

**MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS**

REPORT FOR (MONTH & YEAR):  
December 2012

DATE:  
January 2, 2013

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 in our Hydrologic Service Area (HSA) during the month of December.

**Flood Conditions**

No rivers exceeded their banks during the month of December.

**Flood Stage Report**

No rivers exceeded flood stage during the month of December.

**River Conditions**

River levels across the HSA were near to below 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	101
Whitehall	White	89
Evart	Muskegon	116
Mt. Pleasant	Chippewa	107
Lansing	Grand	58
Grand Rapids	Grand	84
East Lansing	Red Cedar	44
Hastings	Thornapple	57
Battle Creek	Battle Creek	47
Battle Creek	Kalamazoo	50

## General Hydrologic Information

For our HSA, precipitation was near normal and temperatures were significantly above normal for December 2012.

December precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 2.85, 1.98, and 3.04 inches, respectively (Figure 1). Precipitation totals for the month at these three sites were 0.35 of an inch above normal at Grand Rapids, 0.11 of an inch above normal at Lansing, and 0.49 of an inch above normal at Muskegon, Michigan (Figure 2). Snowfall totals for the month of December were below normal and ranged from 7.2 inches at Grand Rapids, 4.0 inches at Lansing and 7.4 inches at Muskegon, Michigan.

Yearly precipitation totals were 4.42 inches below normal for Grand Rapids, 3.36 inches below normal for Lansing, and 1.90 inches below normal for Muskegon, Michigan (Figure 3).

Temperatures for the month of December were significantly above normal at Grand Rapids, Lansing, and Muskegon, Michigan, with average monthly departures of +5.9, +5.2 and +5.6 degrees Fahrenheit, respectively.

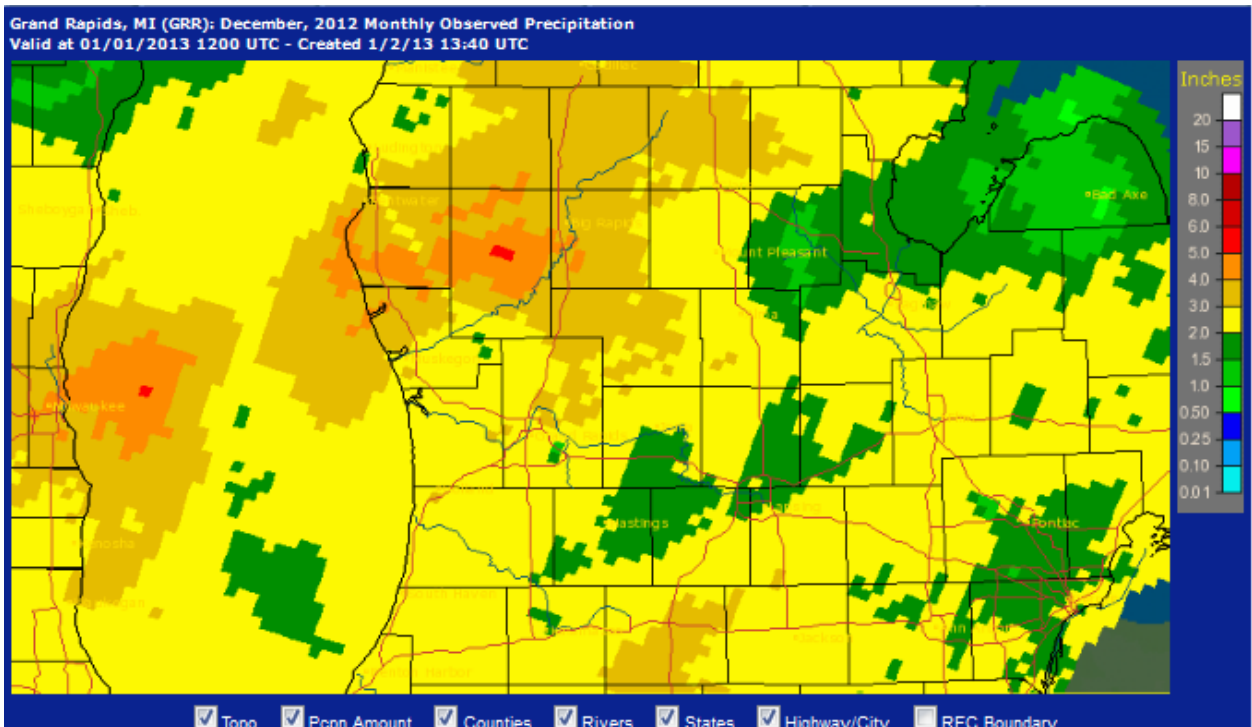


Figure 1. December 2012 Monthly Precipitation Totals

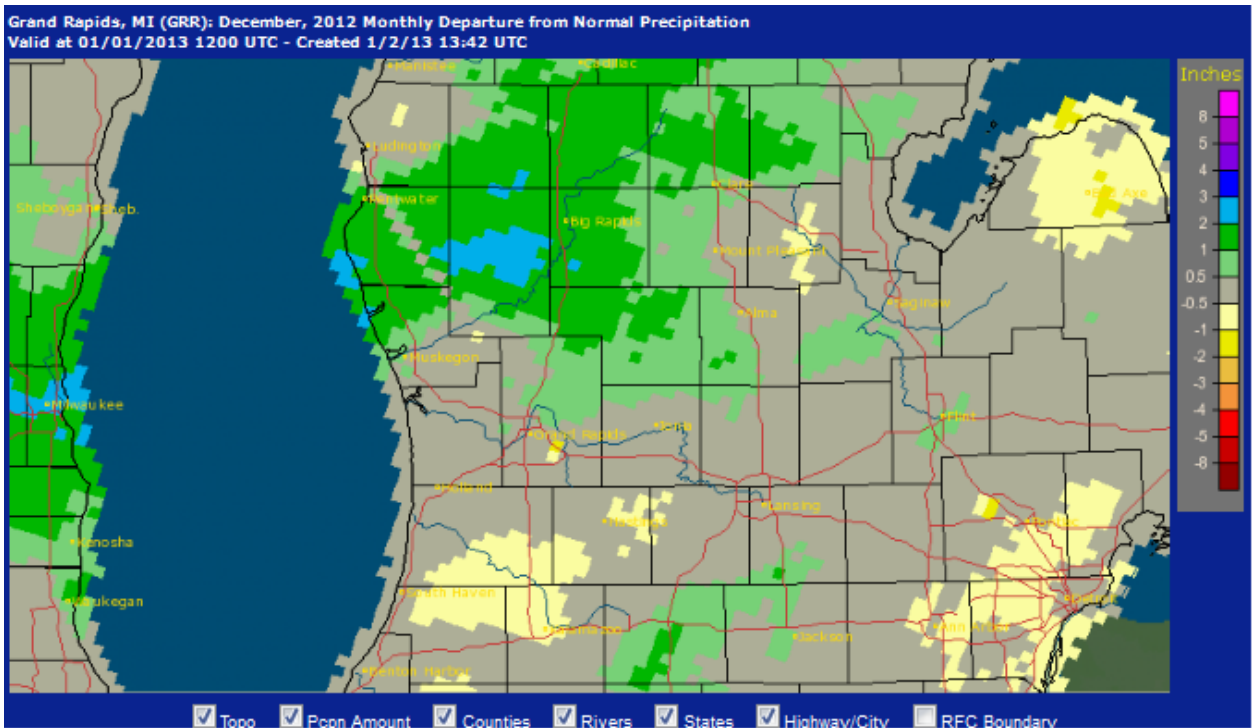


Figure 2. December 2012 Monthly Departure from Normal Precipitation Totals

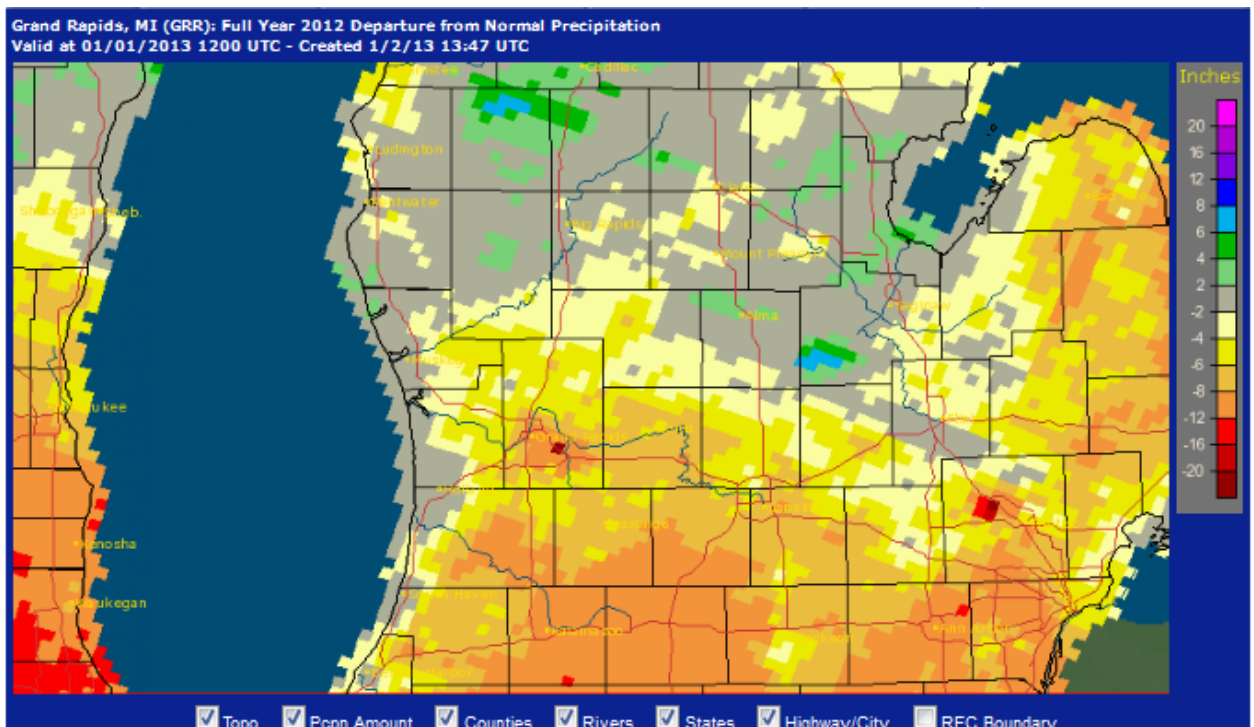


Figure 3. Departure from Normal Precipitation for the Year 2012.

**Hydrologic Products issued this month:**

- 1 Probabilistic Hydrologic Outlook (ARBESFGRR)
- 31 Hydrologic Summaries (ARBRVAGRR)