

NOAA In Your State

South 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 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.

SD

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 16 ASOS stations in South 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. 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 172 COOP sites in South 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 South Dakota.

SD-At Large

Aberdeen, Buffalo, Pierre,

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.

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

Located near Aberdeen Regional 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 26 counties in the northeast third of South Dakota and two counties in west-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, 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.

Rapid City

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

Located at the South Dakota School of Mines and Technology, 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 western South Dakota and three counties in northeast Wyoming. 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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Rockford, Brookings

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

NOAA's Air Resource 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 Rockford, SD, and another is located near Brookings, SD. 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. Observations from these sites are being used to test and improve the current generation of land surface models that are used for both regional and global climate prediction.

Sioux Falls

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

Located at Sioux Falls 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 southeast South Dakota, northwest Iowa, southwest Minnesota and two counties in northeast Nebraska. 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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Office of Oceanic and Atmospheric Research (OAR) - [Surface Radiation Measurement Network](#)

The Earth System Research Laboratory Global Monitoring Division operates seven stations as part of its surface radiation measurement network (SURFRAD). The station measurements support regional and global weather and climate research with accurate, continuous, long-term measurements of the surface radiation budget over the United States. Solar radiation is the driving energy for geophysical and biological processes that control weather and affect planetary life; understanding the global surface energy budget is therefore key to understanding climate and the environmental consequences to agriculture and other statewide concerns. Because it is impractical to cover the whole earth with monitoring stations, the answer to global coverage lies in reliable satellite-based observations. Accurate and precise ground-based measurements across a range of climate regions are essential to refine and verify the satellite observations. One of these stations is located near Sioux Falls. These ground-based measurements also support special research projects on radiation and climate processes in the South Dakota region and serve as important verification for weather forecasts.

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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 and Staff Offices. Questions about specific programs or offices should be directed to the NOAA Line or Staff Office listed.

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

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South Dakota

NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

