

NWS FORM E-5

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

HSA OFFICE:
Grand Rapids, MI

REPORT FOR (MONTH & YEAR):
July 2017

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

DATE:
August 4th, 2017

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

With well below normal precipitation during the month of July, hydrologic impacts were minimal. One potential heavy rain event was forecasted for the middle part of the month, but less rainfall occurred than predicted.

Flood Conditions

Wednesday, July 12th

At 1:09 AM EDT, an areal flood watch was issued for potential heavy rain.

Wednesday, July 12th

At 11:02 AM EDT, the areal flood watch was extended for potential heavy rain.

Wednesday, July 12th

At 4:06 PM EDT, the areal flood watch was continued for potential heavy rain.

Wednesday, July 12th

At 10:16 PM EDT, the areal flood watch was continued for potential heavy rain.

Thursday, July 13th

At 5:47 AM EDT, the Areal Flood Watch was cancelled.

The no rivers exceeded bankfull during the month of July 2017:

Flood Stage Report

No forecast points exceeded flood stage in our HSA during the month of July 2017. Thus, the NWS Form E-3 “Flood Stage Report” was not issued.

River Conditions

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

<u>Location</u>	<u>River</u>	<u>% of Normal</u>
Scottville	Pere Marquette	116
Whitehall	White	100
Ewart	Muskegon	158
Mt. Pleasant	Chippewa	164
Lansing	Grand	91
Grand Rapids	Grand	98
East Lansing	Red Cedar	105
Hastings	Thornapple	92
Battle Creek	Battle Creek	MSG
Battle Creek	Kalamazoo	100

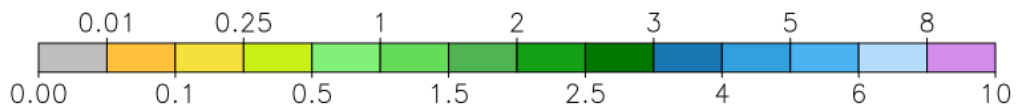
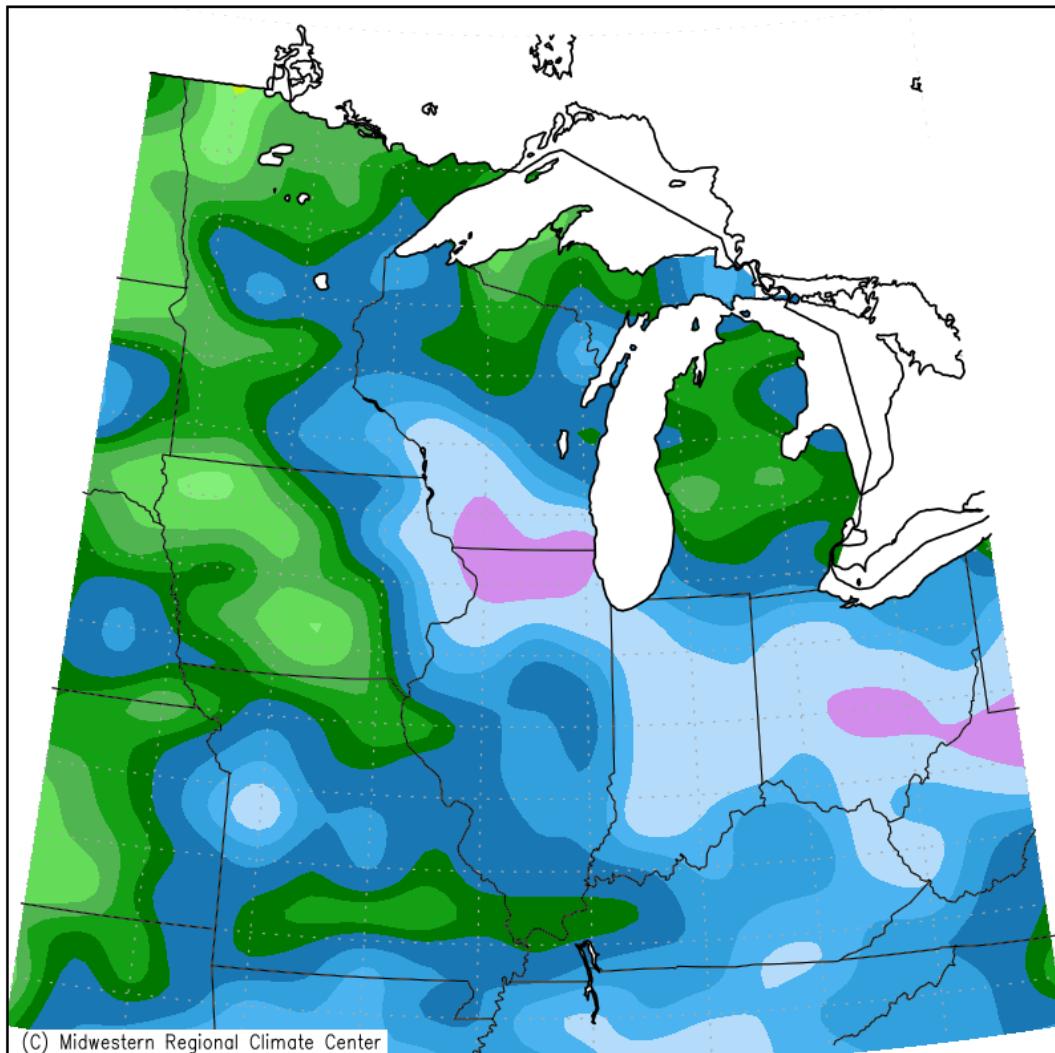
General Hydrologic Information

The month of July featured well below normal precipitation. The greatest departures were in the Grand and Muskegon basins where roughly half the normal precipitation fell. As a result, many of the river levels fell through the month with some below normal readings showing up by the end of the month.

July precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 1.22, 2.70, and 1.63 inches, respectively (Figure 1). Monthly departures were -2.66, -0.14 and -0.74 inches respectively. Yearly departures were 1.47, 5.65, and 2.56 inches for Grand Rapids, Lansing and Muskegon respectively. Percent of mean precipitation for July 2017 is shown in Figure 2.

Temperatures for the month of July were slightly above normal at Grand Rapids, Lansing and Muskegon. The average monthly temperature departures for Grand Rapids, Lansing and Muskegon were, 0.1, 1.7 and 0.5 degrees Fahrenheit respectively.

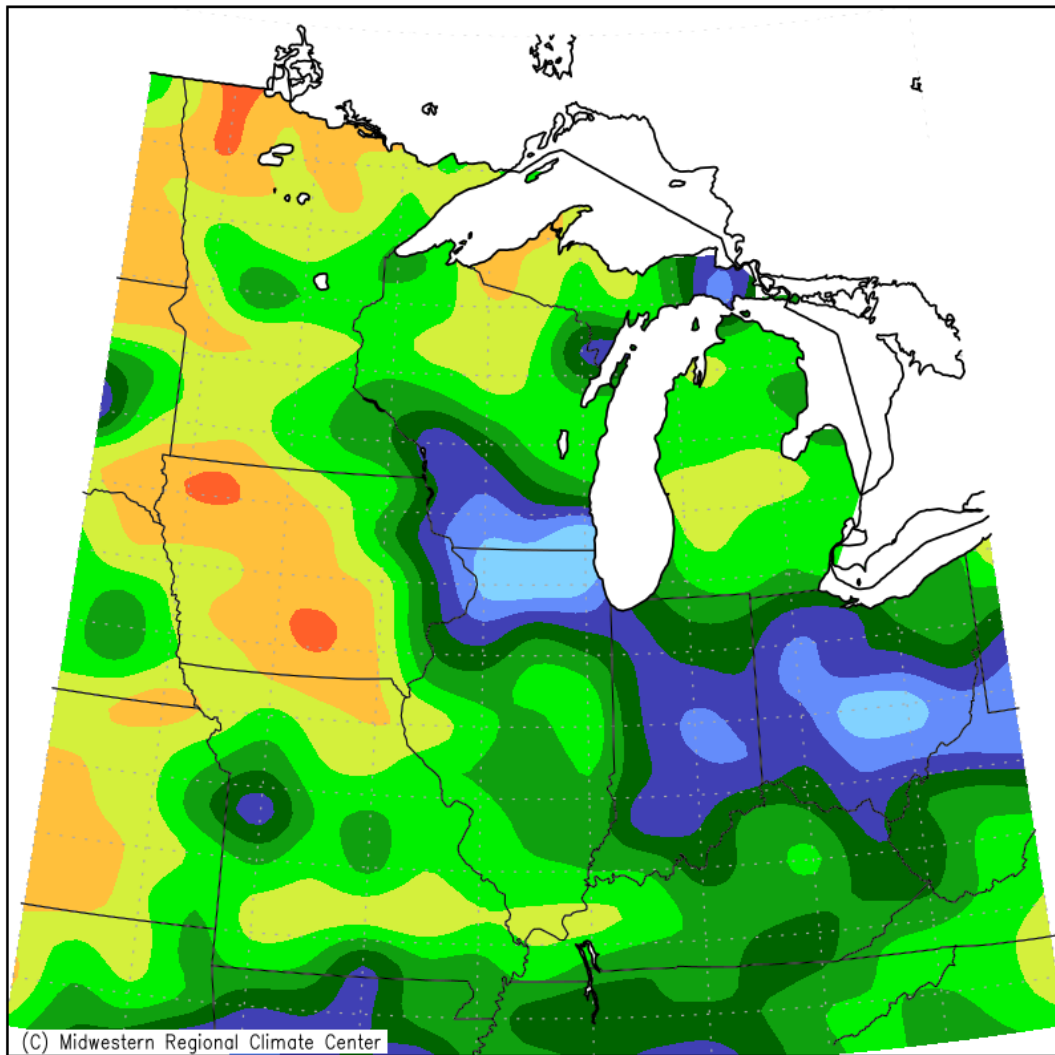
Accumulated Precipitation (in)
July 1, 2017 to July 31, 2017



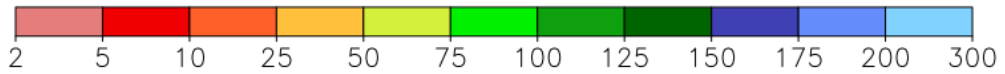
Midwestern Regional Climate Center
Illinois State Water Survey, Prairie Research Institute
University of Illinois at Urbana-Champaign

Figure 1. July Monthly Precipitation Totals

Accumulated Precipitation: Percent of Mean
July 1, 2017 to July 31, 2017



Mean period is 1981–2010.



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Figure 2. July Percent of Mean of Accumulated Precipitation

Hydrologic Products issued this month:

- 31 Hydrologic Summaries (ARBRVAGRR)
 - 1 Probabilistic Hydrologic Outlook (ARBESFGRR)
 - 1 Areal Flood Watch (ARBFFAGRR)
- 31 Daily River and Lake Summary (ARBRVDGRR)
 - 1 Hydrologic Statements (ARBRVSGRR)
 - 2 Areal Flood Advisory Statements (ARBFLSGRR)