

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

REPORT FOR (MONTH & YEAR):  
November 2012

DATE:  
December 3, 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).

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 November.

**Flood Conditions**

No rivers exceeded their banks during the month of November.

**Flood Stage Report**

No rivers exceeded flood stage during the month of November.

**River Conditions**

River levels across the HSA were 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	70
Whitehall	White	63
Evart	Muskegon	70
Mt. Pleasant	Chippewa	62
Lansing	Grand	35
Grand Rapids	Grand	62
East Lansing	Red Cedar	36
Hastings	Thornapple	49
Battle Creek	Battle Creek	48
Battle Creek	Kalamazoo	59

## General Hydrologic Information

For our HSA, precipitation was significantly below normal and temperatures were near normal for November 2012.

November precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 0.49, 0.38, and 0.57 of an inch, respectively (Figure 1). Precipitation totals for the month at these three sites were 3.02 inches below normal at Grand Rapids, 2.40 inches below normal at Lansing, and 2.79 inches below normal at Muskegon, Michigan (Figure 2). Yearly precipitation totals were 4.77 inches below normal for Grand Rapids, 3.47 inches below normal for Lansing, and 2.39 inches below normal for Muskegon, Michigan. Snowfall totals for the month were below normal and ranged from 0.3 of an inch at Grand Rapids, 0.4 of an inch at Lansing and 0.8 of an inch at Muskegon, Michigan.

Temperatures for the month of November were near normal at Grand Rapids, Lansing, and Muskegon, Michigan, with average monthly departures of 0.0, -1.0 and 0.6 degrees Fahrenheit, respectively.

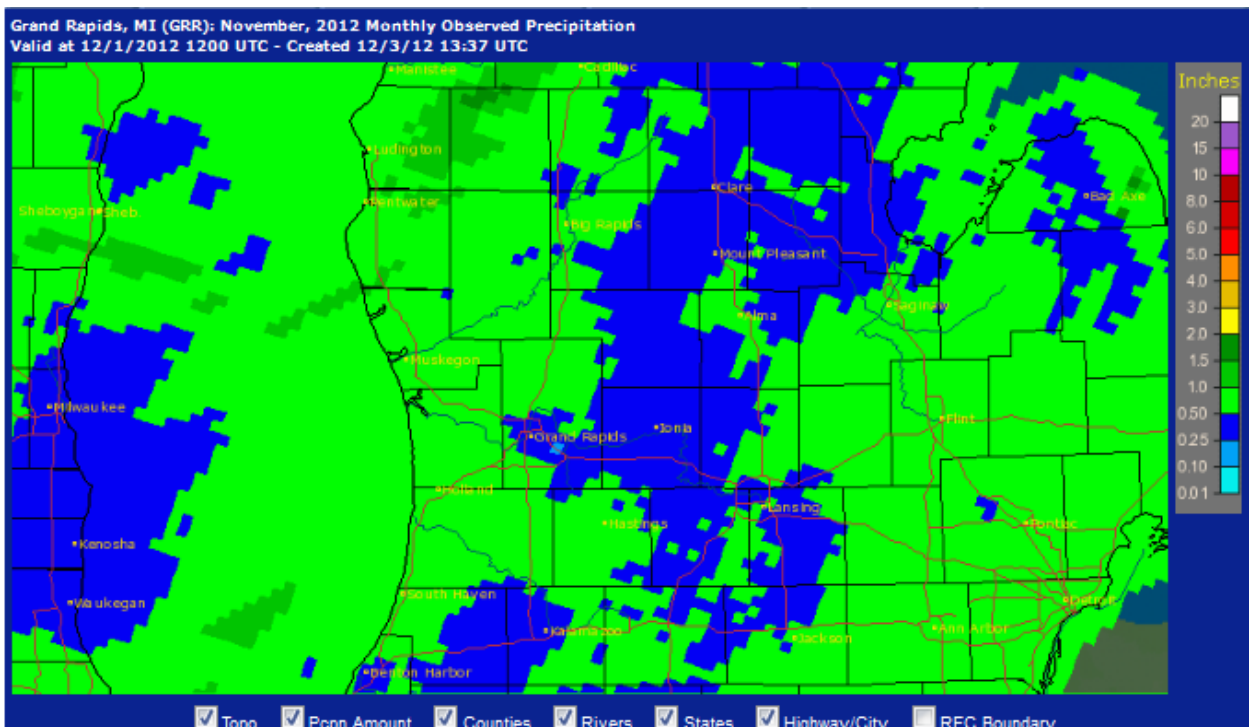


Figure 1. November 2012 Monthly Precipitation Totals

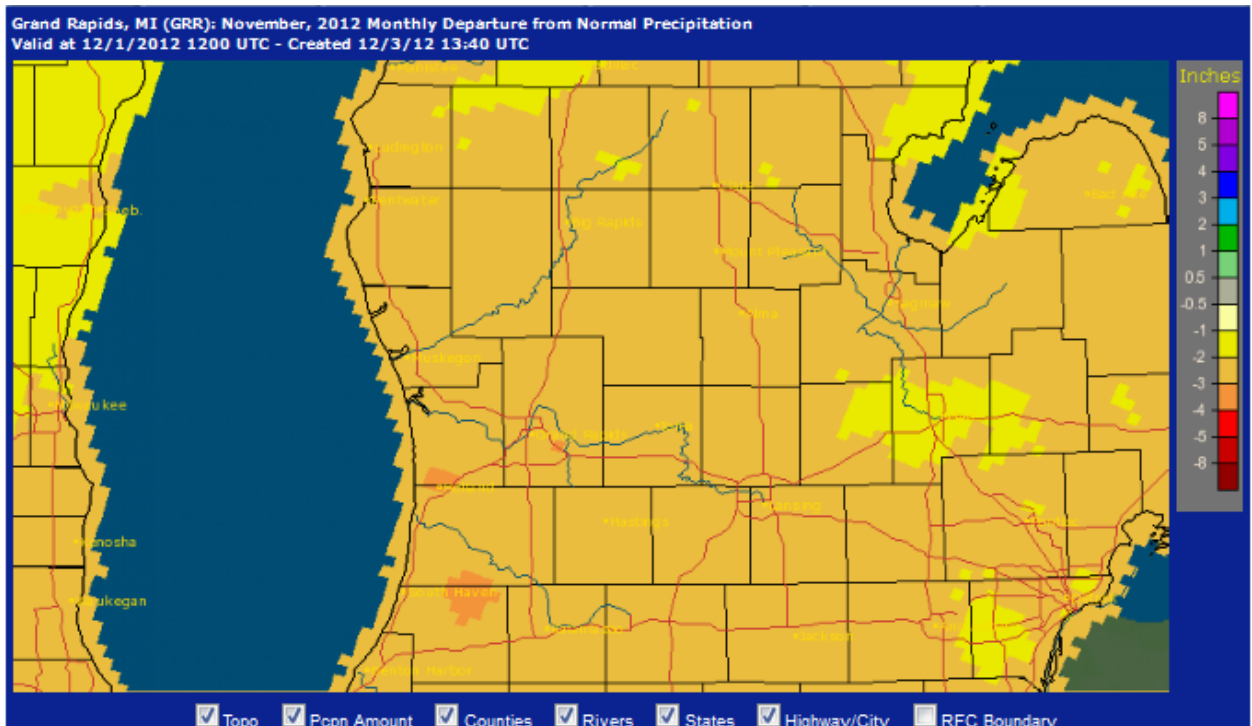


Figure 2. November 2012 Monthly Departure from Normal Precipitation Totals

**Hydrologic Products issued this month:**

- 1 Probabilistic Hydrologic Outlook (ARBESFGRR)
- 30 Daily River and Lake Summaries (ARBRVDGRR)
- 30 Hydrologic Summaries (ARBRVAGRR)

**News Articles and Related Documentation**

None