NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

NOAA In Your State

Arizona

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

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

AZ

Statewide

National Marine Fisheries Service (NMFS) and National Ocean Service (NOS) - Damage Assessment, Remediation, and Restoration Program

NOAA's Damage Assessment, Remediation, and Restoration Program (DARRP) assesses and restores habitat, fisheries, protected species and recreational uses that have been harmed by oil spills, chemical releases, and ship groundings. Working with federal, state, and tribal entities, and responsible parties, we have recovered $10.4 billion for restoration of critical habitats, fisheries, protected species and recreational uses nationwide. These projects promote recovery of the ecosystem and provide economic benefits from tourism, recreation, green jobs, coastal resiliency, property values and quality of life.

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

National Weather Service (NWS) - Automated Surface Observing Systems Stations
The Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). ASOS serves as the Nation's primary surface weather observing network. ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year observing basic weather elements, such as cloud cover, precipitation, wind, sea level pressure, and conditions, such as rain, snow, freezing rain, thunderstorms, and fog. There are 18 ASOS stations in Arizona.

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. There are 170 COOP sites in Arizona.

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.

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 14 NWR transmitters in Arizona.

Black Oak, Canelo, Elgin, Fairbank, Freeman Springs, Whetstone

Office of Oceanic and Atmospheric Research (OAR) - Soil Moisture Observational Network

The NOAA Earth System Research Laboratory Physical Sciences Division has implemented a Soil Moisture Observational Network across southern Arizona's San Pedro River Basin. With a dry climate and a rapidly growing population, the state of Arizona is facing a growing risk for the impacts of flash floods and drought. At six field sites centered around Sierra Vista, soil moisture and temperature are measured as well as basic meteorological parameters at the surface. The objective is to work with the Colorado River Basin Forecast Center and National Weather Service Office of Water Prediction to improve flash flood forecasting and better understand how soil information can be included in hydrologic models for water resource management studies.

AZ-1

Flagstaff

National Weather Service (NWS) - Weather Forecast Office

Located just outside of Flagstaff in Bellemont, 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 Coconino, Yavapai, Apache, Navajo and the northern third of Gila County. 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.

Grand Canyon

Office of Oceanic and Atmospheric Research (OAR) - Science On a Sphere® at Grand Canyon National Park

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

NOAA Office of Education - Environmental Literacy Program

NOAA’s Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to build the capacity of institutions and networks to advance NOAA’s mission through formal (K-12) and informal education at national, regional, and local levels. In Arizona, ELP supports the Watershed Management Group (Tucson) and the Arizona State University (Tempe) through Environmental Literacy Grants focused on resilience to extreme weather events and environmental hazards. Arizona State University is working with NOAA to develop a model for public science centers (e.g., Arizona Science Center, Phoenix) to offer deliberative forums that engage adults on real-world issues of concern to local communities, including extreme precipitation, heat waves, and drought. Watershed Management Group is using NOAA assets related to increased temperatures, drought and flooding to create a curriculum

for students in grades 6-12 that builds an understanding of Earth systems, weather, and climate and incorporates engineering design of rainwater harvesting systems. Implementation of this curriculum culminates in teacher/student-led schoolyard water harvesting projects involving members of the broader community. ELP supports the Grand Canyon Visitor Center, which has a permanent exhibit featuring NOAA's Science On a Sphere and is a member of NOAA's SOS Users Collaborative Network. The SOS Network has more than 100 institutions worldwide, reaching over 60 million people, and shares best practices in using the sphere to bring the latest global forecasts and models to the public. ELP also supports the AMS DataStreme courses for K-12 educators through a grant and in-kind support. Local implementation teams in the state offer DataStreme courses that use weather, climate, and the ocean as contexts for teaching science and improving understanding about the Earth system. Additionally, Arizona Science Center provides support to and receives support from a grant recipient to advance NOAA's mission.

Williams

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

The U.S. Climate Reference Network (USCRN) is an operationally viable research network of 135 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS).

AZ-2

Tucson

NOAA Office of Education - Environmental Literacy Program

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AZ-3
Elgin

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Office of Oceanic and Atmospheric Research (OAR) - Global Energy and Water Exchanges Project

NOAA's Air Resources Laboratory has several observational sites that support the World Climate Research Programme's Global Energy and Water Exchanges Project (GEWEX). One of NOAA's GEWEX sites is located near Elgin, AZ. GEWEX sites were established to provide detailed measurements (such as turbulent fluxes of heat, water vapor, momentum, carbon dioxide, air temperature, and relative humidity) and other information about the physical and biological processes that occur at the land/surface interface.

Tucson

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

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National Weather Service (NWS) - Weather Forecast Office

Located in Tucson, 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 southeast Arizona. 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) - Climate Assessment of the Southwest

The Regional Integrated Sciences and Assessments' Climate Assessment of the Southwest (CLIMAS) was established as a cooperative agreement between NOAA's Climate Program Office and University of Arizona's Institute of the Environment. The mission of the CLIMAS program is to improve the region's ability to respond sufficiently and appropriately to climatic events and climate changes. The program promotes participatory, iterative research involving scientists, decision makers, resource users, educators, and others who need more and better information about climate and its impacts. CLIMAS investigators conduct research on the nature, causes, and consequences of climate change and variability in the southwestern United States. The intersection of climate variability and change with social phenomena such as population growth, economic development, and populations with varying levels of climate vulnerability creates a complex environment for decision making in the semi-arid and arid southwestern United States. Resource and land managers concerned with maintaining the health of ecosystems and resources face serious climate-related challenges, including severe sustained drought, dramatic seasonal and interannual variations in precipitation, and steadily rising temperatures. Similarly, local, state, and tribal governments strive to maintain vital economic growth and quality of life within the context of drought, population growth, vector-born disease, and variable water supplies. Throughout its history, CLIMAS has worked to assess climate variability and longer-term climate change in terms of impacts on human and natural systems in the Southwest.

AZ-4

Yuma

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

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AZ-9

Phoenix

National Weather Service (NWS) - Weather Forecast Office

Located in Phoenix, 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 central Arizona and the California deserts. 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.

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Tempe

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***NOAA In Your State* is managed by NOAA's Office of Legislative and Intergovernmental Affairs and maintained with information provided by NOAA's Line, Corporate, and Staff Offices. Questions about specific programs or offices should be directed to the NOAA Line, Corporate, or Staff Office listed.**

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