NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

NOAA In Your State

New Jersey

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

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

Highlights of NOAA in New Jersey

Port Agent Field Office	Northfield	NJ-2
James J. Howard Marine Sciences Laboratory	Highlands	NJ-6
Jacques Cousteau National Estuarine Research Reserve	Mullica River/Great Bay	NJ-3
Geophysical Fluid Dynamics Laboratory	Princeton	NJ-12
Cooperative Institute for Modeling Earth Systems	Princeton	NJ-12
Bipartisan Infrastructure Law (BIL) / Inflation Reduction Act (IRA) Projects	Project Specific	NJ

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

Weather Forecast Offices

Mount-Holly-Greater-Philadelphia-Area-Delaware River Valley NJ-3

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 New Jersey. There are 122 WFOs nationwide of which one is in New Jersey. 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 New Jersey weather, visit www.weather.gov and, on the national map, click on the relevant county or district.

Science On a Sphere®

Jersey City	NJ-8
Morristown	NJ-11

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

NJ-1

Camden

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

In New Jersey, NOAA's Office of Education provides support to the Adventure Aquarium & Center for Aquatic Sciences in Camden 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.

NJ-2

Northfield

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

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

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

NOAA's Global Monitoring Laboratory (GML) operates a small aircraft-based North American network of sampling sites to measure vertical profiles of important greenhouse gas concentrations. Air is sampled bi-weekly above the surface up to approximately 25,000 feet above sea level using a relatively small, light, and economical automated system developed by GML researchers. These air samples are delivered to GML in Boulder, Colorado for measurements of CO2, CH4, 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.

NJ-3

Mount Holly-Greater Philadelphia Area and Delaware River Valley

National Weather Service (NWS) - Weather Forecast Office

Located about 25 miles northeast of Philadelphia just outside Mount Holly, 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 most of New Jersey, eastern Pennsylvania, Maryland's upper eastern shore, and Delaware. This office also provides marine forecasts and warnings for the Atlantic coastal waters from Sandy Hook, New Jersey to Fenwick Island, Delaware, and the entire Delaware Bay. 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. 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.

Delaware River and Bay Districts

National Ocean Service (NOS) - Delaware River and Bay PORTS

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

NJ-4

Forked River

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

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

Mullica River-Great Bay

National Ocean Service (NOS) - **Jacques Cousteau National Estuarine Research Reserve**

The 114,873-acre Jacques Cousteau Research Reserve, designated in 1997 and managed by Rutgers University Institute of Marine and Coastal Sciences, is regarded as one of the least disturbed estuaries in the densely populated urban corridor of the Northeastern United States. The reserve conducts research on the physical, chemical, and biological components of its estuaries and neighboring watersheds, and is established as a sentinel site for monitoring the impacts of changing water levels and inundation on marsh habitats. The education program brings the latest marine science research into classrooms with a focus on enhancing basic scientific skills, problem-solving, and environmental awareness. The training program provides up-to-date scientific information and access to technologies and skill-building opportunities to address climate change adaptation opportunities in communities throughout the New Jersey coastal zone.

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 Jacques Cousteau National Estuarine Research Reserve will focus their research on estuary-to-ocean connections of summer flounder.

NJ-6
Highlands

National Marine Fisheries Service (NMFS) - James J. Howard Marine Sciences Laboratory

The James J. Howard Marine Sciences Laboratory, part of the NMFS Northeast Fisheries Science Center, is located on the New Jersey shore at Sandy Hook within the National Park Service Gateway Recreational Area. It is a state-of-the-art marine research facility where scientists study the effects of environmental factors on fishery resources, near-shore ecosystems, offshore fish habitat, habitats in designated wind energy development areas in the Northeast, and ocean processes. Emphasis of seawater experimental investigations is on studies of reproductive activity and early life stages of marine animals, since these are generally the most vulnerable to environmental variation caused by pollution, climate change, ocean acidification and other factors. The laboratory also is home to one of the country's premier ocean acidification experimental facilities, which is used to evaluate the effect of ocean acidification on marine organisms.

National Marine Fisheries Service (NMFS) - Habitat and Ecosystem Services Division Field Office

Co-located within the Northeast Fisheries Science Center's James J. Howard Marine Sciences Laboratory, this field office of the Greater Atlantic Regional Fisheries Office's Habitat and Ecosystem Services Division (HESD)provides local support for NMFS' habitat conservation and stewardship efforts in New Jersey, New York, Delaware, and Pennsylvania. HESD staff provide consultative services, technical assistance, and advice to federal agencies that authorize, fund, or undertake activities that may affect marine, estuarine, and migratory fish species and the habitats upon which they depend.

NJ-8
Jersey City

NOAA Office of Education - Science on a Sphere at Liberty Science Center.

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 what are sometimes complex environmental processes, in a way that is simultaneously intuitive and captivating.

Jersey City

National Ocean Service (NOS) - New York / New Jersey Harbor PORTS®

A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community in New York Harbor with real-time data quality-controlled and disseminated to local users for safe and efficient navigation. Real-time data are available for water levels from four stations, tidal currents from three one stations, meteorological data from six five locations and air gap observations from bridges at two locations.

National Ocean Service (NOS) - Ocean Guardian School Program

An 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 partnered with more than 147 schools and has reached more than 80,400 students.

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.

NJ-11
Morristown
NOAA Office of Education - Science on a Sphere at Morristown-Beard School.
Science On a Sphere (SOS) is a room-sized global display system that uses computers and video projectors to display planetary data onto a six-foot diameter sphere, analogous to a giant animated globe. Researchers at NOAA developed Science On a Sphere® as an educational tool to help illustrate Earth System science to people of all ages. Animated images of atmospheric storms, climate change, and ocean temperature can be shown on the sphere, which is used to explain what are sometimes complex environmental processes, in a way that is simultaneously intuitive and captivating.

NJ-12
Princeton
Office of Oceanic and Atmospheric Research (OAR) - Cooperative Institute for Modeling the Earth System
The Cooperative Institute for Modeling the Earth System (CIMES) was awarded to Princeton University. CIMES serves as a mechanism to promote collaborative research between university scientists and those in NOAA. The vision of CIMES is to “be a world leader in understanding and predicting the earth system, across time scales from days to decades, and from the local to global spatial scales, with particular focus on extreme events, and integrating physical, chemical, and biological components. The primary NOAA research partner of CIMES is the Geophysical Fluid Dynamics Laboratory (GFDL). CIMES conducts research across three themes: (1) Earth system modeling; (2) seamless prediction across time and space scales; and (3) Earth system science: analysis and applications.

Office of Oceanic and Atmospheric Research (OAR) - Geophysical Fluid Dynamics Laboratory
The Geophysical Fluid Dynamics Laboratory (GFDL) conducts research directed toward understanding climate on global and regional scales; the earth's atmospheric general circulation; the spatial and temporal dynamics of the oceans; the interactions of the atmosphere and oceans; and the interactions of various trace constituents with the atmosphere and oceans. GFDL develops models of the atmosphere, land, and oceans to study their behavior and properties, contributing to the Nation's programs for improved understanding of climate change and improved weather forecasting. GFDL is proud to collaborate with the Cooperative Institute for Modeling the Earth System (CIMES) at Princeton University to carry out research in the earth system sciences.

Office of the Chief Information Officer (OCIO) - High Performance Computing and Communications
The Office of the Chief Information Officer manages research and development high performance computing for weather and climate modeling, research, and predictions, supporting improvements in areas such as the prediction of severe weather, seasonal prediction of temperature and precipitation, and forecasting the next Sandy-like storm.

Coastal
National Marine Fisheries Service (NMFS) - Deep-Sea Coral Research and Technology Program

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

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

National Marine Fisheries Service (NMFS) - Cooperation with States Program and Species Recovery Grants
Under the authority of section 6 of the Endangered Species Act, the Cooperation with States Program brings states, NMFS, and other partners together to recover threatened and endangered species. A total of 25 U.S. territories and coastal states, including New Jersey, 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. Twenty-five coastal states, including New Jersey and U.S. territories, currently participate in this program. The New Jersey Department of Environmental Protection Division of Fish and Wildlife has received multiple awards through this program, including grants to support projects focused on Atlantic and shortnose sturgeon.

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

National Marine Fisheries Service (NMFS) - National Marine Mammal Stranding Network and John H. Prescott Marine Mammal Rescue Assistance Grant Program
The National Marine Mammal Stranding Network and its trained professionals respond to dead or live marine mammals in distress that are stranded, entangled, out of habitat or otherwise in peril. Our long-standing partnership with the Network provides valuable environmental intelligence, helping NOAA establish links among the health of marine mammals, coastal ecosystems, and coastal communities as well as develop effective conservation programs for marine mammal populations in the wild. There is one stranding network member in the state.

NOAA Fisheries funds eligible members of the Stranding Network through the competitive John H. Prescott Marine Mammal Rescue Assistance Grant Program.Since FY20, Prescott Grants totalling $287,528 were awarded to the New Jersey-based Marine Mammal Stranding Center. Additional Prescott Grants have been awarded to recipients from outside New Jersey but that could benefit the state - for example, response partners in New York or Delaware that support Marine Mammal Stranding Center on occasional responses, and laboratories that provide diagnostic services across the national

network. Nationwide, 154 competitive grants were awarded for a total of $11.5 million between FY21 and FY23. In FY24, NOAA Fisheries recommended funding for 37 competitive Prescott Grants for a total of $4,069,728 federal funding.The New Jersey-based Marine Mammal Stranding Center was recommended for an FY24 award of $78,310.

National Ocean Service (NOS) – Bipartisan Infrastructure Law
The Bipartisan Infrastructure Law is helping coastal communities build the future they want to see. The legislation provides a historic investment in coastal protection and restoration that will increase community resilience to climate change and extreme weather events, and improve how we manage our ocean resources. Projects funded under this law protect and restore ecologically significant habitats, including conserving lands that play a critical role in helping communities become more resilient to natural hazards. New Jersey received funding for one project in FY22 and one project in FY23, as well as funds to build the state's capacity to protect its coastal communities and resources.

National Ocean Service (NOS) - National Water Level Observation Network
The National Ocean Service operates three long-term continuously operating tide stations in the state of New Jersey, 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 Sandy Hook, Atlantic City, and Cape May. 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 New Jersey. 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 the region 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. New Jersey is covered by two Navigation Managers, they are located in Narragansett, RI and Norfolk, VA.

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. The Office of Coast Survey's Navigation Response Branch (NRB) conducts routine and emergency hydrographic surveys; and working with the regional Navigation Managers, navigation response teams (NRT) work around-the-clock after storms to speed the reopening of ports and waterways. During emergency response, the NRTs provide time-sensitive information to the U.S. Coast Guard or port officials, and transmit data to NOAA cartographers for updating the Coast Survey's suite of navigational charts. NRT-New London is homeported in New London, CT and is able to respond in the Northeast region within 24 to 48 hours.

National Ocean Service (NOS) - Coastal and Estuarine Land Conservation Program
The Coastal and Estuarine Land Conservation Program brings conservation partners together to protect coastal and estuarine lands considered important for their ecological, conservation, recreational, historical, or aesthetic values. Subject to availability of funding, the program provides state and local governments with matching funds to purchase coastal and estuarine lands or obtain conservation easements for important lands threatened by development. Since 2002, the program has protected more than 110,000 acres of coastal land nationally, including over 16,000 acres protected as in-kind matching contributions. NOAA awarded eight grants in New Jersey, and these lands are protected in perpetuity.

National Ocean Service (NOS) – National Coastal Zone Management Program
Through a unique federal-state partnership, NOAA's Office for Coastal Management works with the New Jersey Department of Environmental Protection to implement the National Coastal Zone Management Program in New Jersey. 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 The National Coastal Resilience Fund is a partnership effort between NOAA and the National Fish and Wildlife Foundation (NFWF) to restore, increase, and strengthen natural infrastructure to protect coastal communities, while also enhancing habitat for fish and wildlife. In New Jersey,17 projects have been funded: two in FY18, three in FY19, one in FY20, one in FY21, three in FY22, and seven 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. In New Jersey, the ECRF awarded four projects in 2021.

National Ocean Service (NOS) – Regional Ocean Partnerships: Mid-Atlantic Regional Council on the Ocean
The Mid-Atlantic Committee on the Ocean (MACO) is a committee established by the Mid-Atlantic Regional Council for the Ocean (MARCO) to foster collaboration among states, federal agencies, the Mid-Atlantic Fishery Management Council, and federally recognized tribes to enhance the vitality of the region's ocean ecosystem and economy through increased communication and collaboration. To maintain quality constituent service, staff from NOAA Office for Coastal

Management lead NOAA's engagement with MACO, MARCO and state coastal management programs to improve the delivery of NOAA products and services in this region. With funding provided through the Bipartisan Infrastructure Law, NOAA is investing approximately $56 million nationwide over five years to enhance and support the priorities of established regional ocean partnerships, including coordinating interstate and intertribal management of ocean and coastal management issues, and enhancing sharing and integration of data.

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

- Eleven regionally based **Scientific Support Coordinators (SSC)** harness the input of a multi-disciplinary team to address issues such as oil slick trajectory forecasting, environmental trade-offs, best practices, resources at risk, and chemical hazard assessment to reduce risks to coastal habitats and resources. The SSC in New Jersey is based in Point Pleasant at the USCG Station Manasquan.
- OR&R identifies and quantifies environmental injury caused by releases of oil and hazardous materials. Our network of **Regional Resource Coordinators** work with multidisciplinary scientific, economic, and legal teams with the goal of securing the appropriate amount and type of restoration required to restore injured NOAA trust resources and compensate the public for their lost use. We collaborate with NMFS Restoration Center and NOAA General Council through the Damage Assessment, Remediation, and Restoration Program (DARRP) to ensure the process is efficient, legally defensible and restoration focused. The RRC serving the Northeast/Great Lakes region are based in Boston, Massachusetts and New York, New York.
- The **Regional Preparedness Coordinator (RPC)** is strategically placed within the region to ensure that NOS and our partners are able to effectively prepare for, respond to, and recover from all hazards, including coastal disasters. The RPC serves as a liaison between NOS and its federal, state, and local disaster preparedness and emergency response partners. A key role of the RPC is to better understand the needs and opportunities within the region and to ensure partners have the tools and resources necessary to inform decision-making. The RPC has expertise across the spectrum of emergency management and provides preparedness, response, and recovery services including planning, training, exercises, response coordination, continuous improvement, and long-term recovery. The RPC, based in Gloucester, Massachusetts, serves the Northeast region – Connecticut, Maine, New Hampshire, Vermont, Massachusetts, New Jersey, Rhode Island, and New York.

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) - OR&R Atlantic Environmental Response Management Application and Response Tools for Oil and Chemical Spills, Preparedness Training for Responders

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. In addition, OR&R offers training to help spill responders increase their understanding of oil spill science when analyzing spills and making risk-based decisions. The training classes include the Science of Oil Spills (SOS), the Science of Chemical Releases (SOCR), Shoreline Cleanup Assessment Technique (SCAT), among others. Each year, OR&R teaches these classes around the country, see our calendar for upcoming training.

National Ocean Service (NOS) - Mussel Watch Program

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

National Ocean Service (NOS) - Aquaculture Phytoplankton Monitoring Network

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

National Ocean Service (NOS) - Marine Debris Projects and Partnerships in New Jersey

The NOAA Marine Debris Program (MDP) in the Office of Response and Restoration (OR&R) leads national and international efforts to reduce the impacts of marine debris. The program supports marine debris removal, prevention, and research projects in partnership with state and local agencies, tribes, non-governmental organizations, academia, and industry. The MDP Mid-Atlantic Regional Coordinator supports coordination efforts with regional stakeholders, provides support to grant-funded projects, tracks progress of projects, and conducts regional marine debris outreach to local audiences. The MDP also works with local communities and organizations to remove, prevent, and research marine debris. In New Jersey, the MDP is working with Stockton University, using funding provided under the Inflation Reduction Act, to recover derelict fishing gear and remove abandoned and derelict vessels throughout coastal bays of New Jersey. The project will also build marine debris prevention and removal expertise through collaboration with commercial crabbers, training, rapid response coordination, and dissemination of recovery methods across industries. Rutgers University is researching the movement of microplastics down the Delaware River to the confluence with Delaware Bay,

and determining the role this mixing area may play as the entry point for microplastics into the food chain.The Mid-Atlantic Marine Debris Action Plan, covering Maryland, the District of Columbia, Delaware, Virginia, New Jersey, and New York, was published in 2021. This plan is facilitated by the MDP with the participation of 96 organizations. The plan establishes a road map for strategic progress in making the Mid-Atlantic, its coasts, people, and wildlife free from the impacts of marine debris. The MDP continues to work with state and local governments, and other stakeholders, to develop and implement the New Jersey Marine Debris Emergency Response Guide.

National Ocean Service (NOS) - U.S. Integrated Ocean Observing System (Mid-Atlantic Regional Association Coastal Ocean Observing System)
The U.S. Integrated Ocean Observing System, or IOOS®, is a federally and regionally coordinated observing system with 17 interagency and 11 regional partners. The System addresses regional and national needs for coastal, ocean, and Great Lakes data and information. This includes gathering and disseminating regional observations; data management; modeling and analysis; education and outreach; and research and development. The Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS) is one of 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.

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 Marine Fisheries Service (NMFS) - Greater Atlantic Regional Fisheries Office and Northeast Fisheries Science Center
NMFS is responsible for the management, conservation and protection of living marine resources within the United States' Exclusive Economic Zone (water three to 200 miles offshore). Using the tools provided by the *Magnuson-Stevens Act*, NMFS assesses and predicts the status of fish stocks, develops and ensures compliance with fisheries regulations, restores and protects habitat and works to reduce wasteful fishing practices, and promotes sustainable fisheries. Under the *Marine Mammal Protection Act* and the *Endangered Species Act*, NMFS recovers protected marine species (e.g. whales, turtles). The Greater Atlantic Regional Fisheries Office (located in Gloucester, MA) includes divisions that promote sustainable fisheries, habitat conservation, and recovery of protected species, and conducts statistical analysis and programs supporting these divisions. Key fish species managed in the Greater Atlantic Region include the northeast “multispecies complex” (cod, haddock, yellowtail flounder etc.), Atlantic sea scallops, herring, lobster, and summer flounder. Key marine endangered species in this region are North Atlantic Right whales, leatherback, loggerhead, leatherback, and Kemp’s ridley sea turtles, Atlantic salmon and Atlantic and shortnose sturgeon. NMFS is the lead agency

coordinating the Large Whale and Sea Turtle Disentanglement Program activities and the Marine Mammal Health and Stranding Response Program activities. The Office also fosters sustainable aquaculture in the region, with two Regional Aquaculture Coordinators that act as a liaison between federal and state agencies to assist in permitting and coordination activities, supporting aquaculture outreach and education, and collaborating with industry, academia and other stakeholders on regional marine aquaculture issues.

The Northeast Fisheries Science Center (headquartered in Woods Hole, MA) studies fishery species and fisheries, monitors and models ocean ecosystems, and provides reliable advice for policy makers. The Center's work promotes recovery and long-term sustainability of marine life in the region, supports both wild and cultured seafood harvests, helps sustain coastal communities, and generates economic opportunities and benefits from the use of these resources. In addition to its five laboratories the Center uses three research vessels to support its work. They are: the NOAA ships *Henry B. Bigelow*, and the small research vessels *Gloria Michelle* and *Victor Loosanoff*. The Greater Atlantic Regional Fisheries Office and the Science Center are responsible for the District of Columbia and the following states: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina; and the inland states of Vermont, Minnesota, Michigan, Wisconsin, Illinois, Indiana, Ohio, and West Virginia.

National Marine Fisheries Service (NMFS) - Restoration Center

The NOAA Restoration Center, within the Office of Habitat Conservation, works with partners across the nation to restore habitat to sustain fisheries, recover protected species, and maintain resilient coastal ecosystems and communities. We have over 30 years conducting habitat restoration through competitive funding opportunities and technical assistance. We also work to reverse habitat damage from disasters like oil spills, ship groundings, and severe storms.Through Community-based Restoration Program projects, thousands of acres of fisheries habitat have been restored, rehabilitated, and protected and hundreds of miles of streams have been opened to migratory fish since 2000. The local community supported these restoration efforts through the time and effort of over 1,000 volunteers. The Restoration Center works with private and public partners in New Jersey to restore tidal wetlands, construct fish ladders, remove dams, modify culverts to improve tidal flushing in coastal wetlands, remove invasive species and restore native shellfish populations. See the interactive Restoration Atlas to find habitat restoration projects near you. Site visits to see habitat projects may be available in your state, please inquire if interested.

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

National Marine Fisheries Service (NMFS) - Office of Law Enforcement

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

fishermen and enabling sustainable fisheries to support vibrant coastal communities. The Office of Law Enforcement's Northeast Division is headquartered in Gloucester, MA, with New Jersey field offices in Newark, Northfield and Wall.

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

National Ocean Service (NOS) – Regional Geodetic Advisor
The Regional Geodetic Advisor is a National Ocean Service (NOS) employee that resides in a region and serves as a liaison between the National Geodetic Survey (NGS) and its public, academic and private sector constituents within their assigned region. NGS has a Regional Geodetic Advisor stationed in Barre, Vermont serving the Northeast region including New Jersey. 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 - **NEXRAD (WSR-88D) Systems**
NEXRAD is used to warn the people of the United States about dangerous weather and its location. This radar technology allows meteorologists to warn the public to take shelter with more notice than ever before. The NEXRAD network provides significant improvements in severe weather and flash flood warnings, air traffic safety, flow control for air traffic, resource protection at military bases, and management of water, agriculture, forest, and snow removal. NEXRAD radar has a range of up to 250 nautical miles, and can provide information about wind speed and direction, as well as the location, size, and shape of precipitation. There are 159 operational NEXRAD radar systems deployed throughout the United States and overseas, of which one is in New Jersey.

National Weather Service (NWS) - Automated Surface Observing Systems Stations
The Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). ASOS serves as the Nation's primary surface weather observing network. ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year observing basic weather elements, such as cloud cover, precipitation, wind, sea level pressure, and conditions, such as rain, snow, freezing rain, thunderstorm, and fog. There are 10 ASOS stations in New Jersey.

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 49 COOP sites in New Jersey.

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). NWR is provided as a public service by the NWS and 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 three NWR transmitters in New Jersey.

Office of Oceanic and Atmospheric Research (OAR) – New Jersey Sea Grant College Program
The National Sea Grant College Program (Sea Grant) is a federal-university partnership administered by NOAA that integrates research, extension outreach, and education. Sea Grant forms a national network of 34 programs in all U.S. coastal and Great Lakes states, Puerto Rico, and Guam. The New Jersey Sea Grant Consortium is an affiliation of colleges, universities and other groups dedicated to advancing knowledge and stewardship of New Jersey's marine and coastal environment. It meets its mission through research, education and outreach programs that promote well-informed and responsible use of New Jersey's coastal and marine environment. The New Jersey Sea Grant College Program at the New Jersey Sea Grant Consortium funds competitive university-based research and through its outreach specialists, applies that research to practical purposes. Its education and communications programs encourage marine science literacy and environmental stewardship by offering opportunities for groups and individuals to learn about New Jersey's marine, coastal and estuarine environments. 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 Fort Hancock. Get involved with Sea Grant through state and national opportunities like the John A. Knauss Marine Policy Fellowship program at seagrant.noaa.gov.

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

The New Jersey Department of Environmental Protection (NJ-1, NJ-2, NJ-3, NJ-4, NJ-5, NJ-6, NJ-7, NJ-8, NJ-9, NJ-10, NJ-11, NJ-12) received a grant for $72,493,449 to build upon a strong coastal resilience collaborative established after Hurricane Sandy. The region includes some of the most densely developed areas in the country, New Jersey's largest cities and most rural landscapes, ecologically critical coastal areas, and many overburdened communities. This project, spanning 16 counties, will improve community readiness for natural solutions in support of ecosystem and community resilience goals by creating a resilience planning and project design pipeline that advances projects through design and implementation. Critical components of the project support transformational resilience projects in multiple overburdened communities that restore wetlands, protect critical infrastructure, address stormwater flooding and urban heat islands with green infrastructure, and create new public access and recreational opportunities. Additionally, the Education, Climate Awareness, Training, and Engagement (EduCATE) Initiative will be developed and implemented to provide education, workforce development, training, and entrepreneurship opportunities throughout the region.

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

Development of a U.S. East Coast Community Ocean Forecast System, $2,060,000
This project will prototype a ROMS 4D-Var based analysis and forecast system for the entire U.S. East Coast to complement WCOFS in future NCEP operations to achieve complete forecast coverage of U.S. marine territorial seas adjacent to the 48 contiguous states and Puerto Rico.

New Jersey Coastal Management Program - Habitat Protection and Restoration IIJA Cooperative Agreements Capacity-Building Application, $448,063
This funding will build the capacity of the state's federally-approved coastal management program within the New Jersey Department of Environmental Protection (NJDEP) to plan for and implement habitat restoration and conservation projects proposed through funding opportunities connected to the Bipartisan Infrastructure Law. Specifically, NJDEP will use these funds to establish and hire a new full-time staff position to enhance the capacity of the coastal management program to plan, undertake, and implement habitat restoration projects. This will include developing a coordinated program-wide restoration project catalogue that will be used by the networked programs of the coastal management program, nongovernmental organizations, and local governments to prioritize and implement restoration projects.

JC NERRS Capacity Building, $300,000
This funding will build the capacity of the Jacques Cousteau National Estuarine Research Reserve within Rutgers University to plan for and implement habitat restoration and conservation projects proposed through funding opportunities connected to the Bipartisan Infrastructure Law. Specifically, Jacques Cousteau National Estuarine Research Reserve will use these funds to build internal capacity to inform regional habitat restoration priorities with science-based information, best practices, and the use of integrated restoration strategies to become a credible source on habitat restoration issues. The Reserve will accomplish this by developing new partnerships with habitat restoration planning groups in New Jersey, strengthening partnerships with the Reserve's land management partners.

Wildfire Potential Research to Inform Extended Range Resource Planning, $469,261
This project will diagnose the physical sources of prediction skill concerning the sequential and simultaneous compound weather and climate extremes that lead to land surface states that increase wildfire potential and evaluate whether models of the earth system are able to simulate these causal chains of events. This knowledge will be used to judge Earth system models' ability to capture physical mechanisms concerning conditions related to wildfires to be considered in the development of future models.

Combine fire weather modeling with smoke emissions to improve air quality forecasting, $753,047
This project will create new modeling capabilities to investigate the role of wildfires in air quality, climate, and the carbon cycle. The key benefits will be a better understanding of wildfire chemistry, interaction, and propagation of wildfires, impacts on health, and the carbon cycle. Specifically, work will be to implement and evaluate a new capability for simulating dynamic fires and their gas and aerosol emissions into GFDL's Atmospheric Model AM4.1 (atmospheric component of GFDL's Earth System Model ESM4.1) to improve research and development, and earth system atmospheric composition models to enhance wildfire-related air quality and climate performance.

Advancing Prediction: Advancing prediction capabilities through use and improvement of high-resolution climate models, $480,000
Coastal communities are increasingly impacted by periods of flooding, even in the absence of storms or heavy rainfall. This project will contribute to predicting the location and timing of these impacts, and document how this risk varies from month-to-month and year-to-year. This new information and related services will enable the nation to quantify and communicate certain impacts of inundation due to sea level rise, high tide flooding, and Great Lakes water level fluctuations.

Next-Generation of NOAA water modeling: Climate Risks & Interactive Sub-seasonal to Seasonal PredictabilitY (CRISSPY) in the Earth System modeling framework, $2,377,413
Precipitation and surface water flows are projected to become more variable with continuing global warming, resulting in more severe wet and dry events with implications for flooding and droughts. There is a critical need for improved predictions and projections of how climate change will affect national water availability, quality, and risks associated with hydrological hazards on regional scales through the next several decades (the 2020s through 2050s). This period covers the lifespan of many major pieces of infrastructure, the built environment, and policy goals for reaching carbon neutrality.

Advancing Prediction: A regional coupled atmosphere-ocean model for high-resolution physical process studies of the air-sea interface, $972,001
A major problem for numerical weather and climate simulation is representing the coupled atmosphere-ocean processes acting at kilometer or smaller scales. To make progress on this problem, a regional model coupling a regional FV3-based atmosphere to a regional MOM6 ocean will be developed for kilometer-scale (and potentially finer) resolution simulation of coupled air-sea processes, with an initial focus on the effects on coastal extratropical cyclones and their potential impact on coastal inundation. The coupled system will incorporate an optional WAVEWATCH III wave model to simulate complex atmosphere-wave-ocean interactions.

Evaluation of new downscaled climate projection data products used in the NCA5, supporting better-informed applied research and climate services, $185,000
This project will evaluate two new, unpublished statistical downscaling methods (Seasonal Trends and Analysis of Residuals (STAR) Empirical-Statistical Downscaling Model (ESDM) & Localized Constructed Analogues, version 2 (LOCA2)) that are highlighted in the forthcoming Fifth National Climate Assessment report, and thus can be expected to garner widespread use in United States climate impacts studies for several years.

Community Science to Address Microplastic Pollution in Environmental Underserved Communities in NJ and NY, $284,969
The New Jersey Sea Grant Consortium was awarded $284,969 to partner with Columbia University's Eco Ambassador program and New York Sea Grant, through its summer undergraduate internship program, to develop timely and effective marine debris curricula and expand environmental literacy outreach to school districts from marginalized communities located in New Jersey and New York urban watersheds. Additionally, participants will be trained in community science approaches to collect water, soil and biological samples from their communities for plastic waste analysis.

Rockafellows Mill Dam Removal Project, $2,327,869
This project will remove Rockafellows Mill Dam on the South Branch Raritan River to open access to habitat for American shad, river herring, and other migratory fish. They will also restore nearby floodplain and streamside habitats. Removal of the dam will eliminate a significant public safety hazard, improve opportunities for recreation, and reduce the risk of flooding in the local community.

Restore Oyster Reef Habitat in the Mullica River-Great Bay Estuary, $1,271,506
New Jersey's Marine Resources Administration (MRA) is seeking $1,014,903 in grant funding from the CZM Habitat Protection and Restoration Bipartisan Infrastructure Law Competition to significantly expand the scale of New Jersey's existing Atlantic City Shell Recycling and Oyster Reef Restoration Program (ACSRP). This program was created in 2019 to collect shell material from local sources to repurpose and plant onto the Mullica River oyster reef system. While very popular and successful at its current scale, the program is unable to adequately sustain and expand the oyster reef system at the rate needed to create resilience of the oyster reef over the long term. Project funding will be used to 1) significantly expand the existing shell collection capacity in the greater Atlantic City area, making additional shell available for significantly increased restoration efforts within the MRGB estuary; 2) enhance and create resilience in the existing oyster reef system (~136 acres) while also expanding the actual footprint of the reef system by 10 acres; and 3) prioritize education and outreach opportunities through public engagement and through area schools (K-12 for Atlantic City and surrounding areas) by providing capacity building assistance through environmental education programs in this overburdened community. The ACSRP is well-positioned to address the priorities of Restoration and Conservation, Climate Resilience, and Equity and Inclusion.

IRA

Beach Restoration to Create Habitat and Protect Tidal Salt Marsh Buffers within the Bay Point Area of Lawrence Township in Cumberland County, New Jersey, $3,500,138
This investment in restored shoreline will improve community resilience by enhancing ecosystem services that mitigate flooding and extreme weather and protect human lives and critical infrastructure. The project will restore habitat within the Bay Point peninsula of Lawrence Township in Cumberland County. The Bay Point shoreline ecosystem also provides critical spawning habitat for horseshoe crabs and foraging grounds for the federally listed red knot.

Rapid ALDFG/ADV response and recovery: expanding industry-led stewardship of NOAA trust resources for long-term sustainability, $1,429,812
Stockton University will expand its industry-led derelict fishing gear removal efforts while also removing around two dozen abandoned and derelict vessels in an effort to enhance New Jersey's coastal bays.

A Bioinspired North Atlantic Right Whale Satellite Telemetry Tag, $679,552
This project would advance the state of technology with respect to surface-attached satellite telemetry tags for cetaceans. The current technology for "suction cup" tags for cetaceans typically provides attachment durations of less than 24h, which limits the ability to collect medium-to-long term data on movements and distributions of NARW. The primary goal for this project is to utilize the custom Remora Adhesive Device (RAD) mounting base (developed at the New Jersey Institute of Technology) to produce a low-drag, releasable telemetry unit that can be customized to house a variety of sensor packages, with significantly greater attachment duration.

Climate Resilience Planning Support, $875,000
This funding will build the ability of New Jersey's federally-approved coastal management program within the Department of Environmental Protection to implement projects, initiatives, and programs that increase the climate resilience of coastal communities within coastal counties. Specifically, the Department of Environmental Protection will use these funds to enhance the capacity of the New Jersey Coastal Management Program to support local governments in their effort to undertake comprehensive climate resilience planning including advancing implementation of actions that will reduce their risk to climate hazards. The CMP will hire two new planning staff members to work with DEP's Office of Local Government Assistance to identify local governments most at need for assistance, especially overburdened and socially vulnerable communities, collaborate with local governments to increase their understanding of how they will be impacted by climate change, and support local climate resilience communication, education, and planning.

Jacques Cousteau NERR Habitat and Coastal Resilience Specialist, $399,634
This funding will build the ability of the Jacques Cousteau National Estuarine Research Reserve (JC Reserve) within Rutgers, The State University of New Jersey to implement projects, initiatives, and programs that increase the climate resilience of coastal communities within coastal counties. Specifically, the JC Reserve will use these funds to build upon BIL capacity funds used to increase the Reserve's habitat restoration capacity. The JC NERR will hire a full-time Habitat Restoration and Coastal Resilience Specialist to work directly with the Stewardship and Coastal Training Program Coordinators to implement resilience work within the Reserve and oversee restoration at the Grassle Marsh within the boundary of the JC Reserve. Additionally, funding will be used to purchase new equipment, build relationships with local indigenous communities, and to implement staff & partner training.

Building a Climate Ready NJ, $72,493,449
Building upon a strong coastal resilience collaborative established after Hurricane Sandy, this project will implement a transformational resilience initiative across 16 coastal New Jersey counties. This project will improve community readiness for natural solutions in support of ecosystem and community resilience goals by creating a resilience planning and project design pipeline that advances projects through design and implementation. Activities include support for transformational resilience projects in multiple overburdened communities that restore wetlands, protect critical infrastructure, address stormwater flooding and urban heat islands with green infrastructure, and create new public access and recreational opportunities; and implementation of the Education, Climate Awareness, Training, and Engagement (EduCATE) Initiative to provide education, workforce development, training, and entrepreneurship opportunities throughout the region. *This project was funded through the Climate Resilience Regional Challenge*.

Forward - Looking Projections - Climate Model Data Dissemination, Inflation Reduction Act (IRA), $1,549,359
The impacts of extreme precipitation and temperature are deadly, damaging, and increasing with a warming climate. The severity of such extremes demonstrably correlates with climate warming. This project will support forward-looking research and development to underpin the transition into operational forecasts to provide and improve forecasts of extreme and hazardous precipitation and temperature, from weeks to seasons, and to provide clear and effective delivery and communication of weather information designed to meet the needs of impacted communities and ultimately protect lives and property.

Marine Carbon Dioxide Removal (mCDR) 2023: Developing a coupled benthic-pelagic biogeochemical model to evaluate the effectiveness of mCDR interventions, $587,486
The seafloor serves as the only geologic-scale storage of oceanic carbon, and consideration of benthic-pelagic exchanges constitutes a major knowledge gap in our understanding of the long term evolution of the global carbon cycle, as well as the durability of marine carbon dioxide removal (mCDR) strategies. This work will focus on the role of benthic biogeochemical cycles and benthic food web on two mCDR strategies: kelp aquaculture and cessation of trawling. Work will consist of the development of a simple benthic biogeochemical model that can be coupled to the GFDL Modular Ocean Model v. 6 (MOM6) and Carbon, Ocean Biogeochemistry, and Lower Trophics (COBALT) models.

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