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

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

**Highlights of NOAA in Washington**

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<th>Facility</th>
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The state of Washington also has two Weather Forecasting Offices, one Regional Office, one cooperative institute, two Labs and Field Offices, two Science on a Sphere® exhibitions, and one National Estuarine Research Reserves.
Weather Forecast Offices

Spokane WA-5
Seattle WA-7

NWS Weather Forecast Offices (WFO) are staffed around-the-clock every day and provide the best possible weather, water, and climate forecasts and warnings to residents of Washington. 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. 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.

Science On a Sphere®

Redmond WA-1
Seattle WA-7

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

WA-1
Mount Vernon

National Ocean Service (NOS) - Padilla Bay National Estuarine Research Reserve

The National Estuarine Research Reserve System is a network of protected areas focused on long-term research, monitoring, stewardship, education, and training. NOAA’s Office for Coastal Management provides funding and national guidance, and each site is managed on a daily basis by a lead state agency or university with input from local partners. The 11,966 acre Padilla Bay Research Reserve was designated in 1980 and is managed by the Washington State Department of Ecology. The reserve protects on of the nation’s largest eelgrass beds, mudflats, subtidal habitats, and fringing salt marshes, and agricultural diking is a notable feature.

Seattle

National Ocean Service (NOS) – Navigation Response Team
NOAA’s Navigation Response Team 3 operates out of Seattle, supporting navigation in the ports for Washington and Oregon. These three-person teams measure depths of a changing seafloor and search for underwater dangers to navigation that can slow down commercial shipping immediately after storm events and other emergencies. The teams provide time-sensitive information to the U.S. Coast Guard or port officials and transmit data to NOAA cartographers for updating navigational charting products.

**National Ocean Service (NOS) - Center for Operational Oceanographic Products and Services**
This office operates and maintains the West Coast, Pacific Islands and Alaska 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.

**National Ocean Service (NOS) - Pacific Hydrographic Branch**
The Pacific Hydrographic Branch (PHB) is co-located with NOAA’s Sand Point Facility in Seattle, Washington. PHB manages the office processing of hydrographic survey data acquired by NOAA hydrographic vessels, Navigation Response Teams, and performs contract oversight for hydrographic surveys conducted under contract. The Branch serves as the contact for West Coast and Alaska hydrographic survey requests and data processing, and verifies, evaluates, and analyzes acquired survey data. The NOAA Ships *Fairweather* and *Rainer* and contractors conduct the hydrographic surveys analyzed by PHB and then PHB produces final survey data, significant features and soundings for display on nautical charts and related products to support NOAA’s strategic goal of promoting safe navigation on the west coast and Alaska.

**Office of Oceanic and Atmospheric Research (OAR) - Exploration Command Center**
NOAA’s Office of Ocean Exploration and Research (OER) hosts Exploration Command Centers at locations around the country that enable scientists to participate in NOAA Ship Okeanos Explorer expeditions through the use of telepresence technology. This technology uses satellites and Internet to transmit data in real time from the NOAA Ship Okeanos Explorer’s remotely operated vehicles to shore-based centers around the country, as well as other parts of the world. This allows the Okeanos Explorer to operate with the majority of its participating scientists on shore, which expands the breadth of available expertise and increases the pace and efficiency of exploration. It also allows OER to stream seafloor imagery over standard Internet connections, bringing the excitement of ocean exploration and discoveries live into classrooms, newsrooms, and living rooms around the world - strengthening and engaging the community of ocean explorers and increasing their ability to make informed decisions about important ocean issues. The Exploration Command Center in Washington is located at NOAA’s Western Regional Center.

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

**Darrington**
**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).
WA-2
Bellingham
National Marine Fisheries Service (NMFS) - Seafood Inspection Program - Lot Inspection Office
The National 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 fish meal used for animal foods, are eligible for inspection and certification.

Cherry Point
National Ocean Service (NOS) - Physical Oceanographic Real-Time System PORTS®
NOAA, in partnership with British Petroleum, provides a Physical Oceanographic Real-Time System (PORTS®) in Cherry Point at which real-time data are quality-controlled and disseminated to local users for safe and efficient navigation. Real-time data are available for water levels from two stations, currents from one station, and meteorological data from one locations.

Mukilteo
National Marine Fisheries Service (NMFS) - Research Station
Research at Mukilteo, a field station for the Northwest Fisheries Science Center, focuses on understanding the life cycle of marine species, and the impacts of ecosystem stressors on anadromous and marine fish and invertebrates. In this salt-water facility, scientists rear marine and anadromous fish for a range of studies, conduct studies on the effects of impaired water quality and habitats on the health and survival of fish, serve as a base for field studies of Pacific salmon, and hold outreach events for students and public groups on NMFS research in the region. Unique features of the Mukilteo facility include a high-quality seawater system for fish rearing and marine species studies; an algae and zooplankton culture laboratory; a deep water pier and central Puget Sound location with convenient access to field research locations; and specialized laboratories and equipment for studies on the fate and effects of toxic substances.

WA-3, 4
Vancouver, Goldendale
National Ocean Service (NOS) - Lower Columbia River PORTS®
The Columbia River Physical Oceanographic Real-Time System (PORTS®) extends from the mouth of the Columbia River to Vancouver, WA, and provides water level, wind, and weather conditions for pilots and shippers navigating inland to the Port of Portland. In June 2010, NOAA released a study showing that the lower Columbia River area receives an estimated annual economic benefit of $6.4 million in savings and direct income from the operation of the PORTS®. Real-time data are available for water levels from seven stations, and meteorological data from three locations.

WA-4
Pasco
National Marine Fisheries Service (NMFS) - Research Station
The Pasco Research Station supports the Northwest Fisheries Science Center’s research on anadromous fish migration, particularly monitoring and development of technologies to improve salmon survival during passage through the Columbia River hydropower system. The station is strategically located on the main stem of the Columbia River and serves Northwest Fisheries Science Center research throughout the entire Columbia River Basin. It is the only NOAA facility dedicated to the study of safe salmon passage through major hydroelectric dams.

WA-5
Spokane

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).

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

WA-6

Forks

Office of Oceanic and Atmospheric Research (OAR) – **Coastal Atmospheric River Observatory**
The NOAA Earth System Research Laboratory Physical Sciences Division operates and maintains a coastal atmospheric river observatory, which measures the conditions associated with land-falling atmospheric rivers; a key component of winter storms that are responsible for flooding and can sometimes lead to dangerous debris flows. The data collected will be used by researchers to study relevant atmospheric processes and advance NOAA predictive capabilities.

Manchester

National Marine Fisheries Service (NMFS) - **Research Station**
Research at this Northwest Fisheries Science Center facility focuses on captive broodstock research and technology for depressed and endangered fish and the culture, genetics and marking and tagging technology of salmon and marine fish species. A world leader in state-of-the-art salmon culture technology, Manchester was the first research facility in the United States to grow salmon in a marine aquaculture setting. Today, it is one of only a few research facilities in the country where species such as lingcod, rockfish, sablefish, and Pacific halibut are successfully reared. Unique features of the Manchester facility include a large floating marine net-pen complex for understanding the environmental impacts of commercial rearing activities; unique semi-natural and other specialized rearing systems for salmon and marine fish studies; a state-approved salmon quarantine facility; and systems for research and testing of passive integrated transponder tagging technology.

Port Angeles

National Ocean Service (NOS) - **Olympic Coast National Marine Sanctuary**
Since its designation in 1994, the primary mission of NOAA's Olympic Coast National Marine Sanctuary is to protect the nationally-significant natural and cultural marine resources offshore of the Olympic Coast through responsible stewardship, to conduct and apply research to preserve the area's ecological integrity and maritime heritage, and to promote understanding through public outreach and education. Olympic Coast National Marine Sanctuary collaborates with local tribes, Washington state, and many other partners to enhance the understanding of ecosystem processes and inform ecosystem-based management through scientific research, monitoring and characterization. Sanctuary science and resource protection programs include tracking ecosystem health and impacts of marine debris, ocean acidification, changing ocean conditions, cooperative research with Coastal Treaty Tribes and others, vessel tracking, and oil spill prevention and preparedness. The sanctuary is in the process of being established as a sentinel site that brings together science, management and outreach to monitor and raise awareness about ocean acidification. The sanctuary hosts the only research vessel dedicated to Washington's outer coast. The sanctuary carries out Ocean Literacy programs with local and regional education partners and serves the local tourism industry with its Olympic Coast Discovery Center, in Port Angeles. Current efforts focus on planning for a marine science and education facility on the Port Angeles waterfront in cooperation with the Port Angeles Waterfront Center, Olympic Coast National Marine Sanctuary Foundation, and the Arthur Feiro Marine Life Center. The sanctuary relies on input from a community-based advisory council, composed of
both non-governmental sanctuary constituents and governmental members, who provide advice on sanctuary activities and management actions. In addition, the sanctuary works closely with the State of Washington, the Quinault Indian Nation, and the Hoh, Quileute and Makah Indian tribes through the Olympic Coast Intergovernmental Policy Council, a forum for high level policy issues critical to ocean health.

**National Ocean Service (NOS) - Ocean Guardian School Program**

An Ocean Guardian School makes a commitment to the protection and conservation of its local watersheds, the world's ocean, and special ocean areas, like national marine sanctuaries. Funds are provided to schools at $4,000 per year if the school makes this commitment by proposing and then implementing a school- or community-based conservation project. Once the school has completed their project, the school receives official recognition as a NOAA Ocean Guardian School.

**National Ocean Service (NOS) - Zero Waste Week**

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

**National Ocean Service (NOS) - Olympic Coast Discovery Center**

The official visitor center for Olympic Coast National Marine Sanctuary, the Olympic Coast Discovery Center, located on the Port Angeles waterfront is a great place to begin your learning adventures on the Olympic Coast. It has information about marine conservation, the animals and habitats of Olympic Coast National Marine Sanctuary, and the part you play in protecting our marine environment. You will also learn about the history of exploration of the Olympic Coast and the many tools that researchers use to understand the underwater landscapes, living communities and ocean processes that make Olympic Coast National Marine Sanctuary the ecological treasure it is.

**Quinault**

**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).

**WA-7 Seattle**

**Acquisition and Grants Office (AGO) - Western Acquisition Division**

The Acquisition and Grants Office provides financial assistance and acquisition services for NOAA by overseeing and implementing all processes related to contracts and grants.

**National Environmental Satellite, Data, and Information Service (NESDIS) - Western 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.

**NOAA Finance Office (NFO) - Western Operations Branch**
The Western Operations Branch processes payments for services, supplies, and materials commonly required to support the Department's programs (i.e. lab equipment, non-personal services, travel expenses, utilities, and vessel charters). In providing these services, our staff examines vouchers and invoices, issues bills for receivables, receives and deposits receipts, pays various types of accounts payable documents, and enters other types of accounting transactions. The staff also responds to clients about finance-related concerns and problems.

**National Marine Fisheries Service (NMFS) - Alaska Fisheries Science Center**
The Alaska Fisheries Science Center (AFSC) is responsible for planning, developing, and managing scientific research on living marine resources in the coastal oceans off Alaska and parts of the West Coast, home to the Nation's largest fisheries and largest marine mammal populations. The Center conducts field and laboratory research to help conserve and manage the region's living marine resources in compliance with the **Magnuson-Stevens Fishery Conservation and Management Act**, the **Marine Mammal Protection Act**, and the **Endangered Species Act**. In addition to ongoing survey and assessment activities, the Center is engaged in cutting-edge research on emerging issues such as climate change, loss of sea ice, and ocean acidification.

**National Marine Fisheries Service (NMFS) - West Coast Region**
The NMFS West Coast Region's Seattle office is dedicated to protecting and preserving our nation's living marine resources through scientific research, fisheries management, enforcement, and habitat conservation. The West Coast Region manages marine and anadromous fish, sea turtles, and marine mammals and their habitats administers fisheries programs along the coasts of Washington, Oregon, and California; and in the vast inland habitats of Washington, Oregon, California, and Idaho. We carry out our work to conserve, protect, and manage these species salmon and marine mammals under the **Endangered Species Act**, and **Marine Mammal Protection Act**, and, to sustainably manage West Coast fisheries as guided by the Magnuson-Stevens Fisheries Conservation and Management Act. We work closely with tribes, local, state, and federal agencies, the Pacific Fishery Management Council, and our stakeholders and partners to find science-based solutions to complex ecological issues.

**National Marine Fisheries Service (NMFS) - Western Inspection Branch and Lot Inspection Office**
The National 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 fish meal used for animal foods, are eligible for inspection and certification.

**National Marine Fisheries Service (NMFS) and National Ocean Service (NOS) - Centers of Excellence**
NOAA's West Coast Center of Excellence for Oceans and Human Health (WCCOHH) This Center has strong research programs with proven track records informing our understanding of how the oceans affect human health in a wide range of scientific fields (e.g., climatology, oceangraphy, microbiology, genetics and molecular biology, immunology, ecotoxicology, neurotoxicology, developmental biology, plankton ecology, physiology, and marine mammal ecology). The WCCOHH conducts its research through four core programs: (1) pathogens, viruses, and bacteria; (2) chemical contaminants and biotoxins; (3) marine mammals and fish as sentinel organisms; and (4) climate impacts. Key priorities
for the Center include sharing data and research results with other institutions and the public, fostering the exchange of information among diverse communities, including other OHH programs, and providing educational opportunities.

National Ocean Service (NOS) - Office for Coastal Management
The NOAA Office for Coastal Management practices a partner-based, boots on the ground approach to coastal management. The organization currently has staff in the eight regions to provide assistance to local, state, and regional coastal resource management efforts and facilitate customer feedback and assessments. Assistance is provided to local, state, and regional coastal resource management efforts. The central West Coast staff office is located in Oakland, California, with additional staff based in Portland, Oregon and Seattle, Washington.

National Ocean Service (NOS) - Office of Response and Restoration
The Office of Response and Restoration’s (OR&R) Seattle office is the backbone of scientific support that America’s response community depends on during crises. Home to biologists, chemists, oceanographers and data management specialists, OR&R’s Seattle team of over 90 staff provides comprehensive expertise in coastal hazard preparedness, response, assessment and restoration. Here, OR&R builds and maintains the tools that federal, state, and local emergency responders depend on nationwide to predict chemical reactions, oil spill and marine debris trajectories, and oil weathering.

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

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. In Washington, ELP supports the Pacific Science Center (Seattle), which has a permanent exhibit featuring NOAA’s Science On a Sphere and is a member 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 support to the Seattle 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.

Office of Oceanic and Atmospheric Research (OAR) - Seattle Regional Library
NOAA’s Seattle Regional Library supports research in the areas of meteorology, physical and chemical oceanography, geochemistry, atmospheric physics, ocean engineering, mathematics, statistics, and computer science. Special collections in the library include the Rudolph Preisendorfer Memorial Collection, an 800-volume library of classic works in mathematics and statistics; holdings on Puget Sound; a complete collection of monographs from the National Science Foundation Israel Program for Scientific Translations; and nautical, hydrographic, and topographic charts and maps.

Office of Oceanic and Atmospheric Research (OAR) - Joint Institute for Study of the Atmosphere and Ocean
JISAO is a NOAA Cooperative Institute at the University of Washington that fosters collaborative research between NOAA scientists and university scientists and students. JISAO conducts research under seven themes: (1) climate research and impacts; (2) marine ecosystems; (3) environmental chemistry; (4) ocean and coastal oceanography; (5) seafloor process; (6) protection and restoration of marine resources; and (7) tsunami observations and modeling. Throughout its existence, JISAO has conducted outstanding collaborative research primarily with scientists at the Pacific Marine Environmental Laboratory. In recent years, JISAO has expanded its collaborations to include scientists with the National Ocean Service and National Marine Fisheries Service, specifically with the Alaska Fisheries Science Center and the Northwest Fisheries
Science Center. University departments involved in JISAO research include Atmospheric Sciences, Earth and Space Sciences, School of Oceanography, School of Fisheries, School of Marine Affairs, Applied Physics Laboratory, Civil and Environmental Engineering, and the School of Public Affairs.

**Office of Oceanic and Atmospheric Research (OAR) - Joint Technology Transfer Initiative**

Through the Joint Technology Transfer Initiative (JTTI) program, OWAQ funds proposals to support further development, testing and evaluation of mature weather research that has potential for improving NOAA's NWS operational capabilities, particularly in the areas of advancing numerical weather prediction capabilities that seamlessly integrate in the NOAA Unified Forecast System (UFS), water prediction capabilities, and forecasting extreme precipitation and flooding events.

**Office of Oceanic and Atmospheric Research (OAR) - Science On a Sphere®**

- See Page 2 for details.

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

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates surface-based radiation monitoring sites in seven states. ESRL/GMD's Integrated Surface Irradiance Study (ISIS) monitoring network is based in the continental United States and is collaboration with NOAA's SURFRAD Network.

**Office of Oceanic and Atmospheric Research (OAR) - Pacific Marine Environmental Laboratory**

The Pacific Marine Environmental Laboratory (PMEL) is a federal laboratory that makes critical observations and conducts groundbreaking research to advance our knowledge of the global ocean and its interactions with the earth, atmosphere, ecosystems, and climate. PMEL's mission is to a) observe, analyze, and predict oceanic and atmospheric phenomena, b) lead the development and deployment of innovative technologies, c) identify and understand ocean-related issues of major consequence, and d) inform society with well-documented, high quality science. Key research areas at PMEL include ocean acidification, tsunami detection and forecasting, long term climate monitoring and analysis, fisheries oceanography, arctic, and hydrothermal vent systems.

**Office of the Chief Administrative Officer (OCAO) - Western Region**

The Office of the Chief Administrative Officer (CAO) provides comprehensive facility construction and lease acquisition management support services in support of NOAA programs located in western United States, specifically in the areas of:

- Real estate (lease management, real property acquisitions);
- Construction project planning, design and engineering;
- Facility project management; and
- Building management, including warehousing, at NOAA's Western Region Center in Seattle.

**Office of the Chief Information Officer (OCIO) - Western Regional Center**

The Office of the Chief Information Officer (OCIO) at NOAA's Western Regional Center (WRC), in Seattle, WA maintains staff and offices to provide support for corporate services such as networking, computing, software and hardware management, and cyber security. In addition, the OCIO at WRC provides select enterprise and regional IT support services to the NOAA Line and Staff Offices located in the WRC and Western region. This 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.

Seattle, WA is also one of five NOAA Trusted Internet Connection Access Points (TICAPs) which monitors the connection of NOAA networks with the greater Internet. This is required by OMB policy to ensure secure communication from NOAA IT systems to untrusted networks. TICAPs are NOAA's first line of defense for protecting NOAA's mission from external cyber-attacks. The information the TICAPs provide is invaluable for determining the nature and scope of cyber threats.
NOAA is also able to offer this as a service to other government agencies, eliminating the requirement for them to build and manage their own TICAPs.

Office of Marine and Aviation Operations (OMAO) - **NOAA Diving Program**
The mission of the NOAA Diving Program is to train, certify and equip scientists, engineers, and technicians, while promoting innovation of effective, economical diving technologies, and safely performing underwater operations. The dive program is headquartered at the NOAA Diving Center on the campus of the NOAA Western Regional Center, in Seattle, Washington. The NDP establishes standards and safety procedures for conducting various types of diving in support of NOAA’s mission. With 347 active divers, NOAA has the largest complement of divers of any civilian federal agency. Averaging between 8,000 to 15,000 dives per year (2010-2017), the dive program has consistently maintained an excellent diving safety record (99.97% safe dive statistic). NOAA divers support the agency’s mission and work throughout the oceans and inland waters of the world in conditions varying from the crystal clear water of a pristine marine sanctuary to the murky water of a congested harbor. On any given day, NOAA divers may be seen deploying and retrieving scientific instruments, documenting the behavior of fish and other marine animals, performing emergency and routine ship repair and maintenance, assessing the impact of man on the environment, and locating and charting submerged objects. The NDP’s vision for the future is to lead the Nation in the advancement of diving safety, education, training, innovation and execution of underwater operations in support of science, service and stewardship.

Office of Marine and Aviation Operations (OMAO) - **Small Boat Program**
The NOAA Small Boat Program (SBP) manages and coordinates over 400 small vessels (<100ft) and over 800 qualified operators located across the entire United States. The SBP provides administrative and technical support, develops and implements training courses, schedules and performs vessel inspections, provides engineering and naval architecture expertise and works directly with all NOAA line offices to ensure safe and efficient use of NOAA small vessels. NOAA’s SBP is responsible for creating and implementing policy pertaining to the operation of small boats for a variety of missions including law enforcement, fisheries and atmospheric research, dive operations and hydrographic survey. The SBP works to ensure that the thousands of small boat operations taking place throughout NOAA and millions of dollars’ worth of assets are managed as safely and efficiently as possible.

Workforce Management Office (WFMO) - **Seattle Center**
The Workforce Management Office in Seattle provides nationwide consultative services with respect to talent acquisition and strategic workforce planning to the National Weather Service, the National Marine Fisheries Service and the National Ocean Service. The HR Business Partners and HR Business Advisors ensure consistency of service, compliance, best practices and knowledge sharing among the team members. The Office manages the workload and resources to account for peak demand, vacancies and talent acquisitions strategies to meet new mission requirements, and escalates these and other issues as necessary to leadership.

**Sand Point**

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.

**WA-8**

Auburn

National Weather Service (NWS) - **Center Weather Service Unit**
Housed in the Federal Aviation Administration’s Seattle Air Route Traffic Control Center (ARTCC), the NWS Center Weather Service Unit (CWSU) provides aviation forecasts and other weather information to ARTCC personnel for use in directing the safe, smooth flow of aviation traffic in all of Washington, most of Oregon, and parts of California and Idaho.

**Ellensburg**

**National Marine Fisheries Service (NMFS) - West Coast Region’s Interior** [Columbia Basin Office](#)

The Interior Columbia Basin Area Office is located in Portland, with satellite teams in Ellensburg, Washington; La Grande, Oregon; Grangeville, Idaho; and Boise, Idaho. Our responsibilities focus on protecting species and their habitats upstream of Bonneville Dam, into the upper reaches of the Columbia and Snake rivers in Washington, Oregon, and Idaho. We work to protect species listed under the Endangered Species Act by evaluating the impacts of proposed federal actions, developing and implementing recovery plans, seeking conservation partnerships with local governments and landowners, and ensuring safe fish passage through federal and some private dams.

**WA-9**

**Port of Tacoma**

**National Ocean Service (NOS) - Port of Tacoma PORTS®**

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

**WA-10**

**Lacey**

**National Marine Fisheries Service (NMFS) - Field Office**

NMFS is dedicated to protecting and preserving our nation’s living marine resources through scientific research, fisheries management, enforcement, and habitat conservation. The West Coast Region administers fisheries programs along the coasts of Washington, Oregon and California; and in the vast inland habitats of Washington, Oregon, California and Idaho. We work to conserve, protect, and manage fish, sea turtles, and marine mammals under the Endangered Species Act and Marine Mammal Protection Act, and sustainably manage West Coast fisheries as guided by the Magnuson-Stevens Fisheries Conservation Act. To achieve this mission and advance sound stewardship of these resources, we work closely with tribes, local, state and federal agencies, our stakeholders, and partners to find science-based solutions to complex ecological issues.

**WA Statewide**

**National Marine Fisheries Service (NMFS) – Aquaculture Coordinators**

The aquaculture coordinators lead regional efforts to foster sustainable aquaculture across the region. The West Coast has a vibrant commercial marine aquaculture industry supported by a world class research and technology sector. These positions support permit streamlining, aquaculture outreach and education, and serve as liaisons with state and local agencies, tribes, non-government organizations, academia, and industry.

**National Marine Fisheries Service (NMFS) - Northwest Fisheries Science Center**

The Northwest Fisheries Science Center’s headquarters (also in Seattle, WA) was established in 1931 as the first government laboratory dedicated to the study of living marine resources on the West Coast. The Fisheries Science Center’s mission is to provide the science necessary to conserve and manage living marine resources and their ecosystems, with an emphasis on the Pacific Northwest. The Fisheries Science Center conducts research on protected resources (i.e. salmon and killer whales) and commercially managed groundfish species along the West Coast and
provides the best scientific information available to inform management decisions by the West Coast Regional Office, Pacific Fishery Management Council, and other natural resource managers. The Fisheries Science Center conducts surveys and assessments of hake, rockfish, sablefish and flatfish along the West Coast and houses the nation’s laboratory for chemical testing of seafood following oil spills. The Fisheries Science Center responds dynamically to emerging research needs such as climate change and ocean acidification, integrated ecosystem modeling, socio-economic connections, and biological effects of emerging toxins. The Fisheries Science Center conducts this work through its headquarters in Seattle near the University of Washington and its five field research stations located throughout Washington and Oregon.

**National Marine Fisheries Service (NMFS) - Northwest 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.

**National Marine Fisheries Service (NMFS) - Scientific Publications Office**

The NOAA Fisheries Scientific Publications Office (SPO) is located in Seattle, WA and publishes the results of all NOAA Fisheries research. Formal NOAA Fisheries publications include the quarterly journals, *Fishery Bulletin* and *Marine Fisheries Review*, and the NOAA Professional Paper series (formerly the NOAA Technical Report series). Additionally, the SPO provides technical and administrative editorial support to NOAA Fisheries headquarters offices, including coordinating publication of three series of the NOAA Technical Memorandum. The SPO also publishes the Our Living Oceans series and other special publications. All SPO publications can be accessed through an online digital archive.

**National Marine Fisheries Service (NMFS) - Office of Law Enforcement**

NOAA’s Office of Law Enforcement is the only conservation enforcement program (Federal or State) that is exclusively dedicated to Federal fisheries and marine resource enforcement. Its mission is to protect global marine resources by enforcing domestic laws and international treaties and obligations dedicated to protecting wildlife and their natural habitat. Our special agents and enforcement officers ensure compliance with these laws and take enforcement action if there are violations. Additionally, the Cooperative Enforcement Program allows NOAA the ability to leverage the resources and assistance of 27 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. The Office of Law Enforcement’s West Coast Division is headquartered in Seattle, with field offices in Seattle, Bellingham, Westport and Lacey, as well as in California and Oregon.

**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 Washington, the Restoration Center works to restore tidal wetlands, remove dams, modify culverts to improve tidal flushing in coastal wetlands, remove invasive species, and restore native fish and shellfish populations. In Washington, the Restoration Center has restored over 5,655 acres of habitat and opened up more than 400 miles of fish passage through over 320 projects. For example, the Smith Island Estuarine Restoration project restored full tidal exchange to over 320 acres of marsh that are currently restricted by levees. The project provided access to rearing
habitat for federally listed Chinook salmon, steelhead and many estuarine fish species. The Restoration Center is also involved with the The Puget Sound Partnership, a community effort of citizens, governments, tribes, scientists, and businesses working together to restore and protect Puget Sound. Puget Sound Partnership has worked with NOAA since 2010 to restore critical habitat for threatened and endangered species and foster long-term stewardship of resources in Puget Sound. This work is also a top priority of the NOAA-approved Puget Sound Salmon Recovery Plan.

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 funding from responsible parties for restoration of critical habitats, fisheries, protected species and recreational uses nationwide. These projects promote recovery of the ecosystem and provide economic benefits from tourism, recreation, green jobs, coastal resiliency, property values and quality of life. In Washington, the Program is currently working to restore natural resources in cases including Lower Duwamish River, Hanford Nuclear Site, and Port Gardner hazardous waste sites.

National Marine Fisheries Service (NMFS) - West Coast Region
NMFS is dedicated to protecting and preserving our nation's living marine resources through scientific research, fisheries management, enforcement, and habitat conservation. The West Coast Region manages marine and anadromous fish, sea turtles, and marine mammals and their habitats administers fisheries programs along off the coasts of Washington, Oregon, and California; and in the vast inland habitats of Washington, Oregon, California, and Idaho. We carry out our work to conserve, protect, and manage these species salmon and marine mammals under the Endangered Species Act, and Marine Mammal Protection Act, and to sustainably manage West Coast fisheries as guided by the Magnuson-Stevens Fisheries Conservation and Management Act. We work closely with tribes, local, state, and federal agencies, the Pacific Fishery Management Council, and our stakeholders and partners to find science-based solutions to complex ecological issues.

National Ocean Service (NOS) - Bay-Watershed Education and Training Program
NOAA's Bay-Watershed Education and Training (B-WET) Program, administered in this region by the Office of National Marine Sanctuaries, 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). 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. Pacific Northwest B-WET responds to regional education and environmental priorities, including projects that demonstrate a connection to the ocean environment through the watershed system, through local implementation of competitive grant funds.

National Ocean Service (NOS) - Navigation Manager
Navigation Managers serve as Coast Survey's ambassadors to the maritime community. Located in different regions throughout the country, Coast Survey Navigation Managers help identify the challenges facing marine transportation in general, directly supporting the NOAA strategic goal to "promote safe navigation." These agents assist Coast Survey in overseeing the National Oceanic and Atmospheric Administration's nautical chart data collection and information programs, helping to meet constituent needs. Navigation Managers focus primarily on resolving charting and navigation questions, educating constituents on emerging charting technologies and their uses, and soliciting feedback on NOAA's navigation products and services from the commercial maritime industry. The Office of Coast Survey has a Navigation Manager located in Seattle, WA to support mariners and stakeholders in Oregon and Washington.
**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 Seattle, Washington serving the Northwest region – Idaho, Oregon, and Washington. 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 28 ASOS stations in Washington.

**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 195 COOP sites in Washington.

**National Weather Service (NWS) - Incident Meteorologists**

The NWS, as mandated by Congress, provides fire weather forecast products and services to the fire and land management community for the protection of life and property, promotion of firefighter safety, and stewardship of America’s public wildlands. Since 1928, this effort has included providing critical on-scene support to wildfire managers via specially-trained NWS forecasters called Incident Meteorologists (IMETs). When a fire reaches a large enough size, IMETs are rapidly deployed to the incident and set-up a mobile weather center to provide constant weather updates and forecast briefings to the fire incident commanders. IMETs are very important members of the firefighting team, as changes in the fires are largely due to changes in the weather.

**National Weather Service (NWS) - NOAA Weather Radio All Hazards Transmitters**

NOAA Weather Radio All Hazards (NWR) broadcasts 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 16 NWR transmitters in Washington.

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. In Washington, ELP supports the Orca Bowl in Washington, one 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 American Meteorological Society’s 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, there are other institutions providing support to and receiving support from our grant recipients to advance NOAA’s mission.

Office of Oceanic and Atmospheric Research (OAR) – **Washington 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. Washington Sea Grant is located at the University of Washington, with ten active field offices providing services and research important to the health of both the coast and Puget Sound, the largest estuary on the West Coast. The program serves marine communities, industries and the people of Washington, in a rapidly growing state with a large ocean economy within close proximity to some of the world’s most productive fisheries. The aquaculture industry alone produces more oysters and other bivalves than any other state. Through research, education and outreach, Washington Sea Grant addresses important marine issues; provides better tools for managing the marine environment; and cultivates strategic partnerships within the marine community and throughout the state.

**Coastal**

**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 and within the Office of Habitat Conservation -- 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 2019, research is being prioritized in two regions -- the southeast (states include VA, NC, SC, GA, FL, AL, MS, LA, TX, and the Caribbean islands) and the west coast (WA, OR, CA).

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

Under the authority of section 6 of the Endangered Species Act, the Cooperation with States Program brings states, NMFS, and other partners together to recover threatened and endangered species. A total of 25 U.S. territories and coastal states, including Washington, currently participate in this program. Competitive grants are awarded to states through the Species Recovery Grants to States Program to support management, monitoring, research and outreach.
efforts for species that spend all or a portion of their life cycle in state waters. The funded work is designed to prevent extinctions or reverse the decline of species, and restore ecosystems and their related socioeconomic benefits. The Washington Department of Fish and Wildlife has received multiple awards through this program, including grants to support projects focused on Puget Sound rockfish, eulachon, large whales, and Southern Resident killer whales.

**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 and volunteers 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 13 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. In FY17, 36 grantees received $2.8 Mil nationwide, with five awards going to Washington: Cascadia Research Collective, Washington Department of Fish and Wildlife, SR3 Sea Life Response, Rehabilitation and Research, Wolf Hollow Rehabilitation Center and the Whale Museum.

**National Marine Fisheries Service (NMFS) - Pacific Coastal Salmon Recovery Fund**

The Pacific Coastal Salmon Recovery Fund (PCSRF) was established by Congress in 2000 to reverse the declines of Pacific salmon and steelhead by advancing the protection, restoration, and conservation of Pacific salmon and their habitats. The Fund is essential to prevent the extinction of 28 salmon species protected under the Endangered Species Act and also plays a vital role in supporting the economies of local communities from California to Alaska, upholding Tribal Treaty fishing rights and subsistence fishing traditions, and restoring all salmon populations to productive and viable levels along the entire West Coast. Since 2000, approximately 13,200 projects have restored nearly 1.1 million acres of salmon habitat, opening over 10,550 miles of streams to spawning fish, with $1.35 billion in grants leveraging over $1.69 billion in contributions. Several studies suggest that a $1 million investment in watershed restoration creates between 13 and 32 jobs and between $2.2 and $3.4 million in economic activity. In Washington there are 411 active projects.

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

NOS operates 10 long-term continuously operating tide stations in the state of Washington which provide data and information on tidal datums and relative sea level trends, and are capable of producing real-time data for tsunami and storm surge warning. These stations are located at Cherry Point, Friday Harbor, La Push, Longview, Neah Bay, Port Angeles, Port Townsend, Seattle, Toke Point, and Westport. Each station is associated with a set of tidal benchmarks installed in the ground that is used to reference the height of the water levels and helps connect the water level to land. In 2010, NOAA’s Center for Operational Oceanographic Products and Services (CO-OPS) strengthened an existing National Water Level Observation Network station at Toke Point, WA. Strengthened water-level stations were designed by engineers from CO-OPS to withstand the storm surge and waves of a Category 4 hurricane. Also, CO-OPS continued its two-year effort to add meteorological sensors to National Water Level Observation Network stations, with 20 stations being upgraded in FY2010. The upgrades included the installation of wind, barometric pressure, and air temperature sensors.

**National Ocean Service (NOS) - Coastal Management Fellowship**

This program matches postgraduate students with state and territory coastal zone programs to work on two-year projects proposed by the state or territory. The Washington Coastal Zone Management Program is hosting a fellow from 2018-2020 who is providing coastal managers with information and tools to improve implementation of shoreline armoring regulations in Puget Sound.
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. Twelve projects have been completed in Washington, and these lands are protected in perpetuity.

National Ocean Service (NOS) – National Coastal Zone Management Program
Through a unique federal-state partnership, NOAA’s Office for Coastal Management works with the Washington Department of Ecology to implement the National Coastal Zone Management Program in Washington. 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. In Washington, the NOAA Office for Coastal Management awarded three grants that are ongoing in 2018, including: a grant to Washington Sea Grant to lead a partnership of managers, conservation groups, and academic scientists to enhance coastal community resilience through cutting-edge science, community pilot projects, and revised state guidance and restoration project design; a grant to the Washington Department of Fish and Wildlife to restore 337 acres of wetlands in the Stillaguamish River delta of Puget Sound, Washington, which will provide valuable foraging opportunities and refuge habitat for migratory species, including Endangered Species Act-listed Puget Sound Chinook; and a grant to the North Olympic Salmon Coalition, in collaboration with the Port Gamble S’Klallam Tribe, to replace an earthen causeway and culverts with a bridge that will allow for tidal flow between southern Kilisut Harbor and Oak Bay.

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) - West Coast Regional Office
The Office of National Marine Sanctuaries, West Coast Regional Office oversees management of and fosters coordination among the five national marine sanctuaries of the west coast, which together protect 15,455 square miles of ocean and coastal waters from Washington to southern California. The regional office also closely collaborates with federal, state, local and tribal entities in shared management responsibilities. The West Coast Regional Office is located in Monterey, CA; each sanctuary office and visitor center is noted geographically for the various congressional districts. NOAA Sanctuaries West Coast Regional Office also manages B-WET Pacific Northwest; see Oregon and Washington “NOAA in your State” for a description of that program. The regional office also maintains and operates two science vessels to
support the three north-central California national marine sanctuaries; these vessels are homeported at Monterey Harbor, CA

**National Ocean Service (NOS) – OR&R 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 from local emergencies to events that draw national attention. 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. 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 following events like industrial activity in Commencement Bay 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. Washington's SSC and RRC are based in Seattle along with a large staff of scientists and programmers and other specialists that support spills and cases in WA state and nationally.

**National Ocean Service (NOS) – OR&R 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 Northwest 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. Much of the ERMA leadership and development teams are based in Washington.

**National Ocean Service (NOS) - OR&R 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 Pacific Northwest Regional Coordinator is based in Seattle 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. In Washington, the MDP is partnering with Olympic Coast National Marine Sanctuary (OCNMS) to coordinate a volunteer-based marine debris monitoring program. Several removal efforts are underway to remove derelict crab pots from 155 square miles of habitat within the Quinault Indian Nation and from 20 square miles within the Quileute Indian Tribe Special Management Areas. The MDP partnered with the Makah Indian Tribe to remove three sunken vessels totalling over 300 tons from the Makah Marina in Neah Bay, and it is presently supporting the Makah Tribe to remove over 200 crab pots and lines from Tribal fishing grounds. The MDP and Northwest Straits Foundation partnered to remove an estimated 800 derelict crab pots from the Puget Sound and the Strait of Juan de Fuca. The MDP, in close
partnership with state agencies, NGOs, industry, and academia, has recently completed the Washington Marine Debris Action Plan to reduce marine debris in Washington State more collaboratively and effectively.

**National Ocean Service (NOS) - [Northwest Association of Networked Ocean Observing Systems](https://www.nanoos.org)**
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 Northwest Association of Networked Ocean Observing Systems (NANOOS) is the Regional Association for the Pacific Northwest, primarily Washington and Oregon. NANOOS includes over 40 members representing the interests of different regions and sectors including industry, government (tribal, state, local) education, and research. NANOOS and all of its users are benefiting from a commitment to furthering the scientific and operational design and maintenance of the Pacific Northwest regional ocean observing system. NANOOS has strong ties with the observing programs in Alaska and British Columbia through our common purpose and the occasional overlap of data and products. NANOOS is creating customized information and tools with an emphasis on maritime operations, ecosystem impacts, regional fisheries, coastal hazards.

**National Weather Service (NWS) - [Buoys](https://www.ndbc.noaa.gov)**
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.

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Washington