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| NOAA Header |
| **NOAA In Your State****North Dakota** |
| *“NOAA's work touches the daily lives of every person in the United States and in much of the world. Our products and services are the result of the hard work of NOAA’s dedicated staff and partner organizations located in program and research offices throughout the country. The following is a summary of NOAA programs based in, and focused on, your state. The entries are listed by statewide, region, and then by congressional districts and cities or towns.”** Dr. Jane Lubchenco

Under Secretary of Commerce for Oceans and Atmosphereand NOAA Administrator |

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| where is north dakota |

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| ***ND******Statewide*****National Weather Service (NWS)****Automated Surface Observing Systems****North Dakota 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.<http://www.nws.noaa.gov/mirs/public/prods/maps/map_images/state-maps/asos_09/ND_asos.pdf> and <http://www.nws.noaa.gov/asos/>**National Weather Service (NWS)****Cooperative Observer Program****North Dakota 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 146 COOP sites in North Dakota.<http://www.nws.noaa.gov/mirs/public/prods/maps/map_images/state-maps/coop_09/ND_coop.pdf> and <http://www.nws.noaa.gov/om/coop/>**National Weather Service (NWS)****NOAA Weather Radio All Hazards****North Dakota 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.<http://www.nws.noaa.gov/mirs/public/prods/maps/map_images/state-maps/nwr_09/ND_nwr.pdf> and <http://www.nws.noaa.gov/nwr/>***ND-At Large******Bismarck*****National Weather Service (NWS)****Weather Forecast Office****Bismarck WFO**Located at Bismarck Municipal Airport, this NWS Weather Forecast Office (WFO) is staffed around-the-clock every day, providing the best possible weather, water, and climate forecasts and warnings for 36 counties in the western two-thirds of North Dakota. 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 provide on-site, detailed weather support during critical emergencies, such as wildfires, floods, chemical spills, and for major recovery efforts such as those following the Greensboro, Kansas, tornado; Hurricane Katrina; and the Sept. 11, 2001, terrorist attack in New York City. 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.<http://www.crh.noaa.gov/bis>**Office of Oceanic and Atmospheric Research (OAR)****Earth System Research Laboratory/Global Monitoring Division****Total Column Ozone Measurements**NOAA's Earth System Research Laboratory (ESRL) 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, including Bismarck, ND. The observations are obtained with ground-based spectrometers that measure the attenuation by ozone of ultraviolet light. This integrated ozone amount is critical in determining the amount of ultraviolet radiation reaching the earth's surface. Excess ultraviolet radiation is responsible for human skin cancer and is also harmful to other biogenic organisms. Column ozone measurements monitor changes in the stratospheric ozone layer resulting from human-produced chlorine and bromine compounds that destroy ozone. With controls now in place on the manufacture and use of these ozone-destroying compounds, it will be important to monitor the ozone layer for the expected recovery and determine whether other factors such as long-term climate change are influencing this recovery.<http://www.esrl.noaa.gov/gmd/about/ozone.html>***Dahlen*****Office of Oceanic and Atmospheric Research (OAR)****Earth System Research Laboratory/Global Monitoring Division****Monitoring the Atmosphere Aloft - Carbon Cycle Gases and Halocarbons**NOAA's Earth System Research Laboratory (ESRL) operates a new and growing small aircraft-based North American network of sampling sites to measure vertical profiles of important greenhouse gas concentrations. Air is sampled above the surface up to approximately 25,000 feet above sea level using a relatively small, light, and economical automated system developed by ESRL researchers. These air samples are delivered to the ESRL laboratory in Boulder, Colorado for measurements of CO2, CH4, and other greenhouse gasses. This data will improve understanding and models of the global carbon cycle. Sampling is conducted bi-weekly. Some air samples from the small aircraft program are also analyzed for halocarbon gases that can destroy the stratospheric ozone layer. 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.<http://www.esrl.noaa.gov/gmd/about/climate.html>***Dickinson*****National Ocean Service (NOS)****National Geodetic Survey****Geodetic Coordinator**Through a cooperative agreement and part of the National Ocean Service (NOS) State Advisor Program, the State Geodetic Coordinator is a State employee that serves as liaison between NOS and the host state. In this method, NOS helps guide and assist the State's charting, geodetic and surveying programs through technical transfer. This program also provides assistance in planning and implementing Geographic/Land Information System (GIS/LIS) projects.[http://http://www.ngs.noaa.gov/ADVISORS/AdvisorsIndex.shtml](http://www.ngs.noaa.gov/ADVISORS/AdvisorsIndex.shtml)***Eastern North Dakota at Grand Forks*****National Weather Service (NWS)****Weather Forecast Office****Grand Forks WFO**Located at the University Technology Park adjacent to the University of North Dakota campus in Grand Forks, 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 eastern North Dakota and 18 counties in northwestern 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 provide on-site, detailed weather support during critical emergencies, such as wildfires, floods, chemical spills, and for major recovery efforts such as those following the Greensboro, Kansas, tornado; Hurricane Katrina; and the Sept. 11, 2001, terrorist attack in New York City. 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.<http://www.crh.noaa.gov/fgf>***Medora*****National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR)****Climate Reference Network****Medora Station**The U.S. Climate Reference Network (USCRN) is an operational network of climate stations. Data from the USCRN will be used in operational climate monitoring activities and for placing current climate anomalies into an historical perspective. NOAA's National Climatic Data Center (NCDC) manages the USCRN. The USCRN will also provide 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.<http://www.ncdc.noaa.gov/crn/>***Northgate*****National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR)****Climate Reference Network****Northgate Station**The U.S. Climate Reference Network (USCRN) is an operational network of climate stations. Data from the USCRN will be used in operational climate monitoring activities and for placing current climate anomalies into an historical perspective. NOAA's National Climatic Data Center (NCDC) manages the USCRN. The USCRN will also provide 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.<http://www.ncdc.noaa.gov/crn/>***Williston*****National Weather Service (NWS)****Weather Service Office****Williston WSO**Located at Sloulin Field International Airport in Williston, this Weather Service Office (WSO) provides local service for three counties in northwest North Dakota, and operates a local warning radar. The WSO also supports the mission of their associated Weather Forecast Office in Bismarck, and the goals of the National Weather Service through value-added public service, education, and outreach.<http://www.crh.noaa.gov/bis> |
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