

## NOAA In Your State

# Florida

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***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. The entries are listed by statewide, region, and then by congressional districts and cities or towns.***

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### **FL**

#### **Statewide**

##### **National Marine Fisheries Service (NMFS) - [Gulf of Mexico Bay-Watershed Education 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 (MWEEs). 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.

##### **National Marine Fisheries Service (NMFS) – [Aquaculture Coordinator](#)**

The aquaculture coordinator leads regional efforts in the Gulf of Mexico, South Atlantic and U.S. Caribbean to foster sustainable marine aquaculture. The coordinator acts as a liaison between federal and state agencies to assist in permitting and coordination activities, support aquaculture outreach and education and is the point of contact for industry, academia and other stakeholders for regional marine aquaculture issues. The Southeast Region has a growing commercial marine aquaculture industry with a strong shellfish sector, as well as shrimp and finfish production. The Southeast Region is also the only comprehensive regulatory program for offshore aquaculture in federal waters, although other regions (e.g., the Western Pacific) are working to institute similar programs.

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

The NOAA Restoration Center, within the Office of Habitat Conservation, works with private and public partners locally and nationwide to increase fisheries productivity by restoring coastal habitat. Projects support sustainable fisheries, help recover threatened and endangered species, and reverse damage from disasters like oil spills, ship groundings, and severe storms. Since 1992, they have provided more than \$750 million to implement more 3,300 coastal habitat restoration projects. In Florida, the Restoration Center works with private and public partners to restore habitats such as mangrove forests, oyster reefs, coral, and submerged aquatic vegetation beds; remove invasive species; improve storm-water management; establish wetland buffers; and restore historic tidal flow to degraded sites. More than 350 projects have been constructed in the state since 1996, including restoration and/or protection of over 15,000 acres of fisheries habitat through the Community-based Restoration Program. The 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. NOAA led the natural resource damage assessment restoration planning for the Deepwater Horizon oil spill. Restoration efforts will focus on 13 restoration types and 7 restoration areas to address a broad range of impacts across the Gulf of Mexico.

### **National Marine Fisheries Service (NMFS) and National Ocean Service (NOS) - [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 \$10.4 billion 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. In Florida, the Program is currently working to restore natural resources in cases including the Deepwater Horizon oil spill.

### **National Marine Fisheries Service (NMFS) - [Southeast Division](#) 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 coast 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. Office of Law Enforcement's Southeast Division is headquartered in St. Petersburg, Fla., with field offices in Port Orange, Miami, Marathon, Niceville and St. Petersburg, as well as in North Carolina, South Carolina, Puerto Rico, Texas and Louisiana.

### **National Ocean Service (NOS) - [Regional Advisor Program](#)**

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 Jackson, Mississippi serving the Gulf Coast region – Mississippi, Alabama, Florida, and Louisiana. The Geodetic Advisor provides training, guidance and assistance to constituents managing geospatial activities that are tied to the National Spatial Reference System (NSRS), the framework and coordinate system for all positioning activities in the Nation. The Geodetic Advisor serves as a subject matter expert in geodesy and regional geodetic issues, collaborating internally across NOS and NOAA to ensure that all regional geospatial activities are properly referenced to the NSRS.

### **National Weather Service (NWS) - [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 50 ASOS stations in Florida.

### **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 151 COOP sites in Florida.

### **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 32 NWR transmitters in Florida.

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

NOAA's National Sea Grant College Program is a federal-university partnership that integrates research, education and outreach. Sea Grant forms a network of 33 programs in all U.S. coastal and Great Lakes states, Puerto Rico, and Guam. The Florida Sea Grant College Program, based at the University of Florida, focuses research on climate change and its effects on the coast, fisheries, aquaculture, seafood safety, healthy coastal habitats, sustainable communities, water access and coastal hazards. In conjunction with its research, Florida Sea Grant also provides support to graduate education. Extension and education programs and workforce training are conducted in partnership with UF/IFAS Extension and the 35 coastal counties of Florida through a cadre of more than 35 marine extension agents and specialists.

## ***Coastal***

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

The National Marine Mammal Stranding Network and its trained professionals respond to dead or live marine mammals in distress that are stranded, entangled, out of habitat or otherwise in peril. Our long-standing partnership with the Network provides valuable environmental intelligence, helping NOAA establish links among the health of marine mammals, coastal ecosystems, and coastal communities as well as develop effective conservation programs for marine mammal populations in the wild. There are 21 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. Since 2001, \$53.8 million has been awarded through 617 grants, and recipients have raised over \$17.76 million in matching funds. In FY17, 33 competitive grants were awarded nationwide for a total of \$2.8 million, with four awards going to four recipients in Florida: the Florida Fish & Wildlife Conservation Commission; Hubbs-SeaWorld Research Institute; and Mote Marine Laboratory; and the Florida Institute of Technology.

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

NOAA's Deep Sea Coral Research and Technology Program is the only federal program dedicated to mapping, characterizing, and understanding deep-sea coral ecosystems, and sharing the information needed to conserve these habitats. The Program -- called for in the reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act -- is working with other NOAA offices and external partners to conduct fieldwork to study the distribution, abundance, and diversity of deep sea corals and sponges. Since 2009, more than 42,500 square miles of seafloor have been mapped and surveyed for deep-sea coral habitats from Florida to Maine, in Alaska and the West Coast, and in Hawaii and the Marianas Trench. In FY 2018, research is being prioritized in two regions -- the southeast (states include VA, NC, SC, FL, AL, MS, LA, TX, and the Caribbean islands) and the west coast (WA, OR, CA). The program has conducted research cruises off the Southeastern U.S. Using sonar technology and remotely operated and manned submersibles, new deep-sea coral reefs were discovered off the Southeastern seaboard.

### **National Marine Fisheries Service (NMFS) - [Species Recovery Program](#)**

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. Competitive grants are awarded to states through the Species Recovery Grants to States Program to support management, monitoring, research and outreach efforts for species that spend all or a portion of their life cycle in state waters. The funded work is designed to prevent extinctions or reverse the decline of species, and restore ecosystems and their related socioeconomic benefits. Twenty-five coastal states, including Florida and U.S. territories currently participate in this program. The Florida Fish and Wildlife Conservation Commission has received many awards through this program, including funding to support their marine turtle research and conservation program, studies on smalltooth sawfish distribution and habitat needs, as well as an effort to develop and validate field kits that can instantly determine the sex of listed sturgeon. ;

### **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. Field agents are stationed in Panama City, St. Petersburg, Naples, Key West, Miami, Tequesta, and South Daytona.

**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, track factors affecting turtle health, and provide other information needed for sea turtle management and population recovery.

**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. To date the program has protected more than 100,000 acres of land with program funds and over 16,000 acres with an in-kind match. 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. Two Florida projects have been successfully completed and these lands are protected in perpetuity.

**National Ocean Service (NOS) - [Coral Reef Conservation Program](#)**

NOAA's Coral Reef Conservation Program brings together multidisciplinary expertise from over 30 NOAA offices and partners. The goal is to protect, conserve and restore coral reef resources. In response to identified threats and management priorities developed by coral reef managers in Florida, NOAA invests in coordinated management approaches for the Florida Reef Tract (extending from the southeast Florida coast through the Keys and out to the Tortugas Banks) and monitoring and assessing pollutant impacts to south Florida coastal waters. In addition, NOAA funds are also allocated to implement conservation programs designed to increase the size, abundance, and protection of coral reef species. Examples of projects include: biogeographic assessments to characterize the distribution of coral reef species, research to understand how corals respond to environmental threats and climate change, benthic sampling, and assessing fish spawning aggregation sites throughout the Florida Keys National Marine Sanctuary.

**National Ocean Service (NOS) - [National Coastal Zone Management Program](#)**

Through a unique federal-state partnership, NOAA's Office for Coastal Management works with the Florida Department of Environmental Protection to implement the National Coastal Zone Management Program in Florida. 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) and National Marine Fisheries Service (NMFS) – [Coastal Resilience Grant Award](#)**

These grants help coastal communities prepare for and recover from extreme weather events, climate hazards, and changing ocean conditions. The focus is on comprehensive regional approaches that use science-based solutions and rely on collaborative partnerships. This approach ensures maximum success by expanding reach and impact. In Florida, the NOAA Office for Coastal Management awarded five grants that are ongoing in 2018, including: \$803,713 to the Coastal States Stewardship Foundation to facilitate future disaster recovery efforts across more than 30 coastal communities and \$867,700 to the Gulf of Mexico Alliance to identify and implement proactive, cost-effective solutions to increase local coastal resilience; \$496,285 to the Marine Environmental Sciences Consortium's Northern Gulf of Mexico Sentinel Site Cooperative for enhancing the region's ability to address coastal flooding impacts and recovery through information outreach, small-grant funding, and technical assistance; \$625,000 to the National Association of Counties Research Foundation to help local officials in the Gulf communicate risk and options for addressing impacts of extreme weather and climate-related hazards to their communities; and \$484,244 to the City of Naples, Florida, to restore five

acres of oyster reef in three locations in Naples Bay, which will protect more than 1,000 feet of mangrove shoreline from storm surge and help restore mangrove and seagrass habitat.

**National Ocean Service (NOS) - [Gulf of Mexico Coastal Ocean Observing System](#) - [Southeast Coastal Ocean Observing Regional Association](#)**

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 Southeast Coastal Ocean Observing Regional Association (SECOORA) and the Gulf of Mexico Coastal Ocean Observing System (GCOOS) are two of the Regional Associations that partner with the NOAA-led Integrated Ocean Observing System (U.S. IOOS®) to address regional and national needs for coastal and ocean data and information.

SECOORA coordinates coastal and ocean observing activities in the southeast. Its mission is to observe, understand, and increase awareness of our coastal ocean; promoting knowledge, economic and environmental health through strong regional partnerships. SECOORA invests in buoys and other technologies to collect information about the ocean to help keep Floridians safe. SECOORA's Florida investment includes 8 High Frequency Radars, 5 coastal stations, 3 marine weather buoys, 2 data portals, a coupled forecast model, and data management and education activities.

GCOOS 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.

**National Ocean Service (NOS) - [Scientific Support Coordinator and Regional Resource Coordinator](#)**

NOAA's Office of Response and Restoration (OR&R) brings decades of experience, technical expertise and scientific analysis in response to oil and hazardous chemical spills. In addition to events that draw the national eye like Deepwater Horizon, OR&R also supports response to local emergencies such as tar balls washing up in Cape Canaveral in 2013. Nine regionally based Scientific Support Coordinators (SSCs) harness the input of a multi-disciplinary team to address issues such as oil slick trajectory forecasting, environmental tradeoffs, best practices, resources at risk, oil science and properties, and chemical hazard assessment to reduce risks to coastal habitats and resources. For spills in Florida, the SSC based in Miami works directly with U.S. Coast Guard and the U.S. Environmental Protection Agency to provide critical scientific support to the Federal On-Scene Coordinator. OR&R also helps develop preparedness plans that identify spill response actions with the greatest environmental benefit and trains hundreds of members of the response community each year on the scientific and technical aspects of spills.

OR&R's Regional Resource Coordinator (RRC) provides scientific and technical expertise and timely response to oil spills or hazardous materials releases to collect information, samples, and evidence that are time dependent and critical to support natural resource damage assessments throughout the coastal US. Specifically, RRCs work on multi-disciplinary scientific, economic, and legal teams and are responsible for determining and quantifying injuries to NOAA trust natural resources following events like Deepwater Horizon through determination of injuries and pathway, and demonstration of causal mechanisms. RRCs document the severity, geographic extent, and likely duration of the injury. The goal of the RRCs efforts is to determine the appropriate amount and type of restoration required to restore injured NOAA trust resources and compensate the public for their lost use. Florida's RRC is based in St. Petersburg.

**National Ocean Service (NOS) - [Gulf of Mexico Environmental Response Management Application](#)**

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<sup>®</sup>) is an online mapping tool that integrates both static and real-time data, such as Environmental Sensitivity Index maps, ship locations, weather, and ocean currents, in a centralized, easy-to-use format for environmental responders and decision makers. Gulf of Mexico ERMA was extensively used during the Deepwater Horizon Oil Spill. Recently, data and bookmark map views were created in response to Hurricanes Harvey and Irma.

**National Ocean Service (NOS) - [Marine Debris Projects and Partnerships](#)**

The NOAA Marine Debris Program (MDP) leads national and international efforts to research, prevent, and reduce the impacts of marine debris. The program supports marine debris removal, education and outreach, and research projects in partnership with state and local agencies, tribes, non-governmental organizations, academia, and industry. The MDP Florida and Caribbean Regional Coordinator is based in St. Petersburg and 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. Previous MDP work in Florida involved debris removal from critical nesting habitat for sea turtles in Biscayne Bay National Park. The MDP has also worked with state and local governments, and other stakeholders, to develop the Florida Marine Debris Emergency Response Guide and the Florida Marine Debris Reduction Guidance Plan.

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

NOS operates 16 long-term continuously operating tide stations in the state of Florida which provide data and information on tidal datum and relative sea level trends, and are capable of producing real-time data for storm surge warning. These stations are located at Fernandina Beach, Mayport, Trident Pier, Lake Worth Pier, Virginia Key, Vaca Key, Key West, Naples, Fort Myers, St. Petersburg, Clearwater Beach, Cedar Key, Apalachicola, Panama City, Panama City Beach, and Pensacola.

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

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in Florida. They help identify the navigational challenges facing marine transportation in Florida and provide NOAA's resources and services that promote safe and efficient navigation. Navigation managers are on call to provide expertise and NOAA navigation response coordination in case of severe coastal weather events or other marine emergencies. The Office of Coast Survey has a navigation manager in Charleston, SC and St. Petersburg, FL to support mariners and stakeholders in the East, South and Panhandle of Florida.

**National Ocean Service (NOS) - [Operational Forecast of Harmful Algal Blooms](#)**

NOAA and partners provide twice-weekly forecasts on harmful algal blooms (HABs) along the west coast of Florida, the east coast of Florida and the Florida panhandle. The HAB Forecasting System relies on satellite imagery, real-time and forecast winds, and field samples to provide information on the location, extent, and movement of HABs.

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

The Phytoplankton Monitoring Network (PMN) engages volunteers in monitoring for marine phytoplankton and HABs. Data collected by PMN volunteers is used to better understand species composition and distribution in coastal and Great Lakes waters, and to identify areas for further research and monitoring. Through this program, we have alerted managers to previously undetected toxins in commercial shellfish beds, and the potential for human Amnesic Shellfish Poisoning and domoic acid toxicity in marine animals. This year PMN is active along the West Coast from CA to AK, in Lake Erie, in the Gulf of Maine, and the Gulf of Mexico.

### **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 Weather Service (NWS) - National Data Buoy Center [Buoys](#)**

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

### **[FL-1](#)**

#### **[Freeport](#)**

### **Office of Oceanic and Atmospheric Research (OAR) - [Science On a Sphere® at E.O. Wilson Biophilia Center](#)**

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

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

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to build the capacity of institutions and networks to advance NOAA's mission through formal (K-12) and informal education at national, regional, and local levels. In Florida, ELP supports Kennedy Space Center Visitor Complex (Titusville), E.O. Wilson Biophilia Center (Freeport), Orlando Science Center, South Florida Science Center and Aquarium (West Palm Beach), and Galaxy E3 Elementary (Boynton Beach), all of which have permanent exhibits featuring NOAA's Science On a Sphere (see SOS description from Office of Oceanic and Atmospheric Research) and are members of



NOAA's SOS Users Collaborative Network. The SOS Network has more than 100 institutions worldwide, reaching over 60 million people, and shares best practices in using the sphere to bring the latest global forecasts and models to the public. ELP supports Florida Aquarium (Tampa), International Game Fish Association (Dania Beach), and Rookery Bay National Estuarine Research Reserve (Naples), all members of the Coastal Ecosystem Learning Center (CELC) Network, a consortium of 25 aquariums and marine science education centers with a reach of over 20 million people. The CELC Network works with NOAA and each member institution to engage the public in protecting coastal and marine ecosystems. ELP supports the Manatee Bowl and Spoonbill Bowl in Florida, two of 25 regional competitions of the National Ocean Sciences Bowl (NOSB). The NOSB is an academic competition that engages high school students in learning about ocean sciences and related STEM careers while helping them become knowledgeable citizens and environmental stewards. ELP also supports the AMS DataStreme courses for K-12 educators through a grant and in-kind support. Local implementation teams in the state offer DataStreme courses that use weather, climate, and the ocean as contexts for teaching science and improving understanding about the Earth system. Additionally, Florida State University provides support to and receives support from a grant recipient to advance NOAA's mission.

### ***Gulf Breeze***

#### **National Ocean Service (NOS) - [Gulf Regional Field Office](#)**

NOAA's Center for Operational Oceanographic Products and Services has opened a regional field office located in the EPA building in Gulf Breeze, FL. This office operates and maintains the Gulf Coast portion of the National Water Level Observation Network (NWLON) for the collection, analysis and dissemination of water level observations and long-term sea level trends. NWLON is nationally composed of 210 primary and long-term control tide stations, which provide basic tidal data for U.S. coastal and marine boundaries and for charting data. Other uses range from storm surge warnings to commercial and recreational vessel navigation to global climate change and tectonic studies.

### ***FL-2***

#### ***Apalachicola***

#### **National Ocean Service (NOS) - [Apalachicola Bay National Estuarine Research Reserve](#)**

The 234,715 acre Apalachicola Research Reserve was designated in 1979 and is managed by the Florida Department of Environmental Protection. Located in the Florida panhandle, the Apalachicola Bay basin is a wonder of natural diversity, featuring 1,162 plant species, 315 species of birds, over 180 species of fresh, estuarine and saltwater fish, and 57 species of mammals, as well as the greatest assortment of amphibians and reptiles in North America above Mexico. The site includes an 18,000 square foot environmental education and training center featuring three large walk-around tanks housing plants and animals representative of river, bay, and gulf habitats. Between 60 to 85 percent of the local population make their living directly from the fishing industry, most of which is done in reserve waters. Research projects that target commercial fisheries management and the food web are a high priority. Additionally, the reserve maintains a long-term water quality monitoring program and a highly sophisticated GIS database which is used to educate coastal managers and visiting researchers about the area and its ecology. The reserve is also a partner in the NOAA Sentinel Site Program.

### ***Panama City***

#### **National Marine Fisheries Service (NMFS) - [Panama City Laboratory](#)**

The Panama City Laboratory conducts research critical to the management of fisheries and habitats of the South Atlantic and Gulf of Mexico. Species of interest include reef fishes (snappers, groupers, tile fishes, and others), coastal pelagic fishes (mackerels and tunas, and sharks (coastal and pelagic species). Focal habitats include inshore and offshore reef systems, marine protected areas and other essential fish habitats for these groups. Specific research activities focus on distribution, abundance, movement, migration, stock identification, predator-prey relations, age and growth, reproductive biology and recruitment. The laboratory conducts Highly Migratory Species shark assessments (both domestic and

international (ICCAT)) and research on threatened and endangered species (sawfish, gulf sturgeon). The Lab conducts a fishery independent trap video survey on the west Florida shelf along with an inshore juvenile shark survey.

**National Marine Fisheries Service (NMFS) - [Shark Fishery Observer Programs](#)**

The shark bottom longline and shark driftnet observer programs cover vessels fishing in the U.S. Atlantic Ocean and Gulf of Mexico; primarily in US waters from North Carolina through Texas. The shark gillnet observer program primarily monitors vessels off east Florida and Georgia, and more recently in the Gulf of Mexico and North Carolina.

***Tallahassee***

**NOAA Office of Education - [NOAA Center for Coastal and Marine Ecosystems](#)**

The NOAA Center for Coastal and Marine Ecosystems is led by Florida A&M University in collaboration with its partner institutions: Bethune-Cookman University, California State University Monterey Bay, Jackson State University, Texas A&M University-Corpus Christi, and the University of Texas at Rio Grande Valley. This Center is supported through a cooperative agreement award from NOAA's Educational Partnership Program with Minority Serving Institutions as a future workforce investment toward NOAA's mission. The purpose of the award is to expand participation in education, training, capacity building, and collaborative research focusing on groups that are traditionally underrepresented in NOAA mission-relevant Science Technology Engineering and Math (STEM), natural resources management, and policy disciplines. Center scientists and students will employ an integrated research approach to develop products in support of NOAA's management and stakeholder goals. Among these goals are efforts to transform large datasets to further develop coastal environmental intelligence and communicate place-based conservation practices for healthy oceans, resilient coastal communities, economies, and ecosystems. The center will utilize research as a mechanism to train students and develop their competencies and skills in coastal environmental intelligence. The center student recruitment plan accommodates entry from associate degree programs at community colleges, undergraduate degree programs, master's degree programs, and doctoral programs at partner institutions.

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

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

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

### **FL-3**

#### **Gainesville**

##### **National Marine Fisheries Service (NMFS) - [Recruiting - Training - Research Program](#)**

The Southeast Fisheries Science Center's Recruiting Training Research Program is a joint program between NMFS and the University of Florida. The program recruits top undergraduates into the field of fisheries population dynamics and careers with NMFS; provides training via continuing education courses for NMFS employees; and conducts population dynamics and stock assessment research in support of the NMFS mission in a unique collaboration of undergraduates, graduate students, post-doctoral associates, university faculty, and NMFS biologists.

### **FL-4**

#### **Jacksonville**

##### **National Marine Fisheries Service (NMFS) - [Fernandina Beach Field Office](#)**

The Fernandina Beach Field Office is strategically located near the center of the endangered North Atlantic right whale's calving area. This Office coordinates right whale recovery activities in the Southeast Region, as well as outreach and communication on management and recovery activities.

##### **National Ocean Service (NOS) - Jacksonville [PORTS®](#)**

A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community in Jacksonville. Real-time data are quality-controlled and disseminated to local users for safe and efficient navigation and include water level from six stations, currents from seven stations, meteorological data from six locations and air gap information for the Dames Point Bridge.

##### **National Ocean Service (NOS) – [Navigation Response Team](#)**

NOAA's Navigation Response Team 2 operates out of Fernandina Beach, supporting navigation in the ports from North Carolina to Florida. 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 Weather Service (NWS) - [Center Weather Service Unit](#)**

Housed in the Federal Aviation Administration's Jacksonville Air Route Traffic Control Center (ARTCC) in Hilliard, the NWS Center Weather Service Unit (CWSU) staff provides aviation forecasts and other weather information to ARTCC personnel for their use in directing the safe, smooth flow of aviation traffic in northern Florida, parts of Alabama, southern Georgia and southern South Carolina.

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

This NWS Weather Forecast Office (WFO) is staffed around-the-clock every day, and provides the best possible weather, water, and climate forecasts and warnings to residents of 15 counties in northeast Florida and 13 counties in southeast Georgia. Highly trained forecasters issue warnings and forecasts for events, including severe thunderstorms, tornadoes, winter storms, floods, and heat waves. This essential information is provided to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and NOAA Weather Radio All Hazards.

Forecasters also provide Impact-based Decision-Support Services (IDSS), both remotely and on-site, during critical emergencies, such as wildfires, floods, chemical spills, and for major recovery efforts such as those following the Joplin

and Moore tornadoes, Hurricanes Katrina and Sandy, and the Sept. 11, 2001, terrorist attacks in New York City and Washington D.C. The WFO collects and disseminates precipitation, river, and rainfall data, and prepares local climatological data. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and educational programs, which helps build strong working relationships with local partners in emergency management, government, the media and academic communities. The WFO operates Automated Surface Observing Stations (ASOS), as well as the local Doppler Weather Radar, which provides critical information about current weather conditions. The radar data enables forecasters to issue warnings for tornadoes, severe thunderstorms, and flash floods.

#### ***Ponte Vedra Beach***

#### **National Ocean Service (NOS) - [Guana Tolomato Matanzas National Estuarine Research Reserve](#)**

The 73,352-acre Guana Tolomato Matanzas Research Reserve was designated in 1999 and is managed by the Florida Department of Environmental Protection. The site includes salt marsh and mangrove tidal wetlands, oyster bars, estuarine lagoons, upland habitat, and offshore seas in Northeast Florida. It is located 30 miles north of St. Augustine and contains the northernmost extent of mangrove habitat on the east coast, some of the highest dunes in Florida (measuring 30-40 feet), salt and freshwater marshes, cypress and hardwood swamps, shell mounds, and xeric hammocks. Within the site the Matanzas Inlet is the last naturally occurring inlet on the east coast of Florida that has not been subject to dredging and other manmade disturbances. The reserve supports many resident and migratory fish and waterfowl, and a variety of threatened and endangered species, including the manatee, the least tern, and the loggerhead, green and leatherback turtles. It also serves as calving grounds for the endangered Right Whale. Reserve staff interpret scientific information for the benefit of coastal decision makers and planners, and and conduct outreach and education programs for the community.

#### ***FL-8***

#### ***Melbourne***

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

Located at the Melbourne Regional Airport, this NWS Weather Forecast Office (WFO) is staffed around-the-clock every day, and provides the best possible weather, water, and climate forecasts and warnings for east Central Florida and adjacent coastal waters. Highly trained forecasters issue warnings and forecasts for events, including severe thunderstorms, tornadoes, winter storms, floods, and heat waves. This essential information is provided to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and NOAA Weather Radio All Hazards.

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

## **Titusville**

### **National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - [U.S. Climate Reference Network](#)**

The U.S. Climate Reference Network (USCRN) is an operationally viable research network of 135 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).

### **Office of Oceanic and Atmospheric Research (OAR) - [Science On a Sphere® at U.S. Astronaut Hall of Fame](#)**

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

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

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to build the capacity of institutions and networks to advance NOAA's mission through formal (K-12) and informal education at national, regional, and local levels. In Florida, ELP supports Kennedy Space Center Visitor Complex (Titusville), E.O. Wilson Biophilia Center (Freeport), Orlando Science Center, South Florida Science Center and Aquarium (West Palm Beach), and Galaxy E3 Elementary (Boynton Beach), all of which have permanent exhibits featuring NOAA's Science On a Sphere (see SOS description from Office of Oceanic and Atmospheric Research) and are members of NOAA's SOS Users Collaborative Network. The SOS Network has more than 100 institutions worldwide, reaching over 60 million people, and shares best practices in using the sphere to bring the latest global forecasts and models to the public. ELP supports Florida Aquarium (Tampa), International Game Fish Association (Dania Beach), and Rookery Bay National Estuarine Research Reserve (Naples), all members of the Coastal Ecosystem Learning Center (CELC) Network, a consortium of 25 aquariums and marine science education centers with a reach of over 20 million people. The CELC Network works with NOAA and each member institution to engage the public in protecting coastal and marine ecosystems. ELP supports the Manatee Bowl and Spoonbill Bowl in Florida, two of 25 regional competitions of the National Ocean Sciences Bowl (NOSB). The NOSB is an academic competition that engages high school students in learning about ocean sciences and related STEM careers while helping them become knowledgeable citizens and environmental stewards. ELP also supports the AMS DataStreme courses for K-12 educators through a grant and in-kind support. Local implementation teams in the state offer DataStreme courses that use weather, climate, and the ocean as contexts for teaching science and improving understanding about the Earth system. Additionally, Florida State University provides support to and receives support from a grant recipient to advance NOAA's mission.

## **FL-10**

### **Orlando**

#### **Office of Oceanic and Atmospheric Research (OAR) - [Science On a Sphere® at Orlando Science Center](#)**

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

#### **Office of the Chief Information Officer (OCIO) - [High Performance Computing and Communications](#)**

The Office of the Chief Information Officer oversees operational high performance computing in partnership with the National Weather Service. NOAA's operational supercomputers process and analyze earth observations at quadrillions of calculations per second to support weather, water, and climate forecast models. The primary supercomputer, Luna, is located in Reston, Virginia, and the secondary supercomputer, Surge, is located in Orlando, Florida.

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

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to build the capacity of institutions and networks to advance NOAA's mission through formal (K-12) and informal education at national, regional, and local levels. In Florida, ELP supports Kennedy Space Center Visitor Complex (Titusville), E.O. Wilson Biophilia Center (Freeport), Orlando Science Center, South Florida Science Center and Aquarium (West Palm Beach), and Galaxy E3 Elementary (Boynton Beach), all of which have permanent exhibits featuring NOAA's Science On a Sphere (see SOS description from Office of Oceanic and Atmospheric Research) and are members of NOAA's SOS Users Collaborative Network. The SOS Network has more than 100 institutions worldwide, reaching over 60 million people, and shares best practices in using the sphere to bring the latest global forecasts and models to the public. ELP supports Florida Aquarium (Tampa), International Game Fish Association (Dania Beach), and Rookery Bay National Estuarine Research Reserve (Naples), all members of the Coastal Ecosystem Learning Center (CELC) Network, a consortium of 25 aquariums and marine science education centers with a reach of over 20 million people. The CELC Network works with NOAA and each member institution to engage the public in protecting coastal and marine ecosystems. ELP supports the Manatee Bowl and Spoonbill Bowl in Florida, two of 25 regional competitions of the National Ocean Sciences Bowl (NOSB). The NOSB is an academic competition that engages high school students in learning about ocean sciences and related STEM careers while helping them become knowledgeable citizens and environmental stewards. ELP also supports the AMS DataStreme courses for K-12 educators through a grant and in-kind support. Local implementation teams in the state offer DataStreme courses that use weather, climate, and the ocean as contexts for teaching science and improving understanding about the Earth system. Additionally, Florida State University provides support to and receives support from a grant recipient to advance NOAA's mission.

## **FL-11**

### **Tampa**

#### **National Ocean Service (NOS) - Tampa Bay [PORTS®](#)**

A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community in Tampa Bay. Real-time data are quality-controlled and disseminated to local users for safe and efficient navigation and include water level from four stations, currents from three stations, and meteorological data from eight locations.

**Office of the Chief Information Officer (OCIO) - [Service Delivery Division](#)**

The Service Delivery Division provides a suite of IT services to support NOAA's mission. Our work includes IT infrastructure design and maintenance, network and server management and administration, desktop configuration and maintenance, application and system design and implementation, and IT security.

**FL-13**

***St. Petersburg***

**National Marine Fisheries Service (NMFS) - NOAA Fisheries [Southeast Inspection Branch](#)**

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

**FL-14**

***Seffner***

**National Marine Fisheries Service (NMFS) - NOAA Fisheries [Central Florida Lot Inspection Office](#)**

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

***St. Petersburg***

**National Marine Fisheries Service (NMFS) - [Atlantic Highly Migratory Species Management Division](#)**

The Atlantic Highly Migratory Species Management Division manages Atlantic tuna, sharks, swordfish, and billfish under the Magnuson-Stevens Fishery Conservation and Management Act. In cooperation with an external advisory panel, the division develops and implements Fishery Management Plans for these species taking into account all domestic and international requirements under the Atlantic Tunas Convention Act, Marine Mammal Protection Act, the Endangered Species Act, and the Migratory Bird Treaty Act. The St. Petersburg office handles several Atlantic HMS fishery issues including billfish and swordfish fisheries, tournament registration, recreational fisheries, pelagic longline fishing, and recreational non-tournament reporting of billfishes and swordfish.

**National Marine Fisheries Service (NMFS) - [Southeast Regional Office](#)**

The Southeast Regional Office headquarters are located in St. Petersburg, adjacent to the University of South Florida campus. The Office manages and conserves living marine resources and habitat of the Gulf of Mexico, South Atlantic and U.S. Caribbean to promote healthy, functioning marine ecosystems, afford economic opportunities and enhance the quality of life for the American public. The 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 70 marine mammal stocks and 23 threatened or endangered species, including the North Atlantic right whale, five sea turtle, Johnson's sea grass, and seven coral, also occur in this region. The Office consults on 40 percent of the nation's coastal development permits, provides fish passage and ecological flow recommendations at dozens of barriers, supports large-scale 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. With partners, the Office manages species in 17 Fishery Management Plans, along with the nation's first and only comprehensive regulatory program for offshore aquaculture in federal waters.

## ***Tampa Bay***

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

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

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

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to build the capacity of institutions and networks to advance NOAA's mission through formal (K-12) and informal education at national, regional, and local levels. In Florida, ELP supports Kennedy Space Center Visitor Complex (Titusville), E.O. Wilson Biophilia Center (Freeport), Orlando Science Center, South Florida Science Center and Aquarium (West Palm Beach), and Galaxy E3 Elementary (Boynton Beach), all of which have permanent exhibits featuring NOAA's Science On a Sphere (see SOS description from Office of Oceanic and Atmospheric Research) and are members of NOAA's SOS Users Collaborative Network. The SOS Network has more than 100 institutions worldwide, reaching over 60 million people, and shares best practices in using the sphere to bring the latest global forecasts and models to the public. ELP supports Florida Aquarium (Tampa), International Game Fish Association (Dania Beach), and Rookery Bay National Estuarine Research Reserve (Naples), all members of the Coastal Ecosystem Learning Center (CELC) Network, a consortium of 25 aquariums and marine science education centers with a reach of over 20 million people. The CELC Network works with NOAA and each member institution to engage the public in protecting coastal and marine ecosystems. ELP supports the Manatee Bowl and Spoonbill Bowl in Florida, two of 25 regional competitions of the National Ocean Sciences Bowl (NOSB). The NOSB is an academic competition that engages high school students in learning about ocean sciences and related STEM careers while helping them become knowledgeable citizens and environmental stewards. ELP also supports the AMS DataStreme courses for K-12 educators through a grant and in-kind support. Local implementation teams in the state offer DataStreme courses that use weather, climate, and the ocean as contexts for teaching science and improving understanding about the Earth system. Additionally, Florida State University provides support to and receives support from a grant recipient to advance NOAA's mission.

## ***FL-15***

### ***Lakeland***

#### **Office of Marine and Aviation Operations (OMAO) - [Aircraft Operations Center](#)**

The airplanes of the Aircraft Operations Center (AOC) are flown in support of NOAA's mission to promote global environmental assessment, prediction and stewardship of the Earth's environment. NOAA's aircraft operate throughout the United States and around the world; over open oceans, mountains, coastal wetlands, and Arctic pack ice. These versatile aircraft provide scientists with airborne platforms necessary to collect the environmental and geographic data essential to their research. NOAA demonstrates a challenging and multi-disciplinary approach to meeting the responsibilities as the "Earth Systems Agency." The AOC provides capable, mission-ready aircraft and professional crews



to the scientific community wherever and whenever they are required. Whether studying global climate change or acid rain, assessing marine mammal populations, surveying coastal erosion, investigating oil spills, flight checking aeronautical charts, or improving hurricane prediction models, the AOC flight crews continue to operate in some of the world's most demanding flight regimes.

Aircraft based at the AOC include two Lockheed WP-3D Orions and a Gulfstream IV (also known as Hurricane Hunters), four Twin Otters, one King Air, and a Jet Prop. The Hurricane Hunter Lockheed WP-3D Orion and the Gulfstream IV-SP high performance long range aircraft are among the most advanced airborne environmental research planes flying today. These aircraft give scientists a unique platform for the study of tropical cyclones and other severe storms, global climate change, air chemistry and pollution oceanography, arctic ice formation, and many other environmental issues. The AOC and the aircraft are operated under the direction of officers from the NOAA Commissioned Officer Corps. 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 aircraft, manage research projects, conduct diving operations, and serve in staff positions throughout NOAA.

### ***Sarasota***

#### **Office of Oceanic and Atmospheric Research (OAR) - [Science on a Sphere Explorer™ at Mote Marine Laboratory](#)**

Science on a Sphere Explorer™ (SOSx) is a portable, flat-screen virtual globe based on NOAA's 6-foot diameter Science On a Sphere® display system. This ground-breaking software uses video game technology to make SOS datasets interactive and more accessible to schools and small museums. SOSx currently has more than 115 space, ocean, and atmospheric datasets that can be used to explore complex environmental processes.

### ***FL-17***

#### ***Sebring***

#### **National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - [U.S. Climate Reference Network](#)**

The U.S. Climate Reference Network (USCRN) is an operationally viable research network of 135 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).

### ***Miami***

#### **Office of Oceanic and Atmospheric Research (OAR) - [National Hurricane Center Library](#)**

The National Hurricane Center Library is a branch of NOAA's Miami Regional Library. The library specializes in hurricanes and tropical meteorology. The collection includes books and journals on hurricanes, cyclones, typhoons, hurricane damage, economic impact, disaster awareness, mitigation, handwritten weather records, anecdotal hurricane experiences, videos, slides, information on coastal storm-related building and construction, wind studies, and newspaper articles of hurricane damage.

## **FL-18**

### **Fort Pierce**

#### **Office of Oceanic and Atmospheric Research (OAR) - [Cooperative Institute for Ocean Exploration, Research, and Technology](#)**

Established in 2009, the Cooperative Institute for Ocean Exploration, Research, and Technology (CIOERT), is a consortium led by the Harbor Branch Oceanographic Institute at Florida Atlantic University that includes the University of North Carolina - Wilmington, University of Miami and SRI International. CIOERT explores and studies the nation's ocean frontiers using innovation and cutting edge technologies under three research themes: (1) develop advanced underwater technologies, (2) explore and research the frontier regions of the eastern U.S. Continental Shelf and Slope and beyond, and (3) vulnerable deep and shallow coral ecosystems.

### **Key Largo**

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

Designated in 1990, Florida Keys National Marine Sanctuary protects 2,900 square nautical miles of waters, surrounding the Florida Keys, from south of Miami westward to encompass the Dry Tortugas, excluding Dry Tortugas National Park, using an approach that addresses the variety of impacts, pressures, and threats to the Florida Keys ecosystem. The sanctuary is administered by NOAA and is jointly managed with the State of Florida. Within the boundaries of the sanctuary lie spectacular, unique, and nationally significant marine resources including the continental United States' only coral barrier reef, extensive seagrass beds, mangrove fringed islands, and more than 6,000 species of marine life. Together, these habitats support the life cycles of a rich array of tropical marine and estuarine organisms, endangered and protected species. Numerous historic shipwrecks and lighthouses within the sanctuary typify the rich cultural heritage of the Florida Keys, which, in addition, may contain evidence of human activity and the remains of animals from 15,000 years ago.

### **Key West**

#### **National Ocean Service (NOS) - [Florida Keys National Marine Sanctuary \(headquarters\) and Eco Discovery Center](#)**

Designated in 1990, Florida Keys National Marine Sanctuary protects 2,900 square nautical miles of waters, surrounding the Florida Keys, from south of Miami westward to encompass the Dry Tortugas, excluding Dry Tortugas National Park, using an approach that addresses the variety of impacts, pressures, and threats to the Florida Keys ecosystem. The Florida Keys National Marine Sanctuary is administered by NOAA and is jointly managed with the State of Florida. Within the boundaries of the sanctuary lie spectacular, unique, and nationally significant marine resources including the continental United States' only coral barrier reef, extensive seagrass beds, mangrove fringed islands, and more than 6,000 species of marine life. Together, these habitats support the life cycles of a rich array of tropical marine and estuarine organisms, endangered and protected species. Numerous historic shipwrecks and lighthouses within the sanctuary typify the rich cultural heritage of the Florida Keys, which in addition, may contain evidence of human activity and the remains of animals from 15,000 years ago.

The Eco-Discovery Center, sponsored and operated by Florida Keys National Marine Sanctuary, South Florida Water Management District, Everglades and Dry Tortugas National Parks, National Wildlife Refuges of the Florida Keys and Eastern National, opened its doors in 2007 to take visitors on a journey into the world of the native plants and animals of the Keys, both on land and underwater. Featuring more than 6,000 square feet of interactive and dynamic exhibits, visitors leave with an increased awareness and appreciation of the need to protect and conserve the ecosystem of South Florida. The center's theater features "Reflections of the Florida Keys," a short film on the diverse ecosystem of the Florida Keys by renowned filmmaker Bob Talbot. Mote Marine Laboratory's Living Reef exhibit, which includes a 2,500-gallon reef tank with living corals and tropical fish, highlights the coral reef environment.

### ***Miami/Virginia Key***

#### **Office of Oceanic and Atmospheric Research (OAR) - [Miami Regional Library](#)**

The NOAA's Miami Regional Library supports coastal and open ocean programs, tropical and hurricane meteorology, air-sea interaction, ocean physics, chemistry, acoustics, atmospheric chemistry, and marine geology. Special collections include: NOAA Laboratories Technical Report Series for atmospheric sciences, the Harris B. Stewart Collected Papers, foreign and Caribbean meteorological reports, handwritten local weather records, Wood Hole Oceanographic Institution technical reports and dissertations, film loops of weather, and historical weather data of Key West and Miami.

### ***FL-19***

#### ***Naples***

#### **National Ocean Service (NOS) - [Rookery Bay National Estuarine Research Reserve](#)**

The 110,000 acre Rookery Bay Research Reserve was designated in 1978 and is managed by the Florida Department of Environmental Protection. Located south of Naples on the Florida Gulf Coast, the site is situated near one of the fastest growing business and retirement areas in the nation. The reserve includes a nearly pristine subtropical mangrove forested estuary, and contains an estimated 70,000 acres of open waters, representing 64 percent of the reserve. The reserve protects and restores vital habitat, brings diverse stakeholders together to solve complex coastal issues, offers a dynamic visitor experience with land and water trails, and provides extensive education programs at its 16,500 square-foot Environmental Learning Center. The center has research laboratories, classrooms, a 140-seat auditorium, and a two-story visitor center. Interactive exhibits address research and stewardship efforts ongoing within the reserve. The facility was designated as a Coastal Ecosystem Learning Center by Coastal America.

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

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to build the capacity of institutions and networks to advance NOAA's mission through formal (K-12) and informal education at national, regional, and local levels. In Florida, ELP supports Kennedy Space Center Visitor Complex (Titusville), E.O. Wilson Biophilia Center (Freeport), Orlando Science Center, South Florida Science Center and Aquarium (West Palm Beach), and Galaxy E3 Elementary (Boynton Beach), all of which have permanent exhibits featuring NOAA's Science On a Sphere (see SOS description from Office of Oceanic and Atmospheric Research) and are members of NOAA's SOS Users Collaborative Network. The SOS Network has more than 100 institutions worldwide, reaching over 60 million people, and shares best practices in using the sphere to bring the latest global forecasts and models to the public. ELP supports Florida Aquarium (Tampa), International Game Fish Association (Dania Beach), and Rookery Bay National Estuarine Research Reserve (Naples), all members of the Coastal Ecosystem Learning Center (CELC) Network, a consortium of 25 aquariums and marine science education centers with a reach of over 20 million people. The CELC Network works with NOAA and each member institution to engage the public in protecting coastal and marine ecosystems. ELP supports the Manatee Bowl and Spoonbill Bowl in Florida, two of 25 regional competitions of the National Ocean Sciences Bowl (NOSB). The NOSB is an academic competition that engages high school students in learning about ocean sciences and related STEM careers while helping them become knowledgeable citizens and environmental stewards. ELP also supports the AMS DataStreme courses for K-12 educators through a grant and in-kind support. Local implementation teams in the state offer DataStreme courses that use weather, climate, and the ocean as contexts for teaching science and improving understanding about the Earth system. Additionally, Florida State University provides support to and receives support from a grant recipient to advance NOAA's mission.

## **FL-20**

### **West Palm Beach**

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

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## **FL-22**

### **West Boynton Beach**

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

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to build the capacity of institutions and networks to advance NOAA's mission through formal (K-12) and informal education at national, regional, and local levels. In Florida, ELP supports Kennedy Space Center Visitor Complex (Titusville), E.O. Wilson Biophilia Center (Freeport), Orlando Science Center, South Florida Science Center and Aquarium (West Palm Beach), and Galaxy E3 Elementary (Boynton Beach), all of which have permanent exhibits featuring NOAA's Science On a Sphere (see SOS description from Office of Oceanic and Atmospheric Research) and are members of NOAA's SOS Users Collaborative Network. The SOS Network has more than 100 institutions worldwide, reaching over 60 million people, and shares best practices in using the sphere to bring the latest global forecasts and models to the public. ELP supports Florida Aquarium (Tampa), International Game Fish Association (Dania Beach), and Rookery Bay National Estuarine Research Reserve (Naples), all members of the Coastal Ecosystem Learning Center (CELC) Network, a consortium of 25 aquariums and marine science education centers with a reach of over 20 million people. The CELC Network works with NOAA and each member institution to engage the public in protecting coastal and marine ecosystems. ELP supports the Manatee Bowl and Spoonbill Bowl in Florida, two of 25 regional competitions of the National Ocean Sciences Bowl (NOSB). The NOSB is an academic competition that engages high school students in learning about ocean sciences and related STEM careers while helping them become knowledgeable citizens and environmental stewards. ELP also supports the AMS DataStreame courses for K-12 educators through a grant and in-kind support. Local implementation teams in the state offer DataStreame courses that use weather, climate, and the ocean as contexts for teaching science and improving understanding about the Earth system. Additionally, Florida State University provides support to and receives support from a grant recipient to advance NOAA's mission.

## **FL-23**

### ***Dania Beach***

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

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## **FL-27**

### ***South Florida Coastline***

#### **Office of Oceanic and Atmospheric Research (OAR) - [Coral Reef Watch Environmental Monitoring](#)**

These permanent monitoring stations are part of the Coral Reef Watch program, a collaborative effort between NOAA's Atlantic Oceanographic and Meteorological Laboratory (AOML) and NOAA's National Environmental Satellite, Data, and Information Service (NESDIS). Remote monitoring stations in the Florida Keys, Port Everglades, and the Caymans, continually observe meteorological and oceanographic parameters. These data are transmitted to AOML and the integrated data are used to predict, monitor, and model incidences of coral bleaching and other coral-related biological events. AOML is also involved in FL Keys environmental monitoring. Since 1992, a network of 7 monitoring stations in the Florida Keys and Florida Bay, called C-Man stations, has been established through a cooperative effort between AOML and the Florida Institute for Oceanography. These stations monitor and report meteorological and oceanographic parameters from their locations. The data is quality controlled and maintained for distribution at AOML and is used by the Florida Keys National Marine Sanctuary and research scientists to monitor and study coral-reef-related issues such as coral bleaching. Local mariners and recreational fishermen have also found the data to be useful in planning their excursions.

**FL-19**

**Naples**

**National Ocean Service (NOS) - [Rookery Bay National Estuarine Research Reserve](#)**

The 110,000 acre Rookery Bay Reserve was designated in 1978 and is managed by the Florida Department of Environmental Protection. Located south of Naples on the Florida Gulf Coast, the site is situated near one of the fastest growing business and retirement areas in the nation. The reserve protects a nearly pristine subtropical mangrove forested estuary, and contains an estimated 70,000 acres of open waters, representing 64 percent of the reserve. The reserve protects and restores vital habitat, brings diverse stakeholders together to solve complex coastal issues, offers a dynamic visitor experience with land and water trails, and provides extensive education programs.

**FL-20**

**West Palm Beach**

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

In addition to conducting mandated essential fish habitat consultations associated with extensive coastal development activities, the Office contributes to implementation of NOAA's Coral Reef Conservation Program in Florida and the U.S. Caribbean, supports the infrastructure planning activities of the Federal Highway Administration and Florida Department of Transportation, participates in the planning processes for major federal water development projects such as port expansions, and works with state government and stakeholders to reduce the impacts of fishing on coral reef habitat.

**FL-22**

**West Palm Beach**

**Office of Oceanic and Atmospheric Research (OAR) - [Science On a Sphere® at South Florida Science Center and Aquarium](#)**

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

**Delray Beach**

**Office of Oceanic and Atmospheric Research (OAR) - [Science On a Sphere® at Galaxy E3 Elementary School](#)**

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**FL-23**

**Dania Beach**

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

The Dania Beach Field Office analyzes the impacts of projects in southeastern Florida on species and habitat protected by the *Endangered Species Act*. These analyses ensure important projects can be completed without jeopardizing the sustainability of threatened and endangered species or the habitat critical to their recovery.

### **FL-23**

#### **Hollywood**

##### **National Marine Fisheries Service (NMFS) - NOAA Fisheries [South Florida Lot Inspection Office](#)**

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

### **FL-25**

#### **Everglades City**

##### **National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - [U.S. Climate Reference Network](#)**

The U.S. Climate Reference Network (USCRN) is an operationally viable research network of 135 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).

### **Miami**

##### **National Environmental Satellite, Data, and Information Service (NESDIS) - [Office of Satellite Data Processing and Distribution](#)**

The Communications Station (COMMSTA) Miami is a key member of the Coast Guard's Atlantic Area Communications Systems (LANTCOMMSYS) and one of four COMMSTA's on the east coast of the United States. They provide communication services to Coast Guard vessels and aircraft, to the Navy and other agencies, and to the maritime public. They also house eight NOAA Search and Rescue Satellite Aided Tracking (SARSAT) antennas and associated ground equipment supporting MEOSAR and polar satellite search and rescue operations. These ground systems, referred to as Local User Terminals (LUTs) can receive signals, relayed through polar orbiting satellites, from ships, aircraft or individuals in distress. The location of the distress signal is automatically forwarded to the SARSAT Mission Control Center, which notifies the appropriate Rescue Coordination Center. SARSAT is part of an international humanitarian effort helping to improve the rescue of persons in distress and has saved more than 8,200 lives in the United States since 1982.

##### **National Weather Service (NWS) - [Center Weather Service Unit](#)**

Housed in the Federal Aviation Administration's Miami Air Route Traffic Control Center (ARTCC), the NWS Center Weather Service Unit (CWSU) staff provides aviation forecasts and other weather information to ARTCC personnel for their use in directing the safe, smooth flow of aviation traffic in southern Florida.

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

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

## **FL-26**

### **FL Keys/Dry Tortugas**

#### **Office of Oceanic and Atmospheric Research (OAR) - [National Coral Reef Monitoring Program](#)**

This site is part of the National Coral Reef Monitoring Program's (NCRMP) network of sentinel climate and ocean acidification monitoring sites. Sentinel sites in the Atlantic are established in La Parguera, Puerto Rico, at Cheeca Rocks in the Florida Keys National Marine Sanctuary, Flower Garden Banks National Marine Sanctuary in the Gulf of Mexico, and the Dry Tortugas in the Florida Keys. These sites provide coral scientists with additional datasets and insight on changing ocean chemistry and the progression of ocean acidification, as well as the ecological impacts of these variables, across the Caribbean basin and the Gulf of Mexico. The NCRMP, co-funded by NOAA's Coral Reef Conservation Program and Ocean Acidification Program, seeks to provide sustained and long-term measurement of key variables to gauge the status and trends of coral reef health.

### **Key West**

#### **National Weather Service (NWS) - [Key West WFO](#)**

This NWS Weather Forecast Office (WFO) is staffed around-the-clock every day, and provides the best possible weather, water, and climate forecasts and warnings to residents of Monroe County. This office also provides marine warnings and forecasts for the area covering the waters of the lower Keys and Florida Bay west to the Dry Tortugas and 60 miles south into the waters of the Atlantic, including the Florida Straits. Highly trained forecasters issue warnings and forecasts for events, including severe thunderstorms, tornadoes, winter storms, floods, and heat waves. This essential information is provided to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and NOAA Weather Radio All Hazards.

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

### **Miami**

#### **National Weather Service (NWS) - [National Hurricane Center](#)**

Located at Florida International University's University Park campus in Miami and co-located with the Miami NWS Weather Forecast Office, the NWS National Hurricane Center (NHC) is responsible for hurricane forecasts for the Atlantic ocean, the Caribbean, Gulf of Mexico, and the Eastern North Pacific Ocean. While NHC is best known for its hurricane forecast and warning program, its other responsibilities include extensive year-round marine and aviation forecasts, as well as warning programs for tropical and subtropical regions of the North Atlantic, Caribbean, Gulf of Mexico and Eastern North Pacific, including adjacent land areas. To fulfill all of these responsibilities, the NHC prepares and distributes tropical weather forecasts that employ the latest electronic equipment. It also conducts relevant training for courses for meteorologists and emergency response officials from around the world. NHC is one of the nine NWS National Centers for Environmental Prediction and works very closely with the World Meteorological Organization.



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

Located at Florida International University and co-located with the National Hurricane center, this National Weather Service Forecast Office (WFO) is staffed around the clock every day, and provides the best possible weather, water, and climate forecasts and warnings to residents of southern Florida, except for the Florida Keys. Highly trained forecasters issue warnings and forecasts for events including hurricanes and tropical storms, severe thunderstorms, tornadoes, floods, and heat waves. This essential information is provided to the general public, media, emergency management and law enforcement officials, the aviation, and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and broadcast on NOAA Weather Radio All Hazards.

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

### **Office of Oceanic and Atmospheric Research (OAR) - [United States Weather Research Program Joint Hurricane Testbed](#)**

The Joint Hurricane Testbed (JHT) project, located at the National Hurricane Center, operationally tests research products competitively gathered from the hurricane research community. If the tests are successful, the JHT transitions them into operations for accelerating the improvement hurricane track and intensity forecasts at landfall.

### ***FL-27***

#### ***Miami/Virginia Key***

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

NMFS' Southeast Fisheries Science Center is headquartered on Virginia Key, Miami, Florida, and is comprised of five laboratories (Galveston, TX; Pascagoula, MS; Panama City, FL; Miami, FL; and Beaufort, NC) and two satellite facilities (Lafayette, LA and Stennis Space Center, MS). The Southeast Fisheries Science Center implements a multi-disciplinary science and research program in support of living marine resource management. The 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. The Science Center contributes to the needs of the Regional Fishery Management Councils, Interstate and International Fishery Commissions, Fishery Development Foundations, bilateral and multi-lateral fisheries organizations, government agencies, and the general public. The Miami Laboratory has three divisions: Sustainable Fisheries, Fisheries Statistics, and Protected Resources and Biodiversity.

**National Marine Fisheries Service (NMFS) - [Marine Mammal Health and Stranding Response Program](#)**

NMFS authorizes organizations and volunteers under the *Marine Mammal Protection Act* to respond to marine mammal strandings throughout the United States. The Southeast Fisheries Science Center is responsible for marine mammal stranding responses in the southeast region of the United States. This includes the beaches from North Carolina to Texas, Puerto Rico and the U.S. Virgin Islands; coordinating stranding events, monitoring stranding rates, monitoring human caused mortalities, maintaining a stranding data base for the southeast region, and conducting investigations to determine the cause of unusual stranding events including mass strandings and mass mortalities. The Southeast Region stranding coordinator is in Miami, Florida and the Southeast Region Stranding program administrator is in St. Petersburg, FL (NMFS Southeast Regional Office employee). Stranding network members who are authorized to respond to stranding events are located throughout the region.

**National Marine Fisheries Service (NMFS) - [NOAA Cooperative Marine Education and Research Program](#)**

The Southeast Fisheries Science Center supports the University of Miami Rosenstiel School of Marine and Atmospheric Science/NOAA Cooperative Marine Education and Research Program. The goal is to conduct research in line with the interests of NOAA Fisheries while preparing students for careers in research, management, and public policy that support the sustainable harvest and conservation of our nation's living marine resources.

**National Marine Fisheries Service (NMFS) - [Pelagic Observer Program](#)**

The Pelagic Observer Program is based at the Southeast Fisheries Science Center Miami Laboratory, and is responsible for the collection of catch, bycatch, and effort data from U.S. pelagic longline vessels operating in the northwestern Atlantic and Gulf of Mexico. This fleet targets primarily swordfish and tunas and operates year round. Observers are deployed from a number of ports, as far north as Newfoundland, Canada; throughout the east coast of the United States, the United States Gulf coast, and as far south as Puerto Rico and Trinidad. Pelagic Observer Program staff live throughout the southeast region.

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

The Sea Turtle Stranding and Salvage Network collects information on and documents strandings of marine turtles in the Southeast and Atlantic regions. The network, headquartered in Miami, encompasses the coastal areas of the eighteen state regions from Maine through Texas, and portions of the U.S. Caribbean. Data from network partners throughout the region are compiled and included in a centralized database.

**National Marine Fisheries Service (NMFS) - [Social Science Research Group](#)**

The Social Science Research Group conducts applied socioeconomic and cultural research on the use and management of living marine resources under federal jurisdiction from *North Carolina to Texas and in the U.S. Caribbean*. Scientists interpret available fisheries information from an economic and cultural perspective; develop models and estimate relationships to evaluate the economic and socio-cultural effects of fishery policies on fishers and fishing communities; provide research results and advice to the three fishery management councils in the southeast jurisdiction (South Atlantic, Caribbean, and Gulf of Mexico); and supply social science support for other NMFS programs.

**Office of Oceanic and Atmospheric Research (OAR) - [Atlantic Oceanographic and Meteorological Laboratory](#)**

The Atlantic Oceanographic and Meteorological Laboratory (AOML) is a federal research facility that houses approximately 160 employees on a permanent basis. Research at the AOML improves the understanding and prediction of both hurricane track and intensity, the ocean's role in annual to multi-decadal climate variability, and human impacts on coastal ecosystems. AOML's research encompasses the oceans and climate, the global impacts of increased carbon dioxide and ocean acidification, ocean and human health studies, and the ocean's influence on regional rainfall and hurricanes. AOML is also a major partner in the collection and interpretation of oceanographic data collected via ships, satellites, aircraft, drifting buoys, and floats.

**Office of Oceanic and Atmospheric Research (OAR) - [Cooperative Institute for Marine and Atmospheric Studies](#)**

The Cooperative Institute for Marine and Atmospheric Studies (CIMAS) was established in 1977 in the University of Miami's Rosenstiel School of Marine and Atmospheric Science (RSMAS). CIMAS serves as a mechanism to promote synergisms between University scientists and those in NOAA. CIMAS research is largely partnered with Atlantic Oceanographic and Meteorological Laboratory and the Southeast Fisheries Science Center, and recently with NOAA Satellites and Information Service. University partners include Florida Atlantic University, Florida International University, Florida State University, NOVA Southeastern University, University of Puerto Rico, University of Florida, University of South Florida, and University of the Virgin Islands. Strategic Partnerships also include the southeast regional CIs (CIOERT, NGI and CICS-M) and access is offered to high performance computing, research vessels and unique research facilities now being constructed with funding being provided by the Dept. of Commerce through NIST at UM/RSMAS and NOVA. CIMAS carries out research in seven theme areas: (1) climate research and impacts; (2) tropical weather; (3) sustained ocean and coastal observations; (4) ocean modeling; (5) ecosystem modeling and forecasting; (6) ecosystems management; and (7) protections and restoration of resources.

***Key Biscayne***

**Office of Oceanic and Atmospheric Research (OAR) - [Cooperative Global Air Sampling Network](#)**

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates a Cooperative Global Air Sampling Network to measure the distribution and trends of carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>), the two gases most responsible for human-caused climate change, as well as other greenhouse gases and volatile organic compounds. Samples are collected weekly at fixed locations and on several commercial ships. The air samples are delivered to ESRL/GMD, located in Boulder, CO. The observed geographical patterns and small but persistent spatial gradients are used to better understand the processes, both natural and human induced, that underlie the trends. Air samples have been collected at Key Biscayne since 1972. Researchers at NOAA's Atlantic Oceanographic and Meteorological Laboratory collect the samples. Depending on the wind direction, samples collected at Key Biscayne may represent air that has been influenced by carbon sources and sinks in North America, or air that has been over the Atlantic Ocean. These measurements help determine the magnitude of carbon sources and sinks in North America.

***Biscayne Bay***

**National Marine Fisheries Service (NMFS) - [Biscayne Bay Habitat Focus Area](#)**

As part of the Habitat Blueprint, NOAA has selected ten Habitat Focus Areas (HFAs), place-based locations across the country to maximize the effectiveness of habitat conservation. While each HFA focuses on individual habitat conservation goals outlined in their Implementation Plan, the overarching goal is to demonstrate results in a focused area in a short time period.

Administered by NOAA Fisheries, Office of Habitat Conservation, NOAA's Southeast Fisheries Science Center, Atlantic Oceanographic and Meteorological Laboratory, Office of National Marine Sanctuaries, Fisheries Southeast Regional Office, National Centers for Coastal and Ocean Science, National Centers for Environmental Information, Office for

Coastal Management, and the National Weather Service Miami are coordinating NOAA and partner programs within the Biscayne Bay Habitat Focus Area (HFA). Scientists and resource managers worry that Biscayne Bay may reach conditions where nutrients cause large blooms of algae that shade seagrass beds and ultimately decay and deplete the shallow waters of oxygen. NOAA and its partners are working together in the HFA to monitor the water quality, and physical and biological parameters in Biscayne Bay to better understand and limit these algal blooms. Ultimately, NOAA's efforts in Biscayne Bay are aimed at understanding algal blooms, promoting healthy nursery grounds for fisheries and protected species, and promoting resilient coastal communities.

### ***South Florida Coastline***

#### **Office of Oceanic and Atmospheric Research (OAR) - [Coral Reef Early Warning System Network monitoring](#)**

The Coral Reef Early Warning System (CREWS) network is a series of in situ oceanographic and meteorological monitoring stations situated throughout the Caribbean and at Port Everglades in Fort Lauderdale, Florida. Data from CREWS stations are transmitted to NOAA's Atlantic Oceanographic and Meteorological Laboratory (AOML) and used to predict, monitor, and model incidences of coral bleaching and other coral-related biological events. The data collected from Port Everglades are quality controlled and maintained for distribution at AOML and used by Broward County scientists to monitor and study coral-reef-related issues such as coral bleaching. Local mariners and recreational fishermen have also found the data to be useful in planning their excursions.

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## ***NOAA In Your State***



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