

**MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS**

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).

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 in our Hydrologic Service Area (HSA).

**Flood Conditions**

No flooding occurred during the month of December.

**Flood Stage Report**

No rivers exceeded flood stage during the month of December.

**River Conditions**

River levels by the end of December were near to above normal for our HSA.

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	97
Whitehall	White	85
Evart	Muskegon	96
Mt. Pleasant	Chippewa	90
Lansing	Grand	150
Grand Rapids	Grand	125
East Lansing	Red Cedar	135
Hastings	Thornapple	105
Battle Creek	Battle Creek	125
Comstock	Kalamazoo	120

## **General Hydrologic Information**

For the month of December, precipitation totals and average temperatures were near to slightly above normal for Grand Rapids, Lansing, and Muskegon, Michigan.

December precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 3.03, 2.43, and 2.79 inches, respectively. Precipitation totals for the month at these three sites were 0.33 of an inch above normal at Grand Rapids, 0.26 of an inch above normal at Lansing, and 0.15 of an inch above normal at Muskegon, Michigan. Snowfall totals for the month at Grand Rapids, Lansing, and Muskegon were 25.0 (+6.2), 16.7(+3.5), and 21.7(-7.6) inches, respectively. For the year, precipitation totals were near to below normal at Grand Rapids, Lansing, and Muskegon, Michigan. Yearly precipitation totals were 4.35 inches below normal for Grand Rapids, 0.18 of an inch below normal for Lansing, and 4.21 inches below normal for Muskegon, Michigan. At the end of the month, the snow depth was 3 inches at Grand Rapids, and 2 inches at Lansing and 4 inches at Muskegon, Michigan.

Temperatures for the month of December were near to slightly above normal at Grand Rapids, Lansing, and Muskegon, with average monthly departures of +1.6, +0.3 and +1.1 degrees Fahrenheit, respectively.

Frost depths were less than an inch and river ice was minimal across the Hydrologic Service Area.

## **Hydrologic Products issued this month:**

- 1 Hydrologic Outlook (ARBESFGRR) was issued
- 4 Hydrologic Statements (ARBRVSGRR) were issued
- 31 Hydrologic Summary's (ARBRVAGRR) were issued