NWS FORM E-5 **U.S. DEPARTMENT OF COMMERCE**
NOAA, NATIONAL WEATHER SERVICE

HSA OFFICE:
Grand Rapids, MI

REPORT FOR (MONTH &YEAR):
December 2014

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

DATE:
January 9, 2015

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

SIGNATURE:
Daniel K. Cobb, MIC
Mark Sekelsky

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).

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

Summary

The tranquil pattern continued for the month of December with no major hydrologic impacts. The main event occurred at the end of the month when snowmelt combined with 1 to 2 inches of. While above normal flows occurred as a result of this event, no flooding was observed.

Flood Conditions

No flooding occurred. Several advisories were issued at the end of the month to cover the rises associated with a heavy rain event. Less rain fell than forecasted and only one forecast point reached bankfull.

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The following rivers exceeded bankfull during the month of December 2014:

- Sycamore Creek near Holt, Michigan (1 day above bankfull)

Flood Stage Report

No forecast points exceeded flood stage in our HSA during the month of December 2014. As a result, no NWS Form E-3 “Flood Stage Report” was sent.

River Conditions

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

Location	River	% of Normal	
Scottville	Pere Marquette	135	
Whitehall	White	100	
Evart	Muskegon	143	
Mt. Pleasant	Chippewa	152	Dec 30th, ice affected afterwards
Lansing	Grand	99	
Grand Rapids	Grand	155	
East Lansing	Red Cedar	103	
Hastings	Thornapple	150	
Battle Creek	Battle Creek	153	
Battle Creek	Kalamazoo	110	

General Hydrologic Information

December 2014 featured above normal temperatures and below normal precipitation. December precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 1.57, 1.56, and 1.72 inches, respectively (Figure 1). Precipitation departures for the month at these three sites were 0.93 of an inch below normal at Grand Rapids, 0.31 inches below normal at Lansing, and 0.83 of an inch below normal at Muskegon. Percent of mean precipitation for December 2014 is shown in Figure 2. Yearly precipitation departures were 2.01 of an inch above normal for Grand Rapids, 5.71 inches above normal for Lansing, and 5.11 inches above normal for Muskegon, Michigan.

Temperatures for the month of December were above normal at Grand Rapids, Lansing, and Muskegon. The average monthly departures were, 2.7, 3.3, and 2.5 degrees Fahrenheit respectively.

Towards the end of the month, average temperatures fell below 20 degrees, leading to ice formation. This caused some of the levels to be affected, however no impacts resulted.

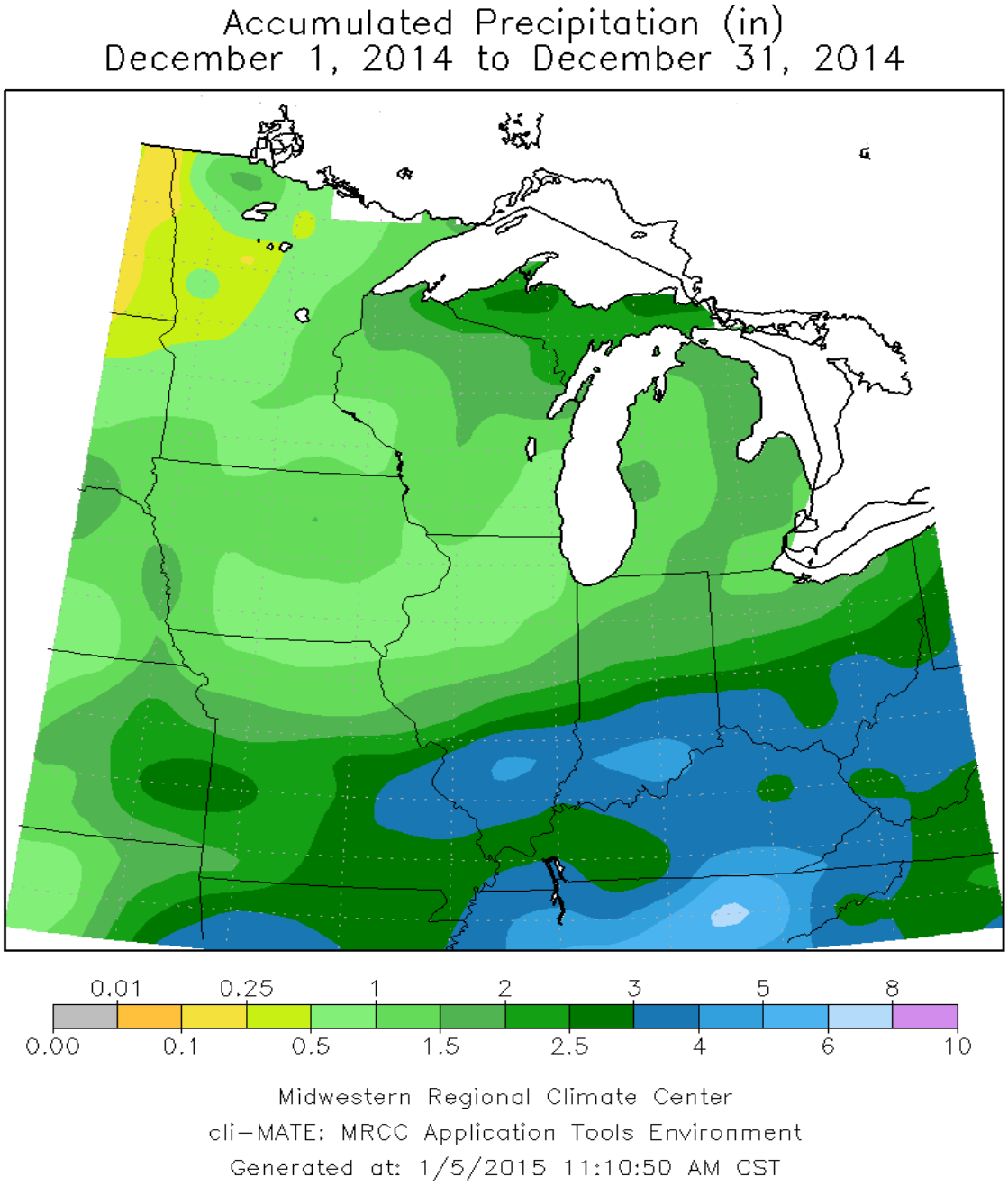

Figure 1. December Monthly Precipitation Totals

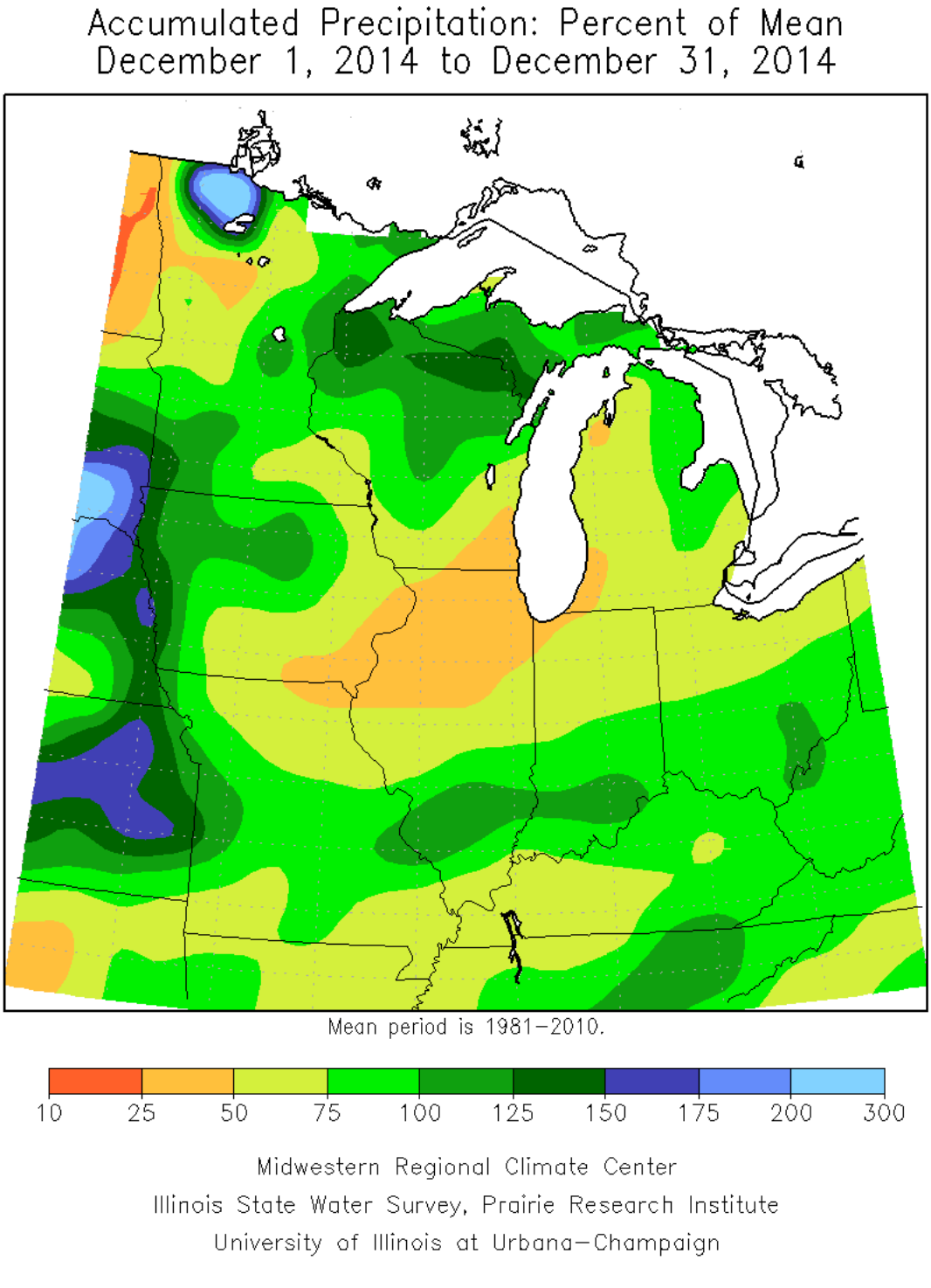

Figure 2. December Percent of Mean of Accumulated Precipitation

Hydrologic Products issued this month:

8 River Flood Advisories (ARBFLSGRR)
1 Hydrologic Outlook (ARBESFGRR)
3 River Statements (ARBRVSGRR)
31 Hydrologic Summaries (ARBRVAGRR)
31 Daily River and Lake Summary (ARBRVDGRR)

News Articles and Related Documentation

None