NOAA In Your State

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

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

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

AK

Statewide

National Marine Fisheries Service (NMFS) - Alaska Regional Office and Alaska Fisheries Science Center

NMFS is responsible for the management, conservation and protection of living marine resources within the United States' Exclusive Economic Zone. Using the tools provided by the *Magnuson-Stevens Act*, NMFS assesses and predicts the status of fish stocks, develops and ensures compliance with fisheries regulations, restores and protects habitat and works to reduce wasteful fishing practices, and promote sustainable fisheries. Under the *Marine Mammal Protection Act* and the *Endangered Species Act*, NMFS recovers protected marine species. The Alaska Regional office oversees marine steward responsibilities in Alaska, including 70 percent of the U.S. Continental Shelf and the nation's most prolific fishing grounds. The Alaska Fisheries Science Center plans, develops, and manages scientific research programs, which generate the best scientific data available for understanding, managing, and conserving Alaska's marine resources. In addition to ongoing survey and assessment activities, the Center is engaged in cutting-edge research on emerging issues such as climate change, loss of sea ice, and ocean acidification. The primary responsibilities of the Regional Office and Fisheries Science Center are to work with the North Pacific Fishery Management Council, State of Alaska, other federal agencies, Alaskan coastal subsistence communities, and U.S. representatives participating in international fishery and marine mammal negotiations. The Regional Office is based in Juneau, AK, with field offices located in Anchorage, Kodiak, and Dutch Harbor. The Fisheries Science Center is based in Seattle, Washington, with field offices in Newport, Oregon; and in Alaska: Juneau, Anchorage, Kodiak, Dutch Harbor, St. Paul and St. George Islands, and Little Port Walter.

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. Regional partners include: the U.S. Coast Guard; State of Alaska, Alaska Wildlife Troopers and Dept. of Fish & Game; U.S. Fish & Wildlife Service; and U.S. Forest Service. The Cooperative Enforcement Program also allows NOAA the ability to leverage the resources and assistance of the State of Alaska, Alaska Wildlife Troopers 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 Alaska Division is headquartered in Juneau, with field offices in Kodiak, Anchorage, Dutch Harbor, Homer, Seward, Sitka, Petersburg, Ketchikan and Juneau.

National Ocean Service (NOS) - 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' Regional Geodetic Advisor in Alaska only serves the state of Alaska due to its size and unique challenges. The Geodetic Advisor provides training, guidance and assistance to constituents managing geospatial activities that are tied to the National Spatial Reference System (NSRS), the framework and coordinate system for all positioning activities in the Nation. The Geodetic Advisor serves as a subject matter expert in geodesy and regional geodetic issues, collaborating internally across NOS and NOAA to ensure that all regional geospatial activities are properly referenced to the NSRS.

National Weather Service (NWS) - Automated Surface Observing Systems

The Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). ASOS serves as the Nation's primary surface weather observing network. ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year observing basic weather elements, such as cloud cover, precipitation, wind, sea level pressure, and conditions, such as rain, snow, freezing rain, thunderstorms, and fog. There are 48 ASOS stations in Alaska.

National Weather Service (NWS) -Cooperative Observer Program

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 168 COOP sites in Alaska.

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

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service (NWS) forecast office. NWR broadcasts official NWS warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week. Working with the Federal Communication Commission's (FCC) Emergency Alert System, NWR is an "All Hazards" radio network, making it the single source for comprehensive weather and emergency information. In conjunction with federal, state, and local emergency managers and other public officials, NWR also broadcasts warning and post-event information for all types of hazards – including natural (such as earthquakes or avalanches), environmental (such as chemical releases or oil spills), and public safety (such as AMBER alerts or 911 Telephone outages). Known as the "Voice of NOAA's National Weather Service," NWR is provided as a public service by the NWS. NWR includes 1,100 transmitters covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. There are 49 NWR transmitters in Alaska.

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 1927, 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.

Office of Oceanic and Atmospheric Research (OAR) - Alaska Sea Grant College Program

NOAA's National Sea Grant College Program is a federal-university partnership that integrates research, education and outreach. Sea Grant forms a network of 33 programs in all U.S. coastal and Great Lakes states, Puerto Rico, Lake Champlain, and Guam. Alaska Sea Grant addresses priority coastal and marine issues affecting more than half of the entire US coastline. Current projects focus on healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies, and environmental literacy and workforce development. Alaska Sea Grant funds research projects and graduate student education throughout the University of Alaska system and at other universities. Outreach faculty in the Alaska Sea Grant Marine Advisory Program share their expertise with communities, government, industry and other concerned groups.

Coastal

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

Deep-sea coral habitats are complex structures that provide habitat for many diverse fish and invertebrate communities including commercially important species such as grouper, snapper, sea bass, rockfish, and crab. The Deep Sea Coral Research and Technology Program is the nation's resource for information on deep-sea coral and sponge ecosystems. The Program—called for in the reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act—is working with other NOAA offices and external partners to conduct fieldwork to study the distribution, abundance, and diversity of corals and sponges in Alaska.

National Marine Fisheries Service (NMFS) - Restoration Program and Center

The Restoration Center achieves science-based habitat restoration by working with partners to achieve landscape scale restoration and coastal resiliency. We build powerful partnerships among Alaska's public, private, and non-profit organizations, including The Nature Conservancy, National Fish and Wildlife Foundation, and Trout Unlimited. Our projects continually demonstrate the benefits and effectiveness of locally based habitat conservation in Alaska. In 2015 NOAA RC and partners applied for and received \$7.5 million from the Exxon Valdez Trustee Council for the Kenai Peninsula Aquatic Ecosystem Restoration Project. This project, with more than \$10 million in AK DOT match, will eradicate fish passage as a contributing factor to Chinook salmon decline in the Kenai Peninsula. These four fish passage projects will open up over 115 miles of streams to anadromous salmon. The Restoration Center also collaborates with NFWF and NOS to begin an Oil Spill Trajectory Analysis for the Arctic which will be available in 2017.

National Marine Fisheries Service (NMFS) - Species Recovery Program

Under the authority of section 6 of the Endangered Species Act, the Cooperation with States Program brings states, NMFS, and other partners together to recover threatened and endangered species. Competitive grants are awarded to states through the Species Recovery Grants to States Program to support management, monitoring, research and outreach efforts for species that spend all or a portion of their life cycle in state waters. The funded work is designed to prevent extinctions or reverse the decline of species, and restore ecosystems and their related socioeconomic benefits. Twenty-five coastal states, including Alaska and U.S. territories currently participate in this program. The Alaska Department of Fish and Game is in the final year of a 3-year, \$1.38 million grant studying the diet composition and contaminant exposure of western Steller sea lions as possible alternate hypotheses for their lack of recovery.

National Marine Fisheries Service (NMFS) - <u>Stranding Network</u> and <u>John H. Prescott Marine Mammal Rescue</u> <u>Assistance Grant Program</u>

The National Marine Mammal Stranding Network and its trained professionals respond to dead or live marine mammals in distress that are stranded, entangled, out of habitat or otherwise in peril. Our long-standing partnership with the Network provides valuable environmental intelligence, helping NOAA establish links among the health of marine mammals, coastal ecosystems, and coastal communities as well as develop effective conservation programs for marine mammal populations in the wild. There are 15 stranding network members in the state. NOAA Fisheries funds eligible members of the Stranding Network through the competitive John H. Prescott Marine Mammal Rescue Assistance Grant Program. Since 2001, \$48.2 million has been awarded to 552 grantees who have raised over \$15.9 million in matching funds. In FY15, 34 grantees received \$2.7 million nationwide, with one award going to one recipient in Alaska: the Seward Association for the Advancement of Marine Science. In FY15, two awards totaling \$197,943 were granted to Alaska: one to the Seward Association for the Advancement of Marine Science and the other to the University of Alaska Anchorage to support stranding response and diagnostics throughout the state.

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

The Pacific Coastal Salmon Recovery Fund (PCSRF) was established by Congress in 2000 to reverse the declines of Pacific salmon and steelhead by advancing the protection, restoration, and conservation of Pacific salmon and their habitats. The Fund is essential to prevent the extinction of 28 salmon species protected under the Endangered Species Act and also plays a vital role in supporting the economies of local communities from California to Alaska, upholding Tribal Treaty fishing rights and subsistence fishing traditions, and restoring all salmon populations to productive and viable levels along the entire West Coast. Since 2000, over 12,000 projects have restored over one million acres of salmon habitat, opening over 9,100 miles of streams to spawning fish, with over \$1.2 billion in grants leveraging over \$1.4 billion in contributions. Recent studies suggest that a \$1 million investment in watershed restoration creates on average 16 to 17 new "green" jobs and averages \$2.3 million in economic activity. In Alaska, nearly \$211 million in PCSRF funds have implemented over 910 projects. Currently there are 50 active projects.

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

NOS operates 26 long-term, continuously operating tide stations in the state of Alaska that provide data and information on tidal datum, relative sea level trends, and are capable of producing real-time data for tsunami and storm surge warning. These stations are located at Ketchikan, Port Alexander, Sitka, Juneau, Skagway, Elfin Cove, Yakutat, Cordova, Valdez, Seward, Seldovia, Nikiski, Anchorage, Kodiak Island, Alitak, Sand Point, King Cove, Adak Island, Atka, Nikolski, Unalaska, Port Moller, Village Cove (Pribilof Islands), Nome, Red Dog Dock, and Prudhoe Bay. 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 to help connect the water level to land.

National Ocean Service (NOS) - Analytical Response Team

NOAA's Analytical Response Team (ART) works with Federal, academic, and state partners to respond to HAB and associated mortality events. They can provide rapid and accurate identification of harmful algae and their associated toxins to the management agencies responsible for, e.g. opening and closing fisheries, targeting monitoring, and responding to marine mammal mortality events. ART works nationally, processing samples and providing expertise upon request. This year ART has responded to events related to harmful algal blooms on the West Coast.

National Ocean Service (NOS) - Phytoplankton Monitoring Network

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

National Ocean Service (NOS) - Navigation Manager

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in Alaska. They help identify the navigational challenges facing marine transportation in Alaska 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 Anchorage, AK to support mariners and stakeholders in Alaskan waters.

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

The Coastal and Estuarine Land Conservation Program brings conservation partners together to protect coastal and estuarine lands considered important for their ecological, conservation, recreational, historical, or aesthetic values. To date the program has protected more than 100,000 acres of land nationally with program funds and over 16,000 acres with an in-kind match. The program provides state and local governments with matching funds to purchase coastal and estuarine lands or obtain conservation easements for important lands threatened by development. Two project grants have been completed in Alaska, and these lands are protected in perpetuity.

National Ocean Service (NOS) - Arctic Environmental Response Management Application

During an emergency, responders and decision-makers need the best available information to protect and restore our coasts from threats like oil and chemical pollution. Arctic Environmental Response Management Application (ERMA[®]) fills that need with both static and real-time data, such as Environmental Sensitivity Index maps, ship locations, weather, and ocean currents, in a centralized, easy-to-use. As Arctic energy exploration and transportation increases, responders must have access to this information in remote locations. Standalone Arctic ERMA increases ERMA's usefulness by allowing responders to use the tool without an internet connection.

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

The NOAA Marine Debris Program (MDP) leads national and international efforts to research, prevent, and reduce the impacts of marine debris. The program supports marine debris removal, education and outreach, and research projects in partnership with state and local agencies, tribes, non-governmental organizations, academia, and industry. In Alaska, the MDP is working with several local communities and groups to remove marine debris and also monitor for changes in debris composition and quantity. The program's Alaska Regional Coordinator oversees removal projects and coordination with partners in the State of Alaska. Projects include volunteers working by kayak to collect remove debris from 60 miles of remote shoreline on Shuyak Island, the removal of 400 derelict crab pots near Juneau, and removing debris through partnerships with several small communities in the Bering Sea region. The MDP is also working with the Center for Alaskan Coastal Studies to implement a zero-waste education and outreach campaign focused on promoting recycling and preventing single-use plastics and other land-based litter. The MDP has also been working with the state of Alaska Department of Environmental Conservation who are contracting with the Gulf of Alaska Keeper to collect, remove, and dispose of marine debris from the 2011 Japan Tsunami through funding from Japan.

National Ocean Service (NOS) - Alaska Ocean Observing System

The U.S. Integrated Ocean Observing System (IOOS)® Program is an operational system and a network of 11 regional partners responsible for regional observations, data management, modeling and analysis, education and outreach, and research and development. The overarching purpose of U.S. IOOS is to address regional and national needs for ocean data and information. The Alaska Ocean Observing System (AOOS) is a collaboration of federal and state agencies, academic and research institutions, and private stakeholder groups, working together to improve our ability to provide accurate information about Alaska's coastal and ocean environment and enable more informed decision-making. The AOOS focal point is its Alaska Marine Information System, a regional integrated data system for Alaska coastal and ocean data and projects. Priority issues include climate change impacts, marine navigation safety, and ecosystem health.

National Weather Service (NWS) - Alaska Buoys and Stations

The National Weather Service (NWS), through its National Data Buoy Center (NDBC), develops, deploys, operates, and maintains the current national data buoy network of moored and drifting weather buoys and land stations that serve all of the Nation's coastal states and territories. Within this network, 110 of the buoys and 51 of the land stations are maintained directly by NDBC. Located at NASA's Stennis Space Center in Mississippi, supports weather and marine warning and forecast services in real time by providing deep-ocean and coastal meteorological and oceanographic observations. These data provide valuable information used by NWS supercomputers to produce computer-generated model forecasts of the atmosphere and climate. NDBC manages the Volunteer Observing Ship program to acquire additional meteorological and oceanographic observations supporting NWS mission requirements. NDBC also operates NOAA's network of Deep-ocean Assessment and Reporting of Tsunami (DART®) stations, for the early detection and real-time reporting of tsunamis in the open ocean. Data from the DART®s are used by the National Weather Service Tsunami Warning Centers in Alaska and Hawaii to provide tsunami forecasts, warnings, and information.

AK - At Large

NOAA Office of Education - Environmental Literacy Program

NOAA's Environmental Literacy Program (ELP) provides grants and in-kind support to build the capacity of institutions and networks to advance NOAA's mission through formal (K-12) and informal education at national, regional, and local levels. In Alaska, ELP supports the Alaska State Museum (Juneau), which has a permanent exhibit featuring NOAA's Science On a Sphere and is a member of NOAA's SOS Users Collaborative Network. ELP also supports the Alaska SeaLife Center (Seward), a member of the Coastal Ecosystem Learning Center (CELC) Network, a consortium of 25 aquariums and marine science education centers with a reach of over 20 million people. The CELC Network works with NOAA and each member institution to engage the public in protecting coastal and marine ecosystems.

Anchorage

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

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

National Marine Fisheries Service (NMFS) - Fisheries Monitoring and Analysis Division Anchorage Field Office

The Alaska Fisheries Science Center's Fisheries Monitoring and Analysis Division conducts research associated with sampling commercial fishery catches, estimation of catch and bycatch mortality, and analysis of fishery-dependent data. The Anchorage Field Station is involved in debriefing and oversight of fishery observers who collect catch data onboard fishing vessels and at onshore processing plants. Division staff process data and make it available to the Sustainable Fisheries Division of the Alaska Regional Office for quota monitoring and to scientists in other Alaska Fisheries Science Center divisions for stock assessment, ecosystem investigations, and an array of research investigations.

National Marine Fisheries Service (NMFS) - <u>National Seafood Inspection Program-Federal and State Inspection</u> <u>Office</u>

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

National Ocean Service (NOS) - PORTS

A Physical Oceanographic Real-Time System (PORTS[®]) is operated cooperatively with the local maritime community in the Port of Anchorage 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 and meteorological data from two stations, Anchorage and Nikiski.

National Ocean Service (NOS) - Scientific Support Coordinator and Regional Resource Coordinator

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

OR&R's Regional Resource Coordinators (RRCs) provide scientific and technical expertise and timely response to oil spills or hazardous materials releases to collect information, samples, and evidence that are time dependent and critical to support natural resource damage assessments throughout the coastal US. RRCs work on multi-disciplinary scientific,

economic, and legal teams and are responsible for determining and quantifying injuries to NOAA trust natural resources through determination of injuries and pathway, and demonstration of causal mechanisms. The goal of the RRCs efforts is to determine, often through the Damage Assessment, Remediation, and Restoration Program, the appropriate amount and type of restoration required to restore injured NOAA trust resources and compensate the public for their lost use. Alaska's SSC and RRC are based in Anchorage.

National Weather Service (NWS) - Alaska Region Headquarters

Located in downtown Anchorage at the New Federal Building and U.S. Court House, the Alaska Region Headquarters is the administrative and support center for 3 NWS Weather Forecast Offices, 12 NWS Weather Service Offices (remote field offices), an aviation-focused Center Weather Service Units, and a River Forecast Center across the state of Alaska. Services provided by a regional headquarters to local NWS offices within the region include scientific support and development, program management and guidance, field support for new program implementation, budget support, and employee recruitment and assistance.

National Weather Service (NWS) - Alaska-Pacific River Forecast Center

Co-located with the NWS Weather Forecast Office in Anchorage, the Alaska-Pacific River Forecast Center (RFC) performs continuous river basin modeling and provides hydrologic forecast and guidance products for rivers and streams in Alaska and Hawaii. 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 critical water and flood information for critical decisions (aka Impactbased Decision-Support Services or IDSS).

National Weather Service (NWS) - <u>Alaska Aviation Weather Unit and Anchorage Volcanic Ash Advisory Center for</u> the North Pacific

Housed in the Federal Aviation Administration's Anchorage Air Route Traffic Control Center (ARTCC), the NWS Alaska Aviation Weather Unit staff provides in route aviation weather forecasts and warnings to ARTCC personnel for use in directing the safe, smooth flow of aviation traffic across the entire State of Alaska, including the Aleutian Islands, the Bering Sea, and the North Pacific. The unit also serves as the Volcanic Ash Advisory Center for the North Pacific within the boundaries of the Alaska flight information region and northeast Russia. There are only nine Volcanic Ash Advisory Centers worldwide. The Anchorage Volcanic Ash Advisory Center covers air routes over some of the most active volcanic areas in the world.

National Weather Service (NWS) - Weather Forecast Office

Co-located with the NWS Alaska-Pacific Region River Forecast Center in Anchorage, this NWS Weather Forecast Office (WFO) is staffed around-the-clock and provides the best possible weather, water, and climate forecasts and warnings to residents of the southern portion of Alaska, excluding the southeastern panhandle. The Anchorage WFO also serves an extensive marine area including the Gulf of Alaska and the Bering Sea. In addition, they provide ice forecasting for the entire state of Alaska. Highly trained forecasters issue warnings and forecasts for events, including severe thunderstorms, tornadoes, winter storms, floods, and heat waves. This essential information is provided to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and NOAA Weather Radio All Hazards. Forecasters also provide Impact-based Decision-Support Services (IDSS), both remotely and on-site, during critical emergencies, such as wildfires, floods, chemical spills, and for major recovery efforts. The WFO collects and disseminates precipitation, river, and rainfall data, and prepares local climatological data. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and

educational programs, which helps build strong working relationships with local partners in emergency management, government, the media and academic communities. The WFO operates Automated Surface Observing Stations (ASOS), as well as the local Doppler Weather Radar, which provides critical information about current weather conditions.

Annette

National Weather Service (NWS) - Weather Service Office

Located in the Southeast Alaskan village of Metlakatla on Annette Island, this NWS Weather Service Office (WSO) provides expert hydro-meteorological data in support of local, regional, national, and global weather, hydrologic, climatic, and warning programs in accordance with the NWS mission. The WSO also supports the mission of their associated NWS Weather Forecast Office (WFO) in Juneau, as well as the agency's goals through value-added public service, education, and outreach.

Barrow

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

The U.S. Climate Reference Network (USCRN) is an operationally viable research network of 135 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS). NOAA's National Environmental Satellite, Data, and Information Service and NOAA's Office of Oceanic and Atmospheric Research jointly manage USCRN.

National Weather Service (NWS) -Weather Service Office

Located in the village of Barrow, the farthest north community in the United States, this NWS Weather Service Office (WSO) provides expert hydro-meteorological data in support of local, regional, national, and global weather, hydrologic, climatic, and warning programs in accordance with the NWS mission. The WSO also supports the mission of their associated NWS Weather Forecast Office (WFO) in Fairbanks, as well as the agency's goals through value-added public service, education, and outreach.

Office of Oceanic and Atmospheric Research (OAR) - Barrow Observatory

The Barrow Observatory is one of six baseline observatories supported by NOAA's Climate Observations and Analysis Program and operated by the Office of Oceanic and Atmospheric Research (OAR), Earth System Research Laboratory's Global Monitoring and Chemical Science Divisions, located in Boulder, CO. The observatories are part of a global network of observatories monitoring atmospheric constituents that cause climate change and depletion of the ozone layer. The Barrow Observatory measures ozone in the total column above the observatory and monitors air pollution (Arctic haze) flowing across the Arctic from Eurasia to Alaska which has been decreasing since the collapse of the Soviet Union. The Barrow Observatory is host to 25 cooperative research projects from various universities and government agencies from around the nation.

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

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

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

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) tropospheric ozone aircraft measurement program is being done in conjunction with the Carbon Cycle and Greenhouse Gas (CCGG) group's existing aircraft sampling network. Aircraft based in-situ tropospheric ozone measurements provide data relevant to: pollution events, lower atmosphere mixing dynamics, boundary layer stability, ozone trend studies, and the validity of other samples collected in-flight. These sites, four of which have records exceeding 25 years in length, provide information on possible long-term changes in tropospheric ozone near the surface and support air quality research.

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

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

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

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates an ultraviolet radiation (UV) monitoring network in Alaska with sites at the Barrow Observatory, Nome, and St. Paul Island. These measurements are done as part of ESRL/GMD's research on the Earth's surface radiation budget. Research efforts are devoted to the extent and cause of observed variations in long-term radiation and meteorological measurements, using satellite observations and climate model calculations. In addition, observations of spectral solar radiation are made for remote sensing of certain atmospheric constituents and spectral solar UV is measured for the investigation of the interaction of ozone and solar radiation. ESRL/GMD also provides essential instrument calibration services for national and worldwide partner UV monitoring networks.

Bethel

National Weather Service (NWS) - Weather Service Office

Located in the village of Bethel near the mouth of the Yukon and Kuskokwim Rivers, this NWS Weather Service Office (WSO) provides expert hydro-meteorological data in support of local, regional, national, and global weather, hydrologic, climatic, and warning programs in accordance with the NWS mission. The WSO also supports the mission of their associated NWS Weather Forecast Office (WFO) in Anchorage, as well as the agency's goals through value-added public service, education, and outreach.

Cold Bay

National Weather Service (NWS) - Weather Service Office

Located in the village of Cold Bay near the western end of the Alaska Peninsula, this NWS Weather Service Office (WSO) provides expert hydro-meteorological data in support of local, regional, national, and global weather, hydrologic, climatic, and warning programs in accordance with the NWS mission. The WSO also supports the mission of their associated NWS Weather Forecast Office (WFO) in Anchorage, as well as the agency's goals through value-added public service, education, and outreach.

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

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates a Cooperative Global Air Sampling Network to measure the distribution and trends of carbon dioxide (CO2) and methane (CH4), the two gases most responsible for human-caused climate change, as well as other greenhouse gases and volatile organic compounds. Samples are collected weekly at fixed locations and on several commercial ships. The air samples are delivered to ESRL/GMD, located in Boulder, CO. The observed geographical patterns and small but persistent spatial gradients are used to better understand the processes, both natural and human induced, that underlie the trends. These measurements help determine the magnitude of carbon sources and sinks in North America.

Deadhorse

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

The U.S. Climate Reference Network (USCRN) is an operationally viable research network of 135 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS). NOAA's National Environmental Satellite, Data, and Information Service and NOAA's Office of Oceanic and Atmospheric Research jointly manage USCRN.

Denali

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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Dutch Harbor

National Marine Fisheries Service (NMFS) - Fisheries Monitoring and Analysis Division

The Alaska Fisheries Science Center's Fisheries Monitoring and Analysis Division conducts research associated with sampling commercial fishery catches, estimation of catch and bycatch mortality, and analysis of fishery-dependent data. The Dutch Harbor Field Station is involved in providing in-season support to fishery observers who collect catch data onboard fishing vessels and at onshore processing plants. Division staff also respond to fishing industry requests for vessel inspections and pre-cruise meetings and provide the industry with information on the methods of collecting fishery dependent data and how fishery managers use it.

Fairbanks

National Environmental Satellite, Data, and Information Service (NESDIS) - <u>Fairbanks Command and Data</u> <u>Acquisition Station</u>

The Fairbanks Command Data Acquisition (CDA) Station provides complete command, data acquisition, and preprocessing, as well as launch and early orbit support of the NOAA's polar orbiting POES system. The Fairbanks CDA Station also houses two search and rescue (SARSAT) antenna and associated ground equipment. These ground systems, referred to as Local User Terminals can receive signals, relayed through polar orbiting satellites, from ships, aircraft or individuals in distress. The location of the distress signal is automatically forwarded to the SARSAT Mission Control Center which notifies the appropriate Rescue Coordination Center. SARSAT is part of an international humanitarian effort helping to improve the rescue of person's in distress

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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National Weather Service (NWS) - Weather Forecast Office

Co-located with the International Arctic Research Center at the University of Alaska campus in Fairbanks, this NWS Weather Forecast Office (WFO) is staffed around--the--clock every day, and provides the best possible weather, water, and climate forecasts and warnings to residents of the northern two-thirds of Alaska. Highly trained forecasters issue warnings and forecasts for events, including severe thunderstorms, tornadoes, winter storms, floods, and heat waves. This essential information is provided to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and NOAA Weather Radio All Hazards.

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

Office of Oceanic and Atmospheric Research (OAR) - Alaska Center for Climate Assessment and Policy

The Regional Integrated Sciences and Assessments' Alaska Center for Climate Assessment and Policy (ACCAP) was established as a cooperative agreement between NOAA's Climate Program Office and University of Alaska Fairbanks. ACCAP partners with stakeholders to inform realistic community plans and climate adaptation strategies using the most scientifically accurate, reliable, and up-to-date information. Stakeholder interaction and outreach is integrated into every aspect of our work, including climate modeling and addressing regional vulnerabilities. These interactions include needs assessment, vulnerability assessment, as well as user collaboration in downscaling models, designing research studies, and developing, testing, and evaluating research information products and tools. Our core activities integrate research and decision-support tool innovation.

Office of Oceanic and Atmospheric Research (OAR) - Cooperative Institute for Alaska Research

Founded in 2008, the Cooperative Institute for Alaska Research (CIFAR) conducts ecosystem and environmental research related to Alaska and its associated Arctic regions, including the Gulf of Alaska, Bering Sea, Chukchi/Beaufort Seas, and Arctic Ocean. CIFAR continues to facilitate the developed long-term collaboration between NOAA and the University of Alaska begun under the Cooperative Institute of Arctic Research in 1994, within which targeted research, technology, education and outreach can be developed and sustained. CIFAR plays a central role in communication and coordination between NOAA, researchers, management agencies, non-governmental organizations, Alaska communities, and the public in collaborative research, education, and outreach efforts. CIFAR conducts research in three thematic areas: ecosystem function, coastal hazards, and climate change and variability.

Office of Oceanic and Atmospheric Research (OAR) - N-Wave NOAA Science Network

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

Glennallen

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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Gustavus

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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Homer

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

The 372,000 acre Kachemak Bay Research Reserve is the largest reserve in NOAA's National Estuarine Research Reserve System. The reserve, designated in 1999 and managed by the Alaska Department of Fish and Game, includes the Bay itself, which is contiguous to the southeastern entrance to Cook Inlet in south central Alaska; the Fox River Flats, a river delta at the head of the Bay; and portions of Kachemak Bay State Park and Wilderness Park. The reserve conducts collaborative research and monitoring programs focused on oceanography, coastal ecology, and watershed ecology with the goal to integrate science into coastal decision-making processes in the region. The reserve offers a variety of educational programs and activities for K-12 students and training programs tailored to the needs of coastal decision makers.

Ivotuk

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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Juneau

National Marine Fisheries Service (NMFS) - Auke Bay Laboratories

The Alaska Fisheries Science Center's Auke Bay Laboratories (ABL) conducts scientific research throughout Alaska on commercially marketable species such as rockfish, sablefish, and salmon as well as ecologically important species such as herring and sharks. ABL research covers all aspects of marine ecosystems, such as ocean physics and chemistry, essential fish habitats and the structure and functioning of marine food webs. Information products are provided to the North Pacific Fishery Management Council, the NMFS Alaska Regional Office, fishing industries, state and federal regulators, and international treaty bodies. Groups involved in managing human activities in Alaska's coastal environments base their actions on ABL's knowledge of the quantities and qualities of fish habitats in the affected areas. ABL operates and maintains a total of six facilities.

National Marine Fisheries Service (NMFS) - Auke Creek Research Station

Located 12 miles from downtown Juneau, Auke Creek Research Station is operated by the Auke Bay Laboratories (ABL) Salmon Ocean Ecology and Bycatch Analysis Study Program on a cooperative basis with University of Alaska Fairbanks (UAF), the Alaska Department of Fish and Game (ADF&G), and the University of Alaska Southeast (UAS). The long time series of observations on the seven anadromous fish species made at the Station's counting weir is not available elsewhere in Alaska. First hand evidence of changes in fish populations in response to climate change is provided by the biological and environmental information generated at this Station. Its information is also used by ADF&G to guide harvest management decisions on commercial and recreational fisheries in the region. An experimental hatchery located near the mouth of the stream provides insights into the genetic basis for many aspects of the behavior of anadromous fish species, and it has been used to train three generations of graduate students in genetics and salmonid biology. The accessibility of the Station by road from the urban area of Juneau makes it a popular scientific educational resource for Juneau Public Schools and the general public.

National Marine Fisheries Service (NMFS) - Subport Dock and Warehouse

Located in downtown Juneau and operated and maintained by Auke Bay Laboratories, this facility has berthing and crane facilities for ocean-going vessels, heated dry storage, office space, and the Alaska Department of Fish and Game (ADF&G) boat repair and storage facility. In addition to staging and loading equipment and supplies on ocean-going fisheries research vessels chartered by ABL, the docks and associated facilities provide essential services to multiple federal and state agencies including the US Coast Guard 17th District, US Navy, NOAA National Ocean Service, NOAA Office of Law Enforcement and ADF&G. In addition to ABL, the subport also provides office and storage space to the NMFS Alaska Regional Office and the US Geological Survey (USGS).

National Marine Fisheries Service (NMFS) - Ted Stevens Marine Research Institute

The headquarters of AFSC's Auke Bay Laboratories is the Ted Stevens Marine Research Institute (TSMRI), an award winning "green" office and laboratory building located at Lena Point, 17 miles north of downtown Juneau. TSMRI is Alaska's largest fisheries research facility, providing fisheries researchers 66,000 square feet of space in the main building. Adjacent to TSMRI is a heated warehouse and free-standing wet lab building. The location of the University of Alaska Fairbanks School of Fisheries and Ocean Sciences (UAF) nearby TSMRI on the NOAA campus enables close professional collaborations and sharing of capabilities. TSMRI provides filtered seawater to UAF and receives used seawater from UAF for sterilization and discharge. TSMRI has 33,000 square feet of laboratories capable of supporting lipid and hydrocarbon analysis, DNA extraction, ultra-cold storage, robotic genotyping, analysis of the composition of hydrocarbons and lipids, age and growth determinations, zooplankton processing and bioenergetics. TSMRI facilities support the Juneau public schools with hands-on learning experiences for more than one thousand students a year, and by hosting science fair projects mentored and judged by NMFS scientists. The lobby of TSMRI is open to the public daily for viewing of marine life in aquariums, for enjoying the stunning views of the surrounding sea and mountains from the observation deck, for taking guided tours of the facilities, and for attending lectures that use the Science on a Sphere visualizations provided by OAR and NMFS. TSMRI has two conference rooms that are made available to state, federal and local government organizations including Juneau Public Schools, USCG, State Departments of Transportation, Labor, and Fish and Game. In addition, TSMRI also hosts public outreach events such as open houses in observance of World Ocean Day and Ted Stevens Day.

National Weather Service (NWS) - Weather Forecast Office

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

Office of Oceanic and Atmospheric Research (OAR) - <u>Science On a Sphere®</u> at Alaska State Museum and National Marine Fisheries Service's Ted Stevens Marine Research Institute

Two sites in the Juneau area provide the public with an innovative educational tool for visualization of NOAA's data on the atmosphere, ocean physics and fisheries known as Science On a Sphere (SOS). 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.

Kachemak Bay

National Ocean Service (NOS) - NOAA Habitat Blueprint-Kachemak Bay Habitat Focus Area

Kachemak Bay, in southern Cook Inlet, has been selected as a Habitat Focus Area under NOAA's Habitat Blueprint initiative. Habitat Focus Areas are a non-regulatory, collaborative approach to habitat conservation that NOAA launched in 2013 to increase the effectiveness of NOAA's habitat conservation science and management efforts. Habitat Focus Areas are places where NOAA offices, working together with public and private sector partners, can achieve measurable habitat conservation results in three to five years. Kachemak Bay provides productive habitat for fish and shellfish, and supports important recreational, subsistence, and commercial fishing, marine transportation, tourism, and threatened and endangered species. However, the region has experienced declines in shrimp, crab, clams, herring, and chinook salmon populations that have not recovered despite fisheries closures. The ecological value of Kachemak Bay has already been recognized by the bay's designation as a State of Alaska Critical Habitat Area, and as a National Estuarine Research Reserve. NOAA's assets in the region include the Kasitsna Bay Laboratory. NOAA and state, local, tribal, and academic partners will address the vulnerability of Kachemak Bay's habitats through new decision support tools for resource management, restoration projects, long-term monitoring and research activities, habitat mapping, and training and education programs in the area.

Kenai

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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Kenai Peninsula

National Marine Fisheries Service (NMFS) - Restoration Center

In 2015, NMFS working with EVOS, USFWS, and ADF&G began a large scale restoration project which will address four major barriers to fish passage on the Kenai Peninsula opening up 116 miles of stream. In 2012 Chinook salmon in this area received a disaster declaration due to continued low returns. These restoration projects are underway with completion scheduled for 2018.

Ketchikan

Office of Marine and Aviation Operations (OMAO) - NOAA Ship Fairweather

The NOAA Ship *Fairweather* is managed by the Marine Operations Center-Pacific. *Fairweather* is homeported in Ketchikan, Alaska, and conducts coastal hydrographic surveys in Alaska and along the West Coast in support of NOAA's mission to promote the safety and efficiency of maritime transportation and commerce. The vessel is operated under the direction of officers from the NOAA Commissioned Officer Corps. The NOAA Corps today provides a cadre of professionals trained in engineering, earth sciences, oceanography, meteorology, fisheries science, and other related disciplines. Officers operate ships, fly aircrafts, conduct diving operations, and serve in other NOAA staff positions.

King Salmon

National Weather Service (NWS) - Weather Service Office

Located in the Bristol Bay village of King Salmon, this NWS Weather Service Office (WSO) provides expert hydrometeorological data in support of local, regional, national, and global weather, hydrologic, climatic, and warning programs in accordance with the NWS mission. The WSO also supports the mission of their associated NWS Weather Forecast Office (WFO) in Anchorage, as well as the agency's goals through value-added public service, education, and outreach.

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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Kodiak

National Marine Fisheries Service (NMFS) - Fisheries Monitoring and Analysis Division

The Alaska Fisheries Science Center's Fisheries Monitoring and Analysis Division conducts research associated with sampling commercial fishery catches, estimation of catch and bycatch mortality, and analysis of fishery-dependent data. The Kodiak Field Station is involved in providing in-season support to fishery observers who collect catch data onboard fishing vessels and at onshore processing plants. Division staff also provides the industry with information on the methods of collecting fishery dependent data and how it is used by fishery managers.

National Marine Fisheries Service (NMFS) - Kodiak Fisheries Research Center

The Kodiak Fisheries Research Center (KFRC) is the primary facility for the Alaska Fisheries Science Center's Resource Assessment and Conservation Engineering Division Shellfish Assessment Program. The Center also provides office space to employees of the Groundfish Assessment Program, the Fisheries Monitoring and Analysis Division (North Pacific Observer Program), and the Alaska Regional Office. Resource assessment activities are primarily stock assessment surveys and related research on commercially important crab and fish in the eastern Bering Sea, Aleutian Islands, and Gulf of Alaska in support of catch quota determinations and management actions. A key product of the shellfish surveys is the annual Bering Sea Crab Survey Report, which is used to aid the fishing industry in locating productive fishing grounds and to provide stock assessment scientists with the data necessary to produce annual catch limits. Alaska crab fisheries are jointly managed by the Federal and State governments, and these data are produced very quickly after the survey ends to meet strict deadlines imposed by the collaborative management process. The Center possesses an excellent seawater system that enables important scientific investigations such as the effects of ocean acidification on commercial crab species and bycatch mortality of non-target species

The Center also plays an important role in research focused on testing the feasibility of crab enhancement in Alaska. Juvenile crab produced in an Alaskan hatchery are released into the ocean at selected study sites and followed over time to assess natural mortality. The Kodiak Fisheries Research Center is located in the third largest commercial fishing port in the U.S. (by landings) and was conceived as a means of providing office and laboratory space for fisheries research in Kodiak within a common location.

National Weather Service (NWS) - Weather Service Office

Located at the nation's largest U.S. Coast Guard Base on the Island of Kodiak ("the Emerald Isle"), this NWS Weather Service Office (WSO) provides expert hydro-meteorological data in support of local, regional, national, and global weather, hydrologic, climatic, and warning programs in accordance with the NWS mission. The WSO also supports the mission of their associated NWS Weather Forecast Office (WFO) in Anchorage, as well as the agency's goals through value-added public service, education, and outreach.

Office of Marine and Aviation Operations (OMAO) - NOAA Ship Oscar Dyson

The NOAA Ship *Oscar Dyson* is managed by the Marine Operations Center-Pacific. The *Oscar Dyson* is homeported in Kodiak, Alaska, and is the first of four acoustically quiet NOAA fishery survey vessels designed and built for NOAA. *Oscar Dyson* was commissioned May of FY 2005 and supports NOAA's mission to conserve, protect, manage, and restore living marine resources through ecosystem approaches to management. The vessel is operated under the direction of officers from the NOAA Commissioned Officer Corps. The NOAA Corps today provides a cadre of professionals trained in engineering, earth sciences, oceanography, meteorology, fisheries science, and other related disciplines. Officers operate ships, fly aircraft, manage research projects, conduct diving operations, and serve in staff positions throughout NOAA.

Kotzebue

National Weather Service (NWS) - Weather Service Office

Located in the northwest Alaskan village of Kotzebue, this NWS Weather Service Office (WSO) provides expert hydrometeorological data in support of local, regional, national, and global weather, hydrologic, climatic, and warning programs in accordance with the NWS mission. The WSO also supports the mission of their associated NWS Weather Forecast Office (WFO) in Fairbanks, as well as the agency's goals through value-added public service, education, and outreach.

Little Port Walter

National Marine Fisheries Service (NMFS) - Marine Station

The oldest continuously operated fisheries research field station in Alaska is situated on the east side of Baranov Island about 44 miles southeast of Sitka. The experimental Chinook salmon hatchery, the anadromous fish counting weir on Sashin Creek, and its close proximity to the ocean environments of the Gulf of Alaska are the principal assets of the station. Operated and maintained by the Auke Bay Laboratories, scientists from many different institutions visit the station to conduct research on steelhead salmon genetics as well aquaculture, genetics, and ocean ecology of Chinook salmon. Chinook salmon originating in Little Port Walter serves as an indicator stock under the Pacific Salmon Treaty and contributes to the understanding of the ecosystems in Southeast Alaska and other parts of North Pacific Ocean where they reside during their life cycle.

McGrath

National Weather Service (NWS) - Weather Service Office

Located along the Upper Kuskokwim River in the village of McGrath, this NWS Weather Service Office (WSO) provides expert hydro-meteorological data in support of local, regional, national, and global weather, hydrologic, climatic, and warning programs in accordance with the NWS mission. The WSO also supports the mission of their associated NWS Weather Forecast Office (WFO) in Anchorage, as well as the agency's goals through value-added public service, education, and outreach.

Metlakatla

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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Nome

National Weather Service (NWS) - Weather Service Office

Located on the Seward Peninsula at the end of the Iditarod Trail in the City of Nome, this NWS Weather Service Office (WSO) provides expert hydro-meteorological data in support of local, regional, national, and global weather, hydrologic, climatic, and warning programs in accordance with the NWS mission.

Palmer

National Weather Service (NWS) - National Tsunami Warning Center

A part of the National Weather Service, the National Tsunami Warning Center (NTWC), has the primary responsibility for the detection, location, and determination of magnitude of potentially tsunamigenic earthquakes occurring in the coastal areas of Alaska, British Columbia, the U.S. West Coast, the U.S. and Canadian Atlantic coasts, and the U.S. Gulf of Mexico coast. The NTWC is responsible for the preparation and dissemination of tsunami warnings, watches, advisories, and information bulletins to civilian and military officials in its area of responsibility regardless of epicenter location.

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

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates an ultraviolet radiation (UV) monitoring network in Alaska with sites at the Barrow Observatory, Nome, and St. Paul Island. These measurements are done as part of ESRL/GMD's research on the Earth's surface radiation budget. Research efforts are devoted to the extent and cause of observed variations in long-term radiation and meteorological measurements, using satellite observations and climate model calculations. In addition, observations of spectral solar radiation are made for remote sensing of certain atmospheric constituents and spectral solar UV is measured for the investigation of the interaction of ozone and solar radiation. ESRL/GMD also provides essential instrument calibration services for national and worldwide partner UV monitoring networks.

Poker Flat

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

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates a Cooperative Global Air Sampling Network to measure the distribution and trends of carbon dioxide (CO2) and methane (CH4), the two gases most responsible for human-caused climate change, as well as other greenhouse gases and volatile organic compounds. Samples are collected weekly at fixed locations and on several commercial ships. The air samples are delivered to ESRL/GMD, located in Boulder, CO. The observed geographical patterns and small but persistent spatial gradients are used to better understand the processes, both natural and human induced, that underlie the trends. These measurements help determine the magnitude of carbon sources and sinks in North America.

Office of Oceanic and Atmospheric Research (OAR) - Tall Tower Carbon Measurements

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates trace gas monitoring sites at tall television transmitter towers in eight states, including Alaska. The sites were established to extend ESRL/GMD's monitoring network into the interior of North America in order to provide data to aid estimation of the net carbon balance of the continent. Variations of trace gases, especially carbon dioxide (CO2), are largest near the ground, so existing tall (> 400 meters) transmitter towers are utilized as platforms for in situ and flask sampling for atmospheric trace gases. The tower site in Alaska is located at Poker Flat, north of Fairbanks.

Port Alsworth

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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Red Dog Mine

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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Ruby

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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Sand Point

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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Seldovia

National Ocean Service (NOS) - Kasitsna Bay Laboratory

The diverse marine habitats in Kachemak Bay, from the kelp forests and rocky fjord substrates to seagrass beds on extensive mudflats, provide a natural laboratory for marine research and education. Climate change, ocean acidification, and shellfish poisoning are already changing Alaska coastal ecosystems, with changes predicted to accelerate in the near future. Kasitsna Bay Lab (KBL) provides coastal managers and communities with cutting-edge science to understand and adapt to these ecosystem changes. KBL research, education and outreach activities are coordinated with the Kachemak Bay NERRs, as well as with other government agencies, tribal organizations, schools, and non-profit education and conservation groups in the region.

Shemya Island

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

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates a Cooperative Global Air Sampling Network to measure the distribution and trends of carbon dioxide (CO2) and methane (CH4), the two gases most responsible for human-caused climate change, as well as other greenhouse gases and volatile organic compounds. Samples are collected weekly at fixed locations and on several commercial ships. The air samples are delivered to ESRL/GMD, located in Boulder, CO. The observed geographical patterns and small but persistent spatial gradients are used to better understand the processes, both natural and human induced, that underlie the trends. These measurements help determine the magnitude of carbon sources and sinks in North America.

Selawik

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

The U.S. Climate Reference Network (USCRN) is an operationally viable research network of 135 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS). NOAA's National Environmental Satellite, Data, and Information Service and NOAA's Office of Oceanic and Atmospheric Research jointly manage USCRN.

Sitka

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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St. Paul and St. George

National Marine Fisheries Service (NMFS) - Pribilof Islands Facilities

Residential, laboratory and storage facilities are operated and maintained by Auke Bay Laboratories in the Probilof Islands in support of NOAA Fisheries' management responsibility for the northern fur seals. Research and stock assessment projects on northern fur seals are conducted by the Alaska Fisheries Science Center's National Marine Mammal Laboratory (NMML). NMML also conducts extensive research on Steller sea lions and northern fur seals. Research projects are designed to assess the status of these species as required by the Endangered Species Act and Marine Mammal Protection Act and to improve basic scientific knowledge of their ecology and behavior.

St. Paul

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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National Weather Service (NWS) - Weather Service Office

Located on St. Paul Island among the Pribilof Islands in the Bering Sea, this NWS Weather Service Office (WSO) provides expert hydro-meteorological data in support of local, regional, national, and global weather, hydrologic, climatic, and warning programs in accordance with the NWS mission. The WSO also supports the mission of their associated NWS Weather Forecast Office (WFO) in Anchorage, as well as the agency's goals through value-added public service, education, and outreach.

Tok

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

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Valdez

National Weather Service (NWS) - Weather Service Office

Located in the City of Valdez along the northern Prince William Sound, at the end of the "Trans-Alaska Pipeline," this NWS Weather Service Office (WSO) provides expert hydro-meteorological data in support of local, regional, national, and global weather, hydrologic, climatic, and warning programs in accordance with the NWS mission. The WSO also supports the mission of their associated NWS Weather Forecast Office (WFO) in Anchorage, as well as the agency's goals through value-added public service, education, and outreach.

Yakutat

National Weather Service (NWS) - Weather Service Office

Located along the northeastern coast of the Gulf of Alaska in the village of Yakutat, this NWS Weather Service Office (WSO) provides expert hydro-meteorological data in support of local, regional, national, and global weather, hydrologic, climatic, and warning programs in accordance with the NWS mission. The WSO also supports the mission of their associated NWS Weather Forecast Office (WFO) in Juneau, as well as the agency's goals through value-added public service, education, and outreach.

National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) - <u>U.S. Climate Reference Network</u>

The U.S. Climate Reference Network (USCRN) is an operationally viable research network of 135 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS). NOAA's National Environmental Satellite, Data, and Information Service and NOAA's Office of Oceanic and Atmospheric Research jointly manage USCRN.

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NOAA In Your State



