

NOAA In Your State

Wisconsin

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.

WI ***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. In Wisconsin, the Program is currently working to restore natural resources in cases including the Sheboygan River and Harbor hazardous waste site.

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 Black River Falls, Wisconsin serving the Great Lakes region – Wisconsin, Illinois, Indiana, and Michigan. 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 sites in Wisconsin.

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

The National Weather Service (NWS) Cooperative Observer Program (COOP) is made up of more than 10,000 volunteers who 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, state and local entities, as well as private companies. 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 249 COOP sites in Wisconsin.

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. NWR is provided as a public service and 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 28 NWR transmitters in Wisconsin.

Office of Oceanic and Atmospheric Research (OAR) – [Wisconsin 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, and Guam. Headquartered at the University of Wisconsin-Madison, the Wisconsin Sea Grant College Program is statewide in scope, focused on basic and applied research, education and technology transfer dedicated to the sustainable use of the Great Lakes. In its 47-year history, Wisconsin Sea Grant has undertaken numerous research projects, including those that address contaminants in the Great Lakes, have discovered a patentable non-lethal test for viral hemorrhagic septicemia that kills Great Lakes fish and built and populated a Wisconsin coastal atlas to visualize lake features. Its outreach projects have helped prevent the spread of aquatic invasive species, assisted the shipping industry in protecting harbor infrastructure and helped coastal communities adapt to a changing climate.

Great Lakes

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

The NOAA Restoration Center, within the Office of Habitat Conservation, works with private and public partners locally and nationwide to increase fisheries productivity by restoring coastal habitat. Projects support sustainable fisheries, help recover threatened and endangered species, and reverse damage from disasters like oil spills, ship groundings, and severe storms. Since 1992, they have provided more than \$750 million to implement more 3,300 coastal habitat restoration projects. In the Great Lakes and Wisconsin, the Restoration Center focuses on restoring the most degraded environments--designated Areas of Concern (AOCs). Projects address loss of habitat and diminished fish and wildlife populations. For example, completing a shovel ready, large-scale habitat improvement and restoration project on Ulae Creek within the Milwaukee River Watershed in the Village and Town of Grafton. NOAA also works with the Great Lakes Restoration Initiative (GLRI) to implement habitat restoration projects that will help improve AOCs.

National Ocean Service (NOS) - [Navigation Manager](#)

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in Wisconsin to help identify the navigational challenges facing marine transportation in Wisconsin and provide NOAA's resources and services that promote safe and efficient navigation. Navigation managers are on call to provide expertise and NOAA navigation response coordination in case of severe coastal weather events or other marine emergencies. The Office of Coast Survey has a Navigation Manager located in Silver Spring, MD to support mariners and stakeholders in Great Lakes waters.

Coastal

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

NOS operates four long-term continuously operating water level stations in the state of Wisconsin which provide data and information on Great Lakes and interconnecting waterways data and lake level regulation and are capable of producing real-time data for storm surge warning. These stations are located on Lake Michigan at Milwaukee, Kewaunee, Sturgeon Bay Canal, and Green Bay.

National Ocean Service (NOS) - [Coastal and Estuarine Land Conservation Program](#)

The Coastal and Estuarine Land Conservation Program brings conservation partners together to protect coastal and estuarine lands considered important for their ecological, conservation, recreational, historical, or aesthetic values. To date the program has protected more than 100,000 acres of land with program funds and over 16,000 acres with an in-kind match. The program provides state and local governments with matching funds to purchase coastal and estuarine lands or obtain conservation easements for important lands threatened by development. NOAA awarded three grants in Wisconsin with another seven with funds from EPA's Great Lakes Restoration Initiative. These lands are protected in perpetuity. One active project is in Clay Bluffs-Cedar Gorge, in which Ozaukee County plans to acquire 102 acres of farmland and forested lakeside bluffs along 6,600 feet of Lake Michigan shoreline. The property will become a new component of the county's Lion's Den Gorge Nature Preserve.

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

This program matches postgraduate students with state and territory coastal zone programs to work on two-year projects proposed by the state or territory. The Wisconsin Coastal Management Program is hosting a fellow from 2016-2018. The fellow is compiling a current and comprehensive public access inventory and developing mobile websites and apps to promote coastal heritage tourism in Wisconsin.

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

Through a unique federal-state partnership, NOAA's Office for Coastal Management works with the Wisconsin Department of Administration, in partnership with the Department of Natural Resources and other state agencies, to implement the National Coastal Zone Management Program in Wisconsin. 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 to support jobs, reduce use conflicts, and sustain natural resources.

National Ocean Service (NOS) and National Marine Fisheries Service (NMFS) – [Coastal Resilience Grant Award](#)

These grants help coastal communities prepare for and recover from extreme weather events, climate hazards, and changing ocean conditions. The focus is on comprehensive regional approaches that use science-based solutions and rely on collaborative partnerships. This approach expands reach and impact, thereby ensuring maximum success. In Wisconsin, the NOAA Office for Coastal Management awarded the Wisconsin Department of Administration \$840,000 to develop guidance with regard to options for protecting bluff, beach, and harbor ecosystems and the coastal economy in southeastern Wisconsin. Exploring future possibilities through scenario development and improving risk communication are also parts of the effort. The Wisconsin Department of Administration's Coastal Management Program is leading this project, and participation involves four coastal counties, 22 coastal municipalities, and various state and local organizations.

National Ocean Service (NOS) - [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. In Wisconsin, the MDP is partnering with Wisconsin Sea Grant to increase the efficiency of locating and removing ghost nets in the upper Great Lakes. The MDP has also worked with state and local governments, and stakeholders, to develop the Great Lakes Land-Based Marine Debris Action Plan.

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

The U.S. Integrated Ocean Observing System, or IOOS®, is a federally and regionally coordinated observing system with 17 interagency and 11 regional partners. The System addresses regional and national needs for coastal, ocean, and Great Lakes data and information. This includes gathering and disseminating regional observations; data management; modeling and analysis; education and outreach; and research and development. 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.

WI-2

Madison

National Ocean Service (NOS) – [Digital Coast Fellowship](#)

This program matches postgraduate students with members of the Digital Coast Partnership to work on two-year projects proposed by the partner organization. The Association of State Floodplain Managers, in Madison, WI is hosting a fellow from 2016-2018. The fellow will help manage coastal hazards and risk, and natural and beneficial functions, by reviewing and evaluating existing policies, increasing collaboration in coastal areas, and investigating the development of a national holistic coasts framework.

National Environmental Satellite, Data, and Information Service (NESDIS) - [Cooperative Institute for Meteorological Satellite Studies](#)

The National Oceanic and Atmospheric Administration (NOAA) and the University of Wisconsin-Madison (UW) have collaborated for more than three decades in satellite meteorological research. The relationship between NOAA and the UW, from which the Cooperative Institute for Meteorological Satellite Studies (CIMSS) was founded, furthers the missions of both organizations. A Memorandum of Understanding between NOAA and the UW established CIMSS in 1980 to formalize their partnership in meteorological research using satellite technology and to provide a firm basis for cooperative research efforts. Sponsorship and membership of the Institute was expanded to include the National Aeronautics and Space Administration (NASA) in 1989. The CIMSS mission is to:

- Foster effective collaboration between NOAA and UW in atmospheric and Earth science exploiting satellite technology;

- Serve as a center of excellence where government and university scientists and engineers work together on projects of mutual interest involving remote sensing of the Earth; and
- Stimulate training of scientists and engineers in disciplines involved in the atmospheric and Earth sciences.

The CIMSS research program includes five research themes and one outreach theme. These themes are: Weather Nowcasting and Forecasting, Clouds and Radiation, Global Hydrological Cycle, Environmental Trends, Climate and Educating and Informing our Citizens. As the major scientific themes of CIMSS are broad, their evolution occurs at the research project level. Numerous programs that track one or more themes have emerged and evolved throughout CIMSS history. These projects evolve to meet NOAA needs, improve scientific understanding, and foster the new capabilities required with advanced satellite observations.

National Environmental Satellite, Data, and Information Service (NESDIS) - [Advanced Satellite Products Branch](#)

The Advanced Satellite Products Branch (ASPB), within the Center for Satellite Applications and Research (STAR) in the National Environmental Satellite, Data, and Information Service (NESDIS), is physically collocated with Cooperative Institute for Meteorological Satellite Studies (CIMSS) on the University of Wisconsin-Madison campus. The ASPB conducts research and development activities in collaboration with university scientists within CIMSS on the broad theme of meteorological satellite studies related to weather and climate. This relationship between the university and ASPB enables NOAA to adopt demonstrated research techniques for deriving atmospheric information from remote sensing data for broader distribution to the science community. In particular, CIMSS collaborates with NOAA in the specification, testing, and evaluation of new satellite instruments; in the development of techniques to derive and apply meteorological parameters from the available satellite measurements; and in the assessment of the impact of new remote sensing data and products on weather analyses and forecasts and as long-term climate data records. The University of Wisconsin, the scientific community and the nation benefit from this arrangement through the training of students and the support of research in atmospheric and Earth science.

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

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates surface-based radiation monitoring sites in seven states. ESRL/GMD's Integrated Surface Irradiance Study (ISIS) monitoring network is based in the continental United States and is a collaboration with NOAA's SURFRAD Network.

Monona

Office of Oceanic and Atmospheric Research (OAR) - [Science On a Sphere® at the Aldo Leopold Nature Center](#)

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.

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 Wisconsin, ELP supports the Aldo Leopold Nature Center (Monona) and the Spaceport Sheboygan (Sheboygan), all of which have permanent exhibits featuring NOAA's Science On a Sphere and are members 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 supports the Lake Sturgeon Bowl in Wisconsin, one of 25 regional competitions of the National Ocean Sciences Bowl (NOSB). The NOSB is an academic competition that engages high school students in learning about ocean sciences and related STEM careers while helping them become knowledgeable citizens and environmental stewards. 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.

WI-3

[La Crosse](#)

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

Located on County Road FA near La Crosse, 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 residents of southwest Wisconsin, southeast Minnesota and northeast Iowa. 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.

WI-4

[Milwaukee](#)

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

Located in Sullivan Township of Waukesha County west of Milwaukee, 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 residents of southeast Wisconsin. This office also provides marine forecasts and warnings for near-shore waters of Lake Michigan. 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) - [Real-Time Meteorological Observation Network](#)

The Great Lakes Environmental Research Laboratory (GLERL)'s Marine Instrumentation Laboratory has deployed and is maintaining a real-time network of shore-based meteorological instrument packages including a location at Milwaukee. The meteorological observations obtained from the network are being used in GLERL's Great Lakes Coastal Forecasting System to improve nowcasts and forecasts of wind, waves, water levels, and circulation. The Milwaukee station measures/records wind speed, wind gust, wind direction, and air temperature at 5-minute increments, and this information is updated hourly.

Office of Oceanic and Atmospheric Research (OAR) - [Real-time Environmental Coastal Observation Network Stations](#)

The Great Lakes Environmental Research Laboratory's Marine Instrumentation Laboratory has deployed and is maintaining a real-time network of shore-based meteorological instrument packages, including one in Milwaukee. The meteorological observations obtained from the network are being used in GLERL's Great Lakes Coastal Forecasting System to improve nowcasts and forecasts of wind, waves, water levels, ice cover and circulation. In addition, the National Weather Service forecast office in Milwaukee is using the observations to improve marine forecasts and warnings. The Milwaukee station measures/records wind speed, wind gust, wind direction, and air temperature at five-minute increments that are updated every 15 minutes on the web.

WI-6

Sheboygan

Office of Oceanic and Atmospheric Research (OAR) - [Science On a Sphere® at the Spaceport Sheboygan](#)

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.

NOAA Office of Education - [Environmental Literacy Program](#)

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WI-7

Necedah National Wildlife Refuge

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).

Park Falls

Office of Oceanic and Atmospheric Research (OAR) - [Tall Tower Carbon Measurements](#)

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates trace gas monitoring sites at tall television transmitter towers in eight states, including Wisconsin. The sites were established to extend ESRL/GMD's monitoring network into the interior of North America in order to provide data to aid estimation of the net carbon balance of the continent. Variations of trace gases, especially carbon dioxide (CO₂), are largest near the ground, so existing tall (> 400 meters) transmitter towers are utilized as platforms for in situ and flask sampling for atmospheric trace gases. The tower site in Wisconsin is located within the Chequamegon National Forest, near Park Falls.

Office of Oceanic and Atmospheric Research (OAR) - [Carbon Cycle Gases and Halocarbons](#)

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) a 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 ESRL/GMD 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. 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.

Office of Oceanic and Atmospheric Research (OAR) - [Cooperative Global Air Sampling Network](#)

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates a Cooperative Global Air Sampling Network to measure the distribution and trends of carbon dioxide (CO₂) and methane (CH₄), the two gases most responsible for human-caused climate change, as well as other greenhouse gases and volatile organic compounds. Samples are collected weekly at fixed locations and on several commercial ships. The air samples are delivered to ESRL/GMD, located in Boulder, CO. These measurements help determine the magnitude of carbon sources and sinks in North America.

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

NOAA's Earth System Research Laboratory Global Monitoring Division (ESRL/GMD) operates a sampling network to measure the distribution and trends of the gases most responsible for human-caused depletion of the stratospheric ozone layer. Weekly samples are collected in high-pressure flasks at fixed locations. The air sample flasks are delivered to ESRL/GMD, located in Boulder, CO for analysis. Some locations conduct continuous surface measurements on site. 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.

[St. Louis River Estuary](#)

National Marine Fisheries Service (NMFS), National Ocean Service (NOS), 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](#)

As part of the Habitat Blueprint administered by the NOAA Fisheries Office of Habitat Conservation, NOAA has selected ten Habitat Focus Areas (HFAs), place-based locations across the country to maximize the effectiveness of habitat conservation. While each HFA focuses on individual habitat conservation goals outlined in their Implementation Plan, the overarching goal is to demonstrate results in a focused area in a short time period. The St. Louis River Estuary has been selected as a Habitat Focus Area under NOAA's Habitat Blueprint. 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.

Partners 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.

Superior

National Ocean Service (NOS) - [Lake Superior National Estuarine Research Reserve](#)

The 16,697-acre Lake Superior Research Reserve is a combination of four distinct land areas managed by the University of Wisconsin. The reserve is one of two sites representing a freshwater estuary on the Great Lakes, and includes portions of connecting waterways in Douglas County, where the St. Louis River flows into Lake Superior. The four non-contiguous areas that make up the site are located within 10 miles of each other, and consist exclusively of public lands and waters owned by Wisconsin Department of Natural Resources, City of Superior, Douglas County, and the University of Wisconsin. Data and information collected by reserve staff members are used to maintain and restore the ecosystems and inform community planning and initiatives. The focus is on coastal development, water quality, human use of the reserve, climate change, and invasive species. Community outreach and education represent an important part of the mission.

WI-8

Green Bay

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

Located next to Austin-Straubel Airport in Green Bay, 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 residents of the northeastern third of Wisconsin. This office also provides marine forecasts and warnings for near-shore waters of Lake Michigan. 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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NOAA In Your State

Wisconsin

NOAA

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
UNITED STATES DEPARTMENT OF COMMERCE

