

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

DATE:

November 15, 2013

SIGNATURE:

Daniel K. Cobb, MIC

Mark L. Walton, Service Hydrologist

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**

No significant flooding occurred in our Hydrologic Service Area (HSA) during the month of October 2013.

**Flood Conditions**

No rivers exceeded bankfull in our HSA during the month of October 2013.

**Flood Stage Report**

No rivers exceeded flood stage in our HSA during the month of October 2013.

**River Conditions**

One to two inches of rain fell over Southwest Lower Michigan at the end of the October which resulted in river levels across the HSA being near to above 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	121
Whitehall	White	113
Evart	Muskegon	112
Mt. Pleasant	Chippewa	168
Lansing	Grand	227
Grand Rapids	Grand	153
East Lansing	Red Cedar	236
Hastings	Thornapple	168
Battle Creek	Battle Creek	152
Battle Creek	Kalamazoo	179

## **General Hydrologic Information**

October 2013 had temperatures and precipitation above normal for Southwest Lower Michigan. October precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 5.46, 3.55, and 4.47 inches, respectively (Figure 1). Precipitation totals for the month at these three sites were 2.20 inches above normal at Grand Rapids, 1.02 inches above normal at Lansing, and 1.36 inches above normal at Muskegon, Michigan (Figure 2). Yearly precipitation totals were 6.77 inches above normal for Grand Rapids, 10.33 inches above normal for Lansing, and 10.09 inches above normal for Muskegon, Michigan.

Only a trace of snowfall was recorded during the month of October.

Temperatures for the month of October were above normal at Grand Rapids, Lansing, and Muskegon, Michigan, with average monthly departures of +2.1, +1.6 and +2.5 degrees Fahrenheit, respectively.

Figure 1. October Monthly Precipitation Totals

Figure 2. October Monthly Departure from Normal Precipitation Totals

**Hydrologic Products issued this month:**

- 5 Areal Flood Watches (ARBFFAGRR)
- 2 Areal Flood Advisories (ABRFLSGRR)
- 2 River Flood Advisories (ARBFLSGRR)
- 1 Hydrologic Statement (ARBRVSGRR)
- 1 Hydrologic Outlook (ARBESFGRR)
- 31 Hydrologic Summaries (ARBRVAGRR)
- 31 Daily River and Lake Summaries (ARBRVDGRR)