandina Beach, FL and is able to respond 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. One project in North Carolina was successfully completed, and this land is 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 North Carolina Department of Environment Quality to implement the National Coastal Zone Management Program in North Carolina. 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 North Carolina, 14 projects have been funded: one each in FY18 and FY19, three each in FY20 and FY21, one in FY22, and five in FY23.

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

The Emergency Coastal Resilience Fund is a partnership effort between NOAA and the National Fish and Wildlife Foundation (NFWF) to increase the resilience of coastal communities within federally-declared disaster areas impacted by hurricanes and wildfires in 2018, 2020, and 2021. North Carolina received funds to implement nine projects in 2019 and one in 2021.

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

The 10,568-acre North Carolina Research Reserve is managed by the North Carolina Department of Environmental Quality. The site is protected for long-term research and monitoring, stewardship, and education. The site has four components: Currituck Banks, Rachel Carson, Masonboro Island, and Zeke's Island. The reserve has been the site of many research projects on a variety of important topics including living shorelines, invasive species, productivity of benthic microalgae, the use of dredged material to nourish salt marshes, and effects of feral horses on salt marsh productivity. The education and training programs enhance estuarine awareness and provide a critical link between scientific research results and coastal management policies. The reserve is also a partner in the NOAA Sentinel Site Program.

### **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 North Carolina National Estuarine Research Reserve will focus their research on the use of drones as a new method for predicting marsh response to sea level rise.

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

The NOAA Office for Coastal Management practices a partner-based, boots on the ground approach to coastal management. The organization currently has staff in the eight regions to provide assistance to local, state, and regional coastal resource management efforts and facilitate customer feedback and assessments. Assistance is provided to local, state, and regional coastal resource management efforts. Southeast representatives are located in Raleigh, North Carolina, and Charleston, South Carolina.

### **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 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.
- 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 North Carolina is based in Point Pleasant, 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 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) - [Marine Debris Projects and Partnerships in North Carolina](#)**

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 Southeast 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. In North Carolina, the MDP is working with the North Carolina Coastal Federation, using funding provided under the Inflation Reduction Act, to remove large storm-related debris, derelict fishing gear, and abandoned vessels throughout coastal North Carolina. In addition, the project will seek to prevent marine debris that future storms generate through broad public outreach to increase awareness and encourage more resilient building techniques for waterfront structures. Further, through the National Marine Sanctuary Foundation's Ocean Odyssey Marine Debris Awards for Diversity, Equity, Inclusion, Justice, and Accessibility (DEIJA), the MDP provided funding to Gullah/Geechee Legacy to expand the Gullah/Geechee Coastal Removal Engaging Artists Through Environmental Action (CREATE) project beyond South Carolina and into the Sea Islands of the Gullah/Geechee Nation in Florida, Georgia, and North Carolina. Native Gullah/Geechee leaders and citizens will plan and lead community outreach and engagement sessions, and Native Gullah/Geechee artisans will assist with intergenerational artwork activities at outreach and education events. These funds were provided to support initiatives that investigate and prevent the adverse impacts of marine debris in communities that are underserved, underrepresented, or overburdened. Further, in North Carolina, the MDP has partnered with the National Park Service to develop and install an outreach and educational exhibit on marine debris in the Cape Lookout National Seashore. The MDP also works with local communities and organizations to remove marine debris. The Southeast Marine Debris Action Plan, covering Georgia, North Carolina, and South Carolina, was published in 2019. This plan is facilitated by the MDP, and it establishes a road map for strategic progress in making the Southeast, its coasts, people, and wildlife free from the impacts of marine debris. The MDP continues to work with state and local governments, and other stakeholders, to develop and implement the North Carolina Marine Debris Emergency Response Guide.

## **National Ocean Service (NOS) - [OR&R Support Disaster Preparedness in Coastal Communities](#)**

The Office Response and Restoration (OR&R) and National Sea Grant College Program (Sea Grant) partnered to support coastal communities prepare for, respond to, and recover from all hazards. A combined total of \$1,966,331 in federal funds from fiscal years 2022, 2023, and 2024 have been used to support eleven projects. In 2023, four projects were

selected in New Jersey, North Carolina, Oregon, and South Carolina focused on strengthening local disaster readiness and recovery in underserved communities.

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

The U.S. Integrated Ocean Observing System (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 the 11 Regional Associations and it extends 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.

The Southeast Coastal Ocean Observing Regional Association (SECOORA) coordinates coastal and ocean observing activities, and facilitates continuous dialogue among stakeholders so that the benefits of a sustained coastal and ocean observing system can be realized. SECOORA's vision is to protect people by providing comprehensive information and tools, conserve the marine environment by providing ocean current, wind, and ecosystem condition information, and enhance the coastal economy by providing information and models to facilitate more effective decision-making.

**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.

---

### **Statewide**

**National Weather Service (NWS) Weather Forecast Offices (WFO)** are staffed 24/7/365 and provide weather, water, and climate forecasts and warnings to residents of North Carolina. There are 122 [WFOs nationwide](#) of which three are in North Carolina. Highly trained forecasters issue warnings and forecasts for weather events, including severe thunderstorms, tornadoes, hurricanes, winter storms, floods, and heat waves to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including wireless emergency alerts, social media, weather.gov, and NOAA Weather Radio All Hazards. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and educational programs that strengthen working relationships with local partners in emergency management, government, the media and academic communities. Forecasters provide Impact-based Decision Support Services

(IDSS), both remotely and on-site during critical emergencies such as wildfires, floods, chemical spills, and major recovery efforts. To gather data for forecasting and other purposes, NWS WFO staff monitor, maintain and use Automated Surface Observing Stations and Doppler Weather Radar. In addition to the WFOs, NWS operates specialized national prediction [centers](#) and regional headquarters throughout the U.S. for a total of 168 operational units. Over 85% of NWS' workforce is in the field. For current North Carolina weather, visit [www.weather.gov](http://www.weather.gov) and, on the national map, click on the relevant county or district.

#### **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. North Carolina contains the largest estuarine system of any Atlantic Coast state. This 2.3 million acre network of habitats provides productive and diverse habitats for finfish, shellfish, and other wildlife, and recreation for millions of people. The Restoration Center works with numerous partners in North Carolina to restore salt marshes, shorelines, and oyster reefs; and to remove dams that block migratory fish habitat. See the interactive [Restoration Atlas](#) to find habitat restoration projects near you. Site visits to see habitat projects may be available in North Carolina, 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 Marine Fisheries Service (NMFS) - [Southeast Regional Office](#)**

NMFS studies, protects and conserves living marine resources to promote healthy, functioning marine ecosystems, afford economic opportunities and enhance the quality of life for the American public. NMFS' Southeast Regional Office (headquartered in Saint Petersburg, FL) and Southeast Fisheries Science Center (headquartered in Miami, FL) are responsible for living marine resources in federal waters of the Gulf of Mexico, South Atlantic, and U.S. Caribbean. Using the authorities provided by the *Magnuson-Stevens Fishery Conservation and Management Act*, *Endangered Species Act*, *Marine Mammal Protection Act* and other federal statutes, the Southeast Regional Office and Southeast Fisheries Science Center partner together to assess and predict the status of fish stocks, marine mammal and sea turtle populations, as well as other protected resources, including coral. The Southeast Regional Office is responsible for over 40% of all federal fishery management plans nationwide which cover hundreds of species ranging from diverse, relatively sedentary and vulnerable coral reef fish - like the popular snappers and groupers - to wide ranging pelagic species like mackerel and mahi mahi. More than 90 marine mammal stocks and 27 threatened or endangered species, including the North Atlantic right whale and smalltooth sawfish, six sea turtle species, and seven coral species also occur in this region. The Office consults on approximately 50% of the nation's coastal development permits, provides fish passage and ecological flow recommendations at dozens of barriers, engages partners in regional collaboration, and supports large-scale conservation and restoration programs aimed at protecting essential fish habitat and coastal communities from development, subsidence, sea level rise, and storms. While 99% of the nation's outer continental shelf oil production is in this region, it is also the focus of new wind energy development off the Carolinas and in the Gulf of Mexico. The Southeast Regional 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.

## **National Marine Fisheries Service (NMFS) - [The Southeast Fisheries Science Center](#)**

The Southeast Fisheries Science Center implements a multi-disciplinary science and research program in support of living marine resource management. The Southeast Fisheries Science Center develops the scientific information required for fishery resource conservation; fishery development and utilization; habitat conservation; the protection of marine mammals, sea turtles and other protected species; impact analyses and environmental assessments for management plans and/or international negotiations; and pursues research to answer specific needs in areas of population dynamics, fishery economics, fishery engineering, food science, and fishery biology. provides the scientific advice and data needed to effectively manage the living marine resources of the Southeast region and Atlantic high seas through the following divisions.

[Fisheries Assessment, Technology, and Engineering Support](#) division provides essential services and development of new innovative technologies to support the center's mission. The branches of Biology and Life History, Advanced Technology, Gear Research, and Gear and Vessel Support branches provide state-of-the-art life history information and innovative solutions to reduce bycatch and optimize the performance of biological and fishery monitoring programs across the science center.

[Fisheries Statistics](#) division provides extensive support to management and science through the collection, management, and dissemination of commercial and recreational fisheries statistics. The branches of Commercial Fisheries Monitoring, Recreational Fisheries Monitoring, Survey Design, Data Management and Dissemination, Catch Validation and Bio-sampling, and Observer Program works extensively with various internal and external partners to collect the fishery dependent information used to support marine resource management in the region. Principal data collection agents are stationed in Wilmington and Manteo, NC.

[Marine Mammals and Sea Turtles](#) division supports and conducts science that leads to improved knowledge and meaningful conservation of marine mammals and turtles and their habitats in a changing environment, helping to achieve NOAA Fisheries' mission of implementing the Marine Mammal Protection Act and Endangered Species Act and making a positive impact on society.

[Population and Ecosystems Monitoring](#) division provides data, analytical products, research, and expertise to support NOAA Fisheries priorities. The branches of Ocean and Coastal Pelagics, Trawl and Plankton, Gulf and Caribbean Reef Fish, Atlantic and Caribbean Reef Fish and Habitat Ecology carry out fishery-independent surveys and applied research focused on fisheries and habitat ecology, and provides support for ecosystem- and climate-related initiatives in the region.

[Sustainable Fisheries](#) division works in partnership with fisheries managers and constituents to provide reliable scientific advice that enhances the stewardship of living marine resources. The branches of Gulf of Mexico Fisheries, Atlantic Fisheries, Highly Migratory Species, Caribbean Fisheries, and Data Analysis and Assessment Support also strive to advance scientific knowledge and promote diverse and sustainable fisheries through innovative research and development activities, and the use of advanced technologies.

[Social Science Research Group](#) conducts research and data collections to assess the social and economic performance of fisheries and regulatory impacts.

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

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

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

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

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

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

The National Oceanic and Atmospheric Administration (NOAA) Mussel Watch Program (MWP) monitors the status and trends of chemical contaminants and biological stressors in the nation's coastal waters. MWP began in 1986, and is based on the periodic collection and analysis of bivalves (oysters and mussels) and sediment from a network of more than 300 monitoring sites nationwide. Contaminants monitored at each site include the EPA's Priority Pollutant List of toxic substances and a suite of chemicals of emerging concern such as flame retardants, PFAS, pharmaceuticals, and current use pesticides.

#### **National 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 three are in North Carolina.

#### **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 18 ASOS stations in North Carolina.

#### **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 163 COOP sites in North Carolina.

#### **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 21 NWR transmitters in North Carolina.

#### **Office of Oceanic and Atmospheric Research (OAR) – [North Carolina 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. North Carolina Sea Grant is your link to research and resources for a healthier coast. Via integrated research, outreach and education programs, we provide unbiased, science-based information on existing and emerging issues affecting N.C. coastal communities and ecosystems. Since 1970, North Carolina Sea Grant has been a valuable resource for scientists, educators, local officials, government agencies, coastal businesses and the public. With headquarters at North Carolina State University in Raleigh, the program also has coastal offices in Manteo, Morehead City and Wilmington. Current projects focus on healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies, and environmental literacy and workforce development. Administrative offices are located in Raleigh. Extension agents are located in Manteo, Morehead City, and Wilmington. 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).

### **National Ocean Service (NOS) - [NOAA Ocean Guardian School Program](#)**

A NOAA Ocean Guardian School makes a commitment to the protection and conservation of its local watersheds, the world's ocean, and special ocean areas, like national marine sanctuaries. Funds are provided to schools at \$4,000 per year if the school makes this commitment by proposing and then implementing a school- or community-based conservation project. Once the school has completed its project, the school receives official recognition as a NOAA Ocean Guardian School. To date, the Ocean Guardian School Program has reached more than 88,797 students and 3,599 teachers.

### **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.

### **[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***

##### **Removing Barriers and Restoring Connectivity on the Roanoke River, North Carolina, \$3,267,128**

This project will replace six undersized culverts with bridges and remove two earthen barriers within the floodplain of the lower Roanoke River. Removal of these eight barriers will benefit migratory species such as blueback herring. It will also provide community benefits by reducing flooding and improving water quality in the watershed.

##### **Watershed Restoration of the Upper Cape Fear and Lower Deep Rivers, North Carolina, \$7,400,000**

This project will restore priority habitat in the Cape Fear watershed for several migratory fish species, including American shad, river herring, striped bass, Atlantic sturgeon, and American eel. Three dams upstream of a series of U.S. Army Corps of Engineers' Locks and Dams will be removed, and pre-removal activities will be initiated for two additional dams.

**Co-creating Inclusive Community Resilience Projects with Nature-based Solutions in the Coastal Carolinas, \$498,984**

This project will work with coastal communities to identify and propose nature-based solutions that increase resilience to extreme weather and climate change. They will collaboratively create a suite of proposed projects that address the goals and challenges of Awendan and McClellanville, South Carolina, and Columbia and Tyrrell County, North Carolina. They will also hire community planners to support the process and help coordinate future restoration. *This award supports work in NC and SC.*

**Improving coastal flood modeling infrastructure by including inland hydrologic extremes through coupling using next-generation NOAA inland hydrologic model, \$693,000**

We propose to create an operational Southeast Coastal Operational Forecast System (SECOFS) based on the work we have done on the Surge and Tide Operational Forecast System (STOFS). In addition to extracting the outputs from STOFS and using the same NOS operational boundary conditions, SECOFS will also include enhancement of the coupling infrastructure itself to be compliant with the Unified Forecast System (UFS), and the NOAA efforts for the development of a generic coastal flood modeling skill assessment and evaluation infrastructure for operational models. *This award supports work in NC, SC, GA, and FL.*

**Southeast Coastal Ocean Observing Regional Association (SECOORA): Implementation of the Infrastructure Investments and Jobs Act, \$1,906,000**

Southeast Coastal Ocean Observing Regional Association (SECOORA) goals are 1 - Invest in new observing infrastructure for the Southeast- Reinvestment in existing observing infrastructure for the Southeast; and 2- Data and product development to support high priority regional management issues- Establishment of Communities of Practice to address regional ocean data sharing needs in the southeast- Support resilience planning in the southeast through the Southeast & Caribbean DisasterResilience Partnership. *This award supports work in NC, SC, GA, and FL.*

**NC National Estuarine Research Reserve Application for Infrastructure Capacity-Building Funding, \$300,000**

This funding will build the capacity of the North Carolina National Estuarine Research Reserve (NCNERR) within the North Carolina Department of Environmental Quality to plan for and implement habitat restoration and conservation projects proposed through funding opportunities connected to the Bipartisan Infrastructure Law. Specifically, NCNERR will use these funds to accomplish development of 3 NCNERR site resilience plans, submittal of planning/construction and acquisition proposals for areas identified for restoration and acquisition in the plans and that meet NCNERR and IIJA objectives, pre- and post-monitoring at priority NCNERR site restoration and acquisition areas, and implementation of funded projects.

**NC CMP Application for Infrastructure Capacity-Building Funding, \$431,387**

This funding will build the capacity of the state's federally-approved coastal management program within the NC Department of Environmental Quality to plan for and implement habitat restoration and conservation projects proposed through funding opportunities connected to the Bipartisan Infrastructure Law. Specifically, the North Carolina Department of Environmental Quality will use these funds to build capacity in the areas of habitat restoration and resilience to directly support implementation of the updated Coastal and Estuarine Land Conservation Program (CELCP) Plan, the NC Coastal Habitat Protection Plan (CHPP), and the NC Natural and Working Lands Action Plan (NWL).

**Persistently Elevated Gas-free Aerostatic Sensor Utility System (PEGASUS), \$155,552**

Anuma Aerospace seeks to develop the conceptual design for, and determine the technical and economic feasibility of, a Persistently-Elevated, Gas-free, Aerostatic Sensor Utility System (PEGASUS). PEGASUS will work like a data buoy in the

sky, continuously collecting and transmitting weather data from the marine atmospheric boundary layer (ABL) with the data being made available via application programming interface (API) on the (internet) cloud.

### **2023 Knauss Marine Policy Fellowship, \$143,000**

The Knauss fellowship provides a one-year educational experience in an executive or legislative branch office which will: 1) Expand the student's experience with, and knowledge of, the policy-making process within federal agencies and Congressional committees dealing with marine and coastal issues; and 2) Allow the student to contribute knowledge gained in academic programs and provide informational feedback to programs, thus assisting in the student's long-term career and educational goals. Two fellowships were awarded to North Carolina State University in 2023.

### **Assessing opportunities for improved coastal data assimilation in ocean model analyses and seasonal forecasting systems, \$739,040**

Existing seasonal forecasting systems have poor skill predicting sea level anomalies for most of the U.S. East Coast and in the Gulf of Mexico. The poor capability of forecasting monthly sea level anomalies for the U.S. East and Gulf Coasts are especially disappointing because outlooks of high tide flooding in these regions would benefit from skilful predictions. Since coastal flooding occurrence is strongly influenced by monthly anomalies of sea level, better seasonal forecasts are highly relevant to improving resilience. *This award supports work in NC, AL, TX, MS, FL, LA, GA, and SC.*

### **Enabling equitable adaptation to changing coastal flood risks through community-engaged modeling in North Carolina and Hawai'i, \$486,933**

Coastal communities are confronting large and growing flood risks. Engaging community members in modeling flood risk and adaptation responses enhances the validity and the usefulness of the process and outputs. This approach, which we refer to as community-engaged modeling, can build community capacity to engage in adaptation decision-making while filling critical gaps in information about flood risk. Through partnerships with four communities in Hawaii and North Carolina, we will integrate physical, social, and economic data to assess flood risk. *This award supports work in NC and HI.*

### **Just Keep Swimming: Expanding Resilience in North Carolina with a Holistic Approach from Source to Sea in the Cape Fear River Basin, \$7,900,000**

This project will lead extensive community engagement to improve fish passage and increase resilience on the Cape Fear River. This project will identify and garner consensus around a fish passage solution at two dams on the mainstem river. It will also build capacity for local governments by sharing best practices for nature-based solutions to address concerns related to water quality, flooding, and other community hazards.

### **The New River Watershed Restoration and Resiliency Initiative, \$16,000,000**

This project will restore critical habitat and alleviate flooding within the New River watershed through work in five project areas. Building upon the successful New River Estuary Oyster Highway and Wilson Bay Project, this effort will include wetland restoration, culvert replacement, living shoreline creation, and outplanting of three million oysters. In addition to restoring habitat, this work will improve water quality, recreational access, and community resilience.

### **Measuring coastal sediment grain size instantly using Instagrain, a hand-held camera with on-device machine learning, \$174,693**

Accurate measurement of coastal sediment grain size is essential for addressing coastal erosion, shoreline change, water level forecasting, storm impact predictions, and planning nature-based coastal protections. This project aims to develop a device that: 1) accurately measures all sediment types along the continental U.S. coastline; 2) includes a new pretrained

machine learning model using weak supervision for improved results; and 3) detects specific minerals' presence and weight percentages. Ultimately, this instrument will enable quick, accurate sediment grain size measurements in the field.

### **Protecting the Neuse River Estuary through Community-Engaged Prevention of Stormwater-Derived Litter in Urban Headwaters, \$298,851**

North Carolina Sea Grant will organize and lead a coalition of partners, and engage a diverse group of stakeholders, in an effort to curb the amount of marine debris coming from highly urbanized areas of the Piedmont into the lower Neuse River and Pamlico Sound. Together, we will conduct research and develop and test litter reduction strategies directed at limiting stormwater conveyed trash. We will investigate land-based litter in urban areas, as well as human attitudes and behaviors that contribute to these sources; document the transport of this debris to downstream waters; and evaluate approaches for preventing both direct and inadvertent litter from entering the stormwater system. This project will focus on the Neuse River basin and will engage local governments, non-profit organizations and citizen groups including the City of Raleigh, Sound Rivers Inc., The Great Raleigh Cleanup, Wake County, N.C. State University (NCSU), and neighborhood residents.

### **TRAcking Suspected Human-sourced marine Debrls and Suspected Plastics via Ocean modeling, SATellite imaging, and machine Learning (TRASH DiSPOSAL), \$1,656,589**

This project aims to quantify the distribution of marine debris and suspected plastics (MD&SP) in coastal oceans while developing a new data analytics system for effective collection and removal. Addressing marine debris requires significant investment from governments and industry, starting with large-scale quantification of concentrations in ocean waters. The approach combines advanced ocean modeling, satellite data analysis, and machine learning to track MD&SP along the U.S. East Coast and Gulf of Mexico. We will also create a public data dashboard to visualize MD&SP concentrations regionally.

#### ***IRA***

### **Completing the Pamlico Sound Oyster Sanctuary and Training the Next Generation of Marine Science Professionals, \$14,949,480**

This project will restore nearly 120 acres of oyster habitat in Pamlico Sound, leading to the completion of the 500-acre goal of the Jean Preston Memorial Oyster Sanctuary. Restoration will benefit key recreational and commercial species such as striped bass. North Carolina Coastal Federation will also join with North Carolina State University Center for Marine Sciences and Technology and North Carolina Central University to provide hands-on opportunities for underrepresented graduate and undergraduate students studying marine sciences.

### **Capacity Expansion to Support Habitat Restoration and Resilience in the Gullah Geechee Corridor, \$536,223**

This project will create new staff positions to expand their work creating a plan for restoration and resilience across the Corridor in North Carolina, South Carolina, Georgia, and Florida. The new positions will help build relationships between restoration organizations and Gullah Geechee communities, identify the resilience priorities of community members, and form local advisory committees to support future restoration efforts. *This award supports work in NC, SC, GA, and FL.*

### **Bay River Coastal Partnership, \$500,000**

This award will support the Bay River Coastal Partnership in the purchase and conservation of an ecologically significant coastal property within the over 400-acre Bay River Tract in Pamlico County. Conservation of this area will protect an undeveloped natural shoreline and rare coastal forest communities, minimize the loss of life and property by directing development out of a high risk area, and safeguard coastal water quality along the Bay River.

**North Carolina Large-scale Marine Debris and ADV Removal, \$4,496,500**

North Carolina Coastal Federation is removing storm-related debris, lost fishing gear, and vessels throughout coastal North Carolina and is working to prevent marine debris from future storms.

**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 NC, NY, NJ, PA, DE, MD, and VA.*

**South Atlantic Fishery Management Council IRA Funds, \$990,077**

The South Atlantic Fishery Management Council (SAFMC) will use funding to help oversee the day-to-day management of climate-related projects, in response to the East Coast Climate Scenario Planning (ECCSP) effort to "conduct evaluations and/or develop tools to describe and visualize past, current, and projected spatial distribution of managed resources to inform management", and collectively address climate change in fisheries. The SAFMC also proposes a series of projects to improve climate resiliency and management responsiveness, evaluate the need for governance changes, and increase the resilience of underserved communities. *This award supports work in NC, SC, GA, and FL.*

**IRA - NOAA-BOEM-MGEL Cooperative Research Proposal for Near Real-Time North Atlantic Right Whale Density Modeling, \$1,381,943**

Real-time knowledge of whale distributions would allow imminent harmful activities to be temporarily redirected, relocated, or postponed, helping to reduce threats to the endangered North Atlantic Right Whale (NARW) population. In partnership with NOAA Fisheries and the wider community of marine researchers and stakeholders, Duke MGEL is building a near real-time modeling system for the NARW. By linking the real-time flow of visual and acoustic observations of right whales to contemporaneous environmental covariates, the system will predict whale density across the eastern seaboard at a daily cadence.

**Southeast Coastal Ocean Observing Regional Association (SECOORA): Inflation Reduction Act, 2022, \$5,000,000**

Through this project, SECOORA aims to ensure equitable service delivery, including the recapitalization of high-frequency radar, gliders and buoy assets; a program to deploy low-cost wave buoys near frontline communities; continued development of the Sargassum Watch product; and stakeholder engagement and workforce development in underserved communities through workshops, enhanced communications and internship opportunities. *This award supports work in NC, SC, GA, and FL.*

**North Carolina Application for the Coastal Zone Management Inflation Reduction Act Non-Competitive Awards, \$875,000**

This funding will increase the ability of the North Carolina Coastal Zone Management Program (NC CZM) within the North Carolina Department of Environmental Quality, Division of Coastal Management, to implement projects, initiatives, and programs that increase the climate resilience of coastal communities within coastal counties. Specifically, NC CZM will use these funds to fully support a full time position and fund resilience planning activities for the North Carolina Coastal Reserve system within the Division of Coastal Management. The position will provide formal guidance and direct support to local governments for incorporating long-term resilience into their comprehensive planning and implementation of resilience-focused work and activities eligible under the Coastal Zone Management Act at six sites within the North Carolina Coastal Reserve system.

#### **NC NERR IRA Non-Competitive Award, \$400,000**

This funding will build the ability of the North Carolina National Estuarine Research Reserve (NC NERR) within the North Carolina Department of Environmental Quality to implement projects, initiatives, and programs that increase the climate resilience of coastal communities within coastal counties. Specifically, the NC NERR will use these funds to provide additional capacity to develop and implement habitat resilience plans at the NC NERR southern sites by funding the development and implementation of habitat resilience plans for the Masonboro Island and Zeke's Island. In addition, to provide capacity to support NC NERR program activities at the NCNERR southern sites, including stewardship, research and monitoring, education, and training at the Masonboro Island and Zeke's Island.

#### **Innovating a Community-Driven Approach to Heat Monitoring and Observation, \$2,300,000**

The Center for The Center for Collaborative Heat Monitoring will address two closely connected problems: (1) the continued challenges associated with understanding and fulfilling urgent data needs about inequitable exposure to heat in communities across the United States, and (2) the continued de-facto exclusion of heat-imperiled communities from large-scale participatory science campaigns. The project will produce a more nuanced and detailed understanding of data needs, desires, and capacities for engagement from inequitably heat-burdened and imperiled communities, and then tailor community science campaigns with these communities through a novel science-to-civics approach. This approach will localize community concerns and priorities about heat through prolonged engagement, investment, and flexibility in monitoring capability to respond to varied data and science needs.

---

*NOAA In Your State* is managed by [NOAA's Office of Legislative and Intergovernmental Affairs](#) and maintained with information provided by NOAA's Line and Staff Offices. Questions about specific programs or offices should be directed to the NOAA Line or Staff Office listed.

More information for those offices may be found at [NOAA.gov](#).

---