



# **NOAA In Your State**

# 4 Mississippi 4

<u>NOAA</u> 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 <u>congressional districts and cities or towns</u>, <u>coastal programs</u>, and then <u>statewide programs</u>.

#### Highlights of NOAA in Mississippi

Mississippi Laboratories	Stennis	MS-4
National Data Buoy Center	Stennis	MS-4
Northern Gulf Institute	Stennis	MS-4
National Centers for Environmental Information	Stennis	MS-4
Grand Bay National Estuarine Research Reserve	Moss Point	MS-4
Southeast Fisheries Science Center	Pascagoula	MS-4
IOAA Ships Oregon II, Pisces, and Gordon Gunter	Pascagoula	MS-4

The state of Mississippi also has one Weather Forecasting Office, one Regional Office, 3 Labs and Field Offices, three Science on a Sphere® exhibitions, and one National Estuarine Research Reserve.

#### Weather Forecast Office

Jackson MS-2

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

#### Science On a Sphere®

Stennis MS-4

Biloxi MS-4

Ocean Springs MS-4

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

#### MS-1 Oxford

#### Office of Oceanic and Atmospheric Research (OAR) - National Sea Grant Law Center

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 National Sea Grant Law Center was established in 2002 to coordinate and enhance Sea Grant's activities in legal scholarship and outreach related to coastal and ocean law issues. The National Sea Grant Law Center's mission is to encourage a well-informed constituency by providing legal information

and analysis to the Sea Grant Community, policy-makers, and the general public through a variety of products and services. The National Sea Grant Law Center's major responsibilities are (1) integrating the efforts of ocean and coastal law researchers and users in the Sea Grant network nationwide; (2) conducting research on current ocean, coastal, and Great Lakes law issues; (3) providing outreach and advisory services to the Sea Grant network and coastal constituents; (4) disseminating information and analysis through periodic workshops and conferences as well as publications, and (5) serving as a focal point for Sea Grant's law-related issues and promoting the growth and development of a Sea Grant legal network. The Sea Grant Law Center is based at the University of Mississippi. Get involved with Sea Grant through state and national opportunities like the John A. Knauss Marine Policy Fellowship program at seagrant.noaa.gov.

#### **Holly Springs**

#### 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.

#### MO-2 Jackson

National Weather Service (NWS) - Weather Forecast Office - See Page 2 for details.

#### MS-2,3

#### Greenwood, Starkville

#### Office of Oceanic and Atmospheric Research (OAR) - VORTEX-SE and PERILS

In support of the <u>VORTEX-SE</u> and <u>PERILS</u> field projects, the Physical Sciences Laboratory operates and maintains a 915-MHz wind profiler with RASS sources, and surface meteorology tripods at Greenwood and Starkville, Mississippi. 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.

#### MS-3 Harrison

#### **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 Mississippi, ELP funded a project by the Program for Local Adaptation to Climate Effects: Sea-Level Rise (PLACE: SLR) in Harrison 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 PLACE: SLR 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.

#### Newton

#### 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.

#### Starkville

#### Office of Oceanic and Atmospheric Research (OAR) - NOAA High-Performance Computing

A high performance supercomputer, located at Thad Cochran Research, Technology and Economic Development Park adjacent to Mississippi State University's Starkville campus, allows Geophysical Fluid Dynamics Laboratory (GFDL) researchers to develop and refine advanced weather and climate models. Named Orion, this high-performance computer is funded via a grant from NOAA and provides increased resources for scientific research and greater opportunities for collaboration with the academic community.

# Office of Oceanic and Atmospheric Research (OAR) - <u>Uncrewed Systems Research Transition Office (UxSRTO)</u> Project for Disaster Response Flood Mapping

Uncrewed Aircraft Systems (UAS) are used by NOAA to rapidly deploy and produce high-resolution maps of flood-inundated lands during major flood events. The data are used immediately by weather forecasters to update warnings and better inform the public and emergency managers about risks, and are also used in the long-term to make improvements to flood forecast models, improving the accuracy of forecasts of future flood events.

#### MS-4 Goodwin Creek

#### Office of Oceanic and Atmospheric Research (OAR) - Surface Radiation Measurement Network

The Global Monitoring Laboratory(GML) operates seven stations as part of its surface radiation budget network (SURFRAD). The station measurements support regional and global weather and climate research with accurate, continuous, long-term measurements of the surface radiation budget over the United States. Solar radiation is the driving energy for geophysical and biological processes that control weather and affect planetary life; understanding the global surface energy budget is therefore key to understanding climate and the environmental consequences to agriculture and other statewide concerns. Because it is impractical to cover the whole earth with monitoring stations, the answer to global coverage lies in reliable satellite-based observations. Accurate and precise ground-based measurements across a range of climate regions are essential to refine and verify the satellite observations. One of these stations is located near Goodwin Creek. These ground-based measurements also support special research projects on radiation and climate processes in the Mississippi region and serve as important verification for weather forecasts.

#### Stennis Space Center

# National Environmental Satellite, Data, and Information Service (NESDIS) - <u>National Centers for Environmental Information</u>

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

Boulder, Colorado; Silver Spring, Maryland; and Stennis Space Center, Mississippi. NCEIs Coastal Data Development program is managed out of the Stennis Space Center, with partnerships across NOAA and with agencies in federal, state, and local government, academic institutions, and nongovernmental organizations that collect or provide coastal data and information.

### National Environmental Satellite, Data, and Information Service (NESDIS) - <u>National Centers for Environmental</u> <u>Information - Northern Gulf Institute</u>

The Northern Gulf Institute (NGI) is a partnership of six complementary academic institutions and NOAA addressing important national strategic research and education goals. Mississippi State University leads this collaboration, partnering with the University of Southern Mississippi, Louisiana State University, Florida State University, Alabama's Dauphin Island Sea Lab, the University of Alabama in Huntsville, and NOAA scientists at various laboratories and operational centers in the Gulf of Mexico region. NGI serves as a mechanism to promote collaborative research between university scientists and those in NOAA. NGI develops, operates, and maintains an integrated research and transition program, the results of which raise awareness and understanding of the Gulf region. The Institute contributes to NOAA's priority interests in the four NGI research themes of Climate Change and Climate Variability Effects on Regional Ecosystems, Coastal Hazards, Ecosystem Management, and Effective and Efficient Data Management Systems Supporting a Data-driven Economy.

# National Environmental Satellite, Data, and Information Service (NESDIS) - <u>National Centers for Environmental Information</u> - <u>Southern Regional Climate Services Director</u>

NOAA's six Regional Climate Services Directors (RCSDs), which are part of NCEI, support the development and delivery of a wide range of place-based climate science and information products and services to help people make informed decisions. RCSDs regularly communicate with stakeholders about climate information needs, and help build and strengthen active partner networks with public and private constituents. They play a primary role in integrating the work within NOAA and among its partners engaged in developing and delivering climate services at the regional level. These efforts serve to increase the value of climate information to users and support more efficient, cost-effective delivery of products and services. The Southern RCSD region encompasses New Mexico, Texas, Oklahoma, Arkansas, Louisiana, Mississippi, Georgia, Tennessee, Alabama, Florida, Puerto Rico, and the U.S. Virgin Islands.

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

The NOAA Office for Coastal Management practices a partner-based, boots on the ground approach to coastal management. The organization currently has staff in the eight regions to provide assistance to local, state, and regional coastal resource management efforts and facilitate customer feedback and assessments. For the Gulf Coast, these NOAA personnel are located in Stennis, Mississippi, St. Petersburg, Florida, and Pensacola, Florida. They provide a wide range of programs dedicated to improving the management of coastal resources in the Gulf region.

#### 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) - Office of Coast Survey - Navigation Manager

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in the northern Gulf of Mexico. They help identify the navigational challenges facing marine transportation in the region and provide NOAA's resources and services that promote safe and efficient navigation. Navigation managers are on call to

provide expertise and NOAA navigation response coordination in case of severe coastal weather events or other marine emergencies.

#### National Ocean Service (NOS) - Office of Coast Survey (OCS) - 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. The NRT-Stennis is assigned to Stennis Space Center.

#### National Marine Fisheries Service (NMFS) - Mississippi Laboratories-Stennis

The Stennis Space Center facility of the Mississippi Laboratories conducts research on advanced data collection technologies, with a focus on acoustic and optical technologies and automated underwater vehicles. Research and modeling activities are also conducted to support oceanographic and ecosystem assessments. Scientists monitor annual hypoxic events in the Gulf of Mexico, track mortalities of stranded sea turtles, determine the impacts of environmental factors on fish abundance, and model plankton distribution and abundance in relation to ocean currents and other oceanographic factors. Research is also focused on acoustic mapping of marine habitats. This facility provides engineering support for marine resource surveys through the design and construction of innovative data collection methods such as digital video camera systems, automated underwater vehicles, and gliders.

#### National Weather Service (NWS) - National Data Buoy Center

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 Bay St. Louis, 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 also supports operational and research programs of NOAA and other national and international organizations. NDBC also operates NOAA's network of Deep-ocean Assessment and Reporting of Tsunami (DART®) stations, for the early detection and real-time reporting of tsunamis in the open ocean. Data from the DART®s are used by the National Weather Service Tsunami Warning Centers in Alaska and Hawaii to provide tsunami forecasts, warnings, and information. NDBC also operates the Tropical Atmosphere Ocean Array of buoys in the tropical Pacific. The TAO array consists of approximately 55 moorings in the Tropical Pacific Ocean. The array is a major component of the El Niño/Southern Oscillation (ENSO) Observing System, the Global Climate Observing System (GCOS) and the Global Ocean Observing System (GOOS). These data provide valuable information used by NWS supercomputers to produce computer generated model forecasts of the atmosphere, and climate.

# Office of Oceanic and Atmospheric Research (OAR) and National Environmental Satellite, Data, and Information Service (NESDIS) - <u>Exploration Command Center</u>

NOAA's National Centers for Environmental Information (NCEI) partners with NOAA Ocean Exploration to manage, archive, and disseminate data collected on its expeditions. NCEI maintains one of the most significant data archives on Earth, providing the public with comprehensive oceanic, atmospheric, and geophysical data. The NCEI at Stennis Space Center supports NOAA Ocean Exploration data management efforts and this location also hosts an Exploration Command Center.

Office of Oceanic and Atmospheric Research (OAR) - Science On a Sphere® - See Page 2 for details.

#### NOAA Commissioned Officer Corps (NOAA Corps) - NOAA Data and Navy Operations Support

The NOAA Commissioned Officer Corps stations multiple officers at the Stennis Space Center in support of NOAA and Navy operations in the state and globally. One is assigned to a Navy unit in support of the Naval Oceanography Mine Warfare Command (NOMWC), leading and deploying with a platoon of 6-8 Navy sailors and one civilian technical representative in operations related to homeland security and countermine activities, as well as serving as NOAA's liaison between the Office of Coast Survey and NOMWC. In addition, two more officers serve in positions covering a Navigation Response Team and the Stennis Lab for the National Data Buoy Center. These officers perform critical functions for each unit, supporting data collection and operations both directly and indirectly through field work and administrative support.

#### Biloxi

Office of Oceanic and Atmospheric Research (OAR) - Science On a Sphere®- See Page 2 for details.

#### **Gulfport**

#### National Ocean Service (NOS) - Mississippi Spatial Reference Center

In a partnership with NOAA, the Mississippi Spatial Reference Center (MSRC) serves as a new way of providing a spatial referencing liaison between Federal and local authorities. The Center is a nonprofit organization located at the Gulf Coast Geospatial Center (GCGC), University of Southern Mississippi. The mission of the GCGC/MSRS is to provide coastal geospatial information, research, and applications that will benefit both the public and private sector. Current project areas include the Mississippi Height Modernization Program, remote sensing science and technology to address topics of importance to the ecology and economy of the northern Gulf of Mexico, and the Mississippi Digital Coast Initiative.

#### **Moss Point**

#### National Ocean Service (NOS) - Grand 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 18,049 acre Grand Bay Research Reserve, designated in 1999 and managed by the Mississippi Department of Marine Resources, is one of the most biologically productive estuaries in the northern Gulf of Mexico, where oyster reefs and seagrass beds serve as nursery areas for economically important marine species such as shrimp, blue crab, speckled trout, and red fish. The reserve includes part of the Grand Bay National Wildlife Refuge, and is a partner in the NOAA Sentinel Site Program.

#### National Ocean Service (NOS) - Margaret A. Davidson Graduate Fellowship

The Margaret A. Davidson Graduate Fellowship program funds graduate student research and professional development opportunities within the National Estuarine Research Reserve System. The program supports collaborative research addressing local management challenges that may influence future policy and management strategies. The Davidson Fellow at Grand Bay National Estuarine Research Reserve will focus their research on utilizing microbial source tracking to evaluate temporal and spatial variation of fecal coliform sources in the Reserve.

#### Office of Oceanic and Atmospheric Research (OAR) - Atmospheric Mercury Monitoring Network

NOAA's Air Resources Laboratory maintains a specialized ambient air mercury measurement site at the Grand Bay Reserve in Moss Point, Mississippi. The site is operated in collaboration with the Grand Bay National Estuarine Research Reserve and is a part of the National Atmospheric Deposition Program's Atmospheric Mercury Monitoring Network (AMNet). The state-of-the-art monitoring site provides semi-continuous measurements of reactive gaseous mercury,

elemental mercury, and particulate mercury in air. Additional data are collected for ambient air concentrations of trace gases (e.g., sulfur dioxide, nitrogen oxides, carbon monoxide, ozone), as well as meteorological parameters such as temperature, humidity, precipitation, wind speed and direction. The site, operated since September 2006, provides high quality data to air quality and mercury transport models.

#### **Ocean Springs**

Office of Oceanic and Atmospheric Research (OAR) - Science On a Sphere®- See Page 2 for details.

#### Pascagoula

#### National Marine Fisheries Service (NMFS) - National Seafood Inspection Laboratory

The National Seafood Inspection Laboratory (NSIL), which is part of the Office of Sustainable Fisheries (OSF), is an accredited ISO/IEC 17025:2017 laboratory that helps protect and strengthen U.S. seafood. The laboratory is located in Pascagoula, Mississippi and houses two teams that test products for bacteria and chemicals that threaten seafood safety. NSIL provides analyses, data management, regulatory compliance risk analysis, and technology transfer expertise. NSIL also provides scientific advice to other federal agencies, committees, conferences, and the seafood industry.

#### National Marine Fisheries Service (NMFS) - Fishery Statistics Office

Field agents serve as the principle data collection agent for marine fisheries throughout the Southeast U.S. (NC-TX). They implement and coordinate surveys involving the collection of fishery related data from the public. Responsibilities and functions are to develop, implement, operate, and manage an integrated fishery statistical data acquisition program for research and fishery management. The Southeast Fisheries Science Center is the headquarters for the Southeast Port Agent program. A field agent is stationed in Pascagoula, MS.

#### National Marine Fisheries Service (NMFS) - Mississippi Laboratories - Pascagoula

Mississippi Laboratories conducts fisheries-independent resource surveys to monitor the number, distribution, and health of marine resources and their habitats in the Gulf of Mexico, South Atlantic, and Caribbean. Information on abundance and distribution of fish, marine mammals and sea turtles are used to assess and predict the status of fish stocks, marine mammals and other protected resources; develop and ensure compliance with fishery regulations; restore and protect habitat; and recover threatened and endangered species in waters off Mississippi and throughout the Southeast Region.

Mississippi Laboratories housesNOAA's only fishing gear development, testing, and engineering program in the southeast. Engineers and scientists design, test, develop and evaluate new fishing gears and harvesting strategies to minimize interactions with protected resources and reduce incidental bycatch mortality. Research in advanced technologies improves our data collection programs, and ecosystem assessment research furthers our understanding of the interactions between the environment and marine resources. The Southeast Area Monitoring and Assessment Program (SEAMAP) is coordinated and managed in Pascagoula. The Southeast Fisheries Science Center has port agents stationed in Mississippi Laboratories, charged with collecting marine fisheries data used in research and fishery management. Aside from the Pascagoula facilities, Mississippi Laboratories includes a satellite facility at Stennis Space Center"

Mississippi Laboratories operates two Class-3 research vessels that are used to conduct research in the Gulf of Mexico and South Atlantic.

#### National Ocean Service (NOS) - Navigation Response Team

NOAA's Navigation Response Team 1 operates out of Stennis supporting navigation in the ports from the panhandle of Florida to Texas. These three-person teams measure depths of a changing seafloor and search for underwater dangers

to navigation that can slow down commercial shipping immediately after storm events and other emergencies. The teams provide time-sensitive information to the U.S. Coast Guard or port officials and transmit data to NOAA cartographers for updating navigational charting products.

#### National Ocean Service (NOS) - Pascagoula PORTS®

A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community in Pascagoula at which real-time data are quality-controlled and disseminated to local users for safe and efficient navigation. CO-OPS partners with the Port of Pascagoula to deliver real-time water level data at one station and meteorological data at one location.

Office of Marine and Aviation Operations (OMAO) - NOAA Ships Oregon II, Pisces, and Gordon Gunter
The NOAA ships Oregon II, Pisces, and Gordon Gunter are managed by NOAA's Marine Operations Center-Atlantic (MOC-A) in Norfolk, Virginia. The ships support the science and research missions of NOAA's Southeast Fisheries
Science Center and its allied laboratories. The ships are homeported at the Gulf Marine Support Facility in Pascagoula and the Port Captain provides operational, administrative and logistical support to the ships. All vessels support NOAA's mission to protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management.

All of the vessels are operated under the direction of officers from the NOAA Commissioned Officer Corps in concert with NOAA Professional Mariners. The NOAA Corps today provides a cadre of professionals trained in engineering, earth sciences, oceanography, meteorology, fisheries science, and other related disciplines. Officers operate ships, fly aircrafts, conduct diving operations, and serve in other NOAA staff positions. NOAA Professional Mariners perform the deck, engineering, steward, and survey tech functions aboard NOAA vessels, providing critical support to OMAO marine operations.

#### Bay St. Louis

#### Office of Oceanic and Atmospheric Research (OAR) - Northern Gulf Institute

The Northern Gulf Institute (NGI) was awarded to Mississippi State University. NGI serves as a mechanism to promote collaborative research between university scientists and those in NOAA. The fundamental mission of NGI is integration: integration of the land-coast-ocean-atmosphere continuum; integration of research to operations; and integration of organizational strengths into a holistic program specifically focused on the Northern Gulf of Mexico region. Among NGI's major NOAA research collaborators are the Atlantic Oceanographic and Meteorological Laboratory, National Weather Service, Coastal Services Center, Office of Oceanic and Atmospheric Research, National Ocean Service (NOS), National Coastal Data Development Center, the National Data Buoy Center, the National Marine Fisheries Service, and the National Sea Grant Office. NGI conducts research across four themes: (1) ecosystem management; (2) effective and efficient data management systems supporting a data-driven economy; (3) climate change and climate variability effects on regional ecosystems; and (4) coastal hazards.

#### 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 Mississippi, 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
Mississippi Department of Wildlife, Fisheries, and Parks has received funding through this program to support research on
Gulf sturgeon.

## National Marine Fisheries Service (NMFS) - <u>National Marine Mammal Stranding Network</u> and <u>John H. Prescott</u> 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 four stranding network members in the state. NOAA Fisheries funds eligible members of the Stranding Network through the competitive John H. Prescott Marine Mammal Rescue Assistance Grant Program. Although Prescott grants have been awarded to recipients in MS in previous years, no grants were awarded in FY20. Nationwide, 43 competitive grants were awarded for a total of \$3.7 million.

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

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

#### National Ocean Service (NOS) - Bipartisan Infrastructure Law

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

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

NOAA's Center for Operational Oceanographic Products and Services (CO-OPS) operates two long-term continuously operating tide stations in the state of Mississippi located at Pascagoula and Bay Waveland Yacht Club which provide data and information on tidal datum and relative sea level trends. These stations have been strengthened to deliver real-time storm tide data during severe coastal events. 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 Mississippi. They help identify the navigational challenges facing marine transportation in Mississippi and provide NOAA's resources and services that promote safe and efficient navigation. Navigation managers are on call to provide expertise and NOAA navigation response coordination in case of severe coastal weather events or other marine emergencies. The Office of Coast Survey has a navigation manager in Lafayette, LA to support mariners and stakeholders in Central Gulf Coast waters.

#### 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 six grants in Mississippi, 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 Mississippi Department of Marine Resources to implement the National Coastal Zone Management Program in Mississippi. NOAA provides the state coastal management program with financial and technical assistance to further the goals of the Coastal Zone Management Act and ensure coastal waters and lands are used in a balanced way to support jobs, reduce use conflicts, and sustain natural resources.

#### National Ocean Service (NOS) - Digital Coast

The Digital Coast is a focused information resource developed to meet the unique needs of coastal communities. Developed and maintained by NOAA's Office for Coastal Management, content comes from hundreds of organizations, including federal, state, and local agencies, plus private sector and non-profit contributors. The Digital Coast website provides not only site-specific coastal data, but also related tools, training, and information needed to make these data useful for coastal decision makers. The Digital Coast Act authorizes the Digital Coast as a standing national program and

supports NOAA's efforts to increase access to authoritative data, tools, and training that enable coastal communities to plan for long-term resilience, manage water resources, and respond to emergencies.

#### National Ocean Service (NOS) - National Coastal Resilience Fund

The National Coastal Resilience Fund is a partnership effort between NOAA and the National Fish and Wildlife Foundation (NFWF) to restore, increase, and strengthen natural infrastructure to protect coastal communities, while also enhancing habitat for fish and wildlife. In Mississippi, three projects were funded in FY22.

#### 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 Mississippi, the ECRF awarded a project in 2021.

#### National Ocean Service (NOS) and National Marine Fisheries Service (NMFS) - 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 will invest approximately \$56 million over five years to enhance and support the priorities of established regional ocean partnerships, including coordinating interstate and intertribal management of ocean and coastal management issues, and enhancing sharing and integration of data.

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

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

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 tradeoffs, best practices, resources at risk, and chemical hazard assessment to reduce risks to coastal habitats and resources. The SSC for Mississippi is based in Mobile, Alabama at NOAA's Gulf of Mexico Disaster Response Center.

 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.

# National Ocean Service (NOS) - OR&R <u>Gulf of Mexico Environmental Response Management Application</u> and <u>Response Tools for Oil and Chemical Spills</u>

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. Gulf of Mexico 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. Maintained habitat data for sensitive species. Ensured data was kept up-to-date and data collection methods were kept consistent. In addition to ERMA, the Office of Response and Restoration (OR&R) offers a suite of tools to support emergency responders dealing with oil and chemical spills. From Environmental Sensitivity Index (ESI) maps and data which provide concise summaries of coastal resources including biological resources and sensitive shorelines to GNOME, a trajectory and fate model that predicts the route and weathering of pollutants spilled on water, and so much more, these tools provide easy-access to critical data that support a wide range of needs for emergency responders, ultimately supporting our coastal communities.

#### National Ocean Service (NOS) - Marine Debris Projects and Partnerships in Mississippi

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 supports coordination efforts with regional stakeholders, provides support to grant-funded projects, tracks progress of projects, and conducts regional marine debris outreach to local audiences. The MDP also works with local communities and organizations to prevent and remove marine debris. Mississippi Commercial Fisheries United, Inc., is providing funds to commercial fishers to properly dispose of derelict fishing gear and other plastic debris they encounter and bring to shore during regular fishing operations. In addition, uncrewed vehicles will be used to conduct monthly surveys at Deer Island in order to locate derelict oyster farming gear for retrieval by licensed oyster farmers. The MDP is also working with the Mississippi Department of Marine Resources to identify and remove derelict crab traps from Mississippi's marine and estuarine waters and adjacent marshes, engaging fishers and the broader community in derelict crab trap removal. Additionally, the MDP is partnering with the Mississippi State University Coastal Research and Extension Center to remove derelict vessels and other large marine debris from the lower Pascagoula River and monitor for ecosystem recovery. Each year, the MDP provides support to the Mississippi Coastal Cleanup Program to expand its reach to tackle new issues, including a July 5th cleanup, monthly cleanups, and new solo cleanup kits. 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 Mississippi Marine Debris Emergency Response Guide.

# National Ocean Service (NOS) - <u>U.S. Integrated Ocean Observing System</u> (<u>Gulf of Mexico Coastal Ocean Observing System</u>)

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 supporting the repair of high frequency radar stations damaged by hurricanes, and the modernization of several high frequency radar stations and moorings, including the only offshore buoy assessing ocean acidification in the central gulf area.

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 network 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).

#### Statewide

National Marine Fisheries Service (NMFS) - Southeast Regional Office and Southeast Fisheries Science Center 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. Additionally, in collaboration, they develop and ensure compliance with fishery regulations, restore and protect habitat, and recover threatened and endangered species in waters off Mississippi and throughout the Southeast Region. The Southeast Regional Office is responsible for over 40 percent 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, sixfive sea turtle species, Johnson's seagrass, and seven coral species, also occur in this region. The Office consults on approximately 50 percent of the nation's coastal development permits, provides fish passage and ecological flow recommendations at dozens of barriers, supports largescale conservation and restoration programs aimed at protecting essential fish habitat and coastal communities from development, subsidence, sea level rise, and storms, and engages partners in regional collaboration. 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 acting 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 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.

**National Marine Fisheries Service (NMFS) -** The <u>Southeast Fisheries Science Center</u> 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.

<u>Fisheries Assessment, Technology, and Engineering Support</u> 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.

<u>Fisheries Statistics</u> 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 Biosampling, 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.

<u>Population and Ecosystems Monitoring</u> 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.

<u>Sustainable Fisheries</u> 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.

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

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

The <u>NOAA Restoration Center</u>, within the <u>Office of Habitat Conservation</u>, 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. The Restoration Center works with private and public partners in Mississippi to provide technical assistance, restore tidal marshes and

oyster reefs.. Through Community-based Restoration Program projects, hundreds of acres of fisheries habitat have been restored and rehabilitated since 2000. The Community-based Restoration Program has partnered with the Mississippi Department of Marine Resources on several projects to restore oyster reef habitat. NOAA's Restoration Center is also working with the state to improve the shoreline as part of the Hancock County Marsh Living Shoreline *Deepwater Horizon* Early Restoration Project. The goal of the 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 <u>Deepwater Horizon oil spill</u> 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 <u>Deepwater Horizon</u> oil spill. The NOAA Fisheries <u>Office of Habitat Conservation's</u> 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.

# National Marine Fisheries Service (NMFS), National Ocean Service (NOS), and NOAA General Counsel - <u>Damage</u> <u>Assessment, Remediation, and Restoration Program</u>

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

## National Marine Fisheries Service (NMFS) - <u>Southeast Regional Office</u>, <u>Gulf of Mexico Bay Watershed Education</u> and Training Program

The NOAA Bay Watershed Education and Training (B-WET) program is an environmental education program that promotes locally relevant, experiential learning in the K-12 environment. The primary delivery of B-WET is through competitive funding that promotes Meaningful Watershed Educational Experiences. 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 responds to regional education and environmental priorities through local implementation of competitive grant funds. Please see the regional funding opportunity for priorities and eligibility details.

#### **National Marine Fisheries Service - 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, which covers Mississippi, is headquartered in St. Petersburg, Florida.

#### 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 Ocean Service (NOS) - Mussel Watch Program

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

#### National Weather Service - NEXRAD (WSR-88D) Systems

NEXRAD is used to warn the people of the United States about dangerous weather and its location. This radar technology allows meteorologists to warn the public to take shelter with more notice than ever before. The NEXRAD network provides significant improvements in severe weather and flash flood warnings, air traffic safety, flow control for air traffic, resource protection at military bases, and management of water, agriculture, forest, and snow removal. NEXRAD radar has a range of up to 250 nautical miles, and can provide information about wind speed and direction, as well as the location, size, and shape of precipitation. There are 159 operational NEXRAD radar systems deployed throughout the United States and overseas, of which one is in Mississippi.

#### 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 10 ASOS stations in Mississippi.

#### 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 147 COOP sites in Mississippi.

#### 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 13 NWR transmitters in Mississippi.

#### 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, University of Alabama, University of Alabama at Birmingham, University of Mississippi, University of Southern Mississippi, and the University of South Alabama. The mission of the 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. Sea Grant specializes in extension, research, outreach and education. Extension agents are located in Biloxi. Administrative offices are located in Ocean Springs. 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) - 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.

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.