

NWS FORM E-5

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

HSA OFFICE:

Grand Rapids, MI

REPORT FOR (MONTH & YEAR):

December 2016

**MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS**

DATE:

January 15th, 2016

SIGNATURE:

Daniel K. Cobb, MIC

Mark Sekelsky, Lead Forecaster

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

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**

Much of the region saw less than normal precipitation for the month of December. This resulted in minimal hydrologic. With the average temperatures ending up mostly below normal, much of the precipitation that did fall was snow. A warm up toward the end of the month resulted in snow melt combining with rainfall to cause rises on the area rivers. No significant flooding occurred. Arctic air returned at the end of the month causing ice to impact the gage readings.

**Flood Conditions**

No significant flooding occurred in the month of December.

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

- Sycamore Creek near Holt, Michigan (3 days above bankfull)
- Maple River at Maple Rapids, Michigan (4 days above bankfull)
- Looking Glass River near Eagle, Michigan (1 day above bankfull)
- Grand River at Ionia, Michigan (5 days above bankfull)

**Flood Stage Report**

No forecast points exceeded flood stage in our HSA during the month of December 2016. As a result no Flood Stage Report (E3) was issued.

## **River Conditions**

The end of the December percentage of normal flow for selected rivers is listed below:

<u>Location</u>	<u>River</u>	<u>% of Normal</u>
Scottville	Pere Marquette	Ice impacted
Whitehall	White	Ice impacted
Evert	Muskegon	Ice impacted
Mt. Pleasant	Chippewa	Ice impacted
Lansing	Grand	196
Grand Rapids	Grand	Ice impacted
East Lansing	Red Cedar	250
Hastings	Thornapple	305
Battle Creek	Battle Creek	318
Battle Creek	Kalamazoo	166

## **General Hydrologic Information**

December precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 2.96, 1.76, and 2.22 inches, respectively (Figure 1). Monthly departures were 0.46 inches, -0.11 inches, and -0.01 inches respectively. Percent of mean precipitation for December 2016 is shown in Figure 2. All three sites feature yearly precipitation departures through the end of December that were above normal. Those departures were 8.02 inches, 3.18 inches, and 6.06 inches respectively.

Temperatures for the month of December were cooler than normal at Grand Rapids, Lansing, and Muskegon. The average monthly temperature departures were, -1.7, -0.4, and -0.2 degrees Fahrenheit respectively.

# Accumulated Precipitation (in)

December 1, 2016 to December 31, 2016

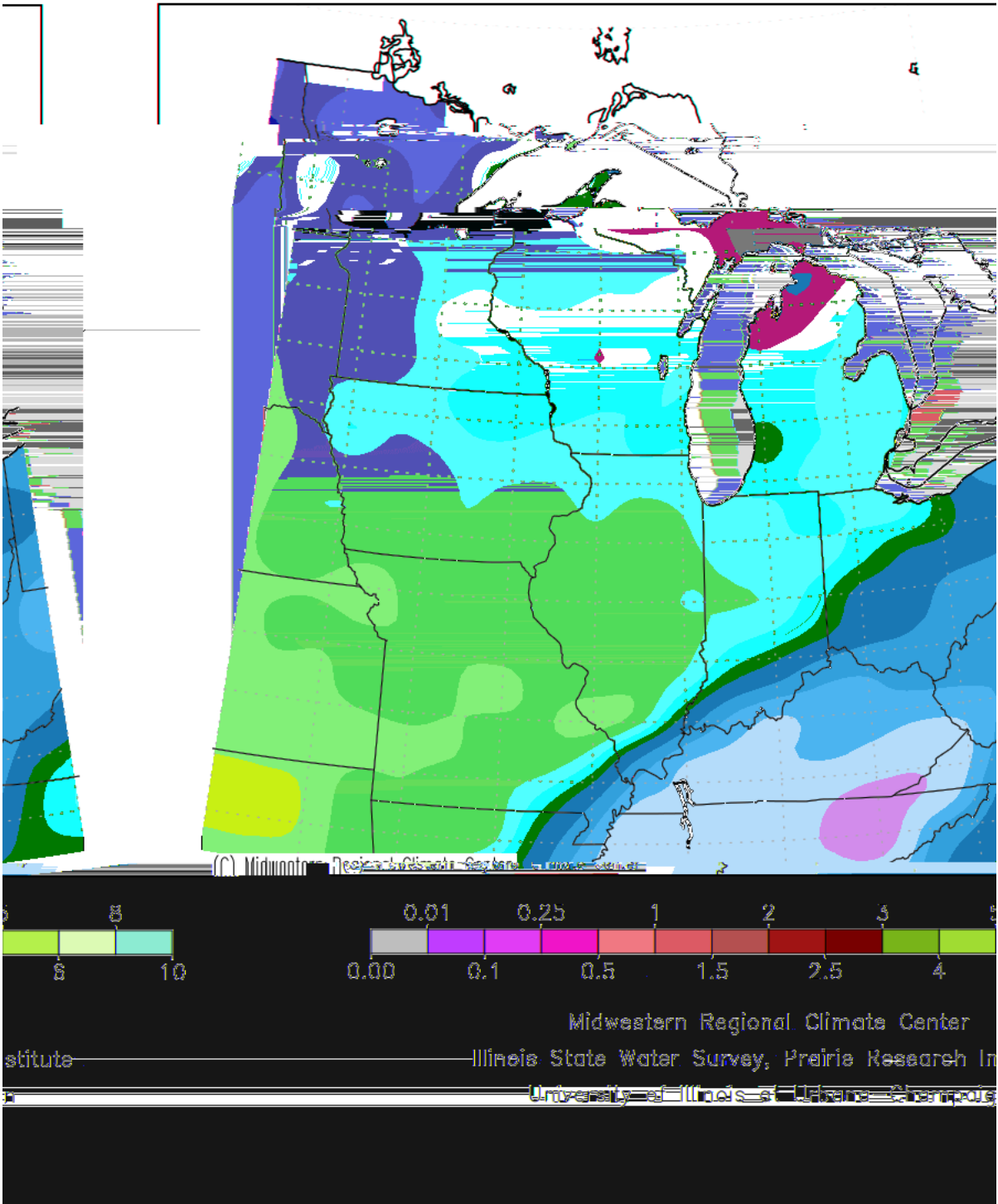


Figure 1. December Monthly Precipitation Totals

# Accumulated Precipitation: Percent of Mean December 1, 2016 to December 31, 2016

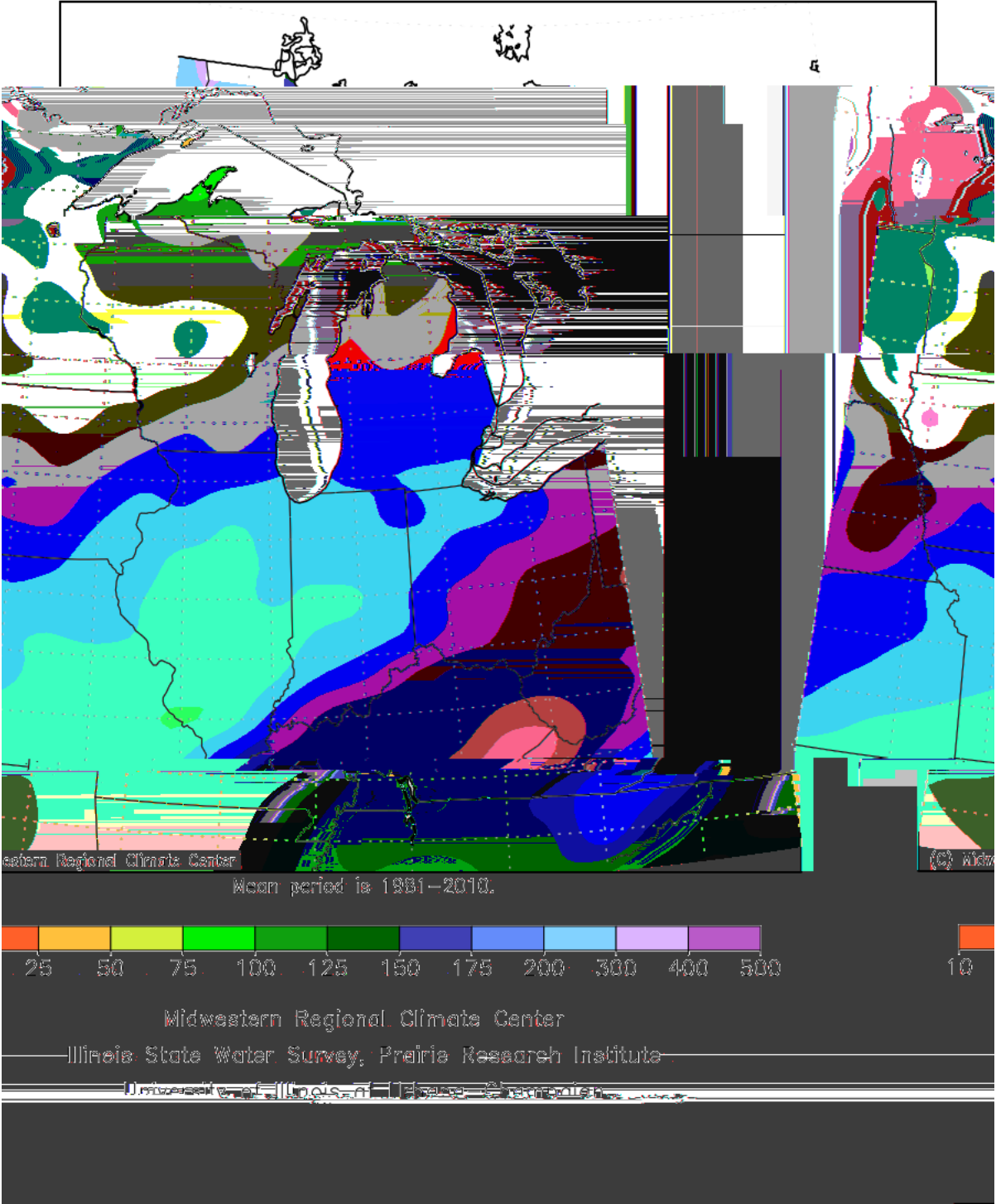


Figure 2. December Percent of Mean of Accumulated Precipitation

**Hydrologic Products issued this month:**

- 31 Hydrologic Summaries (ARBRVAGRR)
- 1 Probabilistic Hydrologic Outlook (ARBESFGRR)
- 23 River Flood Statements (ARBFLSGRR)
- 12 Hydrologic Statements (ARBRVSGRR)

**News Articles and Related Documentation**

None