

## NOAA In Your State

# North Dakota

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

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

### Highlights of NOAA in NorthDakota

<a href="#">Ozone Measurements</a>	Bismarck	ND-At Large
<a href="#">U.S. Climate Reference Network</a>	Jamestown, Medora, Northgate	ND-At Large

The state of South Dakota also has two Weather Forecasting Offices.

### Weather Forecast Offices

Bismarck	ND-At large
Grand Forks	ND-At large

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

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### **[ND-At Large](#) [Bismarck](#)**

**National Weather Service (NWS) - [Weather Forecast Office](#)**- See [Page 1](#) for details.

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

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

### **[Grand Forks](#)**

**National Weather Service (NWS) - [Weather Forecast Office](#)**- See [Page 1](#) for details.

### **[Jamestown, Medora, Northgate](#)**

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

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

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## **Statewide**

### **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 Minneapolis, Minnesota serving the Northern Plains region – Iowa, Minnesota, 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.

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

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

### **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 nine ASOS stations in North Dakota.

### **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 93 COOP sites in North Dakota.

### **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 18 NWR transmitters in North Dakota.

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

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

**National Ocean Service (NOS) - [NOAA Ocean Guardian Youth Ambassador Program](#)**

Youth aged 13-18 from across the United States and its territories that are committed to ocean conservation and stewardship of our blue planet can apply to become a NOAA Ocean Guardian Youth Ambassador. This year-long program looks for enthusiastic youth with new ideas and a unique perspective who want to learn more about [America's underwater treasures](#) and share their passion with others. Youth learn how to become a leader at their school or in their local community to make a difference in the conservation of the ocean through marine protected areas.

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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.

More information for those offices may be found at [NOAA.gov](#).

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