



NOAA In Your State

California

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

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

Highlights of NOAA in California

| | | |
|---|--------------------------------------|----------------|
| Cordell Bank National Marine Sanctuary | Point Reyes Station | CA-2 |
| San Francisco Bay National Estuarine Research Reserve | San Francisco, San Rafael, Suisun | CA-11,2,8 |
| Greater Farallones National Marine Sanctuary | Bodega Bay, Pt. Reyes, San Francisco | CA-2,11,4 9 |
| Russian River Watershed Habitat Focus Area | Santa Rosa | CA-4 |
| Monterey Bay National Marine Sanctuary | Monterey | CA-19 |
| Channel Islands National Marine Sanctuary | Santa Barbara and Ventura | CA-24 |
| NOAA Ship Reuben Lasker | San Diego | CA-50 |

[La Jolla Shores Drive Laboratory](#) La Jolla

CA-50

The state of California also has two Cooperative Institutes, six Weather Forecasting Offices, two Regional Offices, three Labs and Field Offices, ten Science on a Sphere® exhibitions, four National Marine Sanctuaries, three National Estuarine Research Reserves, and one Habitat Focus Area.

Weather Forecast Offices

| | |
|-------------------------------|-------|
| Eureka | CA-2 |
| Sacramento | CA-7 |
| San Francisco | CA-11 |
| San Joaquin Valley/Hanford | CA-13 |
| Los Angeles | CA-34 |
| San Diego | CA-50 |

[National Weather Service \(NWS\) Weather Forecast Offices \(WFO\)](#) are staffed 24/7/365 and provide weather, water, and climate forecasts and warnings to residents of California. There are 122 [WFOs nationwide](#) of which six are in California. Highly trained forecasters issue warnings and forecasts for weather events, including severe thunderstorms, tornadoes, hurricanes, winter storms, floods, and heat waves to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including wireless emergency alerts, social media, [weather.gov](#), and NOAA Weather Radio All Hazards. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and educational programs that strengthen working relationships with local partners in emergency management, government, the media and academic communities. Forecasters provide Impact-based Decision Support Services (IDSS), both remotely and on-site during critical emergencies such as wildfires, floods, chemical spills, and major recovery efforts. To gather data for forecasting and other purposes, NWS WFO staff monitor, maintain and use Automated Surface Observing Stations and Doppler Weather Radar. In addition to the WFOs, NWS operates specialized national prediction [centers](#) and regional headquarters throughout the U.S. for a total of 168 operational units. Over 85% of NWS' workforce is in the field. For current California weather, visit [www.weather.gov](#) and, on the national map, click on the relevant county or district.

Science On a Sphere®

| | |
|---------------------|-------|
| Point Reyes Station | CA-2 |
| Modesto | CA-5 |
| San Francisco | CA-11 |
| San Jose | CA-18 |
| Berkeley | CA-12 |
| Sylmar | CA-29 |
| Lake Forest | CA-40 |

Santa Ana CA-46
Long Beach CA-42
Costa Mesa CA-47

[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 Point Reyes National Seashore, Great Valley Museum and Modesto Junior College, The Climate Corporation in San Francisco, Tech Museum of Innovation in San Jose, Lawrence Hall of Science in Berkeley, Discovery Cube Los Angeles in Sylmar, Panasonic Avionics Corporation in Lake Forest, Discovery Science Center in Santa Ana, and Aquarium of the Pacific in Long Beach.

CA-1 **Redding**

Office of Oceanic and Atmospheric Research (OAR) - [U.S. Climate Reference Network](#)

The US Climate Reference Network (USCRN) is an operationally viable research network of more than 138 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS). ARL/ATDD manage the USCRN in partnership with NOAA's NESDIS/NCEI.

Yreka

National Marine Fisheries Service (NMFS) - [West Coast Region California Coastal Area Office](#)

The California Coastal Area Office is part of the NMFS West Coast Region and includes five offices located in Arcata, Santa Rosa, Yreka, Santa Cruz, and Long Beach. Our responsibilities focus on protecting species and their habitats along the California coastline and its associated watersheds, including the entire Klamath River Basin. We work to protect species listed under the Endangered Species Act by evaluating the impacts of proposed federal actions, developing and implementing recovery plans, ensuring safe fish passage through federal and some private dams and seeking conservation partnerships with local governments and landowners. Using local, on-the-ground knowledge, our priorities focus on land use practices and other threats that limit particular recovery and restoration activities. We work with local communities and a diverse group of stakeholders to ensure that mutually beneficial conservation strategies are realized.

CA-1, 7

[Thermalito, Twitchell Island](#)

Office of Oceanic and Atmospheric Research (OAR) - [MOA CA Department of Water Resources](#)

The NOAA Physical Sciences Laboratory operates and maintains two atmospheric river observatories upwind of the Oroville Dam in California to provide observations of moisture transport through the San Francisco Bay area up into the north central valley where it rises over the Sierra Nevada and causes heavy precipitation. The data are used in research to advance NOAA predictive capabilities through the evaluation of key processes in forecast system models as well as to support nowcasting and real-time applications. The California Department of Water Resources requested that these observatories be installed in response to the Oroville Dam flood mitigation crisis in February 2017.

CA-2

Arcata

National Marine Fisheries Service (NMFS) - [Northern California Pacific Coast Ocean Observing System Coordination Office](#)

Located at the Humboldt State University Marine Laboratory, the Northern California Pacific Coast Ocean Observing System Coordination Office, part of the Southwest Fisheries Science Center's Fishery Ecology Division, is charged with leading and facilitating ocean observing activities and research on fisheries and oceanography off the North Coast of California, a historically understudied region of the California Current System. This collaborative effort between the Southwest Fisheries Science Center and Humboldt State University also provides opportunities for graduate student training and enhances educational programs directly linked to the NMFS mission.

National Marine Fisheries Service (NMFS) - [West Coast Region California Coastal Area Office](#)

The California Coastal Area Office is part of the NMFS West Coast Region and includes five offices located in Arcata, Santa Rosa, Yreka, Santa Cruz, and Long Beach. Our responsibilities focus on protecting species and their habitats along the California coastline and its associated watersheds, including the entire Klamath River Basin. We work to protect species listed under the Endangered Species Act by evaluating the impacts of proposed federal actions, developing and implementing recovery plans, ensuring safe fish passage through federal and some private dams and seeking conservation partnerships with local governments and landowners. Using local, on-the-ground knowledge, our priorities focus on land use practices and other threats that limit particular recovery and restoration activities. We work with local communities and a diverse group of stakeholders to ensure that mutually beneficial conservation strategies are realized.

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

A Physical Oceanographic Real-Time System (PORTS®) in Humboldt Bay, California operates through a partnership with the Humboldt Bay Harbor, Recreation and Conservation District and the Center for Operational Oceanographic Products (CO-OPS). The system in Humboldt Bay collects oceanographic data from two current meters, one water level station and one wave buoy.

Bodega Bay

Office of Oceanic and Atmospheric Research (OAR) - [U.S. Climate Reference Network](#)

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Bodega Bay, Cazadero

Office of Oceanic and Atmospheric Research (OAR) - [Weather-Climate Connection Measurements](#)

The NOAA Physical Sciences Laboratory supports long term measurements of coastal weather phenomena at three sites: Bodega Bay, Cazadero, and Chico. These sites measure key phenomena associated with winter weather, fog, fire weather, air quality, and a host of other applications at the interface of weather and climate. Observations from these sites are made available to the public on the internet and they have led to dozens of research publications in the peer-reviewed literature.

Eureka

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

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

Trinidad

Office of Oceanic and Atmospheric Research (OAR) - [Global Greenhouse Gas Reference Network: Halocarbon/Ozone Measurements](#)

NOAA's Global Monitoring Laboratory (GML) operates a small aircraft-based North American network of sampling sites to measure vertical profiles of important greenhouse gas concentrations. Air is sampled bi-weekly above the surface up to approximately 25,000 feet above sea level using a relatively small, light, and economical automated system developed by GML researchers. These air samples are delivered to GML in Boulder, Colorado for measurements of CO₂, CH₄, other greenhouse gases, and ozone depleting substances. These data improve our understanding of the distribution of greenhouse gases and models of the global carbon cycle. The measurements of ozone depleting substances help determine the effectiveness of efforts to protect and restore the ozone layer, which protects the surface from the sun's ultraviolet radiation. In collaboration with the California Air Resources Board (CARB), GML also 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. GML also conducts long-term monitoring of ozone at the surface through cooperative relationships with local partners. Near ground level ozone is currently monitored using an ultraviolet absorption photometer. This site provides information on possible long-term changes in tropospheric ozone near the surface and supports air quality research.

Petaluma

National Ocean Service (NOS) - [U.S.Integrated Ocean Observing System \(Central and Northern California Ocean Observing System\)](#) and ([Southern California Coastal Ocean Observing System](#))

The Southern California Coastal Ocean Observing System (SCCOOS) has developed the capabilities to support short-term decision-making and long-term assessment by implementing and leveraging biological, chemical and physical observations and models, many of them in the near real-time. The principal goal of SCCOOS is to provide observations and products to a diverse stakeholder community of managers and planners, operational decision makers, scientists and the general public. Information is readily available via a state-of-the-art data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. The geographic extent of SCCOOS overlaps with that of CeNCOOS and extends beyond the U.S./Mexico border. For this reason SCCOOS and CeNCOOS works interactively with its neighboring IOOS Regional Association to the north, the Central and Northern California Ocean Observing System (CeNCOOS) to make information readily available via a state-of-the-art CalOOS data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. SCCOOS and CeNCOOS also partner to build capacity for biogeochemical and biological observations for ecosystem management and prediction. Taken together, their activities are integral to California's economy, health and safety. Marine transportation, aquaculture, commercial fishing, recreational boating and many other industries rely on the data provided to operate successfully.

SCCOOS support to seven California and two external partner institutions is critical to ensuring the SCCOOS mission and vision are realized. Many of the supported projects are cost-shared with CeNCOOS to leverage our support to the CalOOS system. Operational production of a multivariate index of environmental conditions that drive biological variability in the CA Current System to inform biological measurements of California Giant Kelp population dynamics and coverage is supported by an award to the **Farallon Institute**.

CA-2, 8, 11

San Rafael, Suisun, San Francisco

National Ocean Service (NOS) - [San Francisco 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. . Designated in 2003, the San Francisco Bay research reserve is managed by a partnership between San Francisco State University, California State Parks, and the Solano Land Trust. The reserve's 3,710 acres are comprised of two of the most pristine wetlands in the San Francisco Bay estuary, spread across two sites: China Camp State Park and Rush Ranch Open Space Preserve in the Suisun Marsh.

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

The Margaret A. Davidson Graduate Fellowship program funds graduate student research and professional development opportunities within the National Estuarine Research Reserve System. The program supports collaborative research addressing local management challenges that may influence future policy and management strategies. The Davidson Fellow at San Francisco Bay National Estuarine Research Reserve will focus their research on assessing and advancing social equity and justice considerations in nature-based adaptation to sea level rise in the San Francisco Bay.

CA-2, 4

Coastal Marin and Sonoma Counties

National Ocean Service (NOS) - [Cordell Bank National Marine Sanctuary](#) (NMS)

Cordell Bank National Marine Sanctuary, established in 1989 and expanded to 1,286 square miles in 2015, protects and conserves an area of extraordinary ocean productivity and coastal upwelling off northern California. Cordell Bank and Greater Farallones NMS are two sanctuary sites overseen by one management unit and work with the West Coast region and the national program, implementing ecosystem based management that considers coastal communities, maritime commerce, ocean habitat, water quality and a thriving community of resident and migratory fishes, invertebrates, marine mammals, seabirds and turtles. Sanctuary programs include a decades-long monitoring effort to track climate change and ecosystem health, cooperative research with local universities to understand critical ocean issues, education and outreach programs for teachers, schools and local communities to increase ocean awareness and stewardship, and resource protection efforts to educate and enforce sanctuary regulations. Seafloor surveys in 2018 examined multiple habitat types within the sanctuary, including continental shelf, slope, and Cordell Bank, which is covered with corals and sponges. The Cordell Bank and Greater Farallones NMS staff with partners survey open water habitat, including important feeding grounds for resident and migratory seabirds and marine mammals such as endangered and threatened blue and humpback whales. Cordell Bank National Marine Sanctuary relies on input from a citizen advisory council representing sanctuary constituent groups who provide advice on sanctuary activities and management actions. By addressing current management issues and anticipating future challenges, we strive to maintain a healthy marine environment for this and future generations. The sanctuary office is co-located with the offices for Point Reyes National Seashore in Point Reyes Station, CA.

CA-2,11,49

Bodega Bay, Pt. Reyes, San Francisco

National Ocean Service (NOS) - [Greater Farallones National Marine Sanctuary](#)

Greater Farallones National Marine Sanctuary protects 3,295 square miles off the North-central California coast, from Point Arena in Mendocino County, south to Half Moon Bay in San Mateo County. It also has administrative jurisdiction over the northern sector of Monterey Bay National Marine Sanctuary. In 2021, Greater Farallones and Cordell Bank NMS management were consolidated into one unit. Greater Farallones National Marine Sanctuary manages one of the most

biologically productive and diverse regions in the world, consisting of open ocean, tidal flat, rocky intertidal, estuarine wetland, subtidal reef, and sandy beach habitats. It supports 25 threatened and endangered species, 36 marine mammals, white sharks, and the largest seabird rookery in the lower 48 states. Greater Farallones National Marine Sanctuary carries out conservation, research, education, and stewardship programs to protect and manage these waters for resiliency, informed by long-term scientific investigations such as the Applied California Current Ecosystem Studies and Deep Sea Corals research (in conjunction with Cordell Bank National Marine Sanctuary); and its Beach Watch coastal monitoring program. Through formal and informal education and outreach programs it reaches over 30,000 people each year, and through partner exhibits including the California Academy of Sciences and Pt. Reyes National Seashore, it reaches 4.3 million annually. In recent years, Greater Farallones NMS has focused on kelp, wetland, sandy beach, eelgrass, and deep sea coral restoration. An advisory council representing commerce, conservation, fisheries, science, recreation, tourism, and other sectors advises sanctuary management. Established in 1981, Greater Farallones National Marine Sanctuary maintains an office, classroom and visitor center in the Golden Gate National Recreation Area's Presidio of San Francisco.

National Ocean Service (NOS) - [Greater Farallones National Marine Sanctuary Ocean Climate Center](#)

The Office of National Marine Sanctuaries (ONMS) Center for Collaboration on Ocean Climate Change managed by the Greater Farallones National Marine Sanctuary develops and implements novel approaches to mitigate and address the effects of climate change in marine protected areas (MPA). As part of the ONMS climate change team, staff publish and train MPA managers nationally and internationally on these novel approaches.

CA-4

[Santa Rosa](#)

National Ocean Service (NOS), National Marine Fisheries Service (NMFS), Oceanographic and Atmospheric Research (OAR), and National Weather Service (NWS) - [Russian River Watershed Habitat Focus Area](#)

The Russian River watershed was selected as the first [NOAA Habitat Focus Area](#) (HFA). HFAs are targeted places where NOAA addresses high priority habitat issues by collaborating with partners and communities. Over the past several years, NOAA, led by the [Office of Habitat Conservation](#), has selected 11 HFAs across the country which have achieved significant results for ecosystems and communities. While each HFA focuses on individual habitat conservation goals, the overarching goal is to leverage collective expertise and demonstrate results in a short time period. In the Russian River Habitat Focus Area, multiple offices within NOAA joined an already active community of partners to make significant progress on three major objectives - rebuilding endangered coho and threatened steelhead stocks to sustainable levels through habitat protection and restoration; improving frost, rainfall, and river forecasts in the Russian River watershed through improved data collection and modeling; and increasing community resilience to flooding damage through improved planning and water management strategies.

NOAA Commissioned Officer Corps (NOAA Corps) - [GIS and Operations Coordinator](#)

The NOAA Commissioned Officer Corps stations an officer with the California Coastal Office Operations and Policy Branch of the National Marine Fisheries Service (NMFS) West Coast Region in support of NMFS operations requiring Geographic Information Systems (GIS). This officer manages the operations of GIS to support the salmon recovery efforts in the Santa Rosa Office, coordinates with Federal, State, and local partners on GIS requirements for recovery of endangered species act protected species, and responds to other miscellaneous GIS requests for the office. In addition, they serve as both the Vessel Operations Coordinator for seven river research vessels located in both Santa Rosa and Long Beach, and as a NOAA Scientific/Working Diver on the Coastal Office dive team.

National Marine Fisheries Service (NMFS) - [West Coast Region](#) California Coastal Area Office

The California Coastal Area Office is part of the NMFS West Coast Region and includes five offices located in Arcata, Santa Rosa, Yreka, Santa Cruz, and Long Beach. Our responsibilities focus on protecting species and their habitats along the California coastline and its associated watersheds, including the entire Klamath River Basin. We work to protect species listed under the Endangered Species Act by evaluating the impacts of proposed federal actions, developing and implementing recovery plans, ensuring safe fish passage through federal and some private dams and seeking conservation partnerships with local governments and landowners. Using local, on-the-ground knowledge, our priorities focus on land use practices and other threats that limit particular recovery and restoration activities.

Yosemite Village

Office of Oceanic and Atmospheric Research (OAR) - [U.S. Climate Reference Network](#)

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CA-2,4

Hopland, Middletown, Cazadero, Santa Rosa,

Office of Oceanic and Atmospheric Research (OAR) - [NOAA Hydrometeorology Testbed](#)

In conjunction with the Weather Program Office, NOAA's Physical Sciences Laboratory operates and maintains four precipitation profiling radars to evaluate precipitation processes over complex terrain.

CA-7

Sacramento

National Weather Service (NWS) - [California-Nevada River Forecast Center](#)

Co-located with the NWS Weather Forecast Office in Sacramento, the NWS California-Nevada River Forecast Center (CNRFC) performs continuous river basin modeling and provides hydrologic forecast and guidance products for rivers and streams and has responsibility for all river basins in California (except for the Colorado River drainage in the south), the Klamath River in southern Oregon, the Quinn River in southeast Oregon, and all river basins in Nevada (except for tributaries to the Snake River in the north, tributaries to the Colorado River in the southeast, and tributaries to the Great Salt Lake and Sevier Lake in the far east portion). These products include forecasts of river stage and flow, probabilistic river forecasts, reservoir inflow forecasts, gridded precipitation estimates and forecasts, spring flood outlooks, and flash flood and headwater guidance. Some of the RFCs in the western and central U.S. also provide water supply forecasts. RFCs work closely with local, state and federal water management agencies, including the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, and U.S. Geological Survey, to provide water and flood information for critical decisions (aka Impact-based Decision-Support Services or IDSS).

National Marine Fisheries Service (NMFS) - [West Coast Region California Central Valley Area Office](#)

The California Central Valley Area Office is part of the NMFS West Coast Region and is located in the heart of California's Central Valley, only a few blocks from the State Capitol. Our responsibilities focus on the Sacramento and San Joaquin River Basins and Sacramento-San Joaquin Delta. We work in these river basins to protect species listed under the Endangered Species Act by evaluating the impact of proposed federal actions, developing recovery plans, seeking conservation partnerships with local governments and landowners, and ensuring safe fish passage past federal and some private dams.

NOAA Commissioned Officer Corps (NOAA Corps) - [Special Assistant, NMFS California Central Valley Office \(CCVO\)](#)

The NOAA Commissioned Officer Corps stations an officer with the National Marine Fisheries Service California Central Valley Office in support of its mission of conservation and regulatory management. The officer primarily serves the office through providing administrative management and technical assistance to the branches within the office, including performing Section 7 biological consultations under the endangered species act. This officer leverages their scientific and administrative expertise to fill multiple roles simultaneously, including coordinating inter-agency working groups focused on recovery plans and regulatory/management documents as well as participating directly in field work as needed.

Walnut Grove

Office of Oceanic and Atmospheric Research (OAR) - [Global Greenhouse Gas Reference Network; Halocarbon Measurements](#)

NOAA's Global Monitoring Laboratory (GML) performs trace gas monitoring on tall towers in eight states, including California. The sites were established to extend GML's monitoring network to aid estimation of the net carbon balance. Because variations of trace gases, especially carbon dioxide (CO₂), are large near the ground, the collection of measurements at multiple levels on existing tall towers is advantageous to understanding carbon fluxes. GML also 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 GML in Boulder, CO for analysis. 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.

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

CA-11

San Francisco Bay Area

National Ocean Service (NOS) - [San Francisco Bay PORTS®](#)

A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community in greater San Francisco Bay at which real-time data are quality-controlled and disseminated to local users for safe and efficient navigation. Real-time data are available for water levels from six stations, meteorological data from fourteen stations, current data from four stations, surface wave data from one station and visibility sensors from three locations.

CA-8

Stovepipe Wells

Office of Oceanic and Atmospheric Research (OAR) - [U.S. Climate Reference Network](#)

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CA-10

Modesto

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

CA-12

San Francisco

Office of Oceanic and Atmospheric Research (OAR) - [Global Greenhouse Gas Reference Network](#)

NOAA's Global Monitoring Laboratory (GML) operates trace gas monitoring sites at tall towers in eight states, including California. The sites were established to extend GML's monitoring network to provide data to aid estimation of the net carbon balance of the continent. Variations of trace gases, especially carbon dioxide, are largest near the ground, so we utilize existing tall towers as platforms for in situ and flask sampling for atmospheric trace gases. Flask samples are delivered to GML in Boulder, Colorado for analysis. These data improve models and our understanding of the distribution of greenhouse gases, including sources and sinks of carbon in North America. This Sutro Tower site is operated by Sutro Tower, Inc. and measurements are made in collaboration with Lawrence Berkeley National Laboratory.

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

CA-12, 13, 17

[San Francisco, Santa Clara, Santa Rosa, Oakland](#)

Office of Oceanic and Atmospheric Research (OAR) - [Advanced Quantitative Precipitation Information System](#)

NOAA and the Sonoma County Water Agency have signed a MOU in support of the Advanced Quantitative Precipitation Information (AQPI) System project — a four-year, regional multi-agency collaboration to improve monitoring and prediction of precipitation, hydrology, and coastal storm flooding in the San Francisco Bay region. The NOAA Physical Sciences Laboratory and Global Systems Laboratory officially began participation in AQPI in the late summer of 2017 along with partners from Colorado State University, USGS, and Scripps Institution of Oceanography. The project, funded by the California Department of Water Resources, includes installation of five radar systems, and high resolution modeling using a research version of NOAA's operational High Resolution Rapid Refresh (HRRR) to better predict storms and their impacts for a variety of water management practices. The first radar was installed in September 2017 in Santa Clara, CA. The project concludes in 2031 with the delivery of an operational precipitation–hydrologic-coastal monitoring and forecast information system tailored to the needs of regional stakeholders. A second radar was installed in Santa Rosa in 2019, and a third near Oakland in 2022. The fourth and fifth radar systems are planned for installation in 2023.

CA-13

[Fremont](#)

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

Housed in the Federal Aviation Administration's Oakland Air Traffic Control Center (ARTCC) in Fremont, the NWS Center Weather Service Unit (CWSU) staff provides aviation forecasts and other weather information to ARTCC personnel for their use in directing the safe, smooth flow of aviation traffic for most of northern California and western Nevada.

[San Jose, Berkeley](#)

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

Oakland

National Ocean Service (NOS) - [NOAA Marine Debris Program \(MDP\)](#)

The NOAA Marine Debris Program (MDP) in the Office of Response and Restoration (OR&R) supports national and international efforts to reduce the impacts of marine debris. The MDP California Regional Coordinator, based in Oakland, 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.

CA-15

[Livermore](#)

Office of Oceanic and Atmospheric Research (OAR) - [Program for Climate Model Diagnosis and Intercomparison](#)

The Geophysical Fluid Dynamics Laboratory (GFDL) is involved in the archiving of its climate model data at the Lawrence Livermore National Laboratory, located in Livermore, CA. Model data is archived for the purpose of intercomparison of climate model data obtained from other national and international climate modeling institutions around the world.

CA-16

Merced

Office of Oceanic and Atmospheric Research (OAR) - [U.S. Climate Reference Network](#)

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CA-20

Monterey

National Ocean Service (NOS) - [Monterey Bay National Marine Sanctuary](#)

Monterey Bay National Marine Sanctuary, at 6,094 square miles, is the largest national marine sanctuary in the contiguous United States, extending along the coastline from north of San Francisco to the south through five coastal counties to the town of Cambria. A remarkable diversity of marine habitats found nowhere else in North America is within the boundaries of the sanctuary and includes rugged rocky shores, sandy beaches, lush kelp forests, and most significantly, some of the deepest submarine canyons, and Davidson Seamount, the first seamount to be protected within the National Marine Sanctuary System. The nutrient-rich currents traveling through the sanctuary allow for a diverse assemblage of marine life, including marine mammals, seabirds, shorebirds, turtles, hundreds of fish species and thousands of invertebrate species, some of which are listed as threatened or endangered status. Monterey Bay National Marine Sanctuary staff coordinate multiple programs that engage with coastal residents, marine science partners, and businesses as diverse as agriculture, commercial and recreational fishing and recreation and tourism. While the sanctuary's main office is located in Monterey, it operates additional offices and visitor centers in Santa Cruz and in San Simeon.

National Ocean Service (NOS) - [National Marine Protected Areas Center](#)

The mission of the National Marine Protected Areas Center is to facilitate the effective use of science, technology, training and information in the planning, management and evaluation of the nation's system of marine protected areas. The National Marine Protected Areas Center supports the nation's federal, state and territorial marine protected area (MPA) programs through capacity building, science, information, tools and outreach. MPAs include National Marine Sanctuaries, National Estuarine Research Reserves, National Parks, National Wildlife Refuges, and the state counterparts to these programs. The Center is co-located with the Office of National Marine Sanctuaries West Coast Regional Office in Monterey.

NOAA Commissioned Officer Corps (NOAA Corps) - [Manager, Environmental Products](#)

The NOAA Commissioned Officer Corps stations an officer within the Environmental Research Division of the Southwest Fisheries Science Center in support of the agency's mission of stewardship of living marine resources and the promotion of healthy ecosystems. The officer performs a variety of duties in concert with shifts in the Division's operations throughout the year. This includes sailing with the division on projects on NOAA Ships, field work incorporating UAS equipment, and managing logistical and data-analysis responsibilities when not in the field. Additionally, this officer maintains UAS equipment, extracts data from aerial photographs and acoustic sampling, and presents compiled information when required.

NOAA Commissioned Officer Corps (NOAA Corps) - [Operations Officer, Office of National Marine Sanctuaries West Coast Region](#)

The NOAA Commissioned Officer Corps stations an officer at the Office of National Marine Sanctuaries (NMS) West Coast Regional Office in support of multiple sanctuary offices' operations. This officer performs various duties related to the maintenance and operation of multiple NOAA small vessels, such as the 67' R/V Fulmar, as well as in an administrative capacity, such as helping to plan and execute the Office's budget. They are responsible for training new hires on the operation of the small vessels, operating the vessels themselves for up to 120 days of the year, in addition to performing various scientific and working dives as needed by the program. As an additional duty, this officer may be called upon to assist operations in the Channel Islands NMS and Olympic Coast NMS.

National Environmental Satellite, Data, and Information Service (NESDIS) - [The Center for Satellite Applications and Research - CoastWatch West Coast node, collocated with NOAA Fisheries, Monterey and Santa Cruz, California](#)

The CoastWatch mission is to provide and ensure timely access to near real-time satellite data to protect, restore, and manage U.S. coastal ocean resources, and understand climate variability and change to further enhance society's quality of life. Our primary users include federal, state, and local marine scientists, coastal resource managers, and the public. There are two components to CoastWatch: Central Operations and Regional Nodes. Central Operations, managed by NOAA's National Environmental Satellite, Data, and Information Service (NESDIS), coordinates the processing, delivery, quality control and storage of data products.

The CoastWatch West Coast Regional Node (WCRN) provides rapid dissemination of satellite observation data to governmental, academic, commercial, and public users in CA, OR, and WA. The WCRN was established in September 1995. It is hosted by [NOAA National Marine Fisheries Service, Southwest Fisheries Science Center's Environmental Research Division](#). Presently, CoastWatch WCRN is housed at the [Fisheries Ecology Division](#) in Santa Cruz, CA.

The [Environmental Research Division](#) (ERD) of the [Southwest Fisheries Science Center](#) provides innovative science-based analyses, products, and information on environmental variability to meet the research and management needs of the [Southwest Fisheries Science Center](#), the [National Marine Fisheries Service](#), and NOAA. The ERD conducts research on fishery-related effects of natural environmental variability over a broad range of scientific, management, and operational concerns of the government and the fishing industry. As a part of this work, the ERD develops and maintains an extensive database of environmental observations. The work by the ERD includes the ocean and coastal waters of CA, OR, and WA. The data activities of the CoastWatch WCRN are fully integrated with the data services provided by the ERD.

[Santa Cruz](#)

National Marine Fisheries Service (NMFS) - [West Coast Region California Coastal Area Office](#)

The California Coastal Area Office is part of the NMFS West Coast Region and includes five offices located in Arcata, Santa Rosa, Yreka, Santa Cruz, and Long Beach. Our responsibilities focus on protecting species and their habitats along the California coastline and its associated watersheds, including the entire Klamath River Basin. We work to protect species listed under the Endangered Species Act by evaluating the impacts of proposed federal actions, developing and implementing recovery plans, ensuring safe fish passage through federal and some private dams and seeking conservation partnerships with local governments and landowners. Using local, on-the-ground knowledge, our priorities focus on land use practices and other threats that limit particular recovery and restoration activities. We work with local communities and a diverse group of stakeholders to ensure that mutually beneficial conservation strategies are realized.

National Ocean Service (NOS) - [Monterey Bay National Marine Sanctuary - Sanctuary Exploration Center](#)

The Sanctuary Exploration Center, the main visitor center for Monterey Bay National Marine Sanctuary and the largest NOAA-dedicated education facility on the west coast, is located just steps from the Santa Cruz Beach Boardwalk and provides state-of-the-art, interactive, interpretive exhibits regarding the sanctuary and its adjoining watersheds to approximately 60,000 visitors annually, from Wednesday through Sunday. The Sanctuary Exploration Center is a model for sustainable, environmentally sensitive design, construction and operation, meeting the U.S. Green Building Council's GOLD standards for Leadership in Energy and Environmental Design (LEED).

National Ocean Service (NOS) - [Monterey Bay National Marine Sanctuary](#)

The National Marine Fisheries Service Lab in Santa Cruz houses two Monterey Bay National Marine Sanctuary staff, an education specialist and a senior research scientist. This co-location facilitates collaboration between sanctuary and NMFS scientists.

NOAA Commissioned Officer Corps (NOAA Corps) - [Operations Officer, Ecology Investigation](#)

The NOAA Commissioned Officer Corps stations an officer with the Fisheries Ecology Division in support of the division's research on Pacific salmon and groundfish. The officer serves in various roles for the division, including as a member of the groundfish analysis team, Vessel Operations Coordinator for eleven vessels, and as a scientific diver. They participate in field operations with the lab, manage the shore-side support and logistics, and conduct some data analysis for the program. In addition, they perform various administrative duties, such as managing the training and proficiency requirements of the small boat operators, execute various safety programs in the division, and manage the maintenance and inspection of operational equipment.

CA-19

San Jose

CA-20

[Santa Cruz](#)

National Marine Fisheries Service (NMFS) - [Fisheries Ecology Division](#)

Located adjacent to the University of California - Santa Cruz, Long Marine Laboratory, the Fisheries Ecology Division of the Southwest Fisheries Science Center (SWFSC) conducts research on Pacific coast groundfish and Pacific Salmon. Results of this research are used by the Pacific Fishery Management Council to manage fisheries and by NMFS to develop recovery plans for threatened and endangered species. Fisheries Ecology Division scientists study causes of variability in abundance and health of fish populations, analyze ecological relations in marine communities, and study the economics of exploiting and protecting natural resources. They also assess the status of stocks targeted by various fisheries and evaluate impacts of human activities on threatened or endangered species. The Santa Cruz laboratory also houses the Data Integration and Analysis Program of the SWFSC's Environmental Research Division. Program scientists maintain environmental and fisheries relevant databases and distribute environmental index products and time series databases to cooperating researchers world-wide. The Data Integration and Analysis program also hosts the west coast regional node for the NOAA CoastWatch program, which provides rapid dissemination of satellite observation data to governmental, academic, commercial and public users. The Santa Cruz laboratory engages in educational and public engagement partnerships with the Seymour Science Center at UC Santa Cruz and the Monterey Bay National Marine Sanctuary Exploration Center.

[Monterey](#)

National Marine Fisheries Service (NMFS) - [Environmental Research Division](#)

The Climate and Ecosystem Program of the Southwest Fisheries Science Center's Environmental Research Division is located in Monterey, CA, to take advantage of its long association with the United States Navy's Fleet Numerical Meteorology and Oceanography Center. The research group was formed in 1969 to develop databases and to conduct research on fishery-related effects of environmental variability and climate change over a broad range of scientific, management, and operational concerns of the government and the fishing industry of the United States.

NOAA Office of Education — [Coastal Ecosystem Learning Centers \(CELC\) network](#)

In California, NOAA's Office of Education provides support to the Monterey Bay Aquarium in Monterey as part of the Coastal Ecosystem Learning Centers (CELC) network, which is made up of 25 aquariums and marine science education centers located throughout North America. The CELC network collaborates on a variety of initiatives, ranging from youth summits to multi-institution projects, with the goal of better engaging the public in understanding, appreciating, and protecting marine and freshwater ecosystems. Through the CELC network, the Office of Education provides guidance, resources, and scientific expertise to these institutions, which collectively reach an estimated 20 million people annually across North America. By coordinating with the CELC network, NOAA helps to further its mission of engaging the public in protecting and preserving coastal and marine ecosystems.

[Carmel](#)

National Marine Fisheries Service (NMFS) - [Granite Canyon Marine Laboratory](#)

Located at Granite Canyon, eight miles south of Carmel, California, along the Big Sur coast, the Granite Canyon Marine Laboratory has been the site of NMFS' shore-based counts of southbound migrating gray whales since 1967. The University of California-Davis's Marine Pollution Studies Laboratory is also located at the site.

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

[Watsonville](#)

National Ocean Service (NOS) - [Elkhorn Slough 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. Elkhorn Slough National Estuarine Research Reserve was designated in 1979 and is located on the Central California coast halfway between Monterey and Santa Cruz. The reserve, managed on a daily basis by the California Department of Fish and Game and the Elkhorn Slough Foundation, contains 1,439 acres of wetland and upland habitat, rare and threatened marsh, mudflat, and estuarine habitats, all of which are important for several endangered species.

National Ocean Service (NOS) – [Margaret A. Davidson Graduate Fellowship](#)

The Margaret A. Davidson Graduate Fellowship program funds graduate student research and professional development opportunities within the National Estuarine Research Reserve System. The program supports collaborative research addressing local management challenges that may influence future policy and management strategies. The Davidson Fellow at Elkhorn Slough National Estuarine Research Reserve will focus their research on assessing how environmental conditions affect recolonization of vegetation in a salt marsh restoration site.

[CA-21](#)

[San Joaquin Valley/Hanford](#)

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

[Hanford](#)

Office of Oceanic and Atmospheric Research (OAR) - [Surface Radiation Measurement Network: Ozone Measurements](#)

This site is one of seven in the NOAA Global Monitoring Laboratory (GML) surface solar radiation (SOLRAD) monitoring network, based in the continental United States, and is a collaboration with NOAA's SURFRAD Network that supports climate research with accurate, continuous, long-term measurements of the surface radiation budget. The site also makes measurements of the column amounts of ozone between the earth's surface and the top of the atmosphere at a number of locations around the United States. The observations are obtained with ground-based spectrometers that measure the attenuation by ozone of ultraviolet light. These observations are part of a global network and used to track recovery of stratospheric ozone layer in compliance with the USA Clean Air act of 1990. The integrated ozone amount is critical in determining the amount of ultraviolet radiation reaching the earth's surface. These long-term measurements help determine the effectiveness of efforts to protect and restore the ozone layer, which shields the surface from the sun's ultraviolet radiation. Excess ultraviolet radiation is responsible for increased incidence of human skin cancer, crop damage, and damage to other biogenic substances.

CA-24

[San Simeon](#)

National Ocean Service (NOS) - [Monterey Bay National Marine Sanctuary - Coastal Discovery Center](#)

The Coastal Discovery Center at San Simeon Bay, is a small visitor center for Monterey Bay National Marine Sanctuary, located at William R. Hearst State Beach, just across the highway from the entrance to Hearst San Simeon State Historical Monument. This center focuses on sanctuary habitats, responsible wildlife viewing, watersheds, deep sea exploration, ocean sounds, and partners in ocean and watershed protection. The facility hosts 14,000 annually and is open Friday through Sunday weekly.

CA-24, 26

[Santa Barbara and Ventura](#)

National Ocean Service (NOS) - [Channel Islands National Marine Sanctuary](#)

Often referred to as the "American Galapagos," the 1,470 square-mile Channel Islands National Marine Sanctuary, surrounding San Miguel, Santa Rosa, Santa Cruz, Anacapa and Santa Barbara islands, hosts 27 species of whales and dolphins, five species of seals and sea lions, and more than 60 species of seabirds. Rich cultural resources exist as well, such as prehistoric artifacts from early island residents, the remains of more than 100 historic shipwrecks, and the cultural heritage values of contemporary indigenous Chumash people.

Experience the sanctuary first-hand through recreational fishing trips, SCUBA diving and kayak tours, whale watching tours, and excursions to [Channel Islands National Park](#) leaving from Santa Barbara, Ventura or Channel Islands harbors. In Santa Barbara, visitors learn more about the sanctuary through exhibits at the Santa Barbara Maritime Museum, Santa Barbara Sea Center, and Outdoors Santa Barbara Visitor Center. In Ventura County, visitors can learn about the sanctuary, ocean safety and boating options at the Channel Islands Boating Center.

The main office for Channel Islands National Marine Sanctuary staff is located at the University of California, Santa Barbara. The university plans to outfit the publicly-accessible Center for Ocean Advancement of Science and Technology (COAST), co-located with the sanctuary office on campus. Two NOAA research vessels are homeported at Santa Barbara Harbor. Sanctuary programs include protecting sensitive resources, conducting marine science, community involvement, outreach and education programs. Focal issues include climate change, marine debris, non-native species, reducing ship strikes to whales, and marine protected areas. A 21-seat Sanctuary Advisory Council brings together a variety of marine stakeholders and agency partners, meeting publicly every two months to discuss current sanctuary issues and develop management advice to inform agency decision-making.

NOAA Commissioned Officer Corps (NOAA Corps) - [Vessel Operations Coordinator, Channel Islands National Marine Sanctuary](#)

The NOAA Commissioned Officer Corps stations an officer with the Channel Islands National Marine Sanctuary (NMS) office in support of NMS operations in the region. The officer is responsible for the safe operation, inspection compliance, life cycle costs, and material condition of the boats under their supervision, as well as for the planning and execution of both the vessel operations and the Channel Islands NMS budget. In addition, they serve as Operator in Charge, as a crew member, or as a dive team member in various operations on average one week per month. Other duties include coordinating with a variety of Federal and State agencies, as well as universities and NGOs to conduct joint projects on Channel Islands NMS vessels, as well as conducting training to ensure qualified use of NMS assets by all personnel.

Oxnard

National Ocean Service (NOS) - [Channel Islands Boating Center](#)

A consortium of agencies and boaters developed the Channel Islands Boating Center at Channel Islands Harbor in Oxnard. This facility was funded by grants from the California Department of Boating and Waterways and the NOAA Office of National Marine Sanctuaries/ The boating center is operated by California State University, Channel Islands, offering student sailing and watersports activities and educating visitors about boating safety and boating options at the Channel Islands and coastal waters. NOAA's Channel Islands National Marine Sanctuary partners with the boating center to interact with the boating community, Ventura County residents, student groups, other agencies, and the university.

CA-24

San Luis Obispo, Santa Barbara Counties

National Ocean Service (NOS) – [Proposed Chumash Heritage National Marine Sanctuary](#)

NOAA initiated the process to designate the Chumash Heritage National Marine Sanctuary off the coast of California in November 2021. A sanctuary designation would conserve the area's rich biodiversity, recognize Chumash tribal history in the area, and create new opportunities for research and economic development, including recreation and tourism.

National Ocean Service (NOS) - [U.S.Integrated Ocean Observing System \(Central and Northern California Ocean Observing System\)](#) and ([Southern California Coastal Ocean Observing System](#))

The Southern California Coastal Ocean Observing System (SCCOOS) has developed the capabilities to support short-term decision-making and long-term assessment by implementing and leveraging biological, chemical and physical observations and models, many of them in the near real-time. The principal goal of SCCOOS is to provide observations and products to a diverse stakeholder community of managers and planners, operational decision makers, scientists and the general public. Information is readily available via a state-of-the-art data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. The geographic extent of SCCOOS overlaps with that of CeNCOOS and extends beyond the U.S./Mexico border. For this reason SCCOOS and CeNCOOS works interactively with its neighboring IOOS Regional Association to the north, the Central and Northern California Ocean Observing System (CeNCOOS) to make information readily available via a state-of-the-art CalOOS data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. SCCOOS and CeNCOOS also partner to build capacity for biogeochemical and biological observations for ecosystem management and prediction. Taken together, their activities are integral to California's economy, health and safety. Marine transportation, aquaculture, commercial fishing, recreational boating and many other industries rely on the data provided to operate successfully.

SCCOOS support to seven California and two external partner institutions is critical to ensuring the SCCOOS mission and vision are realized. Many of the supported projects are cost-shared with CeNCOOS to leverage our support to the

CalOOS system. The Automated Shore Station Program (SASS) node and the Harmful Algal Bloom Monitoring and Alert Program (HABMAP) projects at Cal Poly Pier are supported through funding from SCCOOS and CeNCOOS to **California State Polytechnic University, San Luis Obispo**.

CA-24

San Simeon

National Marine Fisheries Service (NMFS) - [Piedras Blancas Field Station](#)

Since 1994, scientists from the Southwest Fisheries Science Center's Protected Resources Division have been monitoring the northbound migration of gray whale cows and calves from Piedras Blancas, a point of land just north of San Simeon, and just south of the Big Sur coast. The field site, once used as a lookout point to spot animals during the whaling era, is also home to the Piedras Blancas Light Station and is situated on Bureau of Land Management property. The site is ideal because the whales generally pass within 200 m of the point and often stop to nurse their young in the lee of the rocky point. The survey data has been used to assess variability in annual calf production and to investigate the relationship of this variability to environmental conditions in the Arctic where these whales feed.

Santa Barbara

National Ocean Service (NOS) - [U.S. Integrated Ocean Observing System \(Central and Northern California Ocean Observing System\)](#) and ([Southern California Coastal Ocean Observing System](#))

The Southern California Coastal Ocean Observing System (SCCOOS) has developed the capabilities to support short-term decision-making and long-term assessment by implementing and leveraging biological, chemical and physical observations and models, many of them in the near real-time. The principal goal of SCCOOS is to provide observations and products to a diverse stakeholder community of managers and planners, operational decision makers, scientists and the general public. Information is readily available via a state-of-the-art data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. The geographic extent of SCCOOS overlaps with that of CeNCOOS and extends beyond the U.S./Mexico border. For this reason SCCOOS and CeNCOOS works interactively with its neighboring IOOS Regional Association to the north, the Central and Northern California Ocean Observing System (CeNCOOS) to make information readily available via a state-of-the-art CalOOS data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. SCCOOS and CeNCOOS also partner to build capacity for biogeochemical and biological observations for ecosystem management and prediction. Taken together, their activities are integral to California's economy, health and safety. Marine transportation, aquaculture, commercial fishing, recreational boating and many other industries rely on the data provided to operate successfully.

SCCOOS support to seven California and two external partner institutions is critical to ensuring the SCCOOS mission and vision are realized. Many of the supported projects are cost-shared with CeNCOOS to leverage our support to the CalOOS system. The Automated Shore Station Program (SASS) node at Stearns Wharf is supported by funding to the **University of California, Santa Barbara**, along with the Harmful Algal Bloom Monitoring and Alert Program (HABMAP), the National HAB Observing Network (NHABON), and HFR Surface Current Mapping Network support.

Atmospheric Research (OAR) - [U.S. Climate Reference Network](#)

The US Climate Reference Network (USCRN) is an operationally viable research network of more than 138 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS). ARL/ATDD manage the USCRN in partnership with NOAA's NESDIS/NCEI.

[Vandenberg AFB](#)

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

Vandenberg Air Force Base is the site of many satellite launches for military and commercial organizations. Along with launches, it also houses a remotely controlled and monitored NOAA Search and Rescue Satellite Aided Tracking (SARSAT) reference beacon. . The remotely operated ground systems, referred to as Local User Terminals (LUTs) which receive signals, relayed through polar-orbiting satellites, from ships, aircraft or individuals in distress were decommissioned in response to added MEOSAR ground stations in Florida, Hawaii, and New Mexico. SARSAT is part of an international humanitarian effort helping to improve the rescue of persons in distress. SARSAT has saved more than 10,153 lives in the United States, and over 50,000 people rescued worldwide since 1982.

[CA-25](#)

[Palmdale](#)

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

Housed in the Federal Aviation Administration's Los Angeles Air Traffic Control Center (ARTCC) in Palmdale, the NWS Center Weather Service (CWSU) staff provides aviation forecasts and other weather information to ARTCC personnel for their use in directing the safe, smooth flow of aviation traffic in Southern California and parts of Arizona, Nevada and Utah.

[CA-26](#)

[Los Angeles Basin](#)

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

[CA-27](#)

[Mt. Wilson](#)

Office of Oceanic and Atmospheric Research (OAR) - [Global Greenhouse Gas Reference Network](#)

NOAA's Global Monitoring Laboratory (GML) operates trace gas monitoring sites at tall towers in eight states, including California. The sites were established to extend GML's monitoring network to provide data to aid estimation of the net carbon balance of the continent. Variations of trace gases, especially carbon dioxide, are largest near the ground, so we utilize existing tall towers as platforms for in situ and flask sampling for atmospheric trace gases. Flask samples are delivered to GML in Boulder, Colorado for analysis. These data improve models and our understanding of the distribution of greenhouse gases, including sources and sinks of carbon in North America.

[CA-29](#)

[Sylmar](#)

Office of Oceanic and Atmospheric Research (OAR) - [Science on a Sphere](#)- See [Page 2](#) for details.

[CA-36, 37, 46](#)

[Los Angeles and Long Beach](#)

National Marine Fisheries Service (NMFS) - [West Coast Region](#) California Coastal Area Office

The California Coastal Area Office is part of the NMFS West Coast Region and includes five offices located in Arcata, Santa Rosa, Yreka, Santa Cruz, and Long Beach. Our responsibilities focus on protecting species and their habitats along the California coastline and its associated watersheds, including the entire Klamath River Basin. We work to protect species listed under the Endangered Species Act by evaluating the impacts of proposed federal actions, developing and implementing recovery plans, ensuring safe fish passage through federal and some private dams and seeking conservation partnerships with local governments and landowners. Using local, on-the-ground knowledge, our priorities focus on land use practices and other threats that limit particular recovery and restoration activities.

National Ocean Service (NOS) - [Los Angeles/ Long Beach PORTS®](#)

A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community in the metropolitan Los Angeles/Long Beach area 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 one station, meteorological data from ten stations, surface wave data from three stations, and bridge air gap data from two stations.

CA-42

Los Angeles

National Ocean Service (NOS) - U.S.Integrated Ocean Observing System (Central and Northern California Ocean Observing System) and (Southern California Coastal Ocean Observing System)

The Southern California Coastal Ocean Observing System (SCCOOS) has developed the capabilities to support short-term decision-making and long-term assessment by implementing and leveraging biological, chemical and physical observations and models, many of them in the near real-time. The principal goal of SCCOOS is to provide observations and products to a diverse stakeholder community of managers and planners, operational decision makers, scientists and the general public. Information is readily available via a state-of-the-art data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. The geographic extent of SCCOOS overlaps with that of CeNCOOS and extends beyond the U.S./Mexico border. For this reason SCCOOS and CeNCOOS works interactively with its neighboring IOOS Regional Association to the north, the Central and Northern California Ocean Observing System (CeNCOOS) to make information readily available via a state-of-the-art CalOOS data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. SCCOOS and CeNCOOS also partner to build capacity for biogeochemical and biological observations for ecosystem management and prediction. Taken together, their activities are integral to California's economy, health and safety. Marine transportation, aquaculture, commercial fishing, recreational boating and many other industries rely on the data provided to operate successfully.

SCCOOS support to seven California and two external partner institutions is critical to ensuring the SCCOOS mission and vision are realized. Many of the supported projects are cost-shared with CeNCOOS to leverage our support to the CalOOS system. SCCOOS supports the Harmful Algal Bloom Monitoring and Alert Program (HABMAP) and the National HAB Observing Network (NHABON) projects as well as a node of the HFR Surface Current Mapping Network at the University of Southern California. The HABMAP and NHABON programs at Newport Beach Pier are supported by projects at University of California, Los Angeles along with Regional Ocean Model System (ROMS) development for more accurate nearshore physics and wave dynamics. The Automated Shore Station Program (SASS) node at the Santa Monica Pier in Los Angeles is supported through funding to California State University Northridge.

NOAA Office of Education - [Coastal Ecosystem Learning Centers \(CELC\) network](#)

In California, NOAA's Office of Education provides support to the Aquarium of the Pacific in Los Angeles as part of the Coastal Ecosystem Learning Centers (CELC) network, which is made up of 25 aquariums and marine science education centers located throughout North America. The CELC network collaborates on a variety of initiatives, ranging from youth summits to multi-institution projects, with the goal of better engaging the public in understanding, appreciating, and protecting marine and freshwater ecosystems. Through the CELC network, the Office of Education provides guidance, resources, and scientific expertise to these institutions, which collectively reach an estimated 20 million people annually across North America. By coordinating with the CELC network, NOAA helps to further its mission of engaging the public in protecting and preserving coastal and marine ecosystems.

CA-45

Lake Forest

Office of Oceanic and Atmospheric Research (OAR) - [Science on a Sphere](#)- See [Page 2](#) for details.

CA-46

Santa Ana

Office of Oceanic and Atmospheric Research (OAR) - [Science on a Sphere](#)- See [Page 2](#) for details.

CA-47

Long Beach

Office of Oceanic and Atmospheric Research (OAR) - [Science on a Sphere](#)- See [Page 2](#) for details.

National Marine Fisheries Service (NMFS) - [Southwest Inspection Branch](#) and Los Angeles Lot Inspection Office

NOAA's Seafood Inspection Program conducts a voluntary inspection program for fishery products on a fee-for-service basis. The office offers a wide range of services to the seafood industry (fishermen, wholesalers, processors, retailers, importers and exporters) 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 and animal feeds, are eligible for inspection and certification.

<http://www.westcoast.fisheries.noaa.gov/index.html>

National Marine Fisheries Service (NMFS) - [West Coast Region Long Beach Office](#)

NOAA Fisheries 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 of NOAA Fisheries 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 salmon 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.

National Marine Fisheries Service (NMFS) – Regional Aquaculture Coordinator - West Coast Region - Long Beach Office

The aquaculture coordinators lead regional efforts to foster sustainable aquaculture across the region. The West Coast Region/California has a vibrant commercial marine aquaculture industry supported by a world class research and technology sector. Regional priorities include shellfish, seaweed, and finfish farming, as well as restoration aquaculture. Aquaculture coordinators support regulatory efficiency, aquaculture outreach and education, and serve as liaisons with state and local agencies, tribes, non-government organizations, academia, and industry. These coordinators also work as part of NOAA's Aquaculture Program to foster sustainable U.S. marine aquaculture to increase production of seafood and support business and employment opportunities."

National Ocean Service (NOS) - [U.S.Integrated Ocean Observing System \(Central and Northern California Ocean Observing System\)](#) and ([Southern California Coastal Ocean Observing System](#))

The Southern California Coastal Ocean Observing System (SCCOOS) has developed the capabilities to support short-term decision-making and long-term assessment by implementing and leveraging biological, chemical and physical observations and models, many of them in the near real-time. The principal goal of SCCOOS is to provide observations

and products to a diverse stakeholder community of managers and planners, operational decision makers, scientists and the general public. Information is readily available via a state-of-the-art data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. The geographic extent of SCCOOS overlaps with that of CeNCOOS and extends beyond the U.S./Mexico border. For this reason SCCOOS and CeNCOOS works interactively with its neighboring IOOS Regional Association to the north, the Central and Northern California Ocean Observing System (CeNCOOS) to make information readily available via a state-of-the-art CalOOS data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. SCCOOS and CeNCOOS also partner to build capacity for biogeochemical and biological observations for ecosystem management and prediction. Taken together, their activities are integral to California's economy, health and safety. Marine transportation, aquaculture, commercial fishing, recreational boating and many other industries rely on the data provided to operate successfully.

SCCOOS support to seven California and two external partner institutions is critical to ensuring the SCCOOS mission and vision are realized. Many of the supported projects are cost-shared with CeNCOOS to leverage our support to the CalOOS system. The California White Shark Telemetry Network is partially supported by funding to the **California State University Long Beach**.

CA-48

Costa Mesa

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

CA-49, 52

La Jolla

National Ocean Service (NOS) - [California Spatial Reference Center](#)

In a model partnership with NOAA, the California Spatial Reference Center (CSRC) serves as a way of providing a spatial referencing liaison between Federal and local authorities. The Center is a non-profit organization affiliated with the Scripps Institution of Oceanography of the University of California-San Diego. The mission of the Center is to provide the necessary geodetic services to ensure the availability of accurate, consistent, and timely spatial referencing data for California. In partnership with several other organizations, CSRC has developed a plan to establish and maintain a state-of-the-art network of GPS control stations necessary for a reliable spatial reference system in California.

NOAA Commissioned Officer Corps (NOAA Corps) - [Southwest Fisheries Science Center Support](#)

The NOAA Commissioned Officer Corps stations multiple officers within the various programs of the Southwest Fisheries Science Center (SWFSC) in support of their administrative and operational needs. These officers are responsible for a wide array of positions such as serving as the Center Chief of Staff, as Antarctic Logistics coordinator, as field station Camp Leader in Antarctica, as UAS Cetacean Photogrammetry Specialist, and as Advanced Survey Technology Officer. In these positions, officers perform duties including planning and managing budgets; coordinating with State, Federal, and industry partners to perform scientific research; maintain the equipment in use by the programs; participating in field expeditions; liaising with the USCG, US Navy, and UNOLS on regional issues and operations; and serving as vessel program coordinator for all National Marine Fisheries Service small boat activities in California.

National Environmental Satellite, Data, and Information Service (NESDIS) - [The Center for Satellite Applications and Research](#) - [PolarWatch: National Marine Fisheries Service and include the Arctic and Antarctic, collocated with NOAA Fisheries, La Jolla, California](#)

The CoastWatch mission is to provide and ensure timely access to near real-time satellite data to protect, restore, and manage U.S. coastal ocean resources, and understand climate variability and change to further enhance society's quality

of life. Our primary users include federal, state, and local marine scientists, coastal resource managers, and the public. There are two components to CoastWatch: Central Operations and Regional Nodes. Central Operations, managed by NOAA's National Environmental Satellite, Data, and Information Service (NESDIS), coordinates the processing, delivery, quality control and storage of data products.

PolarWatch extends the CoastWatch program by providing high-latitude satellite observation data to governmental, academic, commercial, and public users in support of broad applications in the Arctic and Southern Oceans. PolarWatch was established in September 2017 to advance the priorities outlined in NOAA's Arctic Action Plan by enabling data discovery, easy access, and broader usage of high-latitude satellite data products. It is hosted by NOAA Fisheries, in the Southwest Fisheries Science Center's Environmental Research Division.

PolarWatch is hosted by NOAA Fisheries in the Southwest Fisheries Science Center Environmental Research Division (ERD). ERD provides innovative science-based analyses, products, and information on environmental variability to meet the research and management needs of the Southwest Fisheries Science Center, the National Marine Fisheries Service, and NOAA. The ERD conducts research on fishery-related effects of natural environmental variability over a broad range of scientific, management, and operational concerns of the government and the fishing industry. As a part of this work, the ERD develops and maintains an extensive database of environmental observations. The data activities of PolarWatch are fully integrated with the data services provided by the ERD.

CA-50

Fallbrook

Office of Oceanic and Atmospheric Research (OAR) - [U.S. Climate Reference Network](#)

The US Climate Reference Network (USCRN) is an operationally viable research network of more than 138 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS). ARL/ATDD manage the USCRN in partnership with NOAA's NESDIS/NCEI.

CA-51

Imperial Beach

National Ocean Service (NOS) - [Tijuana River 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 Tijuana River research reserve was designated in 1982 and is jointly managed by California State Parks, the U.S. Fish and Wildlife Service and the Southwest Wetlands Interpretive Association. The 2,293-acre site is located in Imperial Beach, Calif., 15 miles south of San Diego and immediately adjacent to Tijuana, Mexico. The reserve is a home to eight threatened and endangered species of plants and birds and is recognized as a 'wetland of international importance' by the Ramsar Convention.

National Ocean Service (NOS) – [Margaret A. Davidson Graduate Fellowship](#)

The Margaret A. Davidson Graduate Fellowship program funds graduate student research and professional development opportunities within the National Estuarine Research Reserve System. The program supports collaborative research addressing local management challenges that may influence future policy and management strategies. The Davidson

Fellow at Tijuana River National Estuarine Research Reserve will focus their research on microbial dynamics and responses to pollution gradients at the Reserve.

San Diego

National Marine Fisheries Service (NMFS) - [San Diego Port Facility](#)

The NOAA San Diego Port Facility provides storage for sea-going sampling equipment, berthing for the Southwest Fisheries Science Center's (SWFSC) small boat fleet and provides office space and parking for sea-going personnel and activities. The facility is located within the Port of San Diego's 10th Avenue Marine Terminal.

National Ocean Service (NOS) - [U.S. Integrated Ocean Observing System \(Central and Northern California Ocean Observing System\)](#) and [\(Southern California Coastal Ocean Observing System\)](#)

The Southern California Coastal Ocean Observing System (SCCOOS) has developed the capabilities to support short-term decision-making and long-term assessment by implementing and leveraging biological, chemical and physical observations and models, many of them in the near real-time. The principal goal of SCCOOS is to provide observations and products to a diverse stakeholder community of managers and planners, operational decision makers, scientists and the general public. Information is readily available via a state-of-the-art data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. The geographic extent of SCCOOS overlaps with that of CeNCOOS and extends beyond the U.S./Mexico border. For this reason SCCOOS and CeNCOOS works interactively with its neighboring IOOS Regional Association to the north, the Central and Northern California Ocean Observing System (CeNCOOS) to make information readily available via a state-of-the-art CalOOS data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. SCCOOS and CeNCOOS also partner to build capacity for biogeochemical and biological observations for ecosystem management and prediction. Taken together, their activities are integral to California's economy, health and safety. Marine transportation, aquaculture, commercial fishing, recreational boating and many other industries rely on the data provided to operate successfully.

SCCOOS support to seven California and two external partner institutions is critical to ensuring the SCCOOS mission and vision are realized. Many of the supported projects are cost-shared with CeNCOOS to leverage our support to the CalOOS system. Five projects are supported at **Scripps Institution of Oceanography at University of California, San Diego** (host institution); these include the SCCOOS Program Office, the High-Frequency Radar Surface Current Mapping Network, California Underwater Glider Network, California Flood Network, Harmful Algal Bloom Monitoring and Alert Program (HABMAP), the National HAB Observing Network (NHABON), the Automated Shore Station Program (SASS), and the Coastal Data Information Program (CDIP) buoys at the Ports of Los Angeles and Long Beach.

Office of Oceanic and Atmospheric Research (OAR) - [Cooperative Institute for Marine, Earth, and Atmospheric Systems](#)

The Cooperative Institute for Marine, Earth, and Atmospheric Systems (CIMEAS) was awarded to the Scripps Institution of Oceanography at the University of California, San Diego. CIMEAS serves as a mechanism to promote collaborative research between university scientists and those in NOAA. The mission of CIMEAS is to develop and consolidate leading research and educational programs across its member institutions in support of NOAA's mission "to understand and predict changes in the Earth's environment and conserve and manage coastal and marine resources to meet our Nation's economic, social and environmental needs". CIMEAS research is largely partnered with the NOAA Southwest Fisheries Science Center. CIMEAS conducts research across four themes: (1) science to support ecosystem-based management of living marine resources; (2) research, development, and technology innovation for global ocean observations and monitoring; (3) coastal and oceanic observations, analysis, and prediction; and (4) weather, water and climate research.

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

The Environmental Literacy Program (ELP), administered by NOAA's Office of Education, provides grants and support for formal (K-12) and informal education to advance the agency's mission. In California, ELP funded a project by the Ocean Discovery Institute in San Diego. The project aims to build the environmental literacy of children, youth, and adults so that they can become knowledgeable about ways to increase their community's resilience to extreme weather, climate change, and other environmental hazards, and be involved in achieving that resilience. To achieve this goal, the project integrates relevant state and local resilience plans and collaborates with stakeholders who are actively implementing these plans. The [Ocean Discovery Institute project](#) employs NOAA resources and educational methods to promote community-level environmental literacy, enabling participants to better comprehend threats and implement solutions that build resilience to extreme weather, climate change, and other environmental hazards. Environmental literacy includes the knowledge, skills, and confidence to 1) reason about the ways that human and natural systems interact globally and locally; 2) participate in civic processes; and 3) incorporate scientific information, cultural knowledge, and diverse community values when taking action to anticipate, prepare for, respond to, and recover from environmental hazards, including mitigating and adapting to climate change.

Office of Marine and Aviation Operations (OMAO) - [NOAA Ship Reuben Lasker](#)

NOAA's newest Fishery Survey Vessel, NOAA Ship *Reuben Lasker*, is homeported in San Diego within the Port of San Diego's 10th Avenue Marine Terminal, and is managed by the OMAO Marine Operations Center-Pacific (MOC-P) in Newport, Oregon. The fifth of the Oscar Dyson class vessels, the *Lasker* primarily supports fish, seabird, marine mammal, and turtle surveys off the U.S. West Coast and in the eastern tropical Pacific Ocean. The vessel supports NOAA's mission to protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management. NOAA Ship *Reuben Lasker* is operated under the direction of officers from the NOAA Commissioned Officer Corps in concert with NOAA Professional Mariners. The NOAA Corps today provides a cadre of professionals trained in engineering, earth sciences, oceanography, meteorology, fisheries science, and other related disciplines. Officers operate ships, fly aircrafts, conduct diving operations, and serve in other NOAA staff positions. NOAA Professional Mariners perform the deck, engineering, steward, and survey tech functions aboard NOAA vessels, providing critical support to NOAA missions.

CA-52

[La Jolla](#)

National Marine Fisheries Service (NMFS) - [La Jolla Shores Drive Laboratory](#)

La Jolla is the headquarters for the Southwest Fisheries Science Center (SWFSC) and the location of the Director's Office, Information Technology Services, the Marine Mammal and Turtle Division, Antarctic Ecosystem Research Division and Fisheries Research Division, as well as the Operations and Management Division. Center scientists conduct marine biological, economic and oceanographic research, observations and monitoring of living marine resources and their environment throughout the Pacific Ocean and in the Southern Ocean around Antarctica. The La Jolla Laboratory Replacement Project (completed in 2013) is an award-winning, LEED Gold-certified facility located on the campus of Scripps Institution of Oceanography, University of California - San Diego. The facility is a focal point for ecosystem-based fisheries research, surveys and monitoring programs. In addition to 35 state-of-the-art laboratories, the new facility houses a unique, multi-story Ocean Technology Development Test Tank. The La Jolla Laboratory engages in educational partnerships and public engagement partnerships throughout the city, including the Ocean Discovery Institute.

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

Coastal

Office of Oceanic and Atmospheric Research (OAR) - [Sustained Carbonate Chemistry Observation Moorings](#)

The Carbonate Chemistry Observing Mooring network is a sustained investment in ocean chemistry observing network in U.S. waters and abroad. There are currently 19 buoys in coastal, open-ocean and coral reef waters that contribute to this network. The time series created from these moorings are key to understanding how ocean chemistry is changing over time in these ecosystems by providing continuous and long-term observations of ocean conditions. These buoys are seated in three locations in Alaska (Gulf of Alaska, Papa, Bering Sea), two in California (California Current Ecosystem 1 & 2), one in the Chesapeake Bay (DE, MD, NY, PA, VA, WV), Coastal Mississippi (MS), Florida (Cheeca Rocks), Georgia (Grays Reef), Oregon (Newport Hydrographic Line), Maine (Gulf of Maine), and Washington (Cha'ba in La Push).

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

NOAA's Deep Sea Coral Research is administered by NOAA Fisheries' [Office of Habitat Conservation](#). Mandated by the Magnuson-Stevens Fishery Conservation and Management Act, it is the nation's only federal research program dedicated to increasing scientific understanding of deep-sea coral ecosystems. Deep-sea corals occur off of every coastal state in the country, and create important habitats for countless species, including many fish species. The Program collaborates closely with partners, including other NOAA offices, to study the distribution, abundance, and diversity of deep sea corals and sponges. This work then informs critical management decisions in the waters of the United States and its territories. These decisions enhance the sustainability of deep-sea fisheries and other ocean uses, while conserving deep-sea coral and sponge habitats.

The Program works with partners to complete multi-year regional fieldwork initiatives, as well as smaller projects around the country, centered on integrating new and existing information on these vulnerable and biologically diverse habitats. The first research initiative took place from 2009 to 2011 in the U.S. South Atlantic region and provided valuable information to help decision-makers refine protected area boundaries. To date, the Program has completed one or more initiatives in each region of the United States.

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

Under the authority of section 6 of the Endangered Species Act, the Cooperation with States Program brings states, NMFS, and other partners together to recover threatened and endangered species. A total of 25 U.S. territories and coastal states, including California, 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 California Department of Fish and Wildlife has received multiple awards through this program, including grants to support projects focused on white abalone, black abalone, and the southern distinct population segment of green sturgeon.

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. NOAA Fisheries funds eligible members of the Stranding Network through the competitive John H. Prescott Marine Mammal Rescue Assistance Grant Program.

National Marine Fisheries Service (NMFS) - [Pacific Coastal Salmon Recovery Fund | NOAA Fisheries](#)

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 15,300 projects have restored more than 1.15 million acres of salmon habitat, opening over 11,800 miles of streams to spawning fish, with \$1.7 billion in grants leveraging over \$2.1 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.

National Marine Fisheries Service (NMFS) - [Wetlands Recovery Project](#)

NMFS West Coast Region has been an active participant in the Southern California Wetlands Recovery Project. The Wetlands Recovery Project is a broadly based partnership with 18 state and federal agencies working in concert with scientists, local governments, and environmental organizations, as well business leaders and educators to increase the pace and effectiveness of wetlands recovery efforts in southern California. To date, the Southern California Wetlands Recovery Project has spent more than \$528 million dollars, enhanced over 3,400 acres of wetland habitat, and protected over 7,900 acres of coastal wetlands and watersheds. Major projects include coastal bay and lagoon habitat restoration, increasing fish passage opportunities, stream restoration, and invasive species eradication and control.

National Ocean Service (NOS) – [Bipartisan Infrastructure Law](#)

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

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, Bend, and Medford, Oregon, Seattle, Washington, and Anchorage, Alaska

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

Through a unique federal-state partnership, NOAA's Office for Coastal Management works with the California Coastal Commission, the San Francisco Bay Conservation and Development Commission, and the California Coastal Conservancy to implement the National Coastal Zone Management Program in California. NOAA provides these three state agencies with financial and technical assistance to further the goals of the Coastal Zone Management Act to protect, restore, and responsibly develop our nation's coastal communities 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) - [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 California State Coastal Conservancy is hosting a fellow from 2022-2024, who is helping improve wetland health and coastal resilience in Southern California by developing a regional wetland monitoring program, funding and managing community-based restoration projects, and coordinating multiple state and federal agencies. The California Coastal Commission is also hosting a fellow from 2022-2024 to create resources, training materials, and policy guidance critical for the California Coastal Commission's long-term implementation of its environmental justice and tribal consultation policies.

National Ocean Service (NOS) – [Digital Coast](#)

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

National Ocean Service (NOS) – [National Coastal Resilience Fund](#)

The National Coastal Resilience Fund is a partnership effort between NOAA and the National Fish and Wildlife Foundation (NFWF) to restore, increase, and strengthen natural infrastructure to protect coastal communities, while also enhancing habitat for fish and wildlife. In California, twenty-six projects have been awarded, three in FY18, four in FY19, three in FY20, five in FY21, and eleven in FY22.

National Ocean Service (NOS) – [Emergency Coastal Resilience Fund](#)

The Emergency Coastal Resilience Fund is a partnership effort between NOAA and the National Fish and Wildlife Foundation (NFWF) to increase the resilience of coastal communities within federally-declared disaster areas impacted by hurricanes and wildfires in 2018, 2020, and 2021. California received funding for three projects in 2019 and one in 2021.

National Ocean Service (NOS) - [Coastal and Estuarine Land Conservation Program](#)

The Coastal and Estuarine Land Conservation Program brings conservation partners together to protect coastal and estuarine lands considered important for their ecological, conservation, recreational, historical, or aesthetic values. Subject to availability of funding, the program provides state and local governments with matching funds to purchase coastal and estuarine lands or obtain conservation easements for important lands threatened by development. Since 2002, the program has protected more than 110,000 acres of coastal land nationally, including over 16,000 acres protected as in-kind matching contributions. Fourteen projects have been successfully completed in California, and these lands are protected in perpetuity.

National Ocean Service (NOS) - [West Coast Ocean Alliance](#)

NOAA's Office for Coastal Management is the federal co-lead for the West Coast Ocean Alliance, which includes involvement and support from other NOAA offices (NMFS and ONMS). The partnership is a state, tribal, and federal forum for fostering dialogue on ocean health. The goal is to work together to create shared visions and implementation opportunities. Members include the three west coast states and several west coast tribes and federal agencies, including the Department of Interior which co-leads with NOAA. The partnership's focus includes data delivery and coordination, improving intergovernmental, especially tribal, coordination, and ocean uses such as offshore energy and aquaculture. With funding provided through the Bipartisan Infrastructure Law, NOAA will invest approximately \$56 million over five years to enhance and support the priorities of established regional ocean partnerships, including coordinating interstate and intertribal management of ocean and coastal management issues, and enhancing sharing and integration of data.

National Marine Fisheries Service (NMFS) and National Ocean Service (NOS) - [Montrose Settlements Restoration Program](#)

From the late 1940s to the early 1970s, the Montrose Chemical Corporation discharged millions of pounds of DDT and PCBs onto the Palos Verdes Shelf off the Southern California coast. These hazardous chemicals persist in the environment and continue to affect marine life and birds in Southern California. NOAA and other natural resource trustees formed the Montrose Settlements Restoration Program (MSRP) to oversee restoration of bald eagles, peregrine falcons, seabirds, fishing, and fish habitat. Restoration of these resources has been ongoing since the release of the MSRP Phase 1 Restoration Plan in 2005.

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

NOAA's Center for Operational Oceanographic Products and Services (CO-OPS) operates 14 long-term, continuously operating tide stations in the state of California, which provide data and information on tidal datums, relative sea level trends, and are capable of producing real-time data for tsunami and storm surge warning. These stations are located at San Diego, La Jolla, Los Angeles, Santa Monica, Santa Barbara, Port San Luis, Monterey, San Francisco, Alameda, Point Reyes, Port Chicago, Arena Cove, North Spit, and Crescent City. Each station is associated with a set of tidal benchmarks installed in the ground that is used to reference the height of the water levels and helps connect the water level to land. Station data feeds into many CO-OPS products that are used to support safe navigation, mitigate coastal hazards, and protect communities. Such products include:

- Coastal Inundation Dashboard - view water levels in real-time and during storms
- High Tide Flooding Outlooks
- Sea level trends and maps
- Real-time current measurements
- Hydrodynamic models
- Tidal and water level datums

National Ocean Service (NOS) - [U.S. Integrated Ocean Observing System \(Central and Northern California Ocean Observing System\)](#) and ([Southern California Coastal Ocean Observing System](#))

The U.S. Integrated Ocean Observing System, or IOOS®, is a federally and regionally coordinated observing system with 17 interagency and 11 regional partners. The System addresses regional and national needs for coastal, ocean, and Great Lakes data and information. This includes gathering and disseminating regional observations; data management; modeling and analysis; education and outreach; and research and development. Within the state, there are two Regional Coastal Observing Systems: the Southern California Coastal Ocean Observing System (SCCOOS) and the Central and Northern California Ocean Observing System (CeNCOOS). SCCOOS and CeNCOOS continuously collaborate to address the needs of state agencies and to support coastal management activities.

The Central and Northern California Ocean Observing System (CeNCOOS), with a region extending from Point Conception north to the California-Oregon border, covers some of the nation's most spectacular yet imperiled coastline. CeNCOOS was established in 2004 and continues to evolve with emerging drivers and stakeholder needs to deliver a more efficient, timely, reliable and useful observing system. CeNCOOS employs a 'systems approach' to information handling across the full data 'life cycle' that extends from the collection of observations to data management and product development, through to delivery of information to end-users. We coordinate a broad network of collaborators to expand the set of physics, biogeochemistry, biology and ecosystem variable observations collected from a comprehensive set of platforms, sensors and models.

The Southern California Coastal Ocean Observing System (SCCOOS) has developed the capabilities to support short-term decision-making and long-term assessment by implementing and leveraging biological, chemical and physical observations and models, many of them in the near real-time. The principal goal of the SCCOOS is to provide observations and products to a diverse stakeholder community of managers and planners, operational decision makers, scientists and the general public. The geographic extent of SCCOOS overlaps with that of CeNCOOS and extends beyond the U.S./Mexico border. For this reason SCCOOS and CeNCOOS work interactively to make information readily available via a state-of-the-art CalOOS data portal to ensure that products are useful and easy to access while preserving the necessary detail to support the scientific and educational communities. SCCOOS and CeNCOOS also partner to build capacity for biogeochemical and biological observations for ecosystem management and prediction. Taken together, their activities are integral to California's economy, health and safety. Marine transportation, aquaculture, commercial fishing, recreational boating and many other industries rely on the data provided to operate successfully.

National Ocean Service (NOS) - [Office of National Marine Sanctuaries 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 15,333 square miles of ocean and coastal waters from Washington to southern California. The West Coast 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 below for individual congressional districts. The 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 West Coast Regional Office also maintains and operates two research vessels to support the three north-central California national marine sanctuaries; these vessels are homeported at Monterey Harbor.

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 its project, the school receives official recognition as a NOAA Ocean Guardian School. To date, the Ocean Guardian School Program has reached more than 88,700 students and 3,500 teachers.

National Ocean Service (NOS) - Students for [Zero Waste Week](#)

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

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

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

Eleven regionally based **Scientific Support Coordinators (SSC)** harness the input of a multi-disciplinary team to address issues such as oil slick trajectory forecasting, environmental tradeoffs, best practices, resources at risk, and chemical hazard assessment to reduce risks to coastal habitats and resources. In California, the SSC is collocated with the USCG in Alameda with support staff in Long Beach.

OR&R identifies and quantifies environmental injury caused by releases of oil and hazardous materials. Our network of **Regional Resource Coordinators** work with multidisciplinary scientific, economic, and legal teams with the goal of securing the appropriate amount and type of restoration required to restore injured NOAA trust resources and compensate the public for their lost use. We collaborate with NMFS Restoration Center and NOAA General Council through the Damage Assessment, Remediation, and Restoration Program (DARRP) to ensure the process is efficient, legally defensible and restoration focused. The RRC serving the West Coast/Pacific region are based in Seattle, Washington and Anchorage, Alaska.

National Ocean Service (NOS) - OR&R [Southwest Environmental Response Management Application](#) and [Response Tools for Oil and Chemical Spills](#)

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. Southwest Environmental Response Management Application (ERMA[®]) is an online mapping tool that integrates both static and real-time data, such as ship locations, weather, and ocean currents, providing an easy-to-use common operating picture for environmental responders and decision makers. In addition to ERMA, the Office of Response and Restoration (OR&R) offers a suite of [tools](#) to support emergency responders dealing with oil and chemical spills. From Environmental Sensitivity Index (ESI) maps and data which provide concise summaries of coastal resources including biological resources and sensitive shorelines to GNOME, a trajectory and fate model that predicts the route and weathering of pollutants spilled on water, and so much more, these tools provide easy-access to critical data that support a wide range of needs for emergency responders, ultimately supporting our coastal communities.

National Ocean Service (NOS) - NOAA [Marine Debris Projects and Partnerships in California](#)

The NOAA Marine Debris Program (MDP) in the Office of Response and Restoration (OR&R) leads national and international efforts to reduce the impacts of marine debris. The program supports marine debris removal, prevention, and research projects in partnership with state and local agencies, tribes, non-governmental organizations, academia, and industry. The MDP California Regional Coordinator, based in Oakland, 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 partnership with the California Ocean Protection Council, the MDP is working with stakeholders to implement the California Ocean Litter Prevention Strategy: Addressing Marine Debris from Source to Sea. The Strategy was developed through a collaborative process with stakeholders and serves as a guiding document to making California, its coasts, people, and wildlife free from the impacts of marine debris. The MDP also provides support for local communities and organizations to prevent, remove, and research marine debris. One Cool Earth is working with K-12 students, in both English and Spanish, at 24 public schools in San Luis Obispo County to reduce marine debris, and the Southwest Wetlands Interpretive Association and Tijuana River National Estuarine Research Reserve are repurposing and upcycling debris items to prevent and remove marine debris from the Tijuana River watershed and Pacific Ocean. Recent marine debris removal projects in California include working with California State University Channel Islands on the assessment and removal of marine debris from remote and hard-to-access Channel Islands shorelines, and supporting the Richardson's Bay Regional Agency in removing abandoned or derelict vessels from Richardson's Bay, located within the San Francisco Bay. The MDP is also funding the University of California Riverside to investigate the source and pathways of microplastics in the Southern California Bight; San Diego State University to understand and compare the amount of debris entering the San Diego River from stormwater systems, unhoused communities, and illegal

dumping; and the Monterey Bay National Marine Sanctuary to collect and analyze data to better understand the marine debris problem in the Sanctuary.

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

The Phytoplankton Monitoring Network (PMN) is a nationwide community-based volunteer program of citizen scientists monitoring for the presence of organisms that can lead to Harmful Algal Bloom (HAB) formation. Volunteers serve as data collectors for marine and freshwater blooms at more than 200 coastal and inland sites in the U.S. and Caribbean. Monitoring is conducted year-round and volunteers are trained to measure salinity, air and water temperatures, and how to collect phytoplankton samples using a plankton net. Samples are then analyzed for any HAB organisms via microscopy. Data collected by PMN volunteers enhances the Nation's ability to respond to and manage the growing threat posed by HABs by collecting important data for species composition and distribution in coastal and freshwater environments and creating working relationships between volunteers and professional marine biotoxin researchers. Event monitoring can assist state and federal agencies to issue timely warnings about shellfish consumption and other public health concerns.

National Ocean Service (NOS) - Mussel Watch Program

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

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

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in California. They help identify the navigational challenges facing marine transportation in California 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 Santa Barbara to support mariners and stakeholders on the West Coast.

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

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

National Weather Service (NWS) - [California Buoys](#)

The National Weather Service (NWS), through its National Data Buoy Center (NDBC), develops, deploys, operates, and maintains the current national data buoy network of moored and drifting weather buoys and land stations that serve all of the Nation's coastal states and territories. Within this network, 110 of the buoys and 51 of the land stations are maintained directly by NDBC. Located at NASA's Stennis Space Center in Mississippi, supports weather and marine warning and

forecast services in real time by providing deep ocean and coastal meteorological and oceanographic observations. These data provide valuable information used by NWS supercomputers to produce computer-generated model forecasts of the atmosphere and climate. NDBC manages the Volunteer Observing Ship program to acquire additional meteorological and oceanographic observations supporting NWS mission requirements. NDBC also supports operational and research programs of NOAA and other national and international organizations. NDBC also operates NOAA's network of Deep-ocean Assessment and Reporting of Tsunami (DART®) stations, for the early detection and real-time reporting of tsunamis in the open ocean. Data from the DART®s are used by the National Weather Service Tsunami Warning Centers in Alaska and Hawaii to provide tsunami forecasts, warnings, and information. 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). These data provide valuable information used by NWS supercomputers to produce computer generated model forecasts of the atmosphere, and climate.

Office of Oceanic and Atmospheric Research (OAR) - [Science on a Sphere](#)- See [Page 2](#) for details.

Statewide

National Ocean Service (NOS) - [California Bay Watershed Education and Training Program](#)

NOAA 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. The California B-WET currently serves the counties of Alameda, Contra Costa, Del Norte, Fresno, Humboldt, Lake, Kern, Kings, Madera, Marin, Mendocino, Merced, Monterey, Napa, Sacramento, San Benito, San Francisco, San Luis Obispo, San Joaquin, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Solano, Sonoma, Stanislaus, Trinity, Tulare, Ventura. The California B-WET program recognizes that knowledge and commitment built from firsthand experience, especially in the context of one's community and culture, is essential for achieving environmental stewardship. California B-WET responds to regional education and environmental priorities through local implementation of competitive grant funds.

National Marine Fisheries Service (NMFS) - [West Coast Region](#)

NOAA Fisheries 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 of NOAA Fisheries 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 salmon 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.

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) - [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, Wash., with California field offices in Alameda, Long Beach, San Diego, Monterey, Sacramento, Santa Rosa and Arcata.

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

The [NOAA Restoration Center](#), within the [Office of Habitat Conservation](#), works with partners across the nation to restore habitat to sustain fisheries, recover protected species, and maintain resilient coastal ecosystems and communities. We have over 30 years conducting habitat restoration through competitive funding opportunities and technical assistance. We also work to reverse habitat damage from disasters like oil spills, ship groundings, and severe storms. In addition, the Restoration Center, along with NMFS Habitat Protection and the West Coast Regional Office, are working on implementing the Russian River Watershed Habitat Focus Area. Working with four other NOAA Line offices (National Weather Service, National Ocean Service, Office of Research and Program Planning and Integration) we are conserving habitat in the Russian River at a watershed scale. See the interactive [Restoration Atlas](#) to find habitat restoration projects near you. Site visits to see habitat projects may be available in your state, please inquire if interested.

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

The Southwest Fisheries Science Center (SWFSC) is the research arm of NOAA's National Marine Fisheries Service (NOAA Fisheries) in the Southwest Region. Center scientists conduct marine biological, economic and oceanographic research, observations on living marine resources and their environment throughout the Pacific Ocean and the Southern Ocean off Antarctica. This scientific information supports the sustainability of the region's fisheries and fishing communities and the recovery and conservation of protected species. Guided by the Magnuson-Stevens Fisheries Conservation Act, Endangered Species Act and Marine Mammal Protection Act, research is conducted in support of several regional and international fisheries councils, commissions, conventions and agreements. The Science Center is based in La Jolla with laboratories located in Santa Cruz and Monterey, a field office in Arcata and a field station at Granite Canyon. The SWFSC engages in educational and public engagement partnerships, including with the Exploratorium (San Francisco), Seymour Science Center (UC Santa Cruz), Monterey Bay National Marine Sanctuary Exploration Center (Santa Cruz) and Ocean Discovery Institute (San Diego).

National Marine Fisheries Service (NMFS), National Ocean Service (NOS), and NOAA General Counsel - [Damage Assessment, Remediation, and Restoration Program](#)

NOAA's Damage Assessment, Remediation, and Restoration Program (DARRP) assesses and restores habitat, fisheries, protected species and recreational uses that have been harmed by oil spills, chemical releases, and ship groundings. Working with federal, state, and tribal entities, and responsible parties, we have recovered funding from responsible

parties for restoration of critical habitats, fisheries, protected species and recreational uses nationwide. These projects promote recovery of the ecosystem and provide economic benefits from tourism, recreation, green jobs, coastal resiliency, property values and quality of life. California is a co-trustee with NOAA for assessment and restoration after pollution incidents in California. For more information about our work in California, visit: [DARRP in Your State](#) (and use the top menu to navigate to “California”) and this [interactive map](#).

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 La Jolla, CA serving the Pacific Southwest region – California and Nevada. The Geodetic Advisor provides training, guidance and assistance to constituents managing geospatial activities that are tied to the National Spatial Reference System (NSRS), the framework and coordinate system for all positioning activities in the Nation. The Geodetic Advisor serves as a subject matter expert in geodesy and regional geodetic issues, collaborating internally across NOS and NOAA to ensure that all regional geospatial activities are properly referenced to the NSRS.

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

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

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 while supporting the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations 24/7/365 observing basic weather elements, such as cloud cover, precipitation, wind, sea level pressure, and conditions, such as rain, snow, thunderstorms, and fog. There are 69 ASOS stations in California.

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 458 COOP sites in California.

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) 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, environmental and public safety. 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 35 NWR transmitters in California.

Office of Oceanic and Atmospheric Research (OAR) - [HMT-West Legacy Observing Network](#)

As part of a project funded by the California Department of Water Resources, the Physical Sciences Laboratory maintains numerous sites throughout California where they operate soil temperature/moisture sensors and surface meteorology instruments, sites where they measure integrated water vapor, and sites where they operate snow-level radars. The goal of this project is to aid with operational decision support, provide measurements for evaluating and improving forecast models, and conduct hydrometeorology research.

Office of Oceanic and Atmospheric Research (OAR) - [MOA California Department of Water Resources](#)

NOAA is in the midst of a new 5-year MOA with the California Department of Water Resources that provides state-of-the-art observations, display systems, and decision support tools to address water resource and flood protection issues. The project utilizes an existing network of GPS receivers to retrieve water vapor measurements at 37 sites across the state. Because the amount of rainfall absorbed by the ground can be the deciding factor for flooding, soil measurement systems are being deployed at 43 sites across the state. Ten low-powered S-Band radars (designed by CIRES and the Physical Sciences Laboratory specifically for this project) deployed at key reservoirs around the state will help detect snow level. Four coastal atmospheric river observatories will measure 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.

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

The National Sea Grant College Program (Sea Grant) is a federal-university partnership administered by NOAA that integrates research, extension outreach, and education. Sea Grant forms a national network of 34 programs in all U.S. coastal and Great Lakes states, Puerto Rico, and Guam. The California Sea Grant College Program, based at the University of California's Scripps Institution of Oceanography in La Jolla, annually funds 60 concurrent research projects, which are peer-reviewed and competitively selected to address a wide range of problems and opportunities. The program supports an additional 25 outreach and applied research projects through its Extension Specialists. Current projects focus

on healthy marine ecosystems, sustainable use of coastal and marine resources, sustainable coastal community development, fisheries and fisheries habitat, seafood safety and quality, coastal water quality, aquatic nuisance species, wetland and salmonid habitat restoration, aquaculture, new technologies, marine reserves, and education, training and public information. Administrative offices are located in La Jolla and Los Angeles. Get involved with Sea Grant through state and national opportunities like the John A. Knauss Marine Policy Fellowship program at seagrant.noaa.gov.

Office of Oceanic and Atmospheric Research (OAR) - [University of Southern California Sea Grant Program](#)

The National Sea Grant College Program (Sea Grant) is a federal-university partnership administered by NOAA that integrates research, extension outreach, and education. Sea Grant forms a national network of 34 programs in all U.S. coastal and Great Lakes states, Puerto Rico, and Guam. The Southern California Sea Grant Program, based at the University of Southern California in Los Angeles, concentrates on "The Urban Ocean" -- issues arising out of the necessity of managing people and natural resources in an intensely urban and developed coastline. USC Sea Grant focuses its research, outreach and education programs on the most pressing issues along the urban coastline, including: water quality impacts from land-based inputs into the coastal ocean, harmful algal blooms, invasive species, marine protected areas, seafood safety, ports and harbors, and climate change planning and adaptation. In addition, K-12 education programs increase science literacy among urban students and encourage teachers to adopt science education curricula. Many California institutions receive research funding through the Sea Grant College Program, including the University of Southern California and other private institutions, and University of California and California State University campuses. Any academic institution may apply for funding for projects addressing issues pertaining to the "urban ocean." Get involved with Sea Grant through state and national opportunities like the John A. Knauss Marine Policy Fellowship program at seagrant.noaa.gov.

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More information for those offices may be found at NOAA.gov.
