

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

DATE:

April 10th, 2016

SIGNATURE:

Daniel K. Cobb, MIC

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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

Well above normal precipitation occurred in the month of March. This resulted in high flows for many area rivers for much of the month. The greatest precipitation departures were in the Muskegon and Pere Marquette basins. A storm at the end of the month dumped 1 to 2 inches of rain over the Muskegon and upper Rogue River basins causing considerable rises into the beginning of April that would eventually lead to some flooding.

Flood Conditions

Tuesday, March 8th

At 11:13 AM EST, a flood watch was issued for the Grand River near Comstock Park. Forecasted rainfall was expected to cause the river to rise above flood stage. Flood stage is 12.0 feet. The river was forecasted to crest at 12.3 feet on Sunday morning.

Tuesday, March 8th

At 8:13 PM EST, a flood watch was continued for the Grand River near Comstock Park. Forecasted rainfall was expected to cause the river to rise above flood stage. Flood stage is 12.0 feet. The river was forecasted to crest at 12.3 feet on Sunday morning.

Wednesday, March 9th

At 10:55 AM EST, the flood watch was cancelled and replaced with a flood advisory for the Grand River near Comstock Park. Forecasted rainfall was no longer expected to cause the river to rise above flood stage. Flood stage is 12.0 feet. The river was forecasted to crest at 11.2 feet on Sunday morning.

Wednesday, March 30th

At 10:18 PM EDT, a flood warning was issued for the Muskegon River near Croton. Forecasted rainfall was expected to cause the river to rise above flood stage which is 9.0 ft. The river was forecasted to crest on Saturday at 9.9 ft.

Thursday, March 31st

At 10:53 AM EDT, the flood warning was continued for the Muskegon River near Croton. Fallen and forecasted rainfall was expected to cause the river to rise above flood stage which is 9.0 ft. The 10:30 AM stage was 8.0 ft. The river was forecasted to crest on Saturday morning at 9.3 ft.

Thursday, March 31st

At 8:01 PM EDT, the flood warning was continued for the Muskegon River near Croton. Fallen rainfall was expected to cause the river to rise above flood stage which is 9.0 ft. At 7:30 PM the stage was 9.3 ft. The river was forecasted to crest on Friday morning at 9.5 ft.

Thursday, March 31st

At 10:17 PM EDT, a flood warning was issued for the Rogue River below Rockford. Fallen rainfall was expected to cause the river to rise above flood stage which is 8.0 ft. The river was forecasted to crest late Friday evening at 8.4 ft.

Thursday, March 31st

At 10:23 PM EDT, the flood warning was continued for the Muskegon River near Croton. Runoff was expected to cause the river to rise above flood stage which is 9.0 ft. At 9:30 PM the stage was 9.3 ft. The river was forecasted to crest on Friday evening at 10.0 ft.

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

- Pere Marquette River in Scottville, Michigan (2 days above bankfull)
- Muskegon River in Evart, Michigan (5 days above bankfull)
- Muskegon River at Croton, Michigan (2 days above bankfull)
- White River in Whitehall, Michigan (1 day above bankfull)
- Rogue River near Rockford, Michigan (2 days above bankfull)
- Chippewa River in Mt Pleasant, Michigan (4 days above bankfull)
- Looking Glass River near Eagle, Michigan (19 days above bankfull)
- Maple River in Maple Rapids, Michigan (29 days above bankfull)
- Flat River near Smyrna, Michigan (3 days above bankfull)
- Sycamore Creek near Holt, Michigan (15 days above bankfull)
- Grand River in Ionia, Michigan (23 days above bankfull)
- Grand River in Lowell, Michigan (4 day above bankfull)
- Thornapple River near Hastings, Michigan (10 days above bankfull)

Flood Stage Report

One forecast points exceeded flood stage in our HSA during the month of March 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:

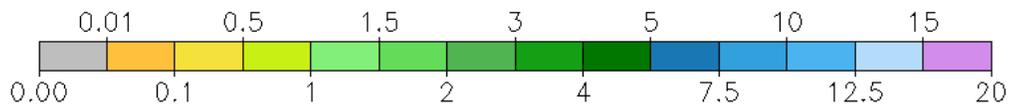
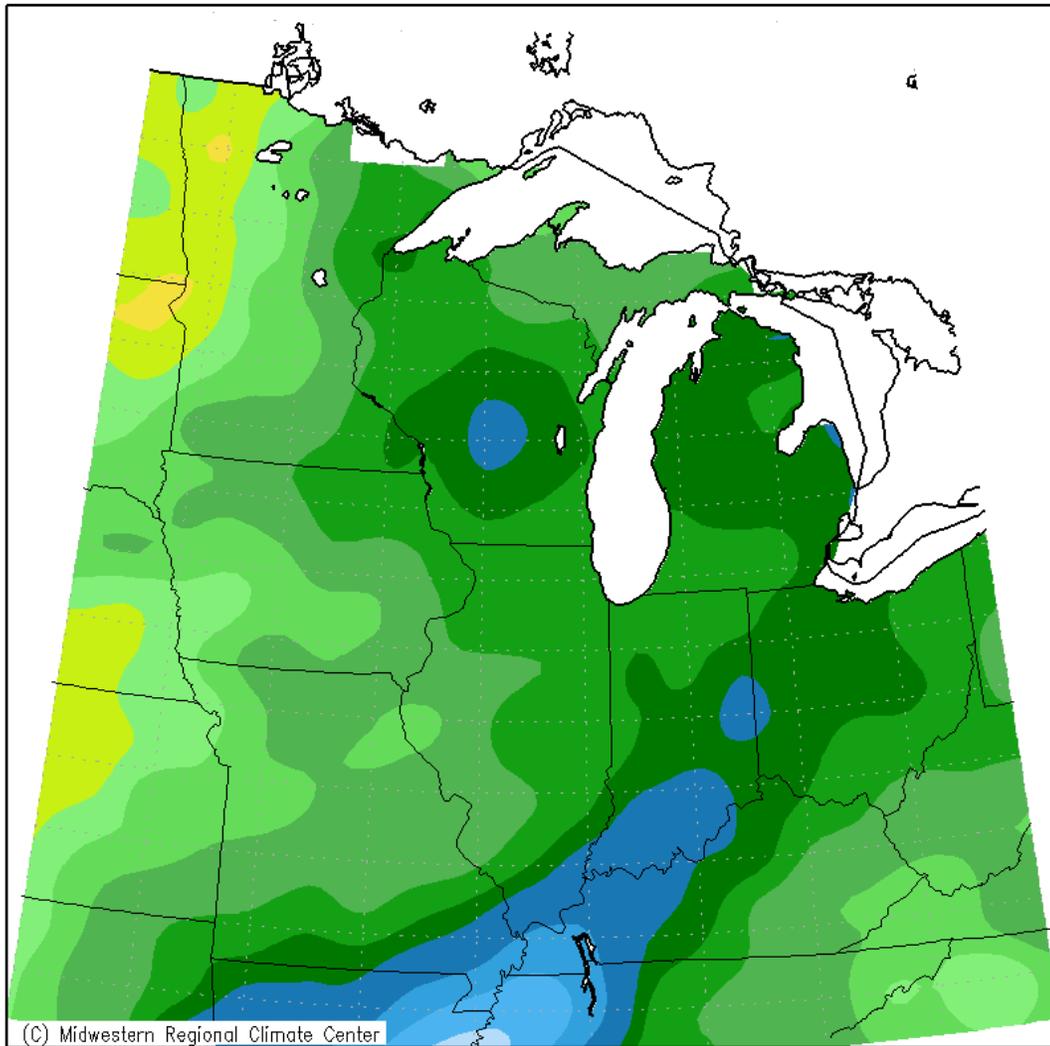
<u>Location</u>	<u>River</u>	<u>% of Normal</u>
Scottville	Pere Marquette	181
Whitehall	White	135
Ewart	Muskegon	218
Mt. Pleasant	Chippewa	272
Lansing	Grand	169
Grand Rapids	Grand	156
East Lansing	Red Cedar	174
Hastings	Thornapple	146
Battle Creek	Battle Creek	130
Battle Creek	Kalamazoo	120

General Hydrologic Information

March precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 4.94, 4.25, and 4.94 inches, respectively (Figure 1). The above normal precipitation departures for the month at these three sites were 2.57 inches at Grand Rapids, 2.19 inches at Lansing, and 2.69 inches at Muskegon. Percent of mean precipitation for March 2016 is shown in Figure 2. Yearly precipitation departures through the end of March were 3.62 inches above normal for Grand Rapids, 2.23 inches above normal for Lansing, and 3.04 inches above normal for Muskegon.

Temperatures for the month of March were above normal at Grand Rapids, Lansing, and Muskegon. The average monthly temperature departures were, 5.0, 5.1, and 4.8 degrees Fahrenheit respectively.

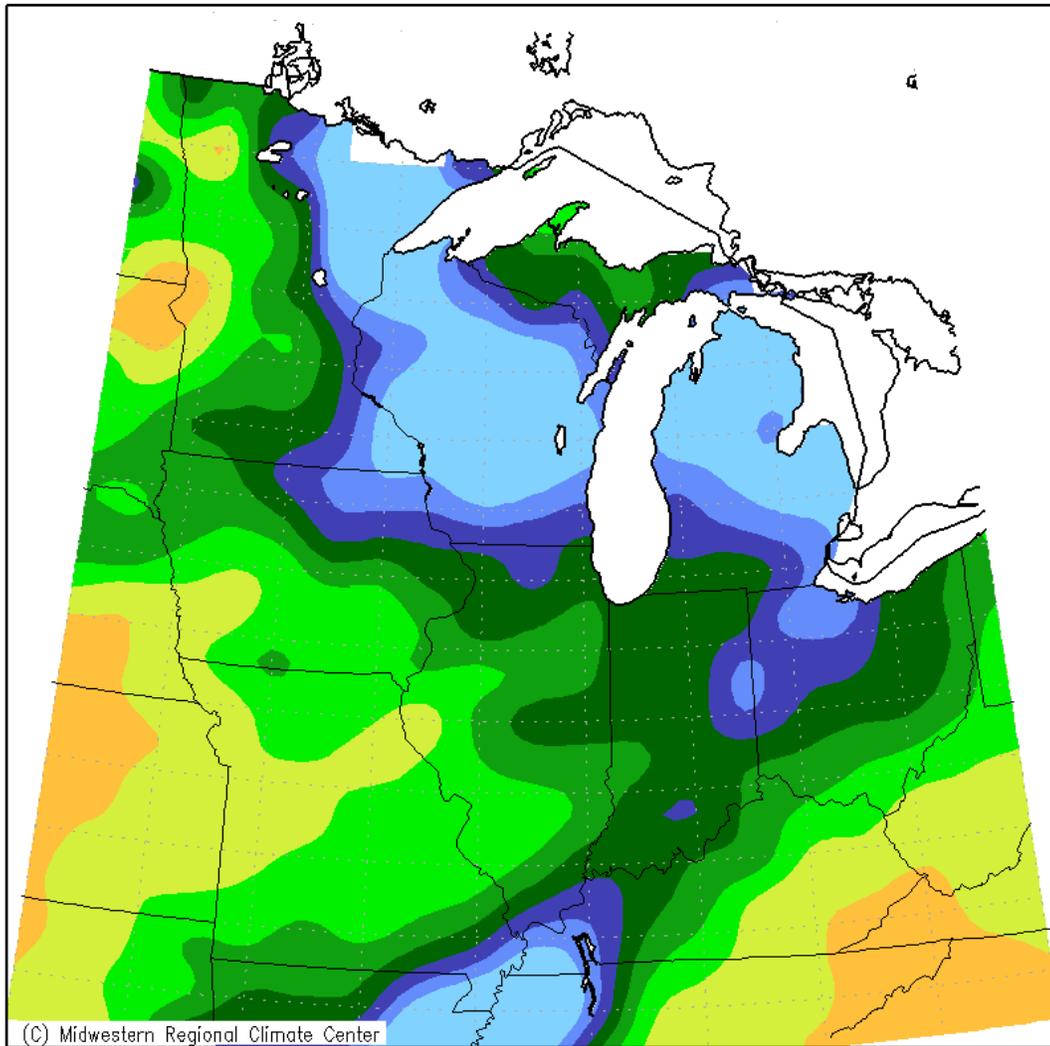
Accumulated Precipitation (in)
March 1, 2016 to March 31, 2016



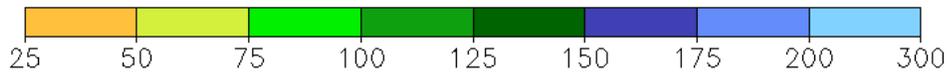
Midwestern Regional Climate Center
Illinois State Water Survey, Prairie Research Institute
University of Illinois at Urbana-Champaign

Figure 1. March Monthly Precipitation Totals

Accumulated Precipitation: Percent of Mean
March 1, 2016 to March 31, 2016



Mean period is 1981–2010.



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

Figure 2. March Percent of Mean of Accumulated Precipitation

Hydrologic Products issued this month:

- 2 Hydrologic Outlook (ARBESFGRR)
- 31 Hydrologic Summaries (ARBRVAGRR)
- 61 River Flood Statements(ARBFLSGRR)
- 33 River Statements(ARBRVSGRR)
- 1 River Flood Warning(ARBFLWGRR)
- 2 River Flood Warning Statements(ARBFLSGRR)
- 3 River Flood Watches for forecast points(ARBFFAGRR)

News Articles and Related Documentation

None