

NOAA In Your State

Minnesota

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

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

MN

Statewide

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 15 ASOS stations in Minnesota.

National Weather Service (NWS) - [Cooperative Observer Program Sites](#)

The National Weather Service (NWS) Cooperative Observer Program (COOP) is truly the Nation's weather and climate observing network of, by and for the people. More than 10,000 volunteers take observations on farms, in urban and suburban areas, National Parks, seashores, and mountaintops. The data are representative of where people live, work and play. The COOP was formally created in 1890 under the NWS Organic Act to provide observational meteorological data, usually consisting of daily maximum and minimum temperatures, snowfall, and 24-hour precipitation totals, required to define the climate of the United States and to help measure long-term climate changes, and to provide observational meteorological data in near real-time to support forecast, warning and other public service programs of the NWS.

The data are also used by other federal (including the Department of Homeland Security), state and local entities, as well as private companies (such as the energy and insurance industries). In some cases, the data are used to make billions of dollars' worth of decisions. For example, the energy sector uses COOP data to calculate the Heating and Cooling Degree Days which are used to determine individuals' energy bills monthly. There are 215 COOP sites in Minnesota.

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 37 NWR transmitters in Minnesota.

Office of Oceanic and Atmospheric Research (OAR) – [Minnesota 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. The Minnesota Sea Grant Program, based at the University of Minnesota Duluth, provides the people, tools, and the technology to help maintain and enhance lakeshore and aquatic economies and resources. Minnesota Sea Grant is made up of researchers and educators who focus on discovering solutions to problems facing Lake Superior and Minnesota's inland waters. The public, industry, and policy makers are kept informed on issues related to aquaculture, aquatic invasive species, fisheries, aquatic education, contaminants, and fisheries through a series of publications including Minnesota Sea Grant's newsletter, the "Seiche".

[Great Lakes](#)

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

In the Great Lakes, the Restoration Center focuses on restoring the most degraded environments--designated Areas of Concern—as well as reversing the environmental damages resulting from oil spills, chemical releases, and marine debris. Our projects address loss of habitat and diminished fish and wildlife populations. Since 2008, we have targeted roughly \$87 million to restore more than 6,000 acres of habitat for fish and wildlife, remove over 210,000 metric tons of waste and demolition material, and open more than 780 miles of river for fish passage. NMFS's Restoration Center works with private and public partners in Michigan and nationwide to restore coastal habitat. We provide technical and financial assistance to help recover threatened and endangered species, support sustainably managed species, and reverse the damage done by oil spills and toxic releases. In Minnesota, we focus on restoring habitats and implementing projects that specifically lead to the delisting of AOCs. Currently, for example, we are working with local partners on a plan for implementing the St. Louis River Habitat Focus Area. We are doing this to focus and prioritize NOAA resources, such as internal programs and expertise, on habitat loss and degradation there. Through the Damage Assessment Remediation and Restoration Program, the Restoration Center also collaborates with other agencies, industry, and citizens to protect and restore coastal and marine resources in Minnesota threatened or injured by oil spills, releases of hazardous substances, and vessel groundings.

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

The Coastal Storms Program focused resources on the Great Lakes region in 2012 and will continue providing support through 2017. Great Lakes project work will focus on the following priority areas: 1) improved weather observations, modeling, and risk communication to address hazards affecting beach safety (rip currents) and coastal development; 2) Shoreline assessment and management; and 3) stormwater impacts on aquatic resources. Outreach coordinators are located with Minnesota and Wisconsin Sea Grant and a small grants competition administered by Ohio Sea Grant was held in FY14.

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

The NOAA Office for Coastal Management practices a partner-based, boots on the ground approach to coastal management. The organization currently has staff in the eight regions who provide assistance to local, state, and regional coastal resource management efforts and facilitate customer feedback and assessments. Great Lakes regional staff are located in Chanhassen, MN and Traverse City, MI. In addition to providing NOAA products and services, these staff represent NOAA on multiple regional governance structures (e.g. Conference of Great Lakes and St. Lawrence Governors and Premiers; Upper Midwest and Great Lakes Landscape Conservation Cooperative; Great Lakes Restoration Initiative; and the Great Lakes Regional Collaboration) to improve the management of natural resources.

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

Through a unique federal-state partnership, NOAA's Office for Coastal Management works with the Minnesota Department of Natural Resources to implement the National Coastal Zone Management Program in Minnesota. NOAA provides the state coastal management program with financial and technical assistance to further the goals of the Coastal Zone Management Act and ensure coastal waters and lands are used in a balanced way to support jobs, reduce use conflicts, and sustain natural resources.

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

The NOAA Bay-Watershed Education and Training (B-WET) Program is an environmental education program that promotes locally relevant, experiential learning in the K-12 environment. The primary delivery of B-WET is through competitive funding that promotes Meaningful Watershed Educational Experiences (MWEEs). B-WET currently serves seven areas of the country: California, Chesapeake Bay, Great Lakes, Gulf of Mexico, Hawai'i, New England, and the Pacific Northwest. The Great Lakes B-WET Program recognizes that knowledge and commitment built from firsthand experience, especially in the context of one's community and culture, is essential for achieving environmental stewardship. Great Lakes B-WET responds to regional education and environmental priorities through local implementation of competitive grant funds. Please see regional funding opportunity for priorities and eligibility details.

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 the Enbridge pipeline spill, 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.

National Ocean Service (NOS) – [Great Lakes Environmental Response Management Application](#)

Assessing important spatial information and designing successful restoration projects rely upon interpreting and mapping geographic information, including the location, duration, and impacts from oil spills, other hazardous materials, or debris released into the environment. Great Lakes Environmental Response Management Application (ERMA®) is an online mapping tool that integrates both static and real-time data, such as Environmental Sensitivity Index maps, ship locations, weather, and ocean currents in a centralized, easy-to-use format for environmental responders and decision makers.

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

The NOAA Marine Debris Program (MDP) leads national and international efforts to research, prevent, and reduce the impacts of marine debris. The program supports marine debris removal, education and outreach, and research projects in partnership with state and local agencies, tribes, non-governmental organizations, academia, and industry.

National Ocean Service (NOS) - [Great Lakes Observing System](#)

The U.S. Integrated Ocean Observing System (IOOS®) is an operational system and a network of 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, coast, and Great Lakes data and information. The Great Lakes Observing System (GLOS), one of the 11 IOOS regional coastal ocean observing systems, provides public access to critical, real-time and historical data and information about the Great Lakes, St. Lawrence River and interconnecting waterways for use in managing, safeguarding and understanding these immensely valuable freshwater resources. GLOS is intended to gather and integrate chemical, biologic and hydrologic data, and monitor lake conditions and trends over time.

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

The NOAA CoastWatch Great Lakes regional node obtains, produces, and delivers environmental data and products for near real-time observation of the Great Lakes to support environmental science, decision making, and supporting research. This is achieved by providing internet access to near real-time and retrospective satellite data and products, as well as in-situ Great Lakes data. The CoastWatch node at Great Lakes Environmental Research Laboratory provides clients including Federal, state, and local agencies, academic institutions, commercial/industries and the public, both within and outside of the Great Lakes region, with access to near real-time satellite observations and in-situ data for the Great Lakes. CoastWatch data are used in a variety of ways, including near real-time observation and tracking of algal blooms, plumes, ice cover, wind speed/direction, surface water intake temperatures at fish hatcheries, two and three dimensional modeling of Great Lakes physical parameters such as wave height and currents damage assessment modeling, research, and educational and recreational activities. In addition, through a cooperative project with Michigan Sea Grant, Great Lakes CoastWatch satellite-derived surface water temperature imagery is contoured and made available via Michigan State Sea Grant's web site. Great Lakes CoastWatch data and products benefit riparians as well as research, operational, and recreational users.

MN-2

Farmington

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

Housed in the Federal Aviation Administration's Minneapolis Air Route Traffic Control Center (ARTCC), the NWS Center Weather Service Unit (CWSU) provides forecasts and other weather information to ARTCC personnel for use in directing the safe, smooth flow of aviation traffic in Minnesota, North Dakota, most of South Dakota, Wisconsin and Michigan, and parts of Nebraska and Iowa.

MN-3

Chanhassen

National Weather Service (NWS) - [National Operational Hydrologic Remote Sensing Center](#)

Co-located with the NWS North Central River Forecast Center and the Twin Cities NWS Weather Forecast Office, the National Operational Hydrologic Remote Sensing Center (NOHRSC) provides remotely-sensed and modeled hydrology products for the coterminous U.S. and Alaska for the protection of life and property and the enhancement of the national economy. NOHRSC airborne, satellite, and modeled snow data and products are used by NWS, other government agencies, the private sector, and the public to support operational and research hydrology programs across the nation. NOHRSC data and products include national analyses of snow water equivalent, snow depth, average snowpack temperature, snow precipitation, snow melt, and sublimation. Snow water equivalent data from NOHRSC is critical to determine spring flooding and spring mountain runoff in the west. A user-driven interactive interface and 3-D visualization capability enables for full exploration of the available data sets.

National Weather Service (NWS) - [North Central River Forecast Center](#)

Co-located in Chanhassen with the Twin Cities NWS Weather Forecast Office and the NWS National Operational Hydrologic Remote Sensing Center, the North Central River Forecast Center (RFC) performs continuous river basin modeling and provides hydrologic forecast and guidance products for rivers and streams in Minnesota, Michigan, Wisconsin, and parts of North Dakota, Missouri, Illinois, Iowa and Indiana. These products include forecasts of river stage and flow, probabilistic river forecasts, reservoir inflow forecasts, gridded precipitation estimates and forecasts, spring flood outlooks, and flash flood and headwater guidance. Some of the RFCs in the western and central U.S. also provide water supply forecasts. RFCs work closely with local, state and federal water management agencies, including the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, and U.S. Geological Survey, to provide water and flood information for critical decisions (aka Impact-based Decision-Support Services or IDSS).

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

Co-located with the NWS North Central River Forecast Center and the NWS National Operational Hydrologic Remote Sensing Center in Chanhassen, this NWS Weather Forecast Office (WFO) provides the best possible weather, water, and climate forecasts and warnings to residents of south central Minnesota. 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. 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.

MN-4

St. Paul

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 St. Paul, Minnesota serving the Northern Plains region – Minnesota, Iowa, Nebraska, North Dakota, and South Dakota. 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.

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

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

MN-7

Goodridge

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

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

MN-8

Duluth, Grand Marais

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

The National Ocean Service (NOS) operates two long-term continuously operating water level stations in the state of Minnesota, which provide data and information on Great Lakes and interconnecting waterways datum and lake level regulation and are capable of producing real-time data for storm surge warning. These stations are located on Lake Superior at Duluth and at Grand Marais.

Duluth

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

Located at Duluth International Airport, 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 northeast Minnesota and northwest Wisconsin. 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.

Sandstone

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 Ocean Service (NOS), National Marine Fisheries Service (NMFS), Office of Oceanic and Atmospheric Research (OAR), National Weather Service (NWS), National Centers for Environmental Information/Regional Climate Services (NESDIS) - [St. Louis River Estuary Habitat Focus Area](#)

The St. Louis River Estuary has been selected as a Habitat Focus Area under NOAA's Habitat Blueprint. Habitat Focus Areas are a non-regulatory, collaborative approach to habitat conservation that NOAA launched in 2013 to increase the effectiveness of NOAA's habitat conservation science and management efforts. Habitat Focus Areas are places where NOAA offices, working together with public and private sector partners, can achieve measurable habitat conservation results in three to five years. NOAA is coordinating its efforts across the National Ocean Service, NOAA Fisheries, Weather Service and Great Lakes Environmental Research Lab, Satellites and Regional Climate Services as well as partner programs within the St. Louis River Estuary Habitat Focus Area. Partner programs include: the Lake Superior National Estuarine Research Reserve, the Wisconsin and Minnesota Coastal Management Programs, Minnesota and Wisconsin Sea Grants, and NOAA's Sentinel Site for climate monitoring.

The St. Louis River is a major tourism draw and home to the country's busiest and largest bulk inland port. Current and former industry has left a legacy of toxic substances, along with extensive habitat alteration and degradation. NOAA is bringing its expertise in flood and weather forecasting, integrated monitoring, habitat protection and restoration,

stakeholder education, and coastal management to the restoration effort to address loss of fish and wildlife habitat and sport fisheries, assess impacts of climate on aquatic and nearshore vegetation, reducing the risk of flooding through improved planning and water management strategies, and increasing coastal tourism, access, and recreational opportunities.

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NOAA In Your State

Minnesota

NOAA NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

