NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

NOAA In Your State

Alabama

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

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

Highlights of NOAA in Alabama

Weeks Bay National Estuarine Research Reserve	Fairhope	AL-1
OR&R Gulf of Mexico Disaster Response Center	Mobile	AL-1
Science On a Sphere® at GulfQuest National Maritime Museum of the Gulf of Mexico	Mobile	AL-1
National Water Center	Tuscaloosa	AL-7
Bipartisan Infrastructure Law (BIL) / Inflation Reduction Act (IRA) Projects	Project Specific	AL

The state of Alabama also has three Weather Forecasting Offices, one Regional Office, two Science on a Sphere® exhibitions, and one National Estuarine Research Reserve.

Weather Forecast Offices

Mobile   AL-1

Huntsville   AL-5

Birmingham   AL-6

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

Science On a Sphere®

Mobile   AL-1

Birmingham   AL-7

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 National Maritime Museum of the Gulf of Mexico in Mobile and McWane Science Center in Birmingham.

AL-1
Fairhope
Office of Oceanic and Atmospheric Research (OAR) - U.S. Climate Reference Network
The US Climate Reference Network (USCRN) is an operationally viable research network of more than 138 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference

network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS). ARL/ATDD manage the USCRN in partnership with NOAA's NESDIS/NCEI.

National Ocean Service (NOS) - [Weeks Bay National Estuarine Research Reserve](#)
The National Estuarine Research Reserve System is a network of protected areas focused on long-term research, monitoring, stewardship, education, and training. NOAA's Office for Coastal Management provides funding and national guidance, and each site is managed on a daily basis by a lead state agency or university with input from local partners. The 9,317 acre Weeks Bay Reserve was designated in 1986 and is managed by the Alabama Department of Conservation and Natural Resources. Located between the major metropolitan areas of Mobile, AL and Pensacola, FL, the reserve consists of tidal and forested wetlands within the greater Mobile Bay estuarine system along the northern Gulf of Mexico,and supports numerous rare and endangered species and habitats including pitcher plant bogs.

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 Weeks Bay National Estuarine Research Reserve will focus their research on using novel low-cost instrumentation to monitor primary productivity rates with high spatial and temporal resolution.

Mobile

Office of Oceanic and Atmospheric Research (OAR)- [The Estuarium at the Dauphin Island Sea Lab](#)
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. In Mobile, Sea Grant operates The Estuarium at the Dauphin Island Sea Lab. Additionally, Sea Grant educators are based at the Mobile County Environmental Studies Center, and Sea Grant administrative offices are based in Mobile as well.

National Ocean Service (NOS) - [Mobile Bay Water Level Network](#)
NOAA's Center for Operational Oceanographic Products and Services partnered with Mobile County Commission, the Alabama Department of Transportation and the National Weather Service to install five microwave sensors at various locations throughout Mobile Bay. This is the first time NOAA has used this type of sensor, which is designed to withstand heavy storm-water levels while providing real-time storm surge data to Mobile County's emergency managers, the NWS Weather Forecast Office there, and others.

National Ocean Service (NOS) - [Mobile Bay Marine Channels Forecast System](#)
NOAA's Mobile Bay Marine Channels Forecast (MBMCF) System is a relatively new decision support tool that centralizes critical oceanographic and meteorological forecast data from the National Weather Service and the National Ocean Service into one location. Implemented in 2021, MBMCF provides local mariners with a completely integrated view of forecasts along the area's shipping channels. Vessel operators transiting Mobile Bay can now view all NOS water level and tidal current forecasts right alongside NWS 24-hour weather forecasts for winds, wind gusts, rain chance, marine hazard alerts, and visibility less than 1 mile. These forecasts are available at 19 points along the area's shipping channels all the way to the Port of Mobile.

National Ocean Service (NOS) – NOAA [Gulf of Mexico Disaster Response Center](#)
The Gulf of Mexico Disaster Response Center (DRC), managed by the Office of Response and Restoration (OR&R), delivers state of the art science and information to emergency managers and other critical stakeholders to assist them in protecting and restoring the Gulf's coasts, communities, and economies. The DRC, located in Mobile, builds a collaborative environment for preparedness, response, recovery, and resiliency efforts by offering the Science of Oil Spills,

Science of Chemical Releases, and Science of Coastal Natural Disasters trainings annually for responders in the Gulf and across the country. This hardened facility is built to withstand a Cat-5 storm and is home to staff from several NOAA programs and provides a large multifunction space for partners to conduct training, meetings, drills, and emergency response operations. This facility brings together NOAA-wide resources to improve preparedness, planning, and response capacity for natural and human-caused disasters along the Gulf Coast. It has become the bedrock for NOAA's Disaster Preparedness Program (DPP) - a program that builds on the DRC's existing operational capabilities and knowledge to ensure that commerce, communities, and natural resources can recover from disasters as quickly as possible. The facility is also home to a wide range of national NOAA disaster preparedness and mission support personnel from various program offices such as the Marine Debris Program (MDP), Spatial Data Branch (SDB), Emergency Response Division (ERD), and National Marine Fisheries (NMFS). Lastly, the Scientific Support Coordinator (SSC) in Alabama and the Gulf of Mexico Marine Debris Regional Coordinator are based in Mobile at NOAA's Disaster Response Center. The DRC is home to 10 OR&R staff who provide comprehensive expertise in coastal hazard preparedness, response, assessment and restoration, and marine debris.The preparedness, response, and restoration coordinators are expanded below.

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 Mobile, Alabama, serves the Gulf of Mexico region – Texas, Louisiana, Mississippi, and Alabama.
- Eleven regionally based **Scientific Support Coordinators (SSC)** harness the input of a multi-disciplinary team to address issues such as oil slick trajectory forecasting, environmental trade-offs, best practices, resources at risk, and chemical hazard assessment to reduce risks to coastal habitats and resources. The SSC in Alabama is based in Mobile at NOAA's Gulf of Mexico Disaster Response Center.
- The [NOAA Marine Debris Program (MDP)](#) in the Office of Response and Restoration (OR&R) supports national and international efforts to reduce the impacts of marine debris. The **MDP Gulf of Mexico Regional Coordinator**, based in Mobile at NOAA's Disaster Response Center, 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.

National Weather Service (NWS) – [Weather Forecast Office](#)- See [Page 2](#) for details.

NOAA Office of Education — **[Coastal Ecosystem Learning Centers (CELC) network](#)**
In Alabama, NOAA's Office of Education provides support to the [Dauphin Island Sea Lab (DISL)](#) in Mobile 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.

NOAA Office of Education - Science On a Sphere® at National Maritime Museum of the Gulf of Mexico - See Page 2 for details.

AL-4
Gadsden
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.

AL-5
Huntsville
National Weather Service (NWS) – Weather Forecast Office- See Page 2 for details.

AL-6
Birmingham
National Weather Service (NWS) – Weather Forecast Office- See Page 2 for details.

AL-7
Birmingham
NOAA Office of Education - Science On a Sphere® at McWane Science Center- See Page 2 for details.

Selma
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.

Tuscaloosa
National Weather Service (NWS) - National Water Center
Opened in 2015 and located on the campus of the University of Alabama in Tuscaloosa, the NWS National Water Center (NWC) is the first national center for water prediction operations in the U.S. The NWC also supports research and collaboration across the federal water science and management agencies, including the U.S. Geological Survey (USGS), the U.S. Army Corps of Engineers, and the Federal Emergency Management Agency (FEMA). The NWC features a water resources forecasting operations center, an applied water resources research and development center, a proving ground for transitioning research into operations, a geo-intelligence laboratory and an airborne snow and soil moisture observation analysis facility. In addition to NWS employees, the NWC hosts staff from USGS, FEMA and academic institutions.

National Environmental Satellite, Data, and Information Service (NESDIS) - [The Center for Satellite Applications and Research (STAR)](#) - [CoastWatch Water Prediction Node, collocated with National Water Center, Tuscaloosa, Alabama](#)
[NOAA CoastWatch](#) exists to help people find, choose, access, and use observations from satellites for ocean, coastal and inland water applications that inform and benefit society. Our primary users include federal, state, and local marine scientists, coastal resource managers, and the public, including commercial users. The CoastWatch Program is managed within the Center for Satellite Applications and Research in the National Environmental Satellite, Data, and Information Service (NESDIS) of NOAA in College Park, MD. The program rests on four legs". Three of the legs, the central operations; training and outreach; and research and applications science teams, are located in College Park, MD. The fourth leg is composed of the seven CoastWatch Regional Nodes, maintained in collaboration with other NOAA Line Offices and located across the US.

The Water Prediction Node is housed within the Office of Water Prediction of the National Weather Service and located in the National Water Center in Tuscaloosa, AL. The Water Prediction Node facilitates the development and use of satellite data and data products for understanding and forecasting hydrology and water quality of inland waters.

NOAA Commissioned Officer Corps (NOAA Corps) - [Operations Officer, National Water Center](#)
The NOAA Commissioned Officer Corps stations an officer at the National Water Center in support of the Office of Water Protection (OWP). This officer serves as the Program Manager for a variety of OWP projects, such as the Airborne Snow and Soil Moisture Survey Program, as well as coordinates resources and procurement for the program. In addition, the officer manages a host of other administrative and financial management responsibilities in tandem with public outreach responsibilities, engaging the local community and collaborating with the University of Alabama.

Office of Oceanic and Atmospheric Research (OAR) - [Cooperative Institute for Research to Operations in Hydrology](#)
The Cooperative Institute for Research to Operations in Hydrology (CIROH) was awarded to the University of Alabama in 2022. CIROH is a national consortium committed to advancing water prediction – the forecasting of streamflow entering water systems, extreme events such as floods and droughts, and water quality – and building community resilience to water-related challenges. CIROH scientists work to improve the understanding of hydrologic processes, operational hydrologic forecasting techniques and workflows, community water modeling, translation of forecasts to actionable products, and use of water predictions in decision making. CIROH conducts research across four themes: (1) water resources prediction capabilities; (2) community water resources modeling; (3) hydroinformatics; and (4) application of social, economic, and behavioral science to water resources prediction.

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

National Ocean Service (NOS) - Mobile Bay PORTS®
A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community around Mobile Bay at which real-time data are quality-controlled and disseminated to local users for safe and efficient navigation. Real-time data are available for water levels data from eight stations, currents from two stations and meteorological data from six stations. At two of those six stations, visibility (fog) observations are also monitored.

National Ocean Service (NOS) - National Water Level Observation Network
NOS operates two long-term continuously operating tide stations in the state of Alabama, which provide data and information on tidal datums and relative sea level trends, and are capable of producing real-time data for storm surge warning. These stations are located at Dauphin Island and Mobile State Docks. 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) – National Coastal Zone Management Program
Through a unique federal-state partnership, NOAA's Office for Coastal Management works with the Alabama Department of Conservation and Natural Resources and Department of Environmental Management to implement the National Coastal Zone Management Program in Alabama. 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 the 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) and National Marine Fisheries Service (NMFS) - Regional Ocean Partnerships: [Gulf of Mexico Alliance](#)
Staff members from NOAA's Office for Coastal Management and NMFS SERO's' Habitat Conservation Division are active in the Gulf of Mexico Alliance (GOMA). The Gulf of Mexico Alliance is a Regional Ocean Partnership working to sustain the resources of the Gulf of Mexico. Led by the five Gulf States, the broad partner network includes federal agencies, academic organizations, businesses, and other non-profits in the region. GOMA's goal is to significantly increase regional collaboration to enhance the environmental and economic health of the Gulf of Mexico. 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 all established regional ocean partnerships (including GOMA), including coordinating interstate and intertribal management of ocean and coastal management issues, and enhancing sharing and integration of data to inform management decisions.

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. Five project grants have been completed in Alabama, and these lands are protected in perpetuity. In addition, two land conservation projects were funded in FY22 in Alabama under the CELCP authority with funding through the Bipartisan Infrastructure Law.

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 Alabama, six projects have been funded: two in FY18, one in FY21, two in FY22, and one 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 Alabama, the ECRF awarded a project in 2019 and 2021.

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 Southeast/Gulf of Mexico region is based in St. Petersburg, Florida.
- The **Regional Preparedness Coordinator (RPC)** is strategically placed within the region to ensure that NOS and our partners are able to effectively prepare for, respond to, and recover from all hazards, including coastal disasters. The RPC serves as a liaison between NOS and its federal, state, and local disaster preparedness and emergency response partners. A key role of the RPC is to better understand the needs and opportunities within the region and to ensure partners have the tools and resources necessary to inform decision-making. The RPC has expertise across the spectrum of emergency management and provides preparedness, response, and recovery services including planning, training, exercises, response coordination, continuous improvement, and long-term recovery. The RPC, based in Mobile, Alabama, serves the Gulf of Mexico region – Texas, Louisiana, Mississippi, and Alabama.

National Ocean Service (NOS) - OR&R [Gulf of Mexico Environmental Response Management Application](#) and [Response Tools for Oil and Chemical Spills](#)
During an emergency, responders and decision-makers need the best available information to protect and restore our coasts from threats like oil and chemical pollution. Gulf of Mexico Environmental Response Management Application (ERMA®) fills that need with 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 Alabama](#)
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 Gulf of Mexico Regional Coordinator, based in Mobile, 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 and prevent marine debris. In Alabama, MDP is working with the Gulf of Mexico Alliance, using funding provided under the Bipartisan Infrastructure Law, to help administer a regional competitive grant program for large marine debris removal in Alabama, Florida, Louisiana, Mississippi, and Texas. The City of Mobile is restoring Mobile's waterways by removing derelict vessels and displaced docks and piers, and conducting public outreach encouraging owners to secure boats before storms hit and thus decrease vessel loss in future storms. The MDP is also working with the City of Orange Beach to remove 900,000 pounds of large-scale marine debris from the coastal habitats of Orange Beach, restore habitat, and conduct outreach focused on prevention and resilience. The MDP is working with Gulf of Mexico stakeholders through the Gulf of Mexico Alliance to implement the Gulf of Mexico Alliance Regional Action Plan, which provides a road map for strategic progress in making the Gulf of Mexico, its coasts, people, and wildlife free from the impacts of marine debris. The MDP is also currently working with state and local governments, and other stakeholders, to maintain and exercise the Alabama Marine Debris Emergency Response Guide.

National Ocean Service (NOS) - U.S. Integrated Ocean Observing System (Gulf of Mexico Coastal Ocean Observing System)
The U.S. Integrated Ocean Observing System, or IOOS®, is a federally and regionally coordinated observing system with 17 interagency and 11 regional partners. The System addresses regional and national needs for coastal, ocean, and Great Lakes data and information. This includes gathering and disseminating regional observations; data management; modeling and analysis; education and outreach; and research and development. The Gulf of Mexico Coastal Ocean Observing System (GCOOS), one of the 11 IOOS regional coastal ocean observing systems, seeks to establish a sustained observing system for the Gulf of Mexico that will provide observations and products needed by users in the region for the purposes of detecting and predicting climate variability and consequences, preserving and restoring healthy marine ecosystems, ensuring human health, managing resources, facilitating safe and efficient marine transportation, enhancing national security, and predicting and mitigating against coastal hazards.GCOOS is developing new local capacity at universities and marine laboratories to implement a harmful algal bloom early warning system, and helping modernize coastal stations.

National Ocean Service (NOS) - Navigation Manager
OCS navigation managers are strategically located in U.S. coastal areas to provide regional support to federal and state agencies in order to assist with navigational challenges. NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in Alabama. They help identify the navigational challenges facing marine transportation in Alabama and provide NOAA's resources and services that promote safe and efficient navigation. Navigation managers are on call to provide expertise and NOAA navigation response coordination in case of severe coastal weather events or other marine emergencies.

National Ocean Service (NOS) - Navigation Response Team
The Office of Coast Survey (OCS) maintains the nation's nautical charts and publications for U.S. coasts and the Great Lakes. OCS navigation managers are strategically located in U.S. coastal areas to provide regional support to federal and state agencies in order to assist with navigational challenges. The Office of Coast Survey's Navigation Response Branch (NRB) conducts routine and emergency hydrographic surveys; and working with the regional Navigation Managers, navigation response teams (NRT) work around-the-clock after storms to speed the reopening of ports and waterways. During emergency response, the NRTs provide time-sensitive information to the U.S. Coast Guard or port officials, and transmit data to NOAA cartographers for updating the Coast Survey's suite of navigational charts. NRT-Gulfport is located in Gulfport, MS and is able to respond within 24 to 48 hours.

National Weather Service (NWS) - National Data Buoy Center Buoys
The National Weather Service (NWS), through its National Data Buoy Center (NDBC), develops, deploys, operates, and maintains the current national data buoy network of moored and drifting weather buoys and land stations that serve each of the Nation's coastal states and territories. Within this network, 110 of the buoys and 51 of the land stations are maintained directly by NDBC. Located at NASA's Stennis Space Center in Mississippi, supports weather and marine warning and forecast services in real time by providing deep ocean and coastal meteorological and oceanographic observations. These data provide valuable information used by NWS supercomputers to produce computer-generated model forecasts of the atmosphere and climate. NDBC manages the Volunteer Observing Ship program to acquire additional meteorological and oceanographic observations supporting NWS mission requirements. NDBC also supports operational and research programs of NOAA and other national and international organizations.

Statewide

National Marine Fisheries Service (NMFS) - [Restoration Center](#)

The [NOAA Restoration Center](#), within the [Office of Habitat Conservation](#), works with partners across the nation to restore habitat to sustain fisheries, recover protected species, and maintain resilient coastal ecosystems and communities. We have over 30 years conducting habitat restoration through competitive funding opportunities and technical assistance. We also work to reverse habitat damage from disasters like oil spills, ship groundings, and severe storms. Through Community-based Restoration Program projects, thousands of acres of fisheries habitat have been restored, rehabilitated, and protected and hundreds of miles of streams have been opened to migratory fish since 2000. The local community supported these restoration efforts through the time and effort of over 1,000 volunteers. The NOAA Restoration Center works with the state of Alabama to protect over one and half miles of shoreline as part of the Swift Tract Living Shoreline Deepwater Horizon Early Restoration project. The goal of this project is to reduce shoreline erosion by dampening wave energy and encouraging reestablishment of habitat in the region. 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. The [*Deepwater Horizon* oil spill](#) in 2010 impacted the entire Gulf ecosystem as well as the communities that rely on the Gulf's natural resources. NOAA and other federal and Gulf state partners are working with the public, partners, and industry to support restoration and recovery of the Gulf of Mexico's natural resources using the $20.8 billion environmental damage settlement. NOAA led the natural resource damage assessment restoration planning for the *Deepwater Horizon* oil spill. The NOAA Fisheries [Office of Habitat Conservation's](#) Restoration Center is deeply engaged in the coordination of projects through RESTORE, Natural Resource Damage Assessment, and the Gulf Environmental Benefit Fund as a result of the Deepwater Horizon oil spill. [Restoration projects can be found in this interactive mapping atlas](#).

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 these projects on our interactive map](#).

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 Alabama, 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.

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

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

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.

NOAA Office of Education, [Gulf of Mexico 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 Gulf of Mexico B-WET program is managed by NOAA's Office of Education. The Gulf of Mexico B-WET program currently serves Alabama, Florida, Louisiana, Mississippi, and Texas. The Gulf of Mexico 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. Gulf of Mexico B-WET regional grant competitions are responsive to local education and environmental priorities. Please see the funding opportunities for specifics.

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

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

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

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

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

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

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

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

National Marine Fisheries Service (NMFS), National Ocean Service (NOS), and NOAA General Counsel - Damage Assessment, Remediation, and Restoration Program
NOAA's Damage Assessment, Remediation, and Restoration Program (DARRP) assesses and restores habitat, fisheries, protected species and recreational uses that have been harmed by oil spills, chemical releases, and ship groundings. Working with federal, state, and tribal entities, and responsible parties, we have recovered funding from responsible parties for restoration of critical habitats, fisheries, protected species and recreational uses nationwide. These projects promote recovery of the ecosystem and provide economic benefits from tourism, recreation, green jobs, coastal resiliency, property values and quality of life. Alabama is a co-trustee with NOAA for assessment and restoration after pollution incidents in Alabama. For more information about our work in Alabama, visit: DARRP in Your State (and use the top menu to navigate to "Alabama") and this interactive map.

National Marine Fisheries Service (NMFS) - Office of Law Enforcement
NOAA's Office of Law Enforcement is the only conservation enforcement program (Federal or State) that is exclusively dedicated to Federal fisheries and marine resource enforcement. Its mission is to protect global marine resources by enforcing domestic laws and international treaties and obligations dedicated to protecting wildlife and their natural habitat. Our special agents and enforcement officers ensure compliance with these laws and take enforcement action if there are

violations. Additionally, the Cooperative Enforcement Program allows NOAA the ability to leverage the resources and assistance of 27 coastal states and U.S. territorial marine conservation law enforcement agencies in direct support of the Federal enforcement mission. Effective fisheries law enforcement is critical to creating a level playing field for U.S. fishermen and enabling sustainable fisheries to support vibrant coastal communities. The Office of Law Enforcement's Southeast Division is headquartered in St. Petersburg, Fla., with an Alabama field office in Mobile.

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

National Ocean Service (NOS) - [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) – [NOAA RESTORE Science Program](#)
The mission of NOAA's RESTORE Science Program is to carry out research, observation, and monitoring to support the long-term sustainability of the Gulf of Mexico ecosystem. The Science Program receives 2.5 percent of the Gulf Coast Restoration Trust Fund, which is funded from penalties associated with the Deepwater Horizon Oil Spill. The Science Program uses stakeholder input to design funding competitions that support teams of resource managers and researchers to work collaboratively to address regional needs. The Science Program has an office at the Stennis Space Center.

National Ocean Service (NOS) - Students for [Zero Waste Week](#)
Students are inviting their local communities to "Go Green and Think Blue" by joining them in the annual *Students for Zero Waste Week campaign*. During this campaign led by the Office of National Marine Sanctuaries, students focus on reducing land-based waste in order to protect the health of local marine environments. These young leaders are raising awareness of how single-use plastic and other types of litter affect the health of local watersheds, national marine sanctuaries, and the ocean. In addition, some schools are looking at ways to reduce their energy use on campus with hopes of raising awareness of how the burning of fossil fuels also impacts the health of the ocean.

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

National Ocean Service (NOS) - [Regional Geodetic Advisor](#)
The Regional Geodetic Advisor is a National Ocean Service (NOS) employee that resides in a region and serves as a liaison between the National Geodetic Survey (NGS) and its public, academic and private sector constituents within their assigned region. NGS has a Regional Geodetic Advisor stationed in Lake City, Florida serving the Gulf Coast region – Alabama, Florida, Louisiana, and Mississippi. 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 Alabama.

National Weather Service (NWS) - [Automated Surface Observing Systems Stations](#)
The Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). ASOS serves as the Nation's primary surface weather observing network. ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year observing basic weather elements, such as cloud cover, precipitation, wind, sea level pressure, and conditions, such as rain, snow, freezing rain, thunderstorm, and fog. There are 17 ASOS stations in Alabama.

National Weather Service (NWS) - [Cooperative Observer Program Sites](#)
The National Weather Service (NWS) Cooperative Observer Program (COOP) uses the help of more than 10,000 volunteers who take observations on farms, in urban and suburban areas, National Parks, seashores, and mountaintops. The data are representative of where people live, work and play. The COOP was 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 113 COOP sites in Alabama.

National Weather Service (NWS) - [NOAA Weather Radio All Hazards Transmitters](#)
NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service (NWS) forecast office. NWR broadcasts official NWS warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week. Working with the Federal Communication Commission's (FCC) Emergency Alert System, NWR is an "All Hazards" radio network, making it the single source for comprehensive weather and emergency information. In conjunction with federal, state, and local emergency managers and other public officials, NWR also broadcasts warning and post-event information for all types of hazards – including natural (such as earthquakes or avalanches), environmental (such as chemical releases or oil spills), and public safety (such as AMBER alerts or 911 Telephone outages). Known as the "Voice of NOAA's National Weather Service," NWR is provided as a public service by the NWS. NWR includes 1,100 transmitters covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. There are 21 NWR transmitters in Alabama.

Office of Oceanic and Atmospheric Research (OAR) - [Mississippi-Alabama Sea Grant College Program](#)
The National Sea Grant College Program (Sea Grant) is a federal-university partnership administered by NOAA that integrates research, extension outreach, and education. Sea Grant forms a national network of 34 programs in all U.S. coastal and Great Lakes states, Puerto Rico, and Guam. The Mississippi-Alabama Sea Grant Consortium is a federal-state partnership that matches NOAA Sea Grant expertise and resources with state academic institutions. Created in 1972, members of the consortium include Auburn University, Dauphin Island Sea Lab, Jackson State University, Mississippi State University, The University of Alabama, The University of Alabama at Birmingham, the University of Mississippi, The University of Southern Mississippi and the University of South Alabama. The mission of Mississippi-Alabama Sea Grant Consortium is to enhance the sustainable use and conservation of ocean and coastal resources to benefit the economy and environment. The bi-state consortium focuses on healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies, and environmental literacy and workforce development. Extension agents are located in Mobile. 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) - [VORTEX-SE and PERiLS](#)
In support of the [VORTEX-SE](#) and [PERiLS](#) field projects, the NOAA Physical Sciences Laboratory operates and maintains an integrated 449-MHz wind profiler observing system, 915-MHz wind profiler with RASS sources, ASSIST infrared spectrometer, microwave radiometer, and laser ceilometer at Courtland, Alabama. Data collected at these sites will be used to better understand the atmospheric conditions that lead to severe storms and the sources of rotation for tornadic development.

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.](https://www.noaa.gov/bil-ira-awards-explorer)

BIL

ACAMP Infrastructure Investment and Jobs Act Capacity-Building Multi-Years Award, $450,000
This funding will build the capacity of the state's federal approved coastal management program located within Alabama Department of Natural Resources (ADCNR) and Alabama Department of Environmental Management (ADEM) to plan for and implement habitat restoration and conservation projects. Specifically, ADCNR will use these funds to hire a new infrastructure project coordinator (IPC) and partially support existing positions, including a natural resources planner (NRP), a Biologist Aide, and a GIS Specialist. These positions will work within the ADCNR to review project concepts in context of existing plans, identify and develop project proposals, develop and update land restoration plans, monitor and track funded projects for funding competitions as well as coordinate with key external stakeholders.

WBNERR Infrastructure investment and Jobs Act Capacity-Building Award Multi-Years, $300,000
This funding will build the capacity of the Weeks Bay National Estuarine Research Reserve within the Alabama Department of Conservation and Natural Resources (ADCNR) to plan for and implement habitat restoration and conservation projects proposed through funding opportunities connected to the Bipartisan Infrastructure Law. Specifically, the Weeks Bay National Estuarine Research Reserve proposes to utilize the capacity-building funding to create multiple staff positions that are shared between the Reserve and the Alabama CZM program to support infrastructure project coordination. ADCNR will hire a new Infrastructure Project Coordinator and partially support three other positions to coordinate habitat conservation and restoration projects within ADCNR and with the support of key external partners.

Fee Simple Acquisition of 40-acre Maury Tract in Meadows Unit of the Weeks Bay National Estuarine Research Reserve, $147,000
This award will result in the fee simple acquisition of the approximately 40-acre Maury tract within the Meadows management unit of the Weeks Bay National Estuarine Research Reserve in Fairhope, Baldwin County, Alabama. The acquisition will help protect the ecological integrity of the area and important ecosystem services, such as acting as a buffer for storm surge and coastal flooding; providing space for marsh migration; providing carbon sequestration services; and the ongoing maintenance of water quality. This project will complement previous acquisition and management efforts in the Meadows unit and is aligned with the acquisition and management strategies outlined in the 2017 to 2022 management plan for the research reserve.

Acquisition of Coastal Pine Savanna and Emergent Marsh Habitat on West Fowl River/ MS Sound in Mobile County, Alabama, $1,103,000
This award will result in the fee simple acquisition of approximately 490 acres of critical habitat to be held by the Alabama Department of Conservation and Natural Resources, State Lands Division. This purchase will conserve the tidal marsh, pine flatwood, and savanna habitats located here, all of which represents a critically imperiled type of habitat found along the northern Gulf of Mexico. The acquisition will protect these sensitive habitats and the myriad ecosystem services provided, such as the area acting as a habitat and nursery ground for commercially and recreationally important fishery species; protecting uplands from storm surge and coastal flooding; and providing carbon sequestration services.

CIROH: Precipitation Frequency Estimation Research and Transition - Atlas 15 supported by Bipartisan Infrastructure Law (BIL) funding, $1,318,309
For this project, the Cooperative Institute for Research to Operations in Hydrology (CIROH) team will perform research to support, enhance,and extend the development of NOAA Atlas 15 products incorporating non-stationarity and future climate conditions. Atlas 15 will examine historical data for trends in extreme precipitation and use new methodology to develop seamless continental United States-wide precipitation frequency estimates for the current state.

CIROH: A Collaborative Approach to Develop Comprehensive FIM Data, Models, and Methods with Emphasis on Transportation Infrastructure supported by Bipartisan Infrastructure Law (BIL) funding, $1,075,060

Through a collaboration of Cooperative Institute for Research to Operations in Hydrology (CIROH) members, Federal Highway Administration, United State Army Corps of Engineers, and other developers/users of a national flood inundation mapping (FIM), researchers propose to develop data structures and visualization tools that investigate the viability of using an ensemble of methods, models, and datasets to enhance the existing Height Above Nearest Drainage FIM capability of the National Water Model.

[CIROH](): Improved and Expanded Probabilistic Downscaling of CMIP6, supported by Bipartisan Infrastructure Law (BIL) funding, $250,001
The goal of this project is to develop a state-of-the-art, statistically downscaled dataset over the entire U.S. and U.S. territories to understand and quantify the effect of climate change on future extreme precipitation. Both daily and hourly gridded precipitation will be created for all available Coupled Model Intercomparison Projects (CMIP6) models. A probabilistic methodology that is well suited for reproducing precipitation extremes will be used. This dataset could be transitioned to become an important component of operational point precipitation frequency estimates.

Developing the Drought Risk Overview Product (DROP): Improving Flash Drought Forecasts and Early Warning Using Machine Learning and Extreme Value Theory Techniques, $10,500
Drought is responsible for $327.7B in economic loss since 1980 in the United States and typically precedes, co occurs, or initiates other hazards like wildfires or prolonged periods of intense heat. The compounding or cascading of these hazards routinely threatens the wellbeing and stability of communities. In this Phase I effort, CFD Research seeks to address the dynamics of flash droughts and improve the prediction and monitoring of their occurrence by developing an AI Convolutional Neural Network (CNN) and Long ShortTerm Memory (LSTM) applying deep learning and pattern recognition.

Active Material Technology to Improve Solar Sail Performance for Space Weather Monitoring, $1,987
A reflection control device (RCD) utilizes polymer dispersed liquid crystal (PDLC) material encapsulated between thin membrane layers of clear polyimide film to create a material that can switch between opaque and transparent by applying an electrical voltage across the material. This RCD will be integrated with a flexible membrane diffraction grating that will change the direction of the incident light transmitted through the RCD. With this innovation, the device becomes a reflection control and direction device (RCDD)This innovative device will progress the state of the art for propulsion of solar sails used to fly space weather monitoring sensors allowing for earlier warning times of impending destructive space weather events.

Shoreline Restoration to Enhance Coastal Resilience within the Weeks Bay National Estuarine Research Reserve, $3,521,843
The Weeks Bay National Estuarine Research Reserve will use these funds to remove a degraded bulkhead, restore an emergent marsh shoreline, and promote shoreline stewardship at the East Gateway Tract within the Weeks Bay NERR. The project will involve planning, engineering, design, construction, and monitoring activities, and will also serve as a demonstration site for education, outreach, professional training, and student-based coastal resilience workforce development.

AI Methods for the Quality Control of Water Level Observations, $175,230
The goal of this two-year NOAA/BIL-funded project is to develop and demonstrate an optimal Artificial Intelligence (AI) approach to quality control water level observations collected by tide gauges. The overall goal is to advance the state of the art in automated quality control improvements of measured real-time and historical time series data. This project will lead to the development of an AI-based approach that will: 1) accurately classify 6-minute water level observations from NOAA stations as good or bad, with accurate classification of bad data weighted heavily, 2) replace bad data points and fill gaps in the resultant time series with backup sensor data or other data and methods comparable to standard protocols

and 3) have the potential to be adapted to partner-collected water level observations. The developed method will benefit the Gulf Coast Ocean Observing System, regional associations, and many other partners to improve the quality control capability and efficiency of partner-collected water level observations.

Active Material Technology to Improve Solar Sail Performance for Space Weather Monitoring, $45,567
This project will develop a Reflectivity Control and Direction Device (RCDD) to enhance solar sail propulsion for space weather monitoring sensors. This innovative device uses polymer dispersed liquid crystal (PDLC) material between polyimide layers, allowing it to switch from opaque to transparent with an electrical voltage. Integrated with a flexible membrane diffraction grating, the RCDD can generate forces in both in-plane and out-of-plane directions, enabling full six-degree-of-freedom (6DOF) control. This innovation simplifies sailcraft control, reduces weight, and improves warning times for harmful space weather events.

Holistic Detection, Monitoring, and Removal of Microplastics Using Integrated Sensing and Filtration Systems, $2,346,891
This project aims to transform ocean-sourced plastics into eco-friendly dyes for fashion and enzymes for environmentally friendly laundry detergents. Concurrently, we will develop a peptide-based solution to survey marine microplastics. By discovering selective binders for microplastics, we aim to quantify pollution levels and inform regulatory policymaking. Additionally, we will explore social barriers to adopting these technologies and conduct educational outreach to raise public awareness. Our goals include developing innovative interception technology, recycling end-of-life fishing gear, and detecting microplastics in the environment.

Coordinated Large Marine Debris Removal in the Gulf of Mexico, $7,725,000
The Gulf of Mexico Alliance is working across all five Gulf states to lead a regional competitive grant program for large marine debris removal, remove abandoned and derelict vessels, and assess habitat impacts and recovery.
This award supports work in AL, MS, LA, TX and FL.

GulfCorps Resilience Collaborative (GRC): Transformative Restoration through Partnerships in the Gulf of Mexico, $12,000,000
The Nature Conservancy, through the GulfCorps Resilience Collaborative, will support the work of young adult conservation corps crews to implement 200 science-guided and community supported conservation and nature-based restoration projects across approximately 10,000 acres of diverse Gulf of Mexico habitats. The Corps crews will be located in nine ecologically important but socially vulnerable sub-regions of the Gulf, from Florida through Texas. *This award supports work in AL, MS, LA, TX and FL.*

Gulf of Mexico Community Based Oyster Recycling and Reef Restoration Network, $4,993,897
This project will restore oyster reef habitat in Texas, Louisiana, Alabama, and Florida, focusing on the resilience priorities of tribal and underserved communities. They will also develop the Gulf Regional Oyster Network, which will expand and enhance oyster shell recovery programs across the region. The GRO Network will collect oysters from restaurants, recycle them, and put them back in the environment at the oyster reef restoration sites. *This award supports work in AL, LA, TX and FL.*

Assessing opportunities for improved coastal data assimilation in ocean model analyses and seasonal forecasting systems, $739,040
Existing seasonal forecasting systems have poor skill predicting sea level anomalies for most of the U.S. East Coast and in the Gulf of Mexico. The poor capability of forecasting monthly sea level anomalies for the U.S. East and Gulf Coasts are especially disappointing because outlooks of high tide flooding in these regions would benefit from skillful predictions.

Since coastal flooding occurrence is strongly influenced by monthly anomalies of sea level, better seasonal forecasts are highly relevant to improving resilience. *This award supports work in AL, TX, MS, FL, LA, GA, NC, and SC.*

Attribution of past, present, and future sea-level changes along the United States east seaboard for Infrastructure Investment and Jobs Act, **$284,302**
Sea level rise is one of the most threatening aspects of the present-day climate change, especially for low-lying and flood-vulnerable coastal regions, such as the east coast of the United States, including the Gulf of Mexico. We propose to carry out the accurate attribution of the dynamic sea level variability along the U.S. east coast using a suite of available satellite (altimetry and gravimetry missions, SST) and in situ (tide and pressure gauges, Argo floats, CTD and XBT sections) observations, numerical ocean models, and ocean and atmospheric reanalyses. *This award supports work in AL, FL, MS, LA, and TX.*

Modernization and Recapitalization of the Gulf of Mexico Coastal Ocean Observing System (Phase I), $1,169,000
The objectives of the proposed work are:1) Recapitalize fix stations and other observing asset by conducting repairs or replacements needed to maintain data collection,2) Enhance network-wide resilience by adding spares to observing systems, and adding a new HFR station to pair with the existing network, and3) Improve data delivery services by modernizing GCOOS' data management and cyberinfrastructure program (DMAC). *This award supports work in AL, FL, MS, LA, and TX.*

Building Partnerships for a Healthy and Resilient Gulf Coast, $3,926,466
The Gulf of Mexico Alliance will provide support to conduct robust stakeholder collaboration across the region to understand the needs associated with healthy ecosystems, resilient communities, and the associated data sharing. The Gulf of Mexico Alliance will conduct thorough assessments to identify gaps as well as existing information and partner expertise needed to support improved ecosystem health, enhanced coastal community resilience. *This award supports work in AL, FL, MS, LA, and TX.*

Incorporating Principles of Environmental Justice into Forecast Informed Reservoir Operations, a Climate and Flood Adaptation Strategy, $474,343
Under Forecast Informed Reservoir Operations (FIRO), improved forecasts can provide reservoir operators greater flexibility. With sufficient forecast skill, water can be strategically pre-released ahead of storms, reducing flood risk and allowing operators to store more water throughout the wet season. The U.S. Army Corps of Engineers (USACE) Engineer Research and Development Center (ERDC) is currently screening sites for FIRO viability assessments to expand FIRO across the country. *This award supports work in AL, CA, GA, FL, and MS.*

Building Partnerships for a Healthy and Resilient Gulf Coast - Round 2, $1,963,233
The Gulf of Mexico Alliance will provide support to conduct robust stakeholder collaboration across the region to understand the needs associated with healthy ecosystems, resilient communities, and the associated data sharing. The Gulf of Mexico Alliance will conduct thorough assessments to identify gaps as well as existing information and partner expertise needed to support improved ecosystem health, enhanced coastal community resilience, and increased data sharing, and then implement phased initiation of projects resulting from stakeholder engagement and assessments. In addition, the Gulf of Mexico Alliance will engage with tribes in the Gulf of Mexico region through workshops intended to facilitate tribal engagement in GOMA Priority Issue Teams and identifying key regional priorities. *This award supports work in AL, MS, FL, LA, and TX.*

IRA

Promoting Recovery and Resilience in Anadromous Gulf Sturgeon and Alabama Shad through Barrier Removal, $1,700,000
This project will take initial planning and design steps toward removing the defunct Elba Hydroelectric Dam Project, which is the only fish passage barrier in the Choctawhatchee River watershed. Removal of the dam will support Alabama shad and threatened Gulf sturgeon by increasing access to 34 miles of habitat on the Pea River used for spawning, nursery, and refuge.

ACAMP IRA Capacity Award Application, $354,000
This funding will build the ability of Alabama's federally-approved coastal management program within the Alabama Department of Conservation and Natural Resources (ADCNR) to implement projects, initiatives, and programs that increase the climate resilience of coastal communities within coastal counties. Specifically, Alabama Coastal Area Management Program (ACAMP) funding from this award will build capacity of staff to implement ACAMP priorities related to coastal resilience including but not limited to outreach to local governments and communities, public access to coastal resources, marine debris awareness and reduction, and implementation of current CZMA activities.

WBNERR IRA Capacity Award Application, $400,000
This funding will build the ability of the Weeks Bay National Estuarine Research Reserve within the Alabama Department of Conservation and Natural Resources to implement projects, initiatives, and programs that increase the climate resilience of coastal communities within coastal counties. Specifically, the Weeks Bay NERR will build the capacity of staff to implement coastal resilience projects and programs. Projects include, but are not limited to, coastal resilience training for communities and resource managers; increased programming for students related to climate effects and resilience; Reserve community science projects; research and monitoring of water levels and saltwater intrusion within sensitive coastal habitats; updated digital elevation maps and flora transect surveys to support the Reserve Sentinel Site program; bioacoustics monitoring equipment and training for monitoring of fauna on Reserve tracts to inform management actions, etc.

Perdido Watershed Habitat and Community Resilience Initiative: Incorporating Nature Based and Hybrid Solutions Across Alabama and Florida, $12,574,655
This project will enhance climate resilience in Alabama and Florida as part of the Perdido Watershed Habitat and Community Resilience Initiative. Living shorelines and habitat restoration will be implemented at multiple locations across the coastlines of both states to protect communities from flooding and storms. This will be coupled with a large-scale planning effort to help communities prioritize, plan, and implement additional nature-based solutions to climate impacts. *This award supports work in AL and FL.*

Gulf Coast - Center for Addressing Microplastics Pollution (GC - CAMP), $1,910,628
The Mississippi-Alabama Sea Grant was awarded $1,910,628 to develop techniques and tools to help mitigate and prevent the presence of microplastics in the Gulf of Mexico through leveraging resources in three states along the Gulf Coast, including 10 wastewater treatment facilities in Mississippi, Alabama, and Florida. The project aims to improve microplastic understanding, develop microplastic reduction techniques, measure microplastic concentration, and enhance collaboration around addressing microplastics in Gulf Coast communities, specifically urban communities, communities that are predominantly Black, and rural, isolated communities. *This award supports work in AL, MS, and FL.*

Infrastructure Improvements to Support Integration of State Recreational Survey Data at Gulf States Marine Fisheries Commission, $1,484,263
To coordinate, plan, and administer new projects that are aimed at improving the quality and timeliness of recreational fishery dependent databases that are provided by state partners to help assist in managing red snapper populations. This

work will be focusing on improving data management systems within Gulf States Marine Fisheries Commission along with state partners' individual data management systems to provide increased quality control and improve the efficiency for moving state data to the GSMFC warehouse. GSMFC along with its state partners have already identified this as its highest current development priority. This funding opportunity will allow for a faster timeline for accomplishing the work associated with this objective. This agreement will also create opportunities for discussions and pilot projects aimed at improving recreational discard estimates along with visioning for a pilot study to validate recreational fishing effort estimates. *This award supports work in AL, MS, FL, LA, and TX.*

Implementing Nature-Based Solutions for Habitat, Community, and Coastal Resilience in Mississippi Sound, Alabama, $14,620,884
The project will construct 5,000 feet of living shoreline breakwaters to protect Coffee Island in Mississippi Sound. Coffee Island is a front-line barrier to the northern Mississippi Sound coast, but it has been subject to high erosion rates. Multiple fish species will benefit from the protection of marsh and seagrass habitats around the island and along coastlines to the north. The protection of Coffee Island will also protect shorelines located near coastal communities in south Mobile County and aquaculture installations in Portersville Bay.

WBNERR IRA Capacity Award Application, $400,000
This funding will build the ability of the Weeks Bay National Estuarine Research Reserve within the Alabama Department of Conservation and Natural Resources to implement projects, initiatives, and programs that increase the climate resilience of coastal communities within coastal counties. Specifically, the Weeks Bay NERR will build the capacity of staff to implement coastal resilience projects and programs. Projects include, but are not limited to, coastal resilience training for communities and resource managers; increased programming for students related to climate effects and resilience; Reserve community science projects; research and monitoring of water levels and saltwater intrusion within sensitive coastal habitats; updated digital elevation maps and flora transect surveys to support the Reserve Sentinel Site program; bioacoustics monitoring equipment and training for monitoring of fauna on Reserve tracts to inform management actions, etc.

The development and implementation of conservation and management measures for our nations marine fisheries, $1,232,940
The Gulf of Mexico Fishery Management Council (GMFMC) will use funding to enhance staffing to assist with climate-ready fisheries programming. Increased staffing will coordinate and ultimately execute project deliverables, and assist with federal reporting requirements, fisheries data acquisition and analyses, and research to support the Council. Funding will meet NOAA's objectives to operationalize fishery climate vulnerability assessments and other scientific products, including ecosystem status reports. Initial year funding will support a full-time Ecosystem Analyst to coordinate and execute the project deliverables. *This award supports work in AL, LA, MS, TX, and FL.*

Supporting Coastal Resilience with Inflation Reduction Act at GCOOS - RA, $4,885,000
GCOOS will use this funding to support projects to deploy assets that complement and fill observation gaps in existing networks, build new asset networks and enhance regional technical capacity to provide equitable data service delivery to communities to build coastal resilience. These include new observation projects and tools co-developed with frontline and Indigenous communities to measure and equip them with knowledge about surface currents, flooding, harmful algal blooms, rip currents to validate offshore data, and to develop multilingual program materials. *This award supports work in AL, TX, LA, MS, and FL.*

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

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