

## 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

DATE:

September 24, 2014

SIGNATURE:

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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).

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

### Summary

August featured several rounds of thunderstorms, some of which contained heavy rainfall. Overall due to the scattered nature of the rain, no significant river flooding occurred. Most of the impacts were confined to urban and poor drainage flooding resulting from heavy rain of a short duration.

### Flood Conditions

#### Friday, August 1st

At 3:50 PM EDT a flood advisory was issued for Lake, Mecosta, Montcalm and Newaygo counties as localized slow moving thunderstorms tracked through the region.

At 6:54 PM EDT the flood advisory was cancelled.

#### Monday, August 4th

At 5:04 PM EDT a flood advisory was issued for parts of Kent and Ionia counties for 1 to 2 inches of rain over an hours time.

At 5:55 PM EDT a van was stranded at a flooded intersection in Alto, located in southeast Kent county.

At 8:58 PM EDT the flood advisory was cancelled

#### Monday, August 11th

At 7:23 AM EDT a flood advisory was issued for Allegan county for potential rainfall amounts of up to 3 inches of rain in a short period of time.

At 9:57 AM EDT the flood advisory was cancelled.

Monday, August 18<sup>th</sup> The Hazardous weather outlook mentions the possibility of heavy rain with the thunderstorms for Tuesday night into Wednesday.

#### Tuesday, August 19th

At 1:43 PM EDT a flood advisory was issued for parts of Kent, Ionia and Montcalm counties. A band of thunderstorms leads to 1 to 2 inches of rain resulting in some urban flooding.

At 1:58 PM EDT a flood advisory is issued for Barry and Allegan counties as the band of

thunderstorms shift southward. Rainfall amounts of 1 to 2 inches is expected to lead to urban and poor drainage flooding.

At 2:56 PM EDT another flood advisory was issued for parts of Kent and Ionia counties. Measured rainfall amounts of 2.10 inches in an hour lead to additional urban and poor drainage flooding.

At 3:03 PM EDT a flood advisory was issued for parts of Clinton, Eaton, Ingham and Ionia counties. Hourly rainfall amounts of 1 to 2 inches are expected to accompany the passing thunderstorms leading to urban and poor drainage flooding.

At 3:44 PM EDT a flood advisory was issued for eastern Van Buren and Kalamazoo counties as locally heavy rain are expected to accompany the thunderstorms tracking through the region.

At 4:11 PM EDT basements are flooded in Otsego located in Allegan county.

At 4:31 PM EDT the flood advisory for central Kent, south central Montcalm and northwest Ionia counties was cancelled.

At 4:32 PM EDT several feet of standing water flood an intersection in Battle Creek located in Calhoun county.

At 5:02 PM EDT the flood advisory for Allegan and Barry counties was allowed to expire.

At 5:42 PM EDT the flood advisory for southern parts of Kent and southwest Ionia counties was cancelled.

At 5:52 PM EDT the flood advisory that was in effect for eastern Van Buren and Kalamazoo counties was cancelled.

At 8:56 PM EDT the flood advisory that was in effect for southeastern Ionia, Ingham, Eaton and Clinton counties was cancelled.

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No rivers exceeded bankfull during the month of August 2014:

### **Flood Stage Report**

No forecast points exceeded flood stage in our HSA during the month of August 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:

<u>Location</u>	<u>River</u>	<u>% of Normal</u>
Scottville	Pere Marquette	113
Whitehall	White	119
Ewart	Muskegon	109
Mt. Pleasant	Chippewa	120
Lansing	Grand	164
Grand Rapids	Grand	160
East Lansing	Red Cedar	237
Hastings	Thornapple	176
Battle Creek	Battle Creek	193
Battle Creek	Kalamazoo	114

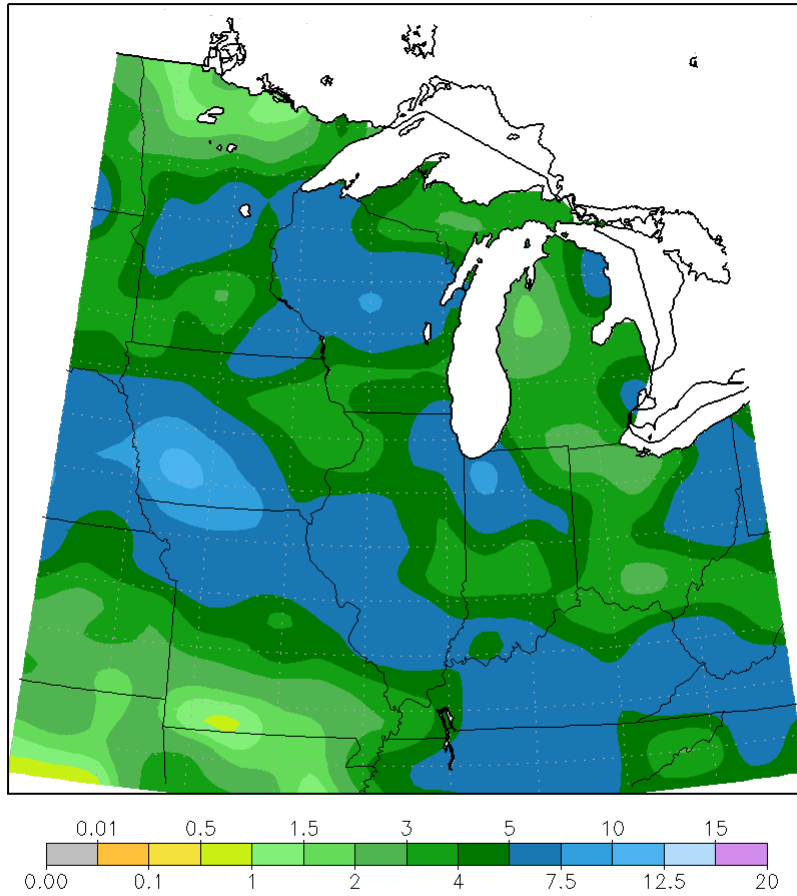
## **General Hydrologic Information**

August 2014 featured near normal temperatures and precipitation. The upper tributaries of the Grand and Kalamazoo basins saw above normal precipitation. This acted to keep the river levels at above normal flows through much of the month.

August precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 3.68, 4.75, and 2.56 inches, respectively (Figure 1). Precipitation totals for the month at these three sites were 0.09 of an inch above normal at Grand Rapids, 1.52 inches above normal at Lansing, and 0.83 of an inch below normal at Muskegon, Michigan. Percent of mean precipitation for August 2014 is shown in Figure 2. Yearly precipitation totals were 1.80 of an inch above normal for Grand Rapids, 6.13 inches above normal for Lansing, and 6.03 of an inch above normal for Muskegon, Michigan.

Temperatures for the month of August were near normal at Grand Rapids, Lansing, and Muskegon, Michigan, with average monthly departures of 0.2, -0.4 and -0.2 degrees Fahrenheit respectively.

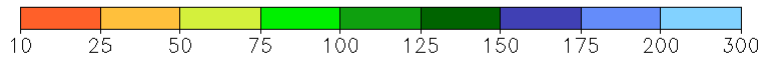
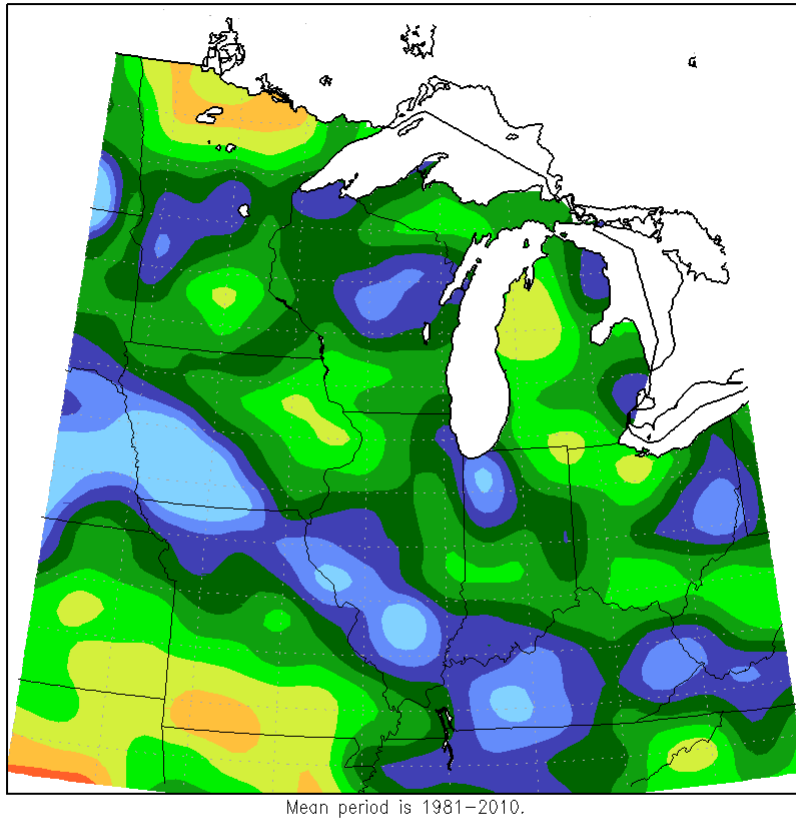
Accumulated Precipitation (in)  
August 1, 2014 to August 31, 2014



Midwestern Regional Climate Center  
Illinois State Water Survey, Prairie Research Institute  
University of Illinois at Urbana-Champaign

Figure 1. August Monthly Precipitation Totals

Accumulated Precipitation: Percent of Mean  
August 1, 2014 to August 31, 2014



Midwestern Regional Climate Center  
Illinois State Water Survey, Prairie Research Institute  
University of Illinois at Urbana–Champaign

Figure 2. August Percent of Mean of Accumulated Precipitation

**Hydrologic Products issued this month:**

- 15 Areal Flood Statements (ARBFLSGRR)
- 1 Hydrologic Outlook (ARBESFGRR)
- 31 Hydrologic Summaries (ARBRVAGRR)
- 31 Daily River and Lake Summary (ARBRVDGRR)

**News Articles and Related Documentation**

None