

NWS FORM E-5

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

HSA OFFICE:  
**Grand Rapids, MI**

REPORT FOR (MONTH & YEAR):  
**July 2009**

**MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS**

DATE:  
August 25, 2009

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 L. Walton, Service Hydrologist

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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).

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**X**

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 July.

**Flood Conditions**

Wednesday, July 22<sup>nd</sup>

Wednesday's Area Forecast Discussion mentioned an active weather pattern for the next several days as a low pressure system moved through the Great Lakes region bringing showers and thunderstorms.

At 5:15 PM EDT, a flood advisory for urban and small streams was issued for Mecosta, Osceola, Lake, and Newaygo counties, effective until 11:00 PM EDT.

At 6:14 PM EDT, a flood advisory for urban and small streams was issued for Allegan, Kent and Ottawa counties, effective until 12:15 AM EDT.

At 6:16 PM EDT, the flood advisory for urban and small streams was cancelled for Mecosta, Osceola, Lake, and Newaygo counties. No significant flooding was reported.

At 9:47 PM EDT, the flood advisory for urban and small streams was cancelled for Allegan, Kent, and Ottawa counties. No significant flooding was reported.

**Flood Stage Report**

No river forecast points exceeded flood stage during the month of July.

## **River Conditions**

River levels were near to above normal across our HSA at the end of July. 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>
Whitehall	White	107
Ewart	Muskegon	91
Mt. Pleasant	Chippewa	108
Lansing	Grand	166
Grand Rapids	Grand	144
East Lansing	Red Cedar	180
Hastings	Thornapple	120
Battle Creek	Battle Creek	121
Comstock	Kalamazoo	127

## **General Hydrologic Information**

July 2009 will be remembered for significantly below normal temperatures and near to below normal precipitation over our HSA. July precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 2.34, 2.92, and 0.87 inches, respectively. Precipitation totals for the month at these three sites were 1.21 inches below normal at Grand Rapids, 0.24 of an inch above normal at Lansing, and 1.45 inches below normal at Muskegon, Michigan. Yearly precipitation totals were 4.22 inches above normal for Grand Rapids, 6.92 inches above normal for Lansing, and 2.70 inches above normal for Muskegon, Michigan.

Temperatures for the month of July were significantly below normal at Grand Rapids, Lansing, and Muskegon, with average monthly departures of -4.3, -3.7 and -4.0 degrees Fahrenheit, respectively.

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

- 6 Areal Flood Advisories (ABRFLSGRR)
- 31 Hydrologic Summaries (ARBRVAGRR)
- 31 Daily River and Lake Summaries (ARBRVDGRR)