

**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

SIGNATURE:  
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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).

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

**Summary**

The Grand Rapids Weather Forecast Office continued to provide on-site weather support at the incident command post located in Marshall, Michigan, for the oil spill that occurred along the Kalamazoo River back in July. The North Central River Forecast Center also continued its daily travel time forecasts for specific points along the Kalamazoo River as well as daily river forecasts for the entire month.

Urban and small stream flood advisories were issued for 18 out of 23 counties in our Hydrologic Service Area (HSA) during the month of September. Local officials reported only temporary water over roads during these advisories.

No rivers exceeded flood stage during the month of September in our Hydrologic Service Area (HSA).

**Flood Conditions**

Thursday, September 16<sup>th</sup>

At 12:18 PM EDT a flood advisory for urban and small streams was issued for portions of Allegan and Barry Counties until 3:15 PM EDT.

At 12:37 PM EDT local law enforcement for Allegan County reported a foot of water over Reno Drive near the Wayland Airport and water over the road at exit 64 off Interstate 131.

At 1:15 PM EDT a weather spotter several streets in downtown Hastings, Michigan, were temporarily closed due to flooding.

At 1:45 PM EDT a flood advisory for urban and small streams was issued for portions of Clinton, Eaton, Ingham, Ionia, Barry, and Kent Counties until 4:45 PM EDT.

At 2:04 PM EDT a flood advisory for urban and small streams was issued for portions of Clinton, Eaton, and Ingham Counties until 5:00 PM EDT. Local broadcast media in Lansing, Michigan, reported flooded streets with cars stalled at the intersection of 127 and Saginaw Street as well as Pennsylvania and Saginaw Street. In Lansing, Michigan, a total of 2.28 inches of rain fell over a 24 hour period, with 1.46 inches falling between 1 and 2 PM EDT.

At 2:17 PM EDT the flood advisory for urban and small streams continued for portions of Allegan and Barry Counties until 3:15 PM EDT.

At 3:35 PM EDT the general public reported water rising up on cars in the Frandor Shopping Center Parking lot in Lansing, Michigan.

At 4:07 PM EDT the flood advisory for urban and small streams was cancelled for portions of Clinton, Eaton, Ingham, Ionia, Barry, and Kent Counties.

At 4:09 PM EDT the flood advisory for urban and small streams was cancelled for portions of Clinton, Eaton, and Ingham Counties.

### Tuesday, September 21<sup>st</sup>

At 9:03 PM EDT Ottawa Emergency Management reported flooded roads near Grand Haven State Park and some basement flooding.

At 9:19 PM EDT a flood advisory for urban and small streams was issued for portions of Clare, Gratiot, Isabella, Mecosta, Montcalm, Osceola, Ionia, Allegan, Kent, Ottawa, Lake, Mason, Muskegon, Newaygo, and Oceana Counties until 3:15 AM EDT Wednesday.

At 10:05 PM EDT Newaygo County Officials reported water over several roads.

At 11:37 PM EDT the flood advisory for urban and small streams was cancelled for portions of Allegan, Ionia, and Gratiot Counties and remained in effect for portions of Clare, Isabella, Mecosta, Montcalm, Osceola, Kent, Ottawa, Lake, Mason, Muskegon, Newaygo, and Oceana Counties until 3:15 AM EDT Wednesday.

### Wednesday, September 22<sup>nd</sup>

At 1:14 AM EDT the flood advisory for urban and small streams was cancelled for portions of Clare, Isabella, Mecosta, Montcalm, Osceola, Kent, Ottawa, Lake, Mason, Muskegon, Newaygo, and Oceana Counties.

## **Flood Stage Report**

No rivers in Southwest Lower Michigan exceeded flood stage during the month of September.

## **River Conditions**

River levels by the end of September were near to below normal across our HSA. 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	94
Whitehall	White	81
Evart	Muskegon	108
Mt. Pleasant	Chippewa	97
Lansing	Grand	101
Grand Rapids	Grand	93
East Lansing	Red Cedar	144
Hastings	Thornapple	93
Battle Creek	Battle Creek	107
New Richmond	Kalamazoo	145

## **General Hydrologic Information**

September 2010 was slightly warmer than normal, with precipitation highly variable across the HSA.

September precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan were 2.80, 4.86, and 6.25 inches, respectively. Precipitation totals for the month at these three sites were 1.48 inches below normal at Grand Rapids, 1.38 inches above normal at Lansing, and 2.73 inches above normal at Muskegon, Michigan. On September 16<sup>th</sup>, Lansing set a record daily precipitation total of 2.28 inches, surpassing the previous record of 1.43 inches that occurred back in 1866. Yearly precipitation totals were 0.39 of an inch above normal for Grand Rapids, 3.21 inches below normal for Lansing, and 1.02 inches below normal for Muskegon, Michigan.

Temperatures for the month of September were slightly above normal at Grand Rapids, Lansing, and Muskegon, Michigan, with average monthly departures of +1.4, +1.2 and +1.9 degrees Fahrenheit, respectively.

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

- 9 Areal Flood Advisories (ARBFLSGRR)
- 30 Hydrologic Statements (ARBRVSGRR)
- 1 Probabilistic Hydrologic Outlook (ARBESFGRR)
- 30 Hydrologic Summaries (ARBRVAGRR)
- 30 Daily River and Lake Summaries (ARBRVDGRR)