

NWS FORM E-5

U.S. DEPARTMENT OF COMMERCE  
NOAA, NATIONAL WEATHER SERVICE

HSA OFFICE:

Grand Rapids, MI

REPORT FOR (MONTH & YEAR):

January 2016

**MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS**

DATE:

February 10th, 2016

TO: NATIONAL WEATHER SERVICE (W/OS31)  
HYDROMETEOROLOGICAL INFO CENTER  
1325 EAST-WEST HIGHWAY, RM 13468  
SILVER SPRING, MD 20910

SIGNATURE:

Daniel K. Cobb, MIC  
Mark Sekelsky, Lead Forecaster

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (WSOM E-41).

An X inside this box indicates that no significant flooding occurred within this Hydrologic Service Area.

**Summary**

January featured near normal precipitation and warmer than normal temperatures. A stretch of cold weather in the middle part of the month supported ice formation on the rivers, which ultimately led to ice jams. Flooding occurred at Robinson Township on the Grand River, downstream of Grand Rapids. A warmup occurred toward the end of the month causing some of the ice to dissipate.

**Flood Conditions**

Monday, January 11th

At 11:21 AM EST the forecast discussion mentions the possibility of ice jamming through the week given the pattern of very cold temperatures. This theme was continued through the week in all hydro discussions.

Thursday, January 14th

At 5:33 AM EST, a flood warning was issued for Robinson Township on the Grand River affecting Ottawa County, MI. An ice jam has caused the river to rise rapidly during the night to flood stage, which is 13.3 ft. Minor flooding was forecasted. The river was forecasted to rise to 14.0 ft on Saturday.

Thursday, January 14th

At 10:11 AM EST, the flood warning was continued for Robinson Township on the Grand River affecting Ottawa County, MI. The stage was 13.6 ft. Flood Stage is 13.3 ft. The river was forecasted to rise to near 14.0 ft Saturday Morning.

Thursday, January 14th

At 8:48 PM EST, the flood warning was continued for Robinson Township on the Grand River affecting Ottawa County, MI. The stage was 13.8 ft. Flood Stage is 13.3 ft. The river was forecasted to remain near 13.9 ft.

Friday, January 15th

At 9:20 AM EST, the flood warning was continued for Robinson Township on the Grand River affecting Ottawa County, MI. The stage was 13.9 ft. Flood Stage is 13.3 ft. The river was forecasted to rise to near 14.0 ft Saturday Morning.

Friday, January 15th

At 9:25 PM EST, the flood warning was continued for Robinson Township on the Grand River affecting Ottawa County, MI. The stage was 14.0 ft. Flood Stage is 13.3 ft. The river was forecasted to rise to near 14.1 ft Saturday Morning.

Saturday, January 16th

At 9:54 AM EST, the flood warning was continued for Robinson Township on the Grand River affecting Ottawa County, MI. The stage was 14.2 ft. Flood Stage is 13.3 ft. The river was forecasted to remain near 14.2 ft for a few days.

Sunday, January 17th

At 11:06 AM EST, the flood warning was continued for Robinson Township on the Grand River affecting Ottawa County, MI. The stage was 14.2 ft. Flood Stage is 13.3 ft. The river was forecasted to remain near 14.2 ft through the week.

Sunday, January 17th

At 11:30 PM EST, the flood warning was continued for Robinson Township on the Grand River affecting Ottawa County, MI. The stage was 14.2 ft. Flood Stage is 13.3 ft. The river was forecasted to remain steady near 14.2 ft.

Monday, January 18th

At 10:36 AM EST, the flood warning was continued for Robinson Township on the Grand River affecting Ottawa County, MI. The stage was 13.8 ft. Flood Stage is 13.3 ft. The river was forecasted to fall to 13.6 ft by Tuesday morning.

Monday, January 18th

At 8:14 PM EST, the flood warning was cancelled for Robinson Township on the Grand River affecting Ottawa County, MI. The stage was 13.2 ft. Flood Stage is 13.3 ft. The river was forecasted to fall steadily through the period.

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The following rivers exceeded bankfull during the month of January 2016:

- Pere Marquette River in Scottville, Michigan (2 days above bankfull)
- Maple River in Maple Rapids, Michigan (5 days above bankfull)
- Looking Glass River in Eagle, Michigan (1 day above bankfull)
- Sycamore Creek in Holt, Michigan (3 days above bankfull)
- Grand River in Ionia, Michigan (2 days above bankfull)
- Grand River in Robinson Township, Michigan (6 days above bankfull)

**Flood Stage Report**

One forecast point exceeded flood stage in our HAS during the month of January 2016. See NWS form E-3 “Flood Stage Report” for more details.

**River Conditions**

The end of the January’s percentage of normal flow for selected rivers is listed below:

<u>Location</u>	<u>River</u>	<u>% of Normal</u>
Scottville	Pere Marquette	Msg
Whitehall	White	Msg
Evert	Muskegon	Msg
Mt. Pleasant	Chippewa	Msg
Lansing	Grand	129
Grand Rapids	Grand	Msg
East Lansing	Red Cedar	131
Hastings	Thornapple	128
Battle Creek	Battle Creek	139
Battle Creek	Kalamazoo	Msg

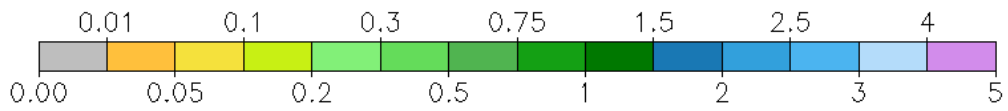
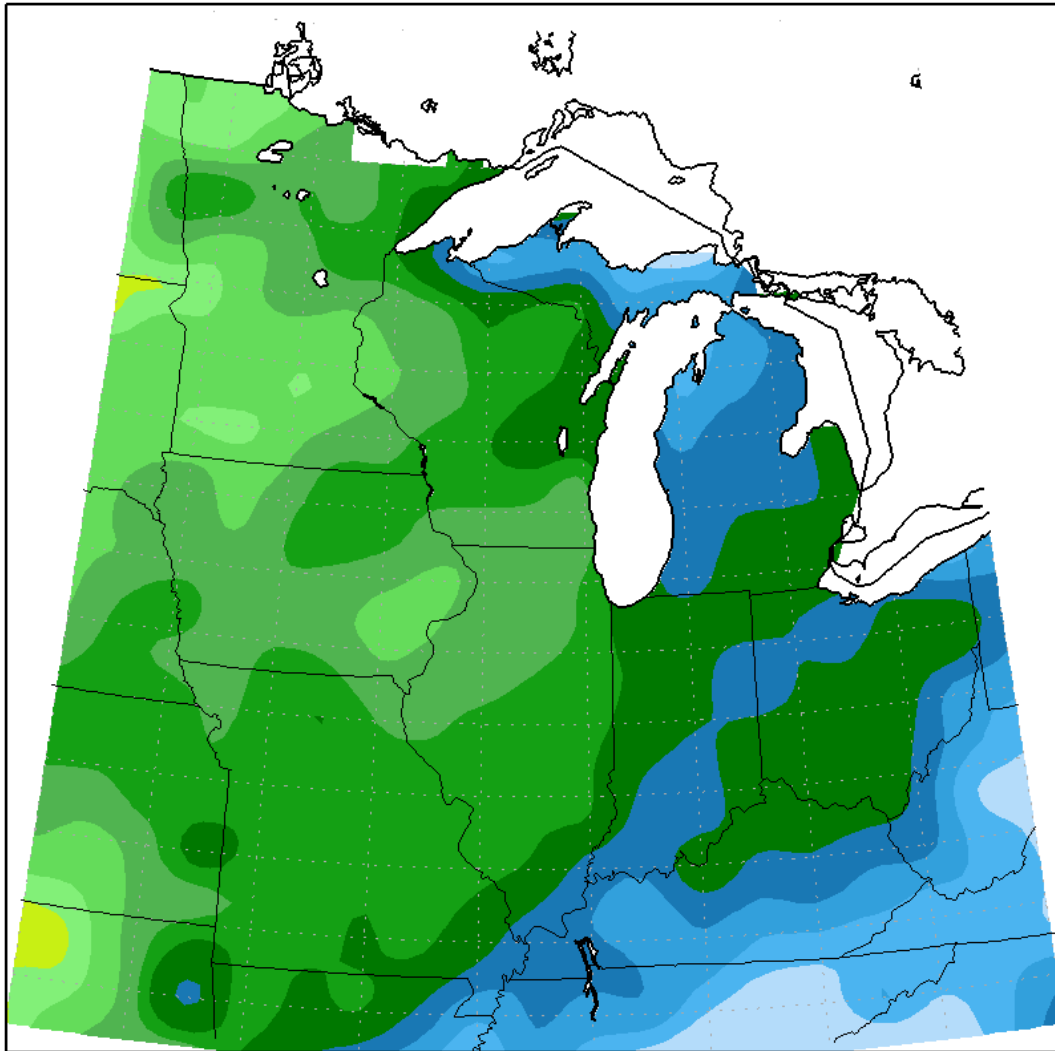
\* Some sites are Msg due to ice impacts on the flow.

**General Hydrologic Information**

January precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 2.15, 1.45, and 2.46 inches, respectively (Figure 1). Precipitation departures for the month at these three sites were 0.06 inches above normal at Grand Rapids, 0.20 inches below normal at Lansing, and 0.43 inches above normal at Muskegon. Percent of mean precipitation for January 2016 is shown in Figure 2. Yearly precipitation departures were 0.06 inches above normal for Grand Rapids, 0.20 inches below normal for Lansing, and 0.43 inches above normal for Muskegon.

Temperatures for the month of January were above normal at Grand Rapids, Lansing, and Muskegon. The average monthly temperature departures were, 1.6, 2.3, and 1.7 degrees Fahrenheit respectively.

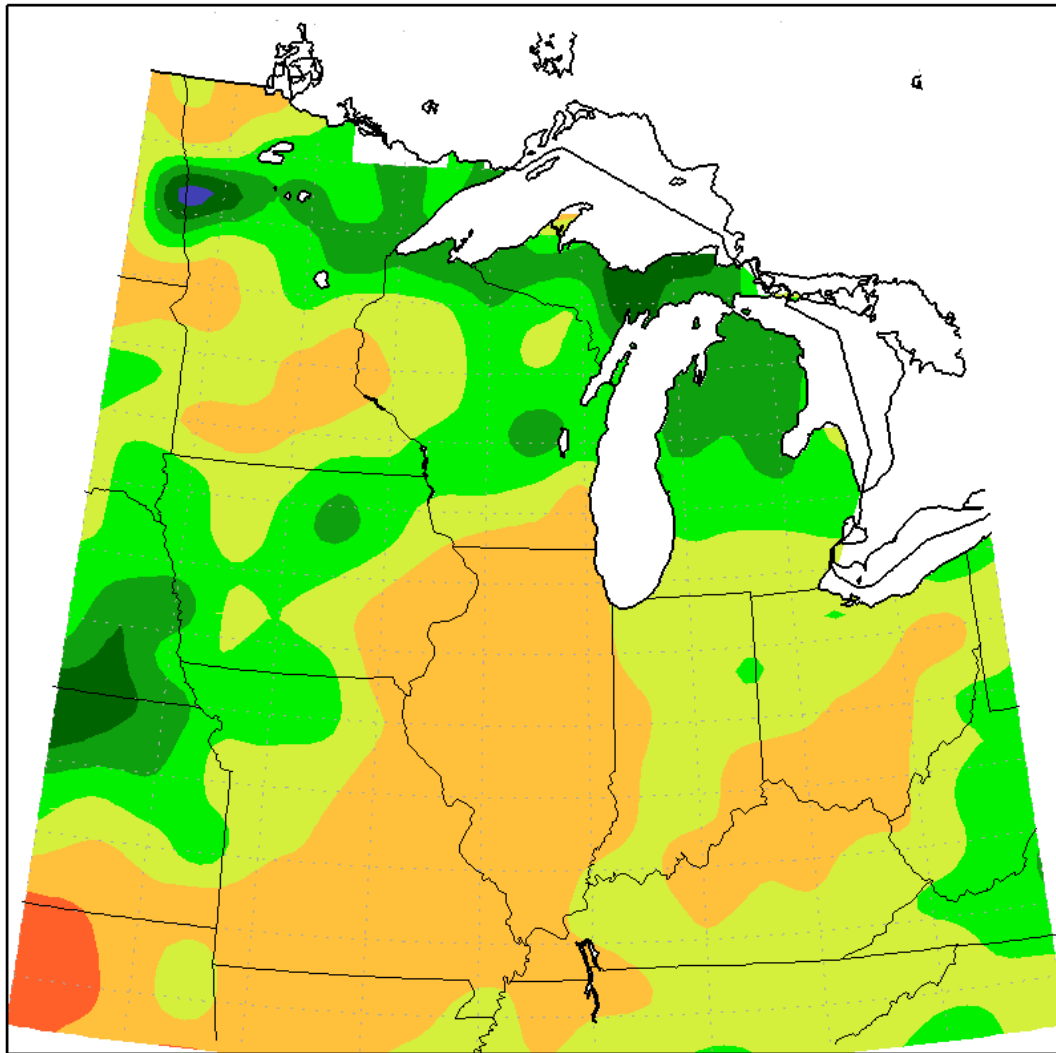
Accumulated Precipitation (in)  
January 1, 2016 to January 31, 2016



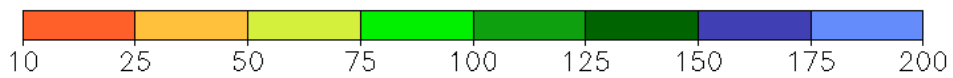
Midwestern Regional Climate Center  
Illinois State Water Survey, Prairie Research Institute  
University of Illinois at Urbana–Champaign

Figure 1. January Monthly Precipitation Totals

Accumulated Precipitation: Percent of Mean  
January 1, 2016 to January 31, 2016



Mean period is 1981–2010.



Midwestern Regional Climate Center  
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Figure 2. January Percent of Mean of Accumulated Precipitation

**Hydrologic Products issued this month:**

- 1 Hydrologic Outlook (ARBESFGRR)
- 31 Hydrologic Summaries (ARBRVAGRR)
- 29 River Flood Statements(ARBFLSGRR)
- 9 River Flood Warning Statements (ARBFLSGRR)
- 19 River Statements(ARBRVSGRR)

**News Articles and Related Documentation**

None