



NOAA In Your State

Hawaii

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 programs based in, and focused on, your state or territory. The entries are listed by statewide, region, and then by congressional districts and cities or towns.

Hawaii Statewide

National Environmental Satellite, Data, and Information Service (NESDIS) - [Marine Optical Buoy Project](#)

The Marine Optical Buoy (MOBY) project supports the calibration of satellite ocean color radiometry data. MOBY measures hyperspectral water-leaving radiance in clear ocean waters off shore of Hawaii. MOBY's unique role as the primary ocean color reference standard requires high quality consistent measurements over time to maintain a true ocean color climate data record. MOBY is a 14-meter long buoy system developed and instrumented to measure upwelling radiance and downwelling irradiance at the sea surface and at three deeper depths. Submarine light is transmitted by fiber optics to the MOBY spectrograph for continuous energy measurements at subnanometer resolution from 340 (ultraviolet) to 950 (near-infrared) nanometers.

National Environmental Satellite, Data, and Information Service (NESDIS) - [Pacific Regional Climate Services Director](#)

NOAA's six Regional Climate Services Directors (RCSDs), which are part of NCEI, support the development and delivery of a wide range of place-based climate science and information products and services to help people make informed decisions. RCSDs regularly communicate with stakeholders about climate information needs, and help build and strengthen active partner networks with public and private constituents. They play a primary role in integrating the work within NOAA and among its partners engaged in developing and delivering climate services at the regional level. These efforts serve to increase the value of climate information to users and support more efficient, cost-effective delivery of products and services.

National Ocean Service (NOS) - [Hawai'i Bay-Watershed Training Program](#)

The Bay-Watershed Training Program (B-WET) is an environmental education program that promotes locally relevant, experiential learning in the K-12 environment. B-WET currently serves seven areas of the country: California, Chesapeake Bay, Great Lakes, Gulf of Mexico, Hawai'i, New England, and the Pacific Northwest. NOAA's Office for Coastal Management helps lead the Hawaii B-WET Program, which 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. Hawai'i B-WET responds to regional education and environmental priorities through local implementation of competitive grant funds.

National Ocean Service (NOS) - [Environmental Literacy Program](#)

Over 500,000 students, teachers, and local community participants have benefited from the environmental literacy program based in the Pacific Office of NOAA's Office for Coastal Management. The team developed an innovative education tool that uses digital globe formats, such as NOAA's Science on a Sphere and the Magic Planet, to provide opportunities for local communities to increase their understanding and use of NOAA's data, information, and programs.

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

The NOAA Office for Coastal Management practices a partner-based, boots-on-the ground regional approach to coastal management, with staff available in the eight regions. Assistance is provided to local, state, and regional coastal resource management efforts. Constituent feedback and assessments are an important part of the effort. Pacific representatives are located in Hawai'i, American Samoa, Guam and the Commonwealth of Northern Marianas Islands. These employees represent NOAA on several regional ocean governance initiatives (e.g., Hawai'i Ocean Resource Management Plan), coordinate NOAA involvement in ocean observing system activities, and support research reserves, coastal zone management, and other NOAA and state coordinated activities.

National Ocean Service (NOS) – [Pacific Risk Management Ohana \(PRiMO\)](#)

NOAA's Office for Coastal Management facilitates and engages in Pacific Risk Management O'Hana (PRiMO) to bring people and organizations together to promote resilient communities in the face of many natural and man-made challenges. PRiMO members participate in hui, or working groups, to develop and implement action plans that improve resilience in the Pacific region. A highlight of the PRiMO effort is the annual conference, held each March in Hawai'i, where hundreds of participants gather to discuss ongoing initiatives, learn from each other, and make the connections and action plans that ultimately result in improved safety and sustainability for Pacific Island communities.

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

NOAA's Office of Law Enforcement is the only U.S. conservation enforcement agency that is exclusively dedicated to Federal fisheries and marine resource enforcement. Its mission is to protect global marine resources by enforcing domestic laws, international treaties, and regulations dedicated to protecting wildlife, and their natural habitat. Our Special Agents and Enforcement Officers ensure compliance with these laws and take enforcement actions if there are violations. In addition, the Cooperative Enforcement Program gives OLE the ability to leverage their resources with the assistance of 27 coastal states and U.S. territorial marine conservation law enforcement agencies in supporting its 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 all the communities throughout the Pacific Islands. The Office of Law Enforcement's Pacific Islands Division is headquartered on Ford Island in Honolulu, Hawaii with field offices in American Samoa and Guam.

National Marine Fisheries Service (NMFS) - [Pacific Islands Regional Office](#) and [Pacific Islands Science Center](#)

NMFS is responsible for the management, conservation, and protection of living marine resources within the U.S. Exclusive Economic Zone. The Pacific Islands Region includes the waters surrounding American Samoa, Guam, Hawaii, and the Commonwealth of the Northern Mariana Islands as well as the Pacific Remote Island Areas. It is the largest geographic area within NMFS jurisdiction, with a U.S. Exclusive Economic Zone of more than 1.7 million square nautical miles of ocean. Using the tools provided by the Magnuson-Stevens Fishery Conservation and Management Act, NMFS monitors and assesses fish stocks, promotes sustainable fisheries, manages Essential Fish Habitat, develops and ensures compliance with fisheries regulations, restores and protects habitats, and works to reduce wasteful fishing practices. Under the Marine Mammal Protection Act and the Endangered Species Act, NMFS regulates and conducts research supporting the recovery of protected marine species (e.g., Hawaiian monk seals, sea turtles, whales, and dolphins). NMFS also co-manages four marine national monuments in the Pacific Islands Region: Rose Atoll Marine National Monument, Marianas Trench Marine National Monument, Pacific Remote Islands Marine National Monument, and Papahānaumokuākea Marine National Monument.

The Pacific Islands Regional Office uses ecosystem-based strategies to manage the marine resources of the region. Responsibilities include maintaining healthy fish stocks for commercial, recreational and subsistence fishing in coordination with the Western Pacific Fishery Management Council and the Western and Central Pacific Fisheries Commission, protecting and recovering populations of protected species, preserving and restoring marine habitat, and coordinating with international organizations to implement and monitor fishery agreements and treaties. The Pacific Islands Regional Office also manages the at-sea observer program for longline vessels in the region. The Regional Office also maintains the NOAA Fisheries Honolulu Service Center at the Pier 38 Fishermen's Village in Honolulu where commercial fishermen can conveniently submit permit applications, turn in logbooks, obtain compliance and regulatory information on fishing, receive training, education and outreach, ask questions, and interact with Fisheries staff.

The Pacific Islands Fisheries Science Center administers scientific research and monitoring programs that support the domestic and international conservation and management of living marine resources. It conducts a wide range of research activities including: resource surveys and stock assessments, fishery monitoring, economic and social science studies, oceanographic research and monitoring, coral reef ecological assessments and monitoring, life history and ecology studies, protected species health and disease studies, ecosystem modeling, marine debris research and removal, and the development of advanced technology survey instrumentation. At the NOAA Inouye Regional Center, the Science Center operates a seawater facility (which is capable of housing sea turtles, Hawaiian monk seals, and fishes) and multiple laboratories to complement its field research activities. The Center uses the NOAA Ship Oscar *Elton Sette* as its primary at-sea research platform and shares the NOAA Ship *Hi'ialakai* with the National Ocean Service. Both ships are managed and operated by NOAA's Office of Marine and Aviation Operations and the NOAA Commissioned Officer Corps. In addition to the offices at the NOAA Inouye Regional Center, both the Regional Office and Science Center have field offices serving American Samoa, Guam, and the Northern Mariana Islands.

National Ocean Service (NOS) - [Coastal Storms Program](#)

The Coastal Storms Program focused resources on the Pacific Islands from FY10-15, with a goal to increase the resilience of coastal communities. These efforts resulted in new products and services that improve weather forecasts, address sea level and storm surge impacts, provide risk and vulnerability assessments, and transfers information to remote communities through training. A local outreach coordinator is located at the University of Hawai'i Sea Grant Program and works with the NOAA Office for Coastal Management and Pacific Risk Management 'Ohana (PRiMO) to expand impacts. The Coastal Storms Program supported a small grants program in FY12 totaling \$1M with 8 projects selected that are focused throughout Hawaii and the U.S. Territories.

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 ten ASOS stations in Hawaii.

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 267 COOP sites in Hawaii.

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 five NWR transmitters in Hawaii.

Office of Oceanic and Atmospheric Research (OAR) - [University of Hawaii 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, Lake Champlain, and Guam. As part of the prestigious School of Ocean and Earth Sciences and Technology, the University of Hawaii Sea Grant College Program links NOAA to its constituents by connecting academia, federal, state, and local government, industry and community members through state of the art technology transfer. Hawaii Sea Grant is dedicated to achieving resilient coastal communities characterized by vibrant economies, social and cultural sustainability, and environmental soundness. Research and extension activities cover a broad spectrum of areas including design sciences, coastal natural hazards, coastal and nearshore resources, sustainable coastal tourism, aquaculture, traditional knowledge, and environmental literacy.

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

The NOAA Restoration Center targets habitat conservation where our fisheries need it most. Through the Community Based Restoration Program, we provide funding and technical guidance to restore coastal habitat nationwide. In Hawai'i, we focus on restoring habitats from ridge to reef. We support a variety of projects, from stabilizing erosion and sedimentation in the watersheds to removing invasive algae on coral reefs. We also support traditional community practices such as fishpond restoration. Our projects help recover threatened and endangered species and support sustainably managed species. Through the Damage Assessment, Remediation & Restoration Program, we reverse the damage done by oil spills and toxic releases. The Restoration Center along with other NOAA programs is coordinating the NOAA Habitat Blueprint Focus Area for West Hawai'i. This effort will bring capacity from across NOAA to improve habitat and community resiliency.

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

NOS operates six long-term continuously operating tide stations in the state of Hawaii, which provide data and information on tidal datum and relative sea level trends, and are capable of producing real-time data for tsunami warning and for storm surge warning. These stations are located at Nawiliwili, Honolulu, Mokuoloe, Kawaihae, Kahului, and Hilo. NOS also operates four continuously operating stations at Sand (Midway) Island, Guam, Kwajalein, Wake Island, and Pago Pago.

National Ocean Service (NOS) - [Integrated Ocean Observing System Program](#)

U.S. IOOS® is an operational system that addresses regional and national needs for ocean data and information. The Pacific Islands Ocean Observing System (PacIOOS) is a Regional Association that creates an effective partnership of data providers and users working together to develop, disseminate, evaluate and apply new ocean data and information products designed specifically to address the needs of the communities, businesses and resources that call the Pacific home. The PacIOOS region is defined as the state of Hawaii, the Commonwealth and Territories of the United States in the Pacific, and the Freely Associated States in the Pacific. IOOS regional partners provide coordination with regional stakeholders while contributing data and other outputs to the national system – supporting regional priorities while advancing national objectives.

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. NOAA awarded six grants in Hawaii, 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 Hawaii, NOAA invests in initiatives that reduce anthropogenic threats to priority coral reef sites, increase the abundance and size of coral reef fishery species, promote resiliency to climate change, and increase public stewardship. Examples of projects include applying stock assessment approaches to determine population status of selected species, benthic habitat mapping, and identifying community users' knowledge, attitudes and perceptions regarding coral reef and watershed conditions. Priority sites in Hawaii include Pelekane Bay on the Big Island and Ka'anapali-Kahekili, Maui, a U.S. Coral Reef Task Force watershed partnership site.

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

Through a unique federal-state partnership, NOAA's Office for Coastal Management works with the Hawaii Department of Business, Economic Development and Coastal Tourism's Office of Planning to implement the National Coastal Management Program in Hawaii. 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) – [Regional 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 expands reach and impact, thereby ensuring maximum success. In Hawai'i, the NOAA Office for Coastal Management awarded \$845,169 to the University of Hawai'i Sea Grant Program to reduce vulnerability and increase resilience to coastal hazards and climate change by incorporating new strategies into community management and disaster recovery plans, and share knowledge, tools, and methods with Hawai'i communities statewide. The region will benefit from the resulting risk assessments and the implementation of improved-upon resilience plans and strategies.

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 ___, OR&R also supports response to local emergencies. 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 Hawaii, the SSC 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 Coordinators (RRCs) provide 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. RRCs work on multi-disciplinary scientific, economic, and legal teams and are responsible for determining and quantifying injuries to NOAA trust natural resources through determination of injuries and pathway, and demonstration of causal mechanisms. The goal of the RRCs efforts is to determine, often through the Damage Assessment, Remediation, and Restoration Program, the appropriate amount and type of restoration required to restore injured NOAA trust resources and compensate the public for their lost use.

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 is funding two education and outreach projects in Hawaii. The first is a public awareness campaign to educate the public about marine debris from tobacco products, and the second is a community outreach program for Leeward Oahu. An interactive marine debris display focusing on marine debris in Papahānaumokuākea Marine National Monument is installed at the Mokupāpapa Discover Center in Hilo. In addition to the annual marine debris removal in the Papahānaumokuākea Marine National Monument, the MDP is working with a local group to organize large scale community-based beach cleanups to remove over 60 tons of marine debris on multiple coastlines on Lāna'i, Kaua'i, Maui, and the island of Hawaii.

National Ocean Service (NOS) - [Pacific Islands 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. Pacific Islands Environmental Response Management Application (ERMA[®]) 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. It is primarily focused on impacts from coastal storms and marine debris, including data for the 2011 Japanese earthquake and tsunami response.

National Weather Service (NWS) - [Center of Excellence in Marine Technology](#)

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 operates NOAA's network of Deep-ocean Assessment and Reporting of Tsunami (DART[®]) stations, for the early detection and real-time reporting of tsunamis in the open ocean. Data from the DART@s are used by the National Weather Service Tsunami Warning Centers in Alaska and Hawaii to provide tsunami forecasts, warnings, and information. NDBC also operates the Tropical Atmosphere Ocean Array of buoys in the tropical Pacific. The TAO/TRITON array consists of approximately 70 moorings in the Tropical Pacific Ocean, telemetering oceanographic and meteorological data to shore in real-time via the Argos satellite system. The array is a major component of the El Niño/Southern Oscillation (ENSO) Observing System, the Global Climate Observing System (GCOS) and the Global Ocean Observing System (GOOS).

National Ocean Service (NOS) - [Coastal Uses Mapping](#)

The NOAA Pacific Services Center is partnering with the Hawaii Division of Aquatic Resources (DAR) and NOAA Fisheries' Pacific Islands Regional Office (PIRO) to map human coastal and marine uses in the area extending from the Honolua watershed to the Wahikuli watershed, and from the coast to the state jurisdictional boundary of three nautical miles out to sea. The project is designed to inform ongoing management and policy decisions among federal and state agencies responsible for nearshore coral reef ecosystems in Hawaii, with a focus on the Hawaii Coral Reef Conservation Program's priority management sites. The information will be made available to local stakeholders, community groups, and nongovernmental organizations to help facilitate local natural resource stewardship efforts. Data and products will be made available to any interested parties via various publicly accessible websites.

Office of Oceanic and Atmospheric Research (OAR) – [Ground-Based GPS Meteorology](#)

The Earth System Research Laboratory maintains the Ground-Based GPS Meteorology project, currently consisting of 400 GPS water vapor observing systems that provide near real-time integrated precipitable water vapor (IPW) measurements for weather forecasting, climate modeling, calibration and validation of satellite and radiosonde water vapor measurements, and research. This project provides water vapor data available to all users.

HI-1

Honolulu

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

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in Hawaii. They help identify the navigational challenges facing marine transportation in Hawaii 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 Honolulu, Hawaii to support mariners and stakeholders in the Pacific Islands region.

National Ocean Service (NOS) - [Pacific Islands Marine Debris Regional and Assistant Regional Coordinator](#)

The NOAA Marine Debris Program (MDP) supports national and international efforts to research, prevent, and reduce the impacts of marine debris. The Pacific Islands Regional Coordinator and Assistant Coordinator, based in Honolulu, supports coordination efforts with regional stakeholders, provides support to grant-funded projects, tracks progress of projects, and conduct regional marine debris outreach to local audiences. Additionally, the Coordinators support and promote the Hawaii Marine Debris Action Plan (HI-MDAP), which has been in place since 2009. Part of the HI-MDAP includes the Papahānaumokuākea Marine National Monument where an estimated 52 tons of marine debris washes ashore annually.

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

The Regional Geodetic Advisor is a National Ocean Service (NOS) employee that resides in a region and serves as a liaison between the National Geodetic Survey (NGS) and its public, academic and private sector constituents within their assigned region. NGS has a Regional Geodetic Advisor stationed in Honolulu, Hawaii serving the Pacific region – Hawaii, American Samoa, Guam, and the Northern Mariana Islands. 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) - [International Tsunami Information Center](#)

The International Tsunami Information Center (ITIC) office is co-located with the National Weather Service (NWS) Pacific Region Headquarters in the Pacific Guardian Center, Mauka Tower. ITIC was established in 1965 by the Intergovernmental Oceanographic Commission of United Nations Educational, Scientific and Cultural Organization, which provides partial funding. The NWS funds salaries and provides in-kind support, including office space and administrative assistance. ITIC maintains and develops relationships with scientific research and academic organizations, civil defense/emergency management agencies and the general public in order to carry out its mission to mitigate the hazards associated with tsunamis by improving tsunami preparedness for all Pacific Ocean nations. To accomplish this mission, ITIC monitors international tsunami warning activities in the Pacific; assists member states in establishing national warning systems; makes information available on current technologies and equipment for tsunami warning systems; disseminates information including educational materials and research reports; and publishes a newsletter for all parties interested in the activities of ITIC and other organizations involved in tsunami warning or tsunami hazard reduction. ITIC works closely with the NWS Richard H. Hagemeyer Pacific Tsunami Warning Center and Hawaii State and County Civil Defense in an advisory capacity and to conduct public education programs.

National Weather Service (NWS) - [Pacific Region Headquarters](#)

Located in the Mauka Tower of the Pacific Guardian Center in downtown Honolulu, this regional office has administrative and management responsibilities for all National Weather Service (NWS) field operations in Hawaii and the territories of American Samoa, Guam and Commonwealth of the Northern Mariana Islands. These areas include offices in Honolulu, Hilo, Kahului, and Lihue, Hawaii; Guam; Pago Pago, American Samoa; Koror, Republic of Palau; Majuro, Republic of the Marshall Islands; and Pohnpei, Yap and Chuuk, Federated States of Micronesia. The NWS Pacific Region operates its five Micronesian offices in cooperation with the Republic of the Palau, Republic of the Marshall Islands and the Federated States of Micronesia in accordance with the provisions of the Compact of Free Association between the United States and each Micronesian government. The five Micronesian Weather Service Offices provide the United States with critical Upper-Air Data and Aviation Weather Observations. These offices also provide adaptive weather forecasts and warnings to their local constituents. The Pacific Region Headquarters also oversees the NWS Central Pacific Hurricane Center and the NWS Pacific Tsunami Warning Center, and it hosts the International Tsunami Information Center.

National Weather Service (NWS) - [Richard H. Hagemeyer Pacific Tsunami Warning Center](#)

The NWS Richard H. Hagemeyer Pacific Tsunami Warning Center (PTWC), located in Ewa Beach, serves as the operational center of the Tsunami Warning System in the Pacific, an international program requiring the participation of many seismic, tide, communication and dissemination facilities operated by most of the nations bordering the Pacific Ocean. The operational objective of PTWC is to detect and locate major earthquakes in the Pacific Basin to determine whether tsunamis have been generated and to provide timely and effective tsunami information and warnings to the population of the Pacific. PTWC also acts as the Hawaii Regional Tsunami Warning Center for tsunamis generated within the Hawaiian Islands. The center works closely with Hawaii State and County Civil Defense to issue timely warnings and conduct public education programs.

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

Located on the Manoa Campus of the University of Hawaii in Honolulu and co-located with the NWS Central Pacific Hurricane Center, 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 Hawaii, and serves as the national center for marine, aviation and satellite services for the Pacific. 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. For the Pacific, the WFO serves as the Meteorological Watch Office for the northern Pacific from 140 W to 160 E and supplies all aviation weather support advisories, terminal forecasts and route forecasts; provides marine high seas forecasts and advisories for the north and south Pacific from 120 W to 160 F (an area four times the size of the continental United States); and satellite interpretation for the north and south Pacific using U.S. geostationary and polar orbiting satellites and Japanese geostationary satellite data.

Office of Oceanic and Atmospheric Research (OAR) – Pacific [Regional Integrated Sciences and Assessments](#)

The Pacific Regional Integrated Science and Assessment (Pacific RISA) was established as a cooperative agreement between NOAA's Climate Program Office and East-West Center. The Pacific RISA engages with communities, governments, and businesses to develop effective policies to build resilience. The project strives to enhance Pacific island communities' abilities to understand, plan for, and respond to changing climate conditions. Using a mix of stakeholder dialogue, climate forecasting, education and outreach, and research and assessment, the Pacific RISA focuses on providing support across seven key sectors. Those sectors include water resource management, coastal and marine resources, fisheries, agriculture, tourism, disaster management and public health. Cooperating institutions are the East-West Center and University of Hawaii with funding from NOAA's Regional Integrated Sciences and Assessments (RISA) Program.

Office of Oceanic and Atmospheric Research (OAR) - [Exploration Command Center](#)

NOAA's Office of Ocean Exploration and Research focuses on interdisciplinary exploration; systematic research of extreme and unique environments, continental shelf ecosystems, new ocean resources, and ocean dynamics; advanced technology development; and communication of results through education and outreach. There are Exploration Command Centers located at the University of Hawaii Manoa and the NOAA Inouye Regional Center on Ford Island where scientists ashore participate in real time in certain expeditions at sea when seafloor video is sent ashore via satellite and Internet pathways.

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.

Office of Oceanic and Atmospheric Research (OAR) - [Science On a Sphere® at Bishop Museum](#)

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.

Office of the Chief Administrative Officer (OCAO) - [Ford Island Office](#)

The Office of the Chief Administrative Officer (OCAO) provides comprehensive facility project management support services for NOAA's Daniel K. Inouye Regional Center project, at Ford Island in Pearl Harbor. In addition to providing overall facility project management support for the project, once the Center is constructed, CAO will provide overall campus management services for this regional facility.

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

NOAA's Environmental Literacy Program (ELP) 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 Hawaii, ELP supports the Bishop Museum (Honolulu) and the Imiloa Astronomy Center of Hawaii (Hilo) both 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 also supports the Waikiki Aquarium, a member 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. Waikiki Aquarium is also supported by an Environmental Literacy Grant to work with informal and formal educators in the incorporation of ocean and atmospheric data and the creation of meaningful place-based education activities about the impacts of excess carbon in the ocean and atmosphere.

Office of Marine and Aviation Operations (OMAO) - [Marine Operations Center Pacific Islands](#) and Homeport of the NOAA Ships [Oscar Elton Sette](#) and [Hi'ialakai](#)

Honolulu is the home to the Marine Operations Center Pacific Islands (MOC-PI), which provides regional management of NOAA Fleet vessels operating throughout the Pacific Islands and Western Pacific. It also serves as the homeport for the NOAA Ships *Oscar Elton Sette*, and *Hi'ialakai*. The NOAA Ship *Oscar Elton Sette* operates throughout the central and western Pacific and conducts fisheries assessment surveys, physical and chemical oceanography, marine mammal projects, marine debris removal, and coral reef research. The NOAA Ship *Hi'ialakai* conducts coral reef ecosystem mapping, bio-analysis assessments, coral reef health and fish stock studies in the Pacific. All vessels support NOAA's mission to protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management. The vessels 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.

[Midway Island](#)

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 (CO₂) and methane (CH₄), 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. These measurements help determine the magnitude of carbon sources and sinks.

[HI-1, 2](#)

[Honolulu, Hilo, Lihue](#)

National Ocean Service (NOS) - [Papahānaumokuākea Marine National Monument](#)

Papahānaumokuākea Marine National Monument was created by Presidential Proclamation 8031 in June 2006 to protect the extraordinary natural and cultural resources of the Northwestern Hawaiian Islands. The site encompasses 139,797 square miles; it is the largest conservation area in the United States, and one of the largest marine protected areas in the world. In July 2010, Papahānaumokuākea was designated as the first mixed UNESCO World Heritage site in the United States for its universal and outstanding natural and cultural features. Management offices are located in Honolulu, O'ahu, Hilo, Hawai'i, and Lihue, Kaua'i. NOAA also facilitates the NWHI Coral Reef Ecosystem Reserve Advisory Council, a group of community, scientific, educational, and Native Hawaiian representatives that provide ONMS Monument staff with advice and recommendations on management of the Monument. Papahānaumokuākea is cooperatively managed to ensure ecological integrity and achieve strong, long-term protection and perpetuation of Northwestern Hawaiian Island ecosystems, Native Hawaiian culture, and heritage resources for current and future generations. Three co-trustees – the Department of Commerce, Department of the Interior, and State of Hawai'i – joined by the Office of Hawaiian Affairs, protect this special place.

[Honolulu, Kihei, Lihu'e](#)

National Ocean Service (NOS) - [Hawaiian Islands Humpback Whale National Marine Sanctuary](#)

The warm, shallow waters surrounding the main Hawaiian Islands constitute one of the world's most important humpback whale habitats and the only place in the U.S. where humpbacks reproduce. The Hawaiian Islands Humpback Whale National Marine Sanctuary's visitor center is located in Kihei, Maui with other offices in Honolulu, O'ahu and Lihu'e, Kauai. Sanctuary waters are located around the islands of Maui, Moloka'i, and Lana'i including Penguin Banks; off the north shore of Kaua'i; the north and south shores of O'ahu; and the north Kona and Kohala coasts of Hawai'i. Scientists estimate that two-thirds of the entire North Pacific humpback whale population migrates to Hawaiian waters to engage in breeding, calving, and nursing activities. The sanctuary's objectives are to protect humpback whales and their habitat; to educate and interpret for the public the relationship of humpback whales and the Hawaiian Islands marine environment; to manage human uses of the sanctuary consistent with the *Hawaiian Islands National Marine Sanctuary Act* and the *National Marine Sanctuary Act*; and to provide for the identification of marine and cultural resources and ecosystems of national significance for possible inclusion in the sanctuary. A community-based advisory council, made up of members representing various communities, industries, and other government agencies, provides recommendations to sanctuary management on how to best implement these objectives.

[Honolulu, Kihei](#)

National Ocean Service (NOS) - [Pacific Islands Regional Office of National Marine Sanctuaries](#)

Located on Honolulu (in Hawaii Kai), and Kihei on Maui, the Pacific Islands Regional (PIR) office administers the two sanctuaries, Hawaiian Islands Humpback Whale National Marine Sanctuary, and the National Marine Sanctuary of American Samoa, and one monument, Papahānaumokuākea Marine National Monument. In addition, the PIR partners or works with many local and regional organizations including the Whole Foods Maui, Waikiki Aquarium, University of Hawaii Institute of Marine Biology, University of Hawaii Maui College, and Kauai Community College, the American Samoa Government and the Commonwealth of the Northern Mariana Islands.

[HI-2](#)

[Hilo](#)

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). NOAA's National Environmental Satellite, Data, and Information Service and NOAA's Office of Oceanic and Atmospheric Research jointly manage USCRN.

National Ocean Service (NOS) - [Papahānaumokuākea Marine National Monument Mokupāpapa Discovery Center](#)

Papahānaumokuākea Marine National Monument operates the 25,000 square foot Northwestern Hawaiian Islands Mokupāpapa Discovery Center on the bay front in Hilo, Hawai'i. The free facility, which opened in May of 2003, welcomes 60,000 visitors annually and provides interpretive tours for school groups and summer programs for school age children. The center's program room also provides a community meeting space for conservation organizations such as the Hilo Bay Watershed Advisory Group and Hilo Downtown Improvement Association. With interpretive panels in English and Hawaiian, as well as a 3,500 gallon aquarium and many interactive exhibits, the facility provides an avenue for residents and visitors alike to learn about the remote and inaccessible Northwestern Hawaiian Islands.

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

NOAA's Environmental Literacy Program (ELP) 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 Hawaii, ELP supports the Bishop Museum (Honolulu) and the Imiloa Astronomy Center of Hawaii (Hilo) both 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 also supports the Waikiki Aquarium, a member 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. Waikiki Aquarium is also supported by an Environmental Literacy Grant to work with informal and formal educators in the incorporation of ocean and atmospheric data and the creation of meaningful place-based education activities about the impacts of excess carbon in the ocean and atmosphere.

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

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

National Weather Service (NWS) - [Hilo Data Collection Office](#)

The Hilo Data Collection Office has responsibility for the Island of Hawaii. The office provides surface and upper air observations; critical input on forecasts, watches and warnings to the Honolulu NWS forecast office for the Big Island; assistance in collecting significant weather observations for the Big Island; and outreach and education programs.

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

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) conducts long-term monitoring of stratospheric ozone with balloons. Stratospheric ozone measurements provide data relevant to: surface pollution events, lower and upper atmosphere mixing dynamics, boundary layer stability, ozone trend studies (vertical distribution), and temperature and pressure profiles.

Office of Oceanic and Atmospheric Research (OAR) - [Water Vapor Measurements](#)

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates a stratospheric water vapor program using balloon-borne, chilled mirror hygrometers flown monthly at Boulder, CO and Hilo, HI and as part of campaigns at other locations to obtain water vapor profiles in the upper troposphere and lower stratosphere (to ~28 km). The Hilo flights began in 2007 and support the 30-year record of measurements at Boulder showing changes in stratospheric water vapor. These ongoing observations are essential for improving our understanding of stratospheric ozone and climate processes.

[Kane'ohe Bay](#)

National Ocean Service (NOS) – [Proposed He'eia National Estuarine Research Reserve](#)

The 1,385 acres of land and water constituting the proposed He'eia National Estuarine Research Reserve is located in Kane'ohe Bay on the windward side of the Oahu, Hawai'i. The designation of this site is anticipated in 2017. Upon designation, the reserve will be managed by the University of Hawai'i's Hawai'i Institute of Marine Biology in collaboration with a wide array of state and local partners. The reserve is a mix of diverse terrestrial and marine habitats combined with significant cultural and historical resources and includes uplands, freshwater and estuarine wetlands, and marine reefs and seagrass beds. Site partners include the State of Hawai'i Office of Planning, Hawai'i's Department of Land and Natural Resources, Kāko'o 'Ōiwi, Paepae o He'eia, Ko'olaupoko Hawaiian Civic Club, Kama'aina Kids, , Hawai'i Community Development Authority, the Ko'olau Foundation, and other state, local, and native Hawaiian organizations.

[Lihue](#)

National Weather Service (NWS) - [Lihue Data Collection Office](#)

The Lihue Data Collection Office has responsibility for the Island of Kauai. The office provides surface and upper air observations; critical input on forecasts, watches and warnings to the Weather Forecast Office Honolulu for Kauai; assistance in collecting significant weather observations for Kauai; and outreach and education programs is used to explain complex environmental processes in a way that is simultaneously intuitive and captivating.

[Mauna Loa](#)

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric - [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) - [Atmospheric Mercury Monitoring Network](#)

NOAA's Air Resources Laboratory maintains a specialized ambient air mercury measurement site at the Mauna Loa Observatory, Mauna Loa, HI, in collaboration with NOAA's Earth System Research Laboratory and the U.S. EPA. The site is operated as part of the National Atmospheric Deposition Program's Atmospheric Mercury Monitoring Network (AMNet). The state-of-the-art monitoring provides semi-continuous measurements of reactive gaseous mercury, elemental mercury, and particulate mercury in air. Additional data are collected for ambient air concentrations of trace gases (e.g., sulfur dioxide, nitrogen oxides, carbon monoxide, ozone), as well as meteorological parameters such as temperature, humidity, precipitation, wind speed and direction. NOAA took over this site in January 2011 in order to provide high quality data to air quality and mercury transport models.

Office of Oceanic and Atmospheric Research (OAR) - [Mauna Loa Observatory](#)

The Mauna Loa Observatory is one of six baseline observatories supported by NOAA's Climate Observations and Analysis Program and operated by the NOAA Research Earth System Research Laboratory Global Monitoring Division, located in Boulder, CO. The observatories are part of a global network of observatories monitoring atmospheric constituents that cause climate change and depletion of the ozone layer. Over 250 different atmospheric and solar radiation properties are monitored at the Mauna Loa observatory.

The observatory's 50-year record of continuous atmospheric carbon dioxide concentrations is one of the longest atmospheric constituent records on earth. The observatory is a key facility in the international Network for the Detection of Stratospheric Change, which monitors the healing of the ozone layer following the global agreement to reduce ozone-

destroying fluorocarbons (the Montreal Protocol), initiated a decade ago. Weekly balloon borne ozonesondes are released to monitor the vertical distribution of ozone and the associated ultraviolet (UV) radiation reaching the surface is measured with a world-standard UV instrument. Mauna Loa Observatory is host to 20 cooperative programs from around the world, is the base for re-transmission of many local government radio signals, and is a testbed for the Federal Aviation Administration GPS global air traffic control system. In addition, Mauna Loa Observatory is host to the University of New Hampshire Wind Lidar program, the NASA stratospheric ozone lidar, the Associated Universities solar observatory, and the National Center for Atmospheric Research High Altitude Observatory, supported by the National Science Foundation.

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

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates a sampling network to measure the distribution and trends of the gases most responsible for human-caused depletion of the stratospheric ozone layer. Weekly samples are collected in high pressure flasks at fixed locations. The air sample flasks are delivered to ESRL/GMD, located in Boulder, CO for analysis. Some locations conduct continuous surface measurements on site. Halocarbon measurements help determine the effectiveness of efforts to protect and restore the ozone layer - so it can protect us from the sun's ultraviolet radiation.

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

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) conducts long-term monitoring of ozone at the surface, with aircraft, and with balloons, through cooperative relationships with local partners. The ESRL/GMD tropospheric ozone aircraft measurement program is being done in conjunction with the Carbon Cycle and Greenhouse Gas (CCGG) group's existing aircraft sampling network. Aircraft based in-situ tropospheric ozone measurements provide data relevant to: pollution events, lower atmosphere mixing dynamics, boundary layer stability, ozone trend studies, and the validity of other samples collected in-flight. Near ground level ozone is currently monitored using ultraviolet absorption photometers at eight sites that are generally representative of background conditions. These sites, four of which have records exceeding 25 years in length, provide information on possible long-term changes in tropospheric ozone near the surface and support air quality research.

Office of Oceanic and Atmospheric Research (OAR) - [Stratospheric Aerosol Lidar Measurements](#)

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates three stratospheric lidar systems to measure atmospheric aerosol profiles. The Mauna Loa record extends back to 1974. Stratospheric lidar systems measure aerosol light for monitoring stratospheric aerosols from volcanic origins. Volcanic aerosols in the stratosphere from future eruptions could act as catalysts for large scale stratospheric ozone depletions until anthropogenic stratospheric halocarbon concentrations decrease to lower levels by mid-century. These ongoing observations are important for monitoring the recovery of the stratospheric ozone layer, which protects us from the sun's ultraviolet radiation.

Office of Oceanic and Atmospheric Research (OAR) - [Surface Aerosol Monitoring](#)

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates surface-based aerosol monitoring sites in seven states and one territory (Puerto Rico). ESRL/GMD's aerosol monitoring capabilities include continental sites in response to the finding that human activities primarily influence aerosols on regional/continental scales rather than on global scales. Aerosols create a significant perturbation of the Earth's radiative balance on regional scales. The measurements made include aerosol optical properties, aerosol number concentration and chemical composition of the aerosol particles.

Office of Oceanic and Atmospheric Research (OAR) - [Ultraviolet Radiation Monitoring Network](#)

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates an ultraviolet radiation (UV) monitoring network site in Mauna Loa. The Mauna Loa site is a global reference site for this UV work. These measurements are done as part of ESRL/GMD's research on the Earth's surface radiation budget. Research efforts are devoted to the extent and cause of observed variations in long-term radiation and meteorological measurements, using satellite observations and climate model calculations. In addition, observations of spectral solar radiation are made for the purpose of remote sensing of certain atmospheric constituents and spectral solar UV is measured for the investigation of the interaction of ozone and solar radiation. ESRL/GMD also provides essential instrument calibration services for national and world-wide partner UV monitoring networks.

Oahu

Office of Oceanic and Atmospheric Research (OAR) - [Carbon Cycle Gases and Halocarbons](#)

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates a small aircraft-based North American network of sampling sites to measure vertical profiles of important greenhouse gas concentrations. Air is sampled above the surface up to approximately 25,000 feet above sea level using a relatively small, light, and economical automated system developed by ESRL/GMD researchers. These air samples are delivered to ESRL/GMD in Boulder, Colorado for measurements of CO₂, CH₄, and other greenhouse gasses. This data will improve understanding and models of the global carbon cycle. Sampling is conducted bi-weekly. Some air samples from the small aircraft program are also analyzed for halocarbon gases that can destroy the stratospheric ozone layer. Halocarbon measurements help determine the effectiveness of efforts to protect and restore the ozone layer so it can protect us from the sun's ultraviolet radiation.

Office of the Chief Information Officer (OCIO) - [Inouye Regional Center](#)

The Office of the Chief Information Officer (OCIO) at NOAA's Inouye Regional Center (IRC), in O'ahu, Hawaii maintains staff (2 federal employees) and offices to provide support for corporate services such as networking, computing, software and hardware management, and cyber security. In addition, the OCIO at IRC provides select enterprise and regional IT support services to all of the NOAA Line and Program Offices located in the Pacific region. Our work includes IT infrastructure design and maintenance, network and server management and administration, desktop configuration and maintenance, application and system design and implementation, IT security, and telecommunications..

Office of Oceanic and Atmospheric Research (OAR) - [Science On a Sphere® at Inouye Regional 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 complex environmental processes in a way that is simultaneously intuitive and captivating.

Pahoa [Cape Kumukahi]

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

NOAA's Earth System Research Laboratory (ESRL) NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) distribution and trends of carbon dioxide (CO₂) and methane (CH₄), 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. These measurements help determine the magnitude of carbon sources and sinks in North America.

Office of Oceanic and Atmospheric Research (OAR) [Halocarbon Measurements](#)

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates a sampling network to measure the distribution and trends of the gases most responsible for human-caused depletion of the stratospheric ozone layer. Weekly samples are collected in high pressure flasks at fixed locations. The air sample flasks are delivered to ESRL/GMD, located in Boulder, CO for analysis. Some locations conduct continuous surface measurements on site. Halocarbon measurements help determine the effectiveness of efforts to protect and restore the ozone layer - so it can protect us from the sun's ultraviolet radiation.

Wahiawa

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

The Naval Computer Telecommunication Area Master Station Pacific (NCTAMS PAC) delivers and operates a reliable, secure and battle-ready Navy network. A Coast Guard facility on the base houses two NOAA Search and Rescue Satellite Aided Tracking (SARSAT) antenna and associated ground equipment. 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 person's in distress and has saved more than 6,000 lives in the United States since 1982.

West Hawai'i

National Marine Fisheries Service (NMFS), National Ocean Service (NOS) - [Habitat Focus Area](#)

West Hawai'i has been selected as a Habitat Focus Area under NOAA's Habitat Blueprint. Habitat Focus Areas are a non-regulatory, collaborative approach to habitat conservation that NOAA launched in 2013 to increase the effectiveness of NOAA's habitat conservation science and management efforts. Habitat Focus Areas are places where NOAA offices, working together with public and private sector partners, can achieve measurable habitat conservation results in three to five years. The area contains one of the longest contiguous coral reefs in the state, which is also one of the healthiest and most productive in the state. Nearly a quarter of the marine species that live along this coast are found nowhere else in the world. The area is also home to federally listed endangered or threatened species such as Hawaiian monk seals, humpback whales, and green sea turtles as well as many other species. There are numerous factors contributing to the loss or degradation of habitat in West Hawaii: climate change, erosion and sedimentation, nutrient input, wildlife interaction pressures, and loss of biomass. The primary goals of the West Hawai'i Habitat Focus Area are to improve coral reef habitat, foster the sustainable use of marine resources, and improve local capacity for long-term management.

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