

NWS FORM E-5

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

HSA OFFICE:

Grand Rapids, MI

REPORT FOR (MONTH & YEAR):

April 2016

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

DATE:

May 5th, 2016

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 Sekelsky, Lead Forecaster

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 wet period continued through the first half of the month. As a result water levels were above normal for most of the month, and some flooding occurred. Numerous advisories and several warnings were issued. Flood water levels remained in the minor category. The pattern dried out for the second half of the month

Flood Conditions

Friday, April 1st

At 11:51 AM EDT, a flood warning was issued for the Maple River near Maple Rapids. Flood stage is 9.0 feet. The river was forecasted to crest at 9.1 feet on Sunday morning.

Friday, April 1st

At 11:58 AM EDT, the flood warning was continued for the Rogue River below Rockford, Muskegon River near Croton and Maple River at Maple Rapids.

Friday, April 1st

At 10:21 PM EDT, the flood warning was continued for the Rogue River below Rockford, Muskegon River near Croton and Maple River at Maple Rapids.

Saturday, April 2nd

At 11:46 AM EDT, the flood warning was continued for the Rogue River below Rockford, Muskegon River near Croton and Maple River at Maple Rapids.

Saturday, April 2nd

At 9:55 PM EDT, a flood warning was issued for the Muskegon River near Evert. Flood stage is 12.0 feet. The river was forecasted to crest at 12.0 feet on Sunday.

Saturday, April 2nd

At 10:45 PM EDT, the flood warning was downgraded to and advisory for the Rogue River below Rockford, but continued for the Muskegon at Croton and the Maple River at Maple Rapids.

Sunday, April 3rd

At 5:15 AM EDT, the flood warning was downgraded to and advisory for the Muskegon River near Croton.

Sunday, April 3rd

At 11:01 AM EDT, the flood warning was downgraded to and advisory for the Muskegon River near Evert, but continued for the Maple River at Maple Rapids.

Sunday April 3rd

At 9:47 PM EDT, a flood warning was issued for the Muskegon River near Croton. Flood stage is 9.0 ft. The 9:30 PM Sunday stage was 8.9 ft. The river was forecasted to crest on Saturday at 9.3 ft by Tuesday morning.

Sunday, April 3rd

At 10:02 PM EDT, the flood warning was downgraded to and advisory for the Maple River near Maple Rapids.

Monday, April 4th

At 11:44 AM EDT, the flood warning was downgraded to and advisory for the Muskegon River near Croton.

Tuesday, April 5th

At 9:31 PM EDT, a flood watch was issued for the Muskegon River near Croton. Flood stage is 9.0 ft. The river was forecasted to crest on Friday Morning at 10.0 ft.

Wednesday April 6th

At 11:52 AM EDT, a flood warning was issued for the Muskegon River near Croton. Flood stage is 9.0 ft. The river was forecasted to crest on Saturday at 9.9 ft.

Wednesday, April 6th

At 11:56 AM EDT, the flood watch for the Muskegon River near Croton was cancelled as it was upgraded to a flood warning.

Wednesday, April 6th

At 10:26 PM EDT, the flood warning for the Muskegon River near Croton was continued. A crest close to the flood stage of 9.0 feet was forecasted.

Thursday, April 7th

At 11:35 AM EDT, the flood warning for the Muskegon River near Croton was downgraded to and advisory.

The following rivers exceeded bankfull during the month of April 2016:

- Pere Marquette River in Scottville, Michigan (6 days above bankfull)
- Muskegon River in Evart, Michigan (11 days above bankfull)
- Muskegon River at Croton, Michigan (10 days above bankfull)
- White River in Whitehall, Michigan (2 day above bankfull)
- Rogue River near Rockford, Michigan (3 days above bankfull)
- Chippewa River in Mt Pleasant, Michigan (5 days above bankfull)
- Looking Glass River near Eagle, Michigan (17 days above bankfull)
- Maple River in Maple Rapids, Michigan (19 days above bankfull)
- Flat River near Smyrna, Michigan (7 days above bankfull)
- Sycamore Creek near Holt, Michigan(11 days above bankfull)
- Grand River in Ionia, Michigan (19 days above bankfull)
- Grand River in Lowell, Michigan (Missing* days above bankfull)
- Grand River at Comstock Park, Michigan (6 days above bankfull)
- Grand River in Grand Rapids, Michigan (3 days above bankfull)
- Thornapple River near Hastings, Michigan (13 days above bankfull)

* Wire Weight gage was inoperable due to debris in the river

Flood Stage Report

Two forecast points exceeded flood stage in our HSA during the month of April 2016. See NWS Form E-3 “Flood Stage Report” for more details

River Conditions

The end of the March’s percentage of normal flow for selected rivers is listed below:

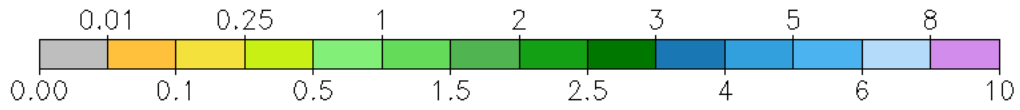
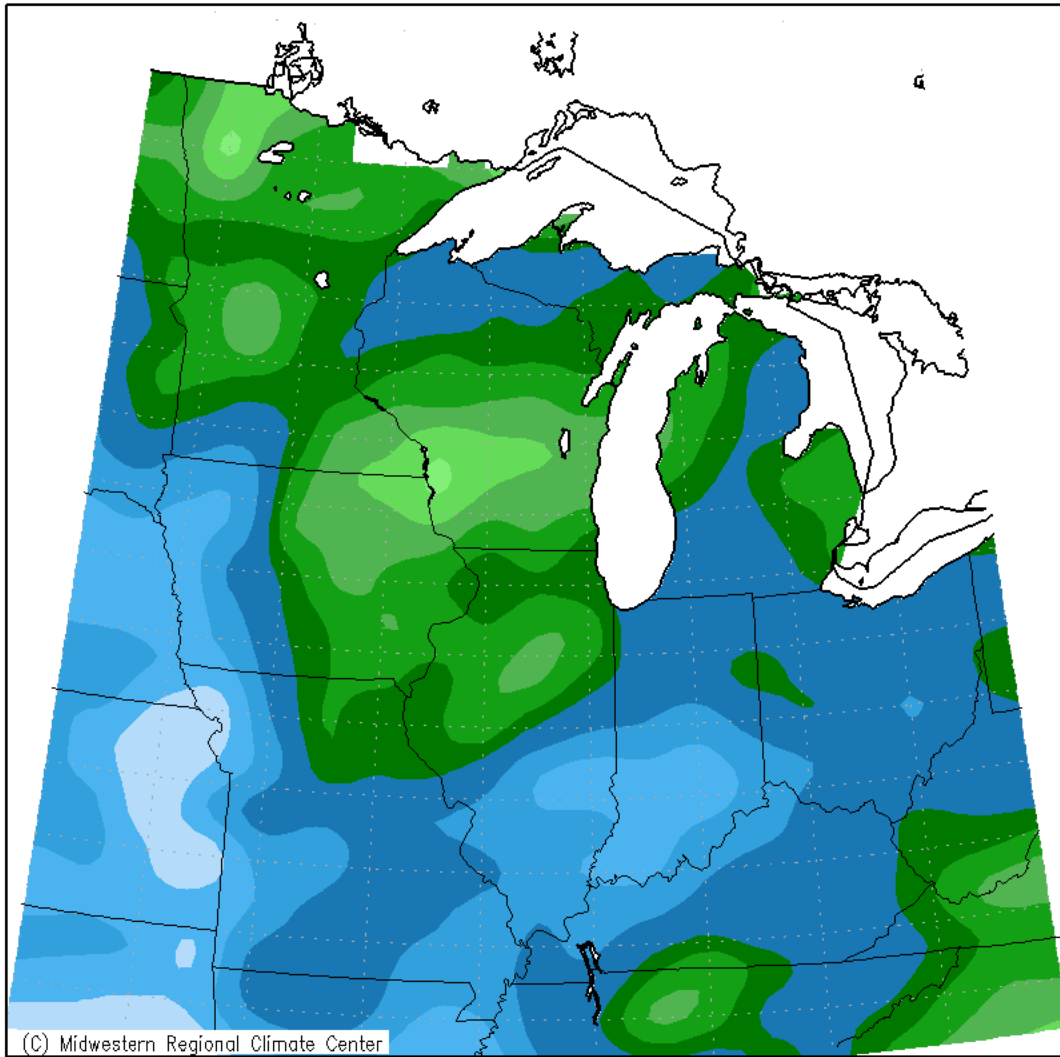
<u>Location</u>	<u>River</u>	<u>% of Normal</u>
Scottville	Pere Marquette	110
Whitehall	White	115
Evart	Muskegon	102
Mt. Pleasant	Chippewa	115
Lansing	Grand	118
Grand Rapids	Grand	140
East Lansing	Red Cedar	128
Hastings	Thornapple	162
Battle Creek	Battle Creek	112
Battle Creek	Kalamazoo	108

General Hydrologic Information

April precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 3.92, 2.51, and 2.20 inches, respectively (Figure 1). Grand Rapids featured above normal precipitation for the month with the departure at 0.57 inches. Lansing and Muskegon were below normal with the departures at - 0.52 inches for Lansing, and -0.51 inches for Muskegon. Percent of mean precipitation for April 2016 is shown in Figure 2. Yearly precipitation departures through the end of April were 4.19 inches above normal for Grand Rapids, 1.71 inches above normal for Lansing, and 2.53 inches above normal for Muskegon.

Temperatures for the month of April were below normal at Grand Rapids, Lansing, and Muskegon. The average monthly temperature departures were, -2.0, -2.7, and - 0.8 degrees Fahrenheit respectively.

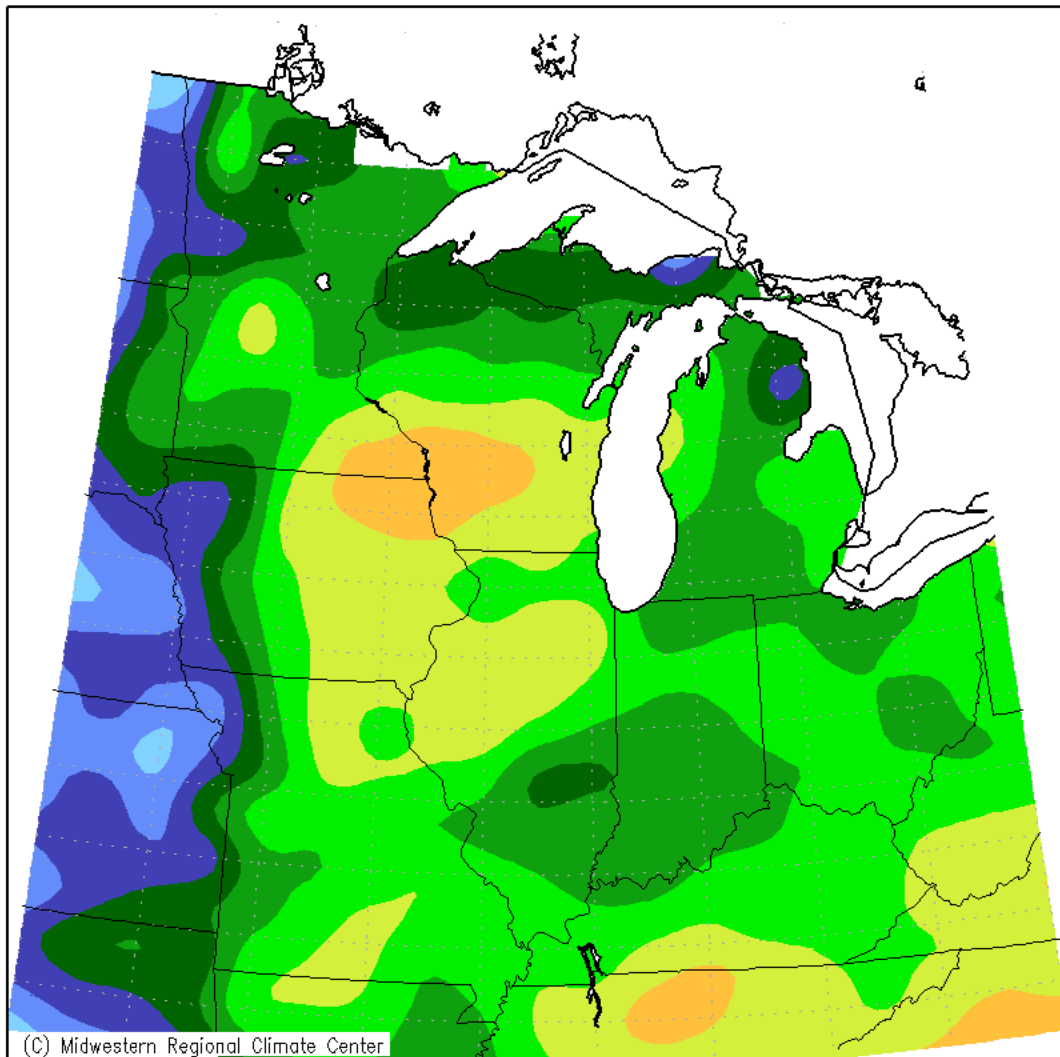
Accumulated Precipitation (in)
April 1, 2016 to April 30, 2016



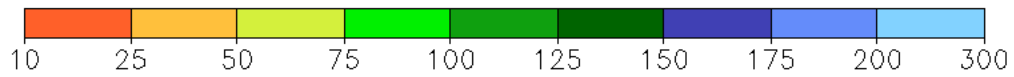
Midwestern Regional Climate Center
Illinois State Water Survey, Prairie Research Institute
University of Illinois at Urbana-Champaign

Figure 1. April Monthly Precipitation Totals

Accumulated Precipitation: Percent of Mean
April 1, 2016 to April 30, 2016



Mean period is 1981–2010.



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Figure 2. April Percent of Mean of Accumulated Precipitation

Hydrologic Products issued this month:

- 1 Hydrologic Outlook (ARBESFGRR)
- 30 Hydrologic Summaries (ARBRVAGRR)
- 39 River Flood Statements(ARBFLSGRR)
- 14 River Statements(ARBRVSGRR)
- 4 River Flood Warning(ARBFLWGRR)
- 14 River Flood Warning Statements(ARBFLSGRR)
- 2 River Flood Watches for forecast points(ARBFFAGRR)
- 1 Areal Flood Statements(ARBFLSGRR)

News Articles and Related Documentation

None