



NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE



NOAA In Your State

New York

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](#), [Great Lakes programs](#), and then [statewide programs](#).

Highlights of NOAA in New York

Eastern Region Headquarters	Bohemia	NY-2
Hudson River National Estuarine Research Reserve	Annandale-on-Hudson	NY-18,19
Greater Atlantic Regional Fisheries Office and Northeast Fisheries Science Center	Statewide	NY
Bipartisan Infrastructure Law (BIL) / Inflation Reduction Act (IRA) Projects	Project Specific	NY

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

Weather Forecast Offices

Upton/Central Long Island/ New York Metro Area	NY-1
Albany	NY-20
Binghamton	NY-19
Buffalo	NY-26

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 York. There are 122 [WFOs nationwide](#) of which four are in New York. Highly trained forecasters issue warnings and forecasts for 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 and 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 York weather, visit [www.weather.gov](#) and, on the national map, click on the relevant county or district.

Science On a Sphere®

Albany	NY-20
Tupper Lake	NY-21
Horseheads	NY-23
Rochester	NY-25

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 Wild Center in Tupper Lake, Wings of Eagles Discovery Center in Horseheads, and Rochester Museum and Science Center in Rochester.

NY-1

East Hampton

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.

Upton/Central Long Island/ New York Metro Area

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

Located at the Department of Energy's Brookhaven National Laboratory, 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 New York City metropolitan area, including Connecticut and northeast New Jersey. 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.

NY- 2

Bellport

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 Bellport field office is part of the Office of Law Enforcement's Northeast Division.

Bohemia

National Weather Service (NWS) - Eastern Region Headquarters

The NWS Eastern Region Headquarters is the administrative and support center for 23 NWS Weather Forecast Offices, four aviation-focused Center Weather Service Units, and three River Forecast Centers in 16 states (Maine, New Hampshire, Massachusetts, Vermont, Connecticut, Rhode Island, New York, Pennsylvania, South Carolina, North Carolina, Ohio, West Virginia, Virginia, Maryland, New Jersey, Delaware) and the District of Columbia. Services provided by a regional headquarters to local NWS offices within the region include scientific support and development, program management and guidance, field support for new program implementation, budget support, and employee recruitment and assistance.

Islip

National Weather Service (NWS) - Center Weather Service Unit

Housed in the Federal Aviation Administration's New York Air Traffic Control Center (ARTCC), the NWS Center Weather Service Unit (CWSU) provides aviation forecasts and other weather information to ARTCC personnel for use in directing the safe, smooth flow of aviation traffic in the New York Metropolitan area, northern New Jersey, and eastern Pennsylvania.

NY- 5, 8, 13

New York 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 the New York / New Jersey Harbor area 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 stations, meteorological data from six locations and air gap observations from bridges at two locations.

NY-6

Linden Hill

National Marine Fisheries Service (NMFS) - Federal Inspection Office

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

NY-8

Brooklyn

Kings

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

In New York, NOAA's Office of Education provides support to the New York Aquarium in Kings 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.

NY-12

New York City

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

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

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

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

The Consortium for Climate Risk in the Urban Northeast (CCRUN) is a cooperative agreement between NOAA's Climate Program Office (CPO) and Columbia University's Earth Institute. 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. CCRUN, the only CAP team with a principal focus on urban settings, serves stakeholder needs in the Northeast, especially the Boston, New York, and Philadelphia metropolitan areas. CCRUN consists of natural, applied, and social scientists with deep stakeholder relationships and core competencies in the topic areas of climate science, coasts and floods, public health, engineering and urban design, equity, and social, behavioral, and economic science. CCRUN manages integrated projects focused on: 1) Compound extreme events; 2) Coastal and inland flooding; 3) Urban-rural linkages; and 4) Alignment of sustainability, adaptation, and emissions reductions goals in resilience planning. The outcomes of CCRUN's work embody solution-based science driven by the needs of their partners and stakeholders and include: 1) advancement of the climate science of emergent risks, 2) enhanced understanding of the intersection of climate risk and vulnerability at new scales, and 3) development of integrative adaptation science linking urban climate risk management and other community challenges. Core partners of CCRUN include Boston University, City College of New York-Hunter College, Rutgers University, Columbia University, Drexel University, and Stevens Institute of Technology. Contact information and more details about this team can be found [here](#).

National Marine Fisheries Service (NMFS) - [Market News](#)

NOAA's "Fishery Market News" began operations in New York City on February 14, 1938. This office provides accurate and unbiased reports depicting current conditions affecting the trade in fish and fishery products.

NOAA Office of Education - [The NOAA Center for Earth System Sciences & Remote Sensing Technologies](#)

The NOAA Cooperative Science Center for Earth System Sciences and Remote Sensing Technologies (CESSRST) is led by the City College of the City University of New York (CUNY) in collaboration with its partner institutions Hampton University, the University of Maryland-Baltimore County, the University of Puerto Rico at Mayaguez, San Diego State University, and University of Texas at El Paso. This Center is supported through a cooperative agreement award from NOAA's Educational Partnership Program with Minority Serving Institutions (EPP/MSI) as a future workforce investment to support NOAA's mission enterprise. The purpose of the award is to expand participation in NOAA mission-aligned

education, training, capacity building, and collaborative research focusing on expanding participation of groups traditionally underrepresented and historically excluded in NOAA mission aligned careers. CESSRST's education and research focuses on earth sciences, engineering, risk assessment, social science and policy discipline with cutting edge remote sensing applications that supports NOAA climate, weather and water, and ecosystem goals. The EPP/MSI Graduate Fellowship Program (GFP) supports CSC students pursuing a graduate degree in a discipline aligned with NOAA's mission. Since 2021, two CESSRST Scholars have been awarded EPP/MSI fellowships. CESSRST, in collaboration with the NOAA Center for Atmospheric Sciences & Meteorology (NCAS-M), and NOAA subject matter experts, will design and implement in 2023 a Joint Collaborative Research and Development Project (JCRDP) that engages NOAA and CESSRST subject matter expert who will expand the Center's NOAA mission capacity, while directly aligning with each Center type. CESSRST conducts research on all aspects of remote sensing - sensor development, satellite remote sensing, ground-based field measurements, data processing and analysis, modeling, and forecasting. CESSRST's primary collaborator at NOAA is the National Environmental Satellite, Data, and Information Service (NESDIS). This Center's research is also aligned with the needs of NOAA's National Weather Service (NWS) and Office of Oceanic and Atmospheric Research (OAR).

[Harlem, New York City](#)

National Environmental Satellite, Data, and Information Service (NESDIS) - [The Center for Satellite Applications and Research \(STAR\)](#), [Office of System Architecture and Engineering \(SAE\)](#) - [NOAA Center for Earth System Sciences and Remote Sensing Technologies \(CESSRST\)](#)

NOAA Center for Earth System Sciences and Remote Sensing Technologies (CESSRST), a Cooperative Science Center (CSC), was established in 2016 through a national competition and is funded by NOAA pursuant to the José E. Serrano Educational Partnership Program with Minority Serving Institutions. The participating institutions are geographically distributed across the nation and enjoy a high enrollment of under-represented minority students. It is a consortium of six institutions, led by [The City College of The City University of New York \(CCNY\)](#) in partnership with

- [Hampton University \(HU\)](#)
- [San Diego State University \(SDSU\)](#)
- [University of Maryland, Baltimore County \(UMBC\)](#)
- [University of Puerto Rico, Mayaguez \(UPRM\)](#)
- [University of Texas, El Paso \(UTEP\)](#)

CESSRST builds on the successes of 15 years (2001-2016) of NOAA-EPP/MSI funding for the Center for Remote Sensing Science and Technologies (NOAA-CREST) as a national leader in STEM (Science, Technology, Engineering and Mathematics) workforce development. CESSRST supports the NOAA mission related to Earth Systems observations, monitoring through environmental satellites, and ground-based remote sensing technologies. The mission of the Center is to educate, train, and graduate a new generation of diverse and competent students, and to create a varied and skilled workforce in NOAA science, technology, engineering, and mathematics and social science disciplines through participation in research.

[NY-15](#)

Bronx

[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 New York, ELP funded a project by the WE STAY/Nos Quedamos in Bronx County. The project aims to build the environmental literacy of children, youth, and adults so that they can become knowledgeable about ways to increase their community's resilience to extreme weather, climate

change, and other environmental hazards, and be involved in achieving that resilience. To achieve this goal, the project integrates relevant state and local resilience plans and collaborates with stakeholders who are actively implementing these plans. The WE STAY/Nos Quedamos project employs NOAA resources and educational methods to promote community-level environmental literacy, enabling participants to better comprehend threats and implement solutions that build resilience to extreme weather, climate change, and other environmental hazards. Environmental literacy includes the knowledge, skills, and confidence to 1) reason about the ways that human and natural systems interact globally and locally; 2) participate in civic processes; and 3) incorporate scientific information, cultural knowledge, and diverse community values when taking action to anticipate, prepare for, respond to, and recover from environmental hazards, including mitigating and adapting to climate change.

NY-17

Palisades

Office of Oceanic and Atmospheric Research (OAR) - [International Research Institute](#)

NOAA's Climate Program Office International Research Institute for Climate and Society (IRI) was established in 1996 by NOAA and Columbia University as the world's first international institute with a mission to apply climate science in the service of society. IRI uses a science-based approach to enhance society's capability to understand, anticipate and manage the impacts of climate in order to improve human welfare and the environment, especially in developing countries. By providing practical advancements that reduce vulnerability to climate-related risks in the present, we are creating solutions that will increase adaptability to long-term climate change.

NY-18

Millbrook

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.

NY-18, 19

Annandale-on-Hudson

National Ocean Service (NOS) - [Hudson River National Estuarine Research Reserve](#)

The 4,838-acre Hudson River Research Reserve was designated in 1982 and is managed by the New York Department of Environmental Conservation. The reserve spans the middle 100 miles of the Hudson River estuary and is comprised of four sites: the tidal wetlands and uplands of Piedmont Marsh, Iona Island, Tivoli Bays, and Stockport Flats. The reserve sponsors interpretative programs for the public, educators, and students. Research and management efforts are focused on understanding impacts of sea level rise on marshes and communities, and fostering adaptive strategies to manage those impacts.

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 Hudson River National Estuarine Research Reserve will focus their research on the restoration of submersed aquatic vegetation.

NY-19

Binghamton

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

Located at Binghamton Regional Airport, 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 central New York and northeast Pennsylvania. 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.

Ithaca

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

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

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 Northeast RCC is collocated with Cornell University, and serves ME, NH, VT, MA, RI, CT, NY, NJ, PA, DE, MD, WV, DC.

Tompkins County

Office of Oceanic and Atmospheric Research (OAR) - [National Trends Network](#)

A NOAA Air Resources Laboratory National Trends Network (NTN) site is located in Ithaca, NY. The site has been in operation since 1992 collecting data on major ions in precipitation (rain, snow) on a daily basis and from 1976 on an event basis. The major ions collected include: sulfate, nitrate, phosphorus, pH, ammonium, sodium, chloride, and soil cations. Since 2019, samples have been collected on a weekly basis and sent to the National Atmospheric Deposition Program

(NADP) Analytical Laboratory for analysis, data entry, verification and screening. Chemistry data collected include: sulfate, nitrate, phosphorus, pH, ammonium, sodium, chloride, magnesium and potassium. NTN is a sub-network of the NADP.

NY-20

Albany

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

Located at the State University of New York at Albany, 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 southern Vermont, east central New York, and northwest Connecticut. 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.

NOAA Office of Education - [Science On a Sphere](#)® at State University of New York - [University at Albany](#).

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.

NY-21

Tupper Lake

NOAA Office of Education - [Science On a Sphere](#)® at The Wild Center.

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NY-23 through 29

Various Great Lakes and tributary cities

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

The National Ocean Service (NOS) operates eleven long-term continuously operating water level stations in the state of New York, which provide data and information on Great Lakes and interconnecting waterways datum and lake level regulation and are capable of producing real-time data for storm surge warning. These stations are located on the St. Lawrence River at Ogdensburg and Alexandria Bay; on Lake Ontario at Cape Vincent, Oswego, Rochester, and Olcott; on

the Niagara River at Ashland Avenue, American Falls, and Niagara Intake; and on Lake Erie at Buffalo and Sturgeon Point. 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

NY-23

Horseheads

NOAA Office of Education - [Science On a Sphere](#)® at Wings of Eagles Discovery Center.

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NY-25

Rochester

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

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Chesapeake Bay Region

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

The NOAA Bay Watershed Education and Training (B-WET) program is a competitive grants program that provides funding for locally relevant environmental education projects for K-12 audiences. The [NOAA Chesapeake Bay Office](#), a division of NOAA Fisheries' [Office of Habitat Conservation](#), administers B-WET grants for the Chesapeake Bay watershed on behalf of the NOAA Office of Education. The Chesapeake B-WET program recognizes that knowledge and commitment built from firsthand experience, especially in the context of one's community and culture, is essential for achieving environmental stewardship. Chesapeake B-WET regional grant competitions are responsive to local education and environmental priorities and are supportive of partnerships between school districts and community organizations and institutions that are run by and/or serve marginalized groups, particularly minority communities. School district implementation grants are available to school districts with 25% or more landmass in the Chesapeake Bay watershed. State-level capacity building grants are typically available on an every-other-year basis. Please see the funding opportunities for specifics.

NY-26

Buffalo

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

Located at the Greater Buffalo International Airport, 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 western New York State. 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.

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Coastal

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

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

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

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

Under the authority of section 6 of the Endangered Species Act, the Cooperation with States Program brings states, NMFS, and other partners together to recover threatened and endangered species. A total of 25 U.S. territories and coastal states, including New York, 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 New York State Department of Environmental Conservation has received multiple awards through this program, including grants to support projects focused on Atlantic sturgeon.

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

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

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

The National Marine Mammal Stranding Network and its trained professionals respond to dead or live marine mammals in distress that are stranded, entangled, out of habitat or otherwise in peril. Our long-standing partnership with the Network provides valuable environmental intelligence, helping NOAA establish links among the health of marine mammals, coastal ecosystems, and coastal communities as well as develop effective conservation programs for marine mammal populations in the wild. There are two stranding network members in the state. NOAA Fisheries funds eligible members of the Stranding Network through the John H. Prescott Marine Mammal Rescue Assistance Grant Program. For fiscal year 2020, 43 competitive Prescott Grants were awarded for a total of \$3.7 million nationwide. Three awards totalling \$210,964 were given to recipients in New York, one to New York Maine Rescue Center and two to Atlantic Marine Conservation Society, Ltd.

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 York received funding in FY22 to build the state's capacity to protect its coastal communities and resources.

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

NOS operates three long-term continuously operating tide stations in the state of New York 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 Montauk, Kings Point, and the Battery in New York City. 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 York. 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 has a navigation manager located in Narragansett, RI, to support mariners and stakeholders in the Northeast. Navigation managers are on call to provide expertise and NOAA navigation response coordination in case of severe coastal weather events or other marine emergencies. In the day-to-day operations of the maritime transportation system, NOAA's navigation managers help identify the navigational challenges facing marine transportation in New York and provide NOAA's resources and services that promote safe and efficient navigation.

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 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 fourteen grants in New York, 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 York Department of State, Office of Planning and Development, to implement the National Coastal Zone Management Program in New York. 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) – Regional Ocean Partnerships: [Mid-Atlantic Regional Council on the Ocean \(MACO\)](#)

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 (MAFMC), 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) – [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 New York, 17 projects have been funded: two each in FY19 and FY21, three in FY22, and eight 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 York, the ECRF awarded a project in 2021.

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

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

- The **Regional Preparedness Coordinator (RPC)** is strategically placed within the region to ensure that NOS and our partners are able to effectively prepare for, respond to, and recover from all hazards, including coastal disasters. The RPC serves as a liaison between NOS and its federal, state, and local disaster preparedness and emergency response partners. A key role of the RPC is to better understand the needs and opportunities within the region and to ensure partners have the tools and resources necessary to inform decision-making. The RPC has expertise across the spectrum of emergency management and provides preparedness, response, and recovery services including planning, training, exercises, response coordination, continuous improvement, and long-term recovery. The RPC, based in Gloucester, Massachusetts, serves the Northeast region – Connecticut, Maine, New Hampshire, Vermont, Massachusetts, New Jersey, Rhode Island, and New York.

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. In 2012, Atlantic ERMA was employed as the Command Operational Picture for the U.S. Coast Guard's pollution response to Tropical Storm Sandy. 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 New York](#)

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. In New York, 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 the Research Foundation of CUNY to support the training of four students to assess the amount of microplastics in water and marine debris on the shoreline in northeast Queens, New York. In addition, this project will recruit volunteers from the community to assist in shoreline clean up events. The resulting project data will be shared to increase STEM engagement and promote environmental stewardship. 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. In New York, the MDP partnered with the National Park Service to develop and install an outreach and educational exhibit on marine debris in Fire Island National Seashore. 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 Long Island Sound Marine Debris Action Plan, covering Connecticut and Long Island, New York, was published in 2022 by the Connecticut and New York Sea Grant programs with support from the MDP and the help of nearly 50 different organizations. The MDP is also currently working with state and local governments, and stakeholders, to maintain and exercise the New York Marine Debris Emergency Response Guide.

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

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

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

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

National 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.

Office of Oceanic and Atmospheric Research (OAR) - [Sustained Carbonate Chemistry Observation Moorings](#)

The Carbonate Chemistry Observing Mooring network is a sustained investment in ocean chemistry observing networks in U.S. waters and abroad. There are currently 19 buoys in coastal, open-ocean and coral reef waters that contribute to this network. The time series created from these moorings are key to understanding how ocean chemistry is changing over time in these ecosystems by providing continuous and long-term observations of ocean conditions. These buoys are seated in three locations in Alaska (Gulf of Alaska, Papa, Bering Sea), two in California (California Current Ecosystem 1 & 2), one in the Chesapeake Bay (DE, MD, NY, PA, VA, WV), Coastal Mississippi (MS), Florida (Cheeca Rocks), Georgia (Grays Reef), Oregon (Newport Hydrographic Line), Maine (Gulf of Maine), and Washington (Cha'ba in La Push).

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, NDBC 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.

National Ocean Service - [National Marine Sanctuary Nominations](#)

NOAA has determined that the Hudson Canyon sanctuary nomination has successfully met the national significance criteria and management considerations described in the sanctuary nomination process. The area under consideration by NOAA for national marine sanctuary designation may be selected, but being on the inventory does not guarantee that the nominated area will become a sanctuary.

Great Lakes

National Ocean Service (NOS) - [Great Lakes Bay Watershed Education and Training Program](#)

The NOAA Bay Watershed Education and Training (B-WET) program is a competitive grants program that provides funding for locally relevant environmental education projects for K-12 audiences. The Great Lakes B-WET program is managed by NOAA's Thunder Bay National Marine Sanctuary on behalf of NOAA's Office of Education. The Great Lakes B-WET program recognizes that knowledge and commitment built from firsthand experience, especially in the context of one's community and culture, is essential for achieving environmental stewardship. Great Lakes B-WET regional grant competitions are responsive to local education and environmental priorities. Please see the funding opportunities for specifics.

National Ocean Service (NOS) – OR&R [Great Lakes 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. Great Lakes 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. 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 New York](#)

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 Great Lakes 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 York, MDP is working with Rochester Institute of Technology, using funds provided under the Bipartisan Infrastructure Law, to stem the flow of marine debris into Lake Ontario by installing storm drain catchment devices throughout the City of Rochester. Further, through the National Marine Sanctuary Foundation's Ocean Odyssey Marine Debris Awards for Diversity, Equity, Inclusion, Justice, and Accessibility (DEIJA), MDP provided funding to Resilience Education Training and Innovation (RETI) Center LLP to support efforts to educate residents to take action in the local urban watershed and create a more livable coastline for an environmental justice community. 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 by marine debris. The current Great Lakes Marine Debris Action Plan was published in 2020. This plan, which is facilitated by the MDP and supported by local stakeholders, provides a road map for strategic progress in making the Great Lakes, its coasts, people, and wildlife free from the impacts of marine debris. The MDP is also currently working with state and local governments and stakeholders, to maintain and exercise the New York Marine Debris Emergency Response Guide.

Office of Oceanic and Atmospheric Research (OAR) - [CoastWatch](#)

The NOAA CoastWatch Great Lakes regional node obtains, produces, and delivers environmental data and products for near real-time observation of the Great Lakes to support environmental science, decision making, and supporting research. This is achieved by providing internet access to near real-time and retrospective satellite data and products, as well as in-situ Great Lakes data. The CoastWatch node at Great Lakes Environmental Research Laboratory provides clients including Federal, state, and local agencies, academic institutions, commercial/industries and the public, both within and outside of the Great Lakes region, with access to near real-time satellite observations and in-situ data for the Great Lakes.

CoastWatch data are used in a variety of ways, including near real-time observation and tracking of algal blooms, plumes, ice cover, wind speed/direction, surface water intake temperatures at fish hatcheries, two and three dimensional modeling of Great Lakes physical parameters such as wave height and currents damage assessment modeling, research, and educational and recreational activities. In addition, through a cooperative project with Michigan Sea Grant, Great Lakes CoastWatch satellite-derived surface water temperature imagery is contoured and made available via Michigan State Sea Grant's website. Great Lakes CoastWatch data and products benefit riparians as well as research, operational, and recreational users.

National Ocean Service (NOS) - [U.S. Integrated Ocean Observing System \(Great Lakes Observing System\)](#)

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. Working with government agencies, academic researchers, tribes, first nations and the private sector, the Great Lakes Observing System (GLOS) provides end-to-end services that support science, policy, management and industry in the U.S. and Canada. GLOS provides public access to critical, real-time and historical data and information about the Great Lakes, St. Lawrence River and interconnecting waterways for use in managing, safeguarding and understanding these immensely valuable freshwater resources.

National Ocean Service (NOS) - [Lake Ontario National Marine Sanctuary](#)

Designated in 2024, Lake Ontario National Marine Sanctuary is a historically rich area where the long interactions between human activity and the maritime environment has fostered a deep sense of meaning and place. The lake shores and bottomlands of Lake Ontario offer an intriguing window into the history of this special area. The first regional inhabitants, the ancestors of the Haudenosaunee Confederacy, populated the area thousands of years ago. As the gateway between the Great Lakes and the ocean, the maritime landscape of this area represents connections between diverse cultures, between a nascent nation and the frontier, and of commerce, opportunity, and ingenuity. The cultural legacy of people who lived along its shores and journeyed across its waters is showcased by the remains left behind and the stories passed down. The 1,722 square mile area in eastern Lake Ontario is home to at least 47 shipwrecks and numerous archaeological resources.

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). The Greater Atlantic Regional Fisheries Office (located in Gloucester, MA) includes divisions that promote sustainable fisheries, habitat conservation, and recovery of protected species, and conducts statistical analysis and programs supporting these divisions. Key fish species managed in the Greater Atlantic Region include the northeast "multispecies complex" (cod, haddock, yellowtail flounder etc.), Atlantic sea scallops, herring, lobster, and summer flounder. Key marine endangered species in this region are North Atlantic right whales, leatherback, loggerhead, and Kemp's ridley sea turtles, Atlantic salmon and Atlantic and shortnose sturgeon. NMFS is the lead agency coordinating the Large Whale and Sea Turtle Disentanglement Program activities and the Marine Mammal Health and Stranding Response Program activities. The core functions of these programs include coordinating volunteer networks to: respond to entanglements and strandings, investigate mortality events, and conduct biomonitoring, tissue/serum banking, and analytical quality assurance. The Office also fosters sustainable [aquaculture](#) in the region, with two Regional Aquaculture Coordinators that act as a liaison between federal and state agencies to assist in permitting and coordination activities, supporting aquaculture outreach and education, and collaborating with industry, academia and other stakeholders on regional marine aquaculture issues.

The Northeast Fisheries Science Center (headquartered in Woods Hole, MA) 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*, *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. In the Great Lakes, the NOAA Restoration Center focuses on restoring the most degraded environments--designated Areas of Concern. Our projects address loss of habitat and diminished fish and wildlife populations. The Restoration Center works with private and public partners in New York and nationwide to restore coastal and Great Lakes habitat. We provide technical and financial assistance to help recover threatened and endangered species, support sustainably managed species, and reverse the damage done by oil spills and toxic releases. 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), 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 York is a co-trustee with NOAA for assessment and restoration after pollution incidents in New York. For more information about our work in New York, visit: [DARRP in Your State](#) (and use the top menu to navigate to "New York") and this [interactive map](#).

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

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

- The **Regional Preparedness Coordinator (RPC)** is strategically placed within the region to ensure that NOS and our partners are able to effectively prepare for, respond to, and recover from all hazards, including coastal disasters. The RPC serves as a liaison between NOS and its federal, state, and local disaster preparedness and emergency response partners. A key role of the RPC is to better understand the needs and opportunities within the region and to ensure partners have the tools and resources necessary to inform decision-making. The RPC has expertise across the spectrum of emergency management and provides preparedness, response, and recovery services including planning, training, exercises, response coordination, continuous improvement, and long-term recovery. The RPC, based in Gloucester, Massachusetts, serves the Northeast region – Connecticut, Maine, New Hampshire, Vermont, Massachusetts, New Jersey, Rhode Island, and New York.
- Eleven regionally based **Scientific Support Coordinators (SSC)** harness the input of a multi-disciplinary team to address issues such as oil slick trajectory forecasting, environmental tradeoffs, best practices, resources at risk, and chemical hazard assessment to reduce risks to coastal habitats and resources. The SSCs for New

York are based in Point Pleasant, New Jersey at the USCG Station Manasquan, Ann Arbor, Michigan at the NOAA Great Lakes Environmental Research Laboratory, and Gloucester, Massachusetts.

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

The NOAA Office for Coastal Management practices a partner-based, boots-on-the ground regional approach to coastal management, with staff available in the eight regions. Assistance is provided to local, state, and regional coastal resource management efforts. Constituent feedback and assessments are an important part of the effort. A staff member for the Mid-Atlantic, Northeast, and Great Lakes regions is located in Albany, NY.

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 York. 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 five are in New York.

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 29 ASOS stations in New York.

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 184 COOP sites in New York.

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 24 NWR transmitters in New York.

Office of Oceanic and Atmospheric Research (OAR) - [New York Sea Grant College Program](#)

NOAA's National Sea Grant College Program is a federal-university partnership 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. Since 1971, New York Sea Grant's statewide network of integrated research, education, and extension services has worked to promote the wise use and protection of natural resources along the state's 3400 miles of marine and Great Lakes coastline. A cooperative program of the State University of New York and Cornell University, New York Sea Grant addresses important challenges and opportunities related to coastal-dependent businesses, coastal ecosystem health, community resilience to coastal hazards, fisheries, seafood safety and technology, and aquatic invasive species. Administrative offices are located in Stonybrook. Extension agents are located in Stonybrook, New York, Ithaca, Brooklyn, Kingston, Westchester, Buffalo, Oswego, and Newark. Get involved with Sea Grant through state and national opportunities like the John A. Knauss Marine Policy Fellowship program at seagrant.noaa.gov.

Office of Oceanic and Atmospheric Research (OAR) - [Lake Champlain Sea Grant Program](#)

The National Sea Grant College Program (Sea Grant) is a federal-university partnership administered by NOAA that integrates research, extension outreach, and education. Sea Grant forms a national network of 34 programs in all U.S. coastal and Great Lakes states, Puerto Rico, and Guam. The Lake Champlain Sea Grant Program, based at the University of Vermont, is the newest member of the national Sea Grant network and supports the improved understanding, use and management of Lake Champlain, Lake George, the Basin's inland waters and the Great Lakes in general. The Lake Champlain Sea Grant Program focuses the program's outreach and research priorities on coastal communities and economies, coastal ecosystem health and public safety, and education and human resources development. Administered by the University of Vermont, the Lake Champlain Sea Grant Program collaborates with Plattsburgh State University in New York. Current projects focus on healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies, and environmental literacy and workforce development. Administrative offices and extension agents of Lake Champlain Sea Grant are located in Plattsburgh. 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) - [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

Bridging the Gap: A Natural Areas Restoration Training and Professional Development Program, \$650,354

This project will establish a paid internship and training program for economically disadvantaged and minority high school and college students. The program will implement habitat restoration projects on parklands in southeastern Queens near Jamaica Bay, which contains the largest remaining extent of marshes in New York City. It will also provide free and accessible programming to the local community, such as volunteer opportunities and environmental education events..

Community-driven restoration priorities and meaningful engagement in the Scajaquada Creek watershed, \$900,709

This project will work toward restoring habitat in the highly-impaired Scajaquada Creek watershed in New York, collaborating closely with community members in the Black Rock, Riverside, East Side of Buffalo, and western Cheektowaga neighborhoods. They will build a coalition to engage community members, conduct stakeholder outreach to inform the creation of a restoration and resilience plan, and advance efforts to restore habitat along the creek.

Hudson River Habitation Restoration Project Coordination, \$300,000

This funding will build the capacity of the Hudson River National Estuarine Research Reserve (HRNERR) within the NY State Department of Environmental Conservation to plan for and implement habitat restoration and conservation projects proposed through funding opportunities connected to the Bipartisan Infrastructure Law. Specifically, HRNERR will use these funds to hire a Habitat Restoration Project Coordinator to plan, coordinate and develop habitat restoration projects in the Hudson River Estuary. This position will work with the Hudson River Estuary Program and NYSDEC staff to develop and update plans, performance measures, pre and post construction monitoring protocols, and best management practices for habitat restoration projects.

Resilient Design Development for Coastal Lakeshore Economy and Resiliency, \$300,000

This funding will build the capacity of the state's federally-approved coastal management program within NY State Department of State to plan for and implement habitat restoration and conservation projects. Specifically, NY State Department of State will use these funds to develop conceptual designs for Lake Ontario communities and further the implementation of regional resiliency strategies and actions, sustainable water-dependent businesses, and projects that will increase resiliency, as identified in receDeveloping sustainable and closed-loop solutions to reduce synthetic fibers, microplastics, and nanoplastics leakage from laundry systems into the marine environmentally completed Coastal Lakeshore Economy and Resiliency (CLEAR) plans led by the NY Department of State Office of Planning, Development and Community Infrastructure (OPDCI).

Mitigation of storm water-derived debris: a community-based approach, \$300,000

The New York Sea Grant was awarded \$300,000 to build a community network engaged in the prevention and remediation of stormwater-derived human-caused debris in the City of Rochester and the watershed of Lake Ontario. The project will expand a trash capture network of Littatraps and use a combined technical and community-based approach to reduce input of debris through mitigation, removal and education. Embedded in activities are career-readiness activities, designed to enhance participation of Rochester youth in environmental stewardship and careers.

Developing sustainable and closed-loop solutions to reduce synthetic fibers, microplastics, and nanoplastics leakage from laundry systems into the marine environment, \$2,814,855

The New York Sea Grant was awarded \$2,990,620 to plug the leak of microplastics and nanoplastics (< 1¼m) into our marine environments from domestic and commercial laundries by developing closed-loop solutions that utilize advanced hollow fiber ultrafiltration techniques and novel methods for reusing the filtered materials. This project aims to make this new plastic removal technology available for all communities, including traditionally underserved communities, and create easily-accessible outreach materials and curricula for communities, schools and teachers regionally and nationally. Outreach materials will be used by Sea Grant extension educators throughout New York and North Carolina.

Co-developing a decision support framework for adaptation to coastal flooding: A comparative case study of communities in NY and VA, \$486,990

Rising sea level is escalating the frequency and severity of tide and storm surge driven coastal flooding along the Atlantic coast of the US, and worsening extreme precipitation increasingly compounds the flooding. Decision makers and

communities face complex choices between adaptation strategies, such as grey and green infrastructure, building retrofits, and relocation. This project brings together interdisciplinary expertise from two Climate Adaptation Partnerships, and four frontline communities which span the northern and southern sections of the Atlantic coast, to co-develop a transferable decision framework.

A Targeted Approach to Maximizing Interception of Urban Stormwater Debris in the Great Lakes Watershed, \$912,829

The Rochester Institute of Technology is installing, maintaining, and collecting debris from interception devices within storm drain catch basins in debris hotspots throughout Rochester, New York and developing a guide for use in other cities.

Space based and In-situ measurement of pre-season soil moisture and land surface temperature to estimate wildfire extent and risk, \$22,522

Understanding the coupling among drought, water content of the soil, and forest fires is essential in the fire risk study framework. In this context, improved wildfires prediction tools, such as risk, severity, burnt area, are urgently needed and in this work, the use of remotely sensed and in-situ sensed Soil Moisture (SM) data, as well as Land Surface Temperature (LST) as key variables in the climate-wildfires relationship is explored. This project will use a variety of data sources to : 1.Understand the relationship between soil moisture and land surface temperature on wildfire risk and burnt area through statistical and AI / Deep learning methods 2. Determine stakeholder information requirements 3. Develop a real-time simulation window to disseminate ensembled model results to the users. Deliverables: Analytical Software, Report & Training to Fire Agencies.

Mitigation of storm water-derived debris: a community-based approach II, \$300,000

Our project centers efforts around stormwater-derived debris, and in particular around a specific trash capture technology—the LittaTrap—that traps debris entering storm drains. We will install these LittaTraps in Rochester, Buffalo, and Syracuse, New York and adapt and deliver the 12-week CASCADE educational program at schools and community centers in these cities. The project will include youth collection and analysis of debris data ,the development of college-level programming ,programming about stormwater and debris, and the creation of a community of practice to share best practices, experiences, and create coordinated messaging around the problem of anthropogenic debris in the Great Lakes.

The Brooklyn-Queens Marine Debris Clean Up Program, \$300,000

The project seeks to build a local partnership to address marine debris in two communities in NYC. New York Sea Grant will partner with NYC H2O and RISE (Rockaway Initiative for Sustainability and Equity) to achieve cleaner beaches in historically underserved communities and to engage diverse community members in accessible environmental stewardship activities. Primary deliverables include beach cleanups, citizen science data collection, student field trips, and a virtual workshop.

Precision Plastic Waste Cleanup and Monitoring: AI-Enhanced Solution for Sustainable Waterways and Ocean Health, \$2,714,917

The overarching goal of this study is to devise an AI-assisted plastic waste collector. The device will harness intelligent recognition technology, integrating hyperspectral and consumer color camera imaging data to accurately differentiate natural debris from plastics and key resource items (e.g., metal soda cans). After the prototypes are built, they will be stress-tested in the Hudson River, Delaware River, and Bronx River. In collaboration with Plastic Fischer, a low-cost version will be developed for use in developing countries, such as Indonesia. Furthermore, we will collaborate with industrial partners and test the plastic recognition technology on barges of collaborative teams, such as Ocean Cleanup and Clearwater Mills. Moreover, we will test efficient methods for recycling collected plastic waste.

MOLLUSCA: A Snail-Inspired Robot for Efficient Marine Microplastic Removal, \$2,670,380

This project aims to develop bio-inspired robots that work in teams to remove microplastics from the ocean. Key activities include integrating an interfacial pumping mechanism into autonomous robots for lab testing and designing, fabricating, and testing full-scale MOLLUSCA robots in a lake setting. Expected outcomes are innovative particle-removal technology and increased awareness of microplastics through education and outreach. Beneficiaries include agencies, NGOs, and businesses interested in using these robotic teams. Subrecipient tasks will focus on sensing and removing microplastics with the MOLLUSCA robots.

Equity-focused Community Engagement to Advance Infrastructure-based Resilience Practice, \$149,643

The project will critically evaluate engagement processes underway in five frontline underserved communities (two in Miami-Dade County and three in the Urban Northeast), co-produce with community partners a refined equity-based community strategy, and investigate the scalability and transferability of this strategy to two additional larger-scale sites in each region. The project assesses examples of engagement strategies in a variety of coastal flood resilience contexts and considers contexts that are local community-based and more regional in character.

Valuation of Surface Ocean pCO2 Observations For Machine Learning Applications, \$573,955

The ocean carbon sink mitigates 25% of annual anthropogenic CO2 emissions. While mean fluxes and seasonality are well constrained at the large scale, data are insufficient to robustly reconstruct interannual to decadal variations of global ocean carbon fluxes. This project will develop approaches to quantify the value of individual pCO2 observations to machine learning (ML) interpolation algorithms to develop a robust, sustainable monitoring system for the ocean carbon sink.

IRA

mCDR 2023: Determining the Influence of Ocean Alkalinity Enhancement on Foraminifera Calcification, Distribution, and CaCO3 Production, \$480,415

Ocean alkalinity enhancement aims to increase the ocean's ability to absorb carbon dioxide by enhancing its buffering capacity. However, the impact of the addition of alkalinity on foraminifera, single-celled organisms that produce calcium carbonate shells and play a crucial role in the ocean's carbon cycle, is not well understood. To examine the effects of different materials used in ocean alkalinity enhancement on foraminifera, the researchers will grow foraminifera in culture experiments and use advanced imaging techniques to examine the impact on calcification (shell building).

Aquatic Microplastic Filtration Device Research and Pilot Deployment, \$1,973,817

The New York Sea Grant was awarded \$1,973,817 to develop riverine infrastructure for the removal of aquatic microplastic debris from a variety of effluents and polluted tributaries within the Hudson River Watershed in New York. This project not only aims to raise broader awareness of the extent of microplastic pollution in the Hudson Watershed but also give underrepresented communities agency in developing and refining microplastic remediation strategies.

Understanding future projections of Tropical cyclone landfall and precipitation, \$599,934

We propose a project to better understand projections of future tropical cyclone (TC) land-fall and precipitation using Large Ensemble (LE) Simulations from SPEAR and other global climate models. TC landfalls can cause catastrophic damage to society, with one of the causes being the associated TC precipitation (TCP). Climate change is expected to increase the severity of landfall TCP with increased landfall storm intensity and greater TCP. Therefore, understanding changes in landfall TC and TCP forced response to global warming in the next several decades is key for strategic planning for improving resilience of coastal cities, mitigation and adaptation.

Projecting Compound Tropical Cyclone-Heat Extremes in a Changing Climate, \$227,252

When tropical cyclones (TCs) make landfall, they often cause blackouts that prevent A/C and oftentimes severe traffic jams. These blackouts and evacuations create a high vulnerability to coincident extreme heat events. Accurate hazard estimates of this emerging compound extreme are critical to public health and power system resilience with climate change. The GFDL SPEAR modeling system presents an exciting opportunity to better understand and quantify TC-heat events with climate change.

Future projections of extreme heat events in SPEAR ensemble simulations, \$502,292

The contiguous U.S. (CONUS) and Europe have recently been identified as hotspots with the fastest trends in the frequency and intensity of extreme heat events. However, the prediction, projection, and attribution of these events and trends on multiannual and multidecadal timescales are limited due to 1) insufficient high-resolution data, 2) uncertainties in general circulation models (GCMs), and 3) incomplete understanding of dynamic and thermodynamic mechanisms responsible for the formation and evolution of hotspots. The Seamless System for Prediction and EArth System Research (SPEAR) provides unprecedented opportunities to fill this gap.

Improving Climate Predictions by Rigorously Assessing Model Fidelity and Biases, \$125,876

This project will improve NOAA's climate prediction capability by identifying and correcting errors in GFDL's SPEAR forecast system. This will be done by comparing predictable variability in observations and models using a rigorous statistical method that overcomes major limitations of previous methods and provides a foundation for evaluating and testing prediction systems on multi-annual to multi-decadal timescales. Specifically, we will quantify the fidelity of individual modes, the interaction and feedback between modes, and each mode's teleconnections with remote variables. Our initial focus will be the variability of El Nino and North Atlantic and Pacific sea surface temperatures.

The National Ocean Renewable Power Accelerator: Ocean RePower, \$249,991

The National Offshore Wind Research & Development Consortium (NOWRDC), in collaboration with Xodus Group and Karp Strategies, proposes the National Ocean Renewable Power Accelerator (Ocean RePower). Ocean RePower will establish a new national framework for innovation commercialization, focusing on tools and services to promote sustainable, safe, inclusive, and informed ocean renewable energy. Instead of a conventional place-based accelerator, our program connects existing support systems nationwide, offering customized assistance to cohort startups. Ocean RePower will target startups and entrepreneurs at demonstration or in-water piloting stages, readying them to design and conduct piloting to prepare them for market entry.

Resiliency Outreach and Design - (1) Activating Community Adaptation Actions: Using Virtual Reality to Engage and Plan for Managed Retreat; and (2) Template Engineering Model/Designs, \$875,000

This funding will build the ability of New York's federally-approved coastal management program within the New York State Department of State to implement projects, initiatives, and programs that increase the climate resilience of coastal communities within coastal counties. Specifically, the New York Coastal Management Program will use these funds to conduct community engagement activities to inform the development of virtual reality (VR) headsets that can be used as a tool for communities to better understand managed retreat. The development of virtual reality headsets will be for the three regions in NY most at risk of climate change impacts: Long Island, Mid-Hudson and Lake Ontario. Additionally, the New York Coastal Management Program will work with an engineering and design firm to develop a series of construction project designs that could be considered for State or federal funding.

HRNERR Restoration Planning and Coordination, \$400,000

This funding will build the ability of the Hudson River National Estuarine Research Reserve (Hudson River Reserve) within the New York State Department of Environmental Conservation to implement projects, initiatives, and programs that

increase the climate resilience of coastal communities within coastal counties. Specifically, the Hudson River Reserve will use these funds to contract with an environmental consulting firm to inventory and evaluate habitat restoration opportunities within the reserve boundary. Additionally, funding will be used to purchase equipment to conduct restoration monitoring and extend funding for existing staff salaries.

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