| NWS | <b>FORM</b> | E-5 |
|-----|-------------|-----|
|-----|-------------|-----|

# U.S. DEPARTMENT OF COMMERCE

NOAA, NATIONAL WEATHER SERVICE

HSA OFFICE: Grand Rapids, MI

REPORT FOR (MONTH &YEAR):

October 2011

DATE:

November 10, 2011

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

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

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 during the month of October.

#### **Flood Conditions**

The following rivers exceeded bankfull during the month of October:

- Sycamore Creek near Holt, Michigan (2 days above bankfull)
- Portage River near Vicksburg, Michigan (8 days above bankfull)

#### Flood Stage Report

No rivers exceeded flood stage during the month of October.

#### **River Conditions**

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

| <u>Location</u> | <u>River</u>   | % of Normal |
|-----------------|----------------|-------------|
| Scottville      | Pere Marquette | 118         |
| Whitehall       | White          | 115         |
| Evart           | Muskegon       | 101         |
| Mt. Pleasant    | Chippewa       | 104         |
| Lansing         | Grand          | 230         |
| Grand Rapids    | Grand          | 180         |
| East Lansing    | Red Cedar      | 206         |
| Hastings        | Thornapple     | 170         |
| Battle Creek    | Battle Creek   | 218         |
| Battle Creek    | Kalamazoo      | 139         |
|                 |                |             |

#### **General Hydrologic Information**

October 2011 had above normal temperatures and near to slightly above normal precipitation for our HSA.

October precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 3.13, 3.08, and 3.96 inches, respectively (Figure 1). Precipitation totals for the month at these three sites were 0.13 of an inch below normal at Grand Rapids, 0.55 of an inch above normal at Lansing, and 0.85 of an inch above normal at Muskegon, Michigan (Figure 2). Yearly precipitation totals were 7.74 inches above normal for Grand Rapids, 6.31 inches above normal for Lansing, and 8.70 inches above normal for Muskegon, Michigan. Only trace amounts of snow were reported in our HSA for 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 +1.5, +1.3 and +1.4 degrees Fahrenheit, respectively.

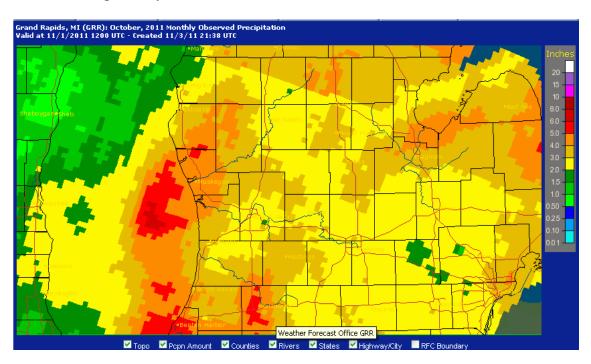


Figure 1. October 2011 Monthly Rainfall Totals

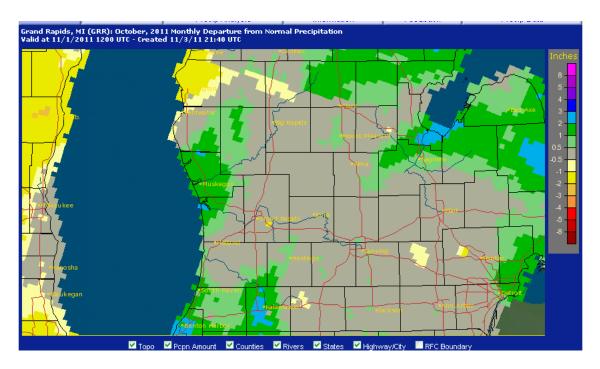


Figure 2. October 2011 Monthly Departure from Nornal Rainfall Totals

## **Hydrologic Products issued this month:**

- 18 River Flood Advisories (ARBFLSGRR)
- 4 Areal Flood Advisories (ARBFLSGRR)
- 13 Hydrologic Statements (ARBRVSGRR)
- 1 Probabilistic Hydrologic Outlook (ARBESFGRR)
- 31 Hydrologic Summaries (ARBRVAGRR)
- 31 Daily River and Lake Summaries (ARBRVDGRR)

#### **News Articles and Related Documentation**

None