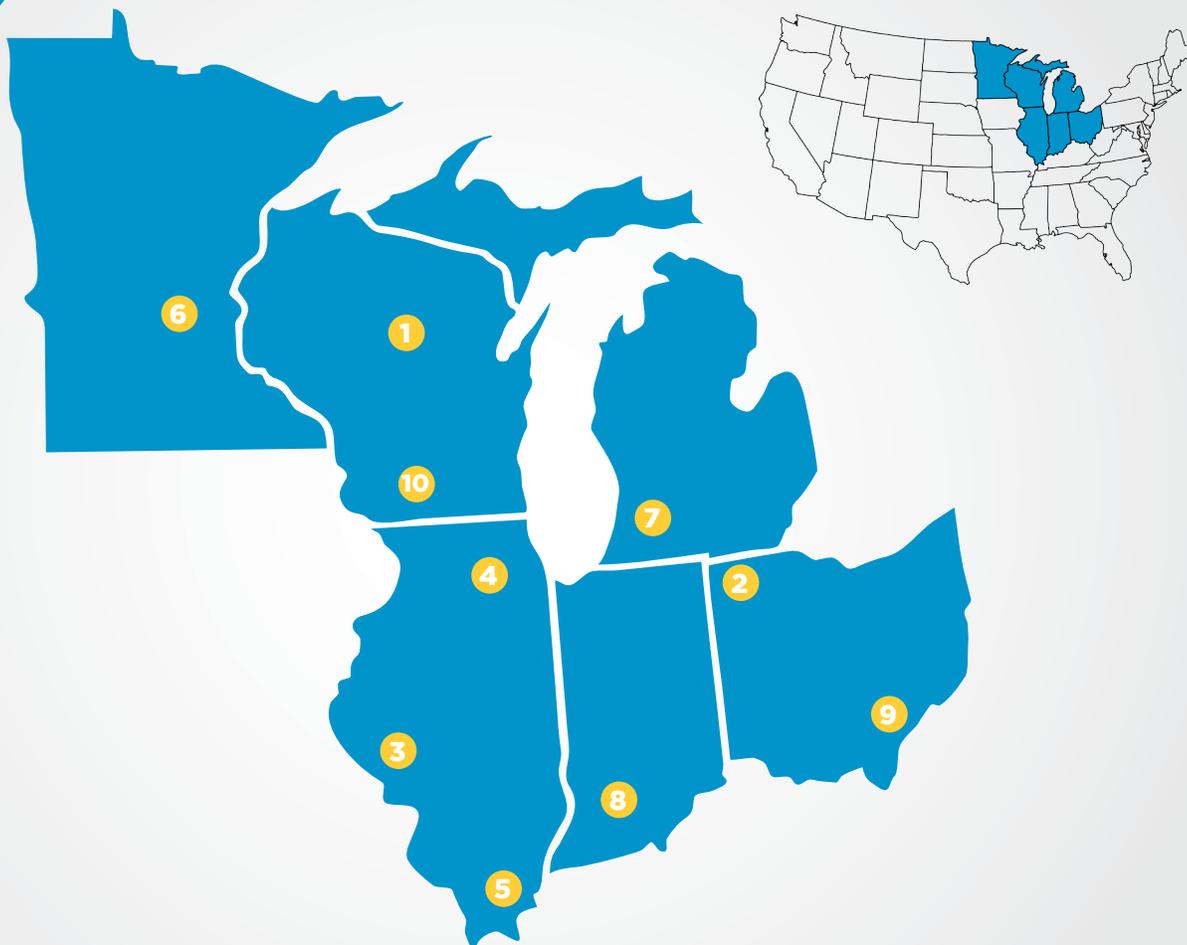




GREAT LAKES REGION



SUPPORTING WEATHER FORECASTING IN YOUR REGION

In the Great Lakes region, 15 Weather Forecast Offices receive data from JPSS to help monitor and forecast weather and environmental conditions. With a population of over 27 million, the region represents an impressive 158 counties and 13 major urban areas.

The region is affected by both warm, humid air from the Gulf as well as cooler weather in the north. The five Great Lakes possess 95 percent of the country's surface fresh water supply and constitute the largest freshwater ecosystem in the world.

The region's 3,500 species of plants and animals contribute to the environmental integrity and character of the area and draw 37 million anglers, hunters and bird watchers annually. This ecosystem supports the impressive \$16 billion Great Lakes tourism and recreation industries.

Data credit: www.regions.noaa.gov

BILLION DOLLAR DISASTERS

\$ (in billions) (casualties)

1	Midwest Flooding (2008)	11.2	24
2	Hurricane Ike (2008)	33.6	112
3	U.S. Drought (2012)	31.5	123
4	IL Hail Storms (2014)	3.8	0
5	Ohio Valley Tornadoes (2003)	5.4	51
6	MN Severe Storms (1998)	2.4	1
7	Drought/Heat Wave (2007)	4.1	15
8	Joplin Tornadoes (2011)	9.7	177
9	Severe Weather/Flooding (1997)	1.5	65
10	Plains Drought (2013)	10.7	53

Sampling of natural disasters costing over a billion dollars to the economy in the last 20 years in the Great Lakes region. Data credit: NCEI

SUPPORTING A “WEATHER-READY NATION”

The Joint Polar Satellite System (JPSS) is the Nation’s advanced series of polar-orbiting environmental satellites. JPSS satellites provide sophisticated meteorological data and observations of atmosphere, ocean and land for short-term, seasonal and long-term monitoring and forecasting.

Specifically, data from the infrared and microwave sounding instruments is assimilated into numerical weather prediction models which forecast the path and intensity of severe weather events such as the damaging tornadoes and thunderstorms that regularly threaten this area. The visible and infrared imaging capabilities of the satellite provide comprehensive Earth observation for mitigating hazardous events including costly droughts, floods and algal blooms that harm the marine ecosystem of the Great Lakes region.

JPSS satellites increase the timeliness and accuracy of forecasts three to seven days in advance of a severe weather event. NOAA’s National Weather Service uses JPSS data as critical input for numerical forecast models, providing the basis for these mid-range forecasts. These forecasts allow for early warnings and enable emergency managers to make timely decisions to protect American lives and property, including ordering effective evacuations.

JPSS satellites circle the Earth from pole-to-pole and cross the equator 14 times daily in the afternoon orbit—providing full global coverage twice a day. Polar satellites are considered the backbone of the global observing system.

Information from JPSS supports NOAA’s mission to ensure a more “Weather-Ready Nation.”

Which industries benefit from JPSS data?

- Emergency management
- Agriculture
- Transportation
- Commercial aviation
- Regional general aviation
- Maritime transportation
- Commercial fishing industry
- Transoceanic container shipping industry
- Recreational boating
- Land transportation
- Defense
- Coastal community preparedness
- Tourism (land and ocean)
- Energy
- Construction
- Insurance
- Conservation
- Oil spill trajectories (ocean)
- Vegetation health



PARTNERS IN YOUR REGION

JPSS commits to continually improving forecasting capabilities by leveraging its relationships with academic institutions, government agencies, ongoing research and development, and working closely with industry contractors.

ACADEMIC AND INDUSTRY PARTNERS

- Advanced Satellite Products Branch (ASPB) and Cooperative Institute for Meteorological Satellite Studies (CIMSS), University of Wisconsin-Madison
- Harris Corporation, Fort Wayne, IN
- University of Wisconsin (NOAA Cooperative Institute)



To learn more about the science behind JPSS, visit www.jpss.noaa.gov

To view an interactive tool that allows users to explore NOAA data, visit: www.nvli.noaa.gov/view