

## MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

DATE:

January 4, 2012

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

SIGNATURE:

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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).

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

**Summary**

No significant flooding occurred during the month of December.

**Flood Conditions****Thursday, December 15<sup>th</sup>**

At 10:52 AM EST a river flood warning was issued for the Portage River near Vicksburg, Michigan. The river stage at the time of issuance was 4.9 feet, and the river was forecast to crest near 5.1 feet early Friday morning. Flood stage is 5 feet.

At 10:58 PM EST the river flood warning for the Portage River near Vicksburg, Michigan, continued with the river still forecast to crest near 5.1 feet early Friday morning.

**Friday, December 16<sup>th</sup>**

At 10:55 AM EST the river flood warning for the Portage River near Vicksburg, Michigan, continued with the river forecast to crest near its flood stage of 5 feet Friday evening.

At 10:41 PM EST the river flood warning for the Portage River near Vicksburg, Michigan, continued with the river forecast to crest near its flood stage of 5 feet Friday evening.

**Saturday, December 17<sup>th</sup>**

At 9:58 AM EST the river flood warning for the Portage River near Vicksburg, Michigan was cancelled when the river crested below flood stage at 4.91 feet. Flood stage is 5 feet.

The following rivers exceeded bankfull during the month of December:

- St. Joseph River near Burlington (27 days above bankfull)
- Sycamore Creek near Holt, Michigan (26 days above bankfull)
- Portage River near Vicksburg, Michigan (29 days above bankfull)
- Grand River at Jackson, Michigan (8 days above bankfull)
- Grand River at Ionia, Michigan (11 days above bankfull)

## **Flood Stage Report**

No rivers exceeded flood stage during the month of December.

## **River Conditions**

River levels across the HSA were near to above normal at the end of the month. The end of the month percentage of normal flow for selected rivers is listed below:

<u>Location</u>	<u>River</u>	<u>% of Normal</u>
Scottville	Pere Marquette	100
Whitehall	White	96
Evart	Muskegon	101
Mt. Pleasant	Chippewa	112
Lansing	Grand	271
Grand Rapids	Grand	161
East Lansing	Red Cedar	267
Hastings	Thornapple	148
Battle Creek	Battle Creek	169
Battle Creek	Kalamazoo	164

## **General Hydrologic Information**

December 2011 had significantly above normal temperatures and near normal precipitation. Snowfall for the month was below normal.

December precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 2.59, 2.22, and 2.33 inches, respectively (Figure 1). Precipitation totals for the month at these three sites were 0.09 of an inch above normal at Grand Rapids, 0.35 of an inch above normal at Lansing, and 0.22 of an inch below normal at Muskegon, Michigan (Figure 2).

Yearly precipitation totals were 6.82 inches above normal for Grand Rapids, 7.12 inches above normal for Lansing, and 8.40 inches above normal for Muskegon, Michigan. It was the 6<sup>th</sup> wettest year on record for Grand Rapids, 8<sup>th</sup> wettest year on record for Lansing, and the 4<sup>th</sup> wettest year on record for Muskegon, Michigan.

Snowfall for the month of December was below normal at Grand Rapids, Lansing, and Muskegon, Michigan were 4.5 inches (17.4 inches below normal), 3.7 inches (9.3 inches below normal), and 1.8 inches (27.1 inches below normal), respectively. Snow depth across the HSA was less than 2 inches at the end of December (Figure 3).

At the end of December frost depth across the HSA was zero with soil temperatures still above freezing.

Temperatures for the month of December were above normal at Grand Rapids, Lansing, and Muskegon, Michigan, with average monthly departures of +5.8, +4.7 and +6.1 degrees Fahrenheit, respectively.



# Snow Depth

2011-12-31 06

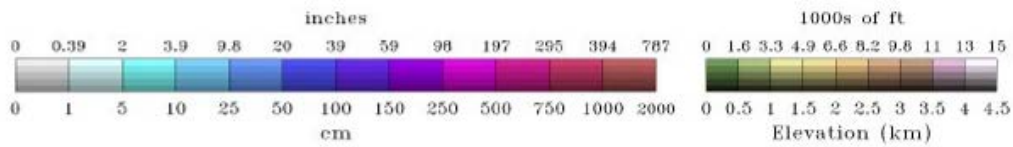
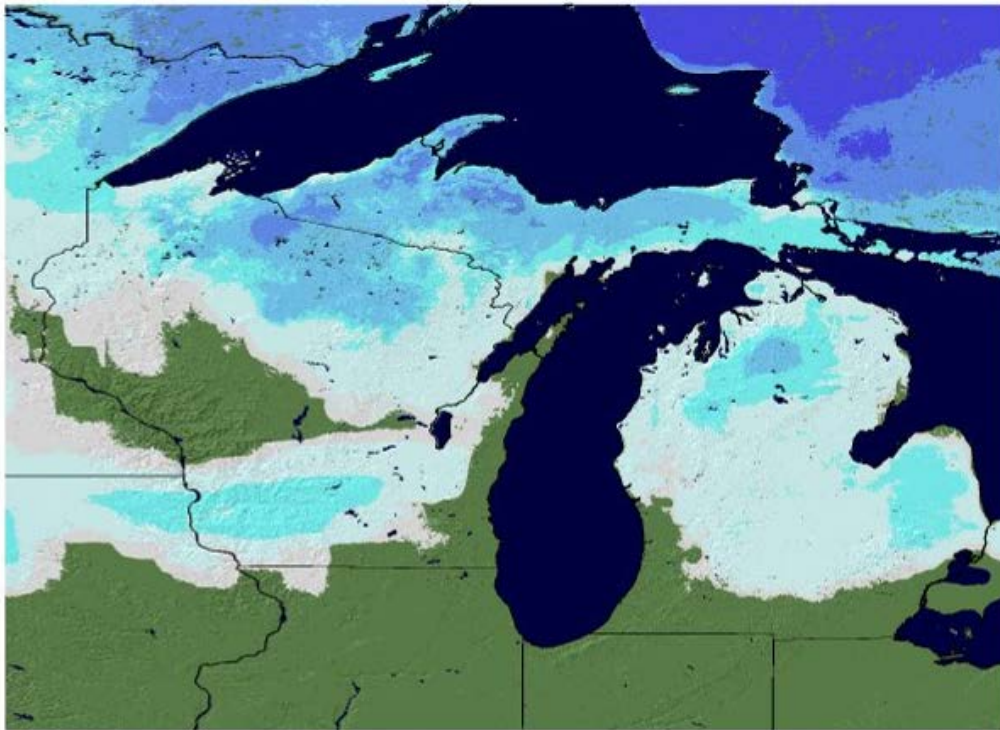


Figure 3. Snow Depth at the end of December.

**Hydrologic Products issued this month:**

- 1 River Flood Warning (ARBFLWGRR)
- 4 River Flood Statements (ARBFLSGRR)
- 61 River Flood Advisories (ARBFLSGRR)
- 24 Hydrologic Statements (ARBRVSGRR)
- 1 Probabilistic Hydrologic Outlook (ARBESFGRR)
- 31 Hydrologic Summaries (ARBRVAGRR)

**News Articles and Related Documentation**

None