

NWS FORM E-5

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

HSA OFFICE:

Grand Rapids, MI

REPORT FOR (MONTH & YEAR):

September 2017

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

DATE:

October 5th, 2017

SIGNATURE:

Daniel K. Cobb, MIC

Mark Sekelsky, Lead Forecaster

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

With well below normal precipitation during the month of September, hydrologic impacts were minimal.

Flood Conditions

Sunday, September 17th

At 7:28 PM EDT, an areal flood advisory was issued for thunderstorms that dumped heavy rain over eastern parts of Calhoun County. Radar estimated that up to two inches had fallen. Minor flooding was expected.

Sunday, September 17th

At 10:06 PM EDT, an areal flood advisory was cancelled for eastern parts of Calhoun County.

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

Flood Stage Report

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

River Conditions

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

| <u>Location</u> | <u>River</u> | <u>% of Normal</u> |
|-----------------|----------------|--------------------|
| Scottville | Pere Marquette | 85 |
| Whitehall | White | 88 |
| Ewart | Muskegon | 83 |
| Mt. Pleasant | Chippewa | 88 |
| Lansing | Grand | 45 |
| Grand Rapids | Grand | 60 |
| East Lansing | Red Cedar | 68 |
| Hastings | Thornapple | 64 |
| Battle Creek | Battle Creek | 65 |
| Battle Creek | Kalamazoo | 70 |

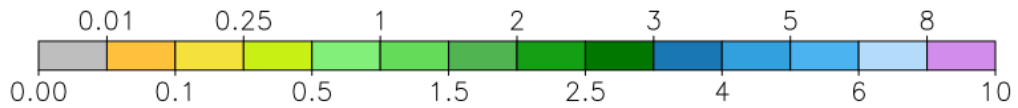
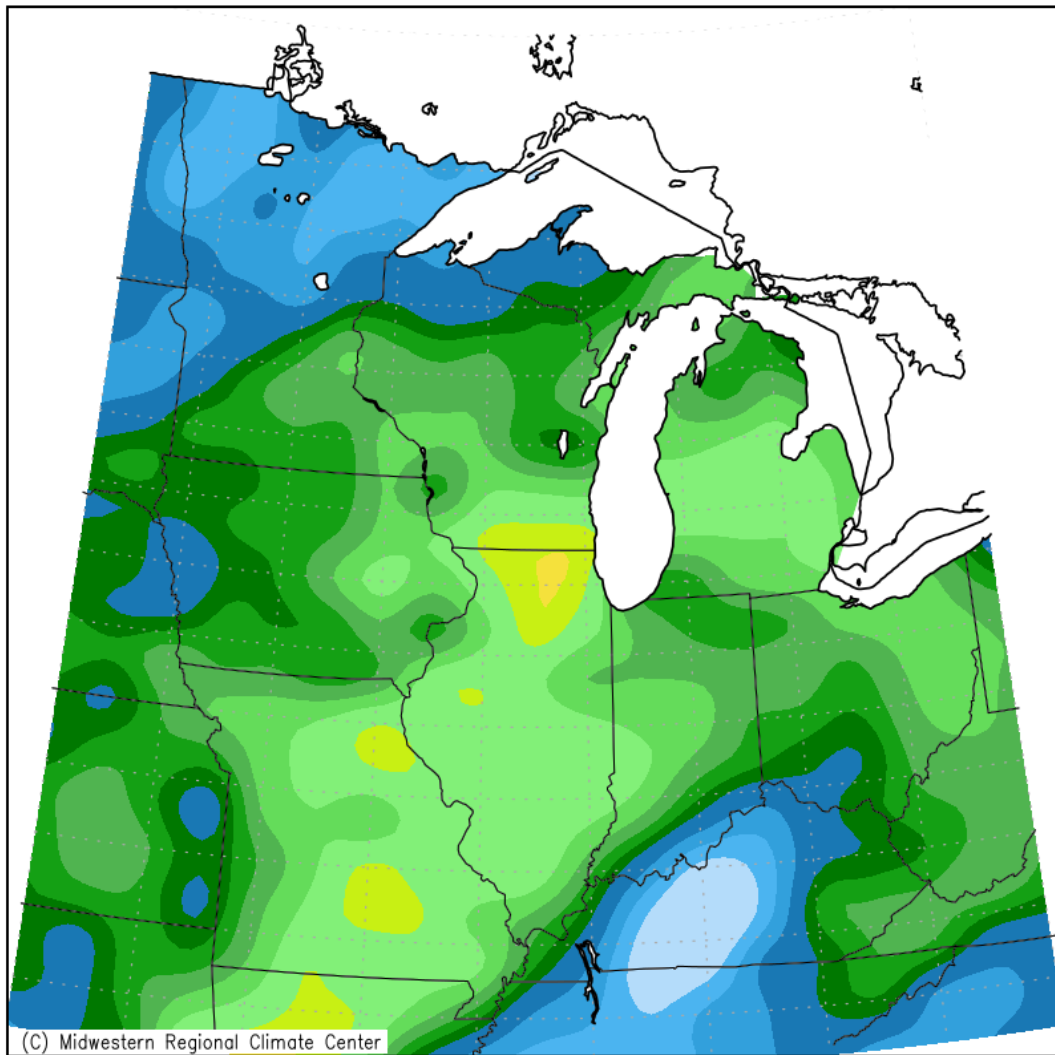
General Hydrologic Information

The month of September featured well below normal precipitation. Nearly the entire hydrologic service area saw monthly rainfall departures of greater than two inches. As a result, many of the river levels fell through the month.

September precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 0.66, 0.94, and 0.82 inches, respectively (Figure 1). Monthly departures were -3.62, -2.56 and -3.07 inches respectively. Yearly departures were -4.02, 1.65, and -2.49 inches for Grand Rapids, Lansing and Muskegon respectively. Percent of mean precipitation for September 2017 is shown in Figure 2.

Temperatures for the month of September were above normal at Grand Rapids, Lansing and Muskegon. The average monthly temperature departures for these sites were, 3.7, 3.7 and 3.3 degrees Fahrenheit respectively.

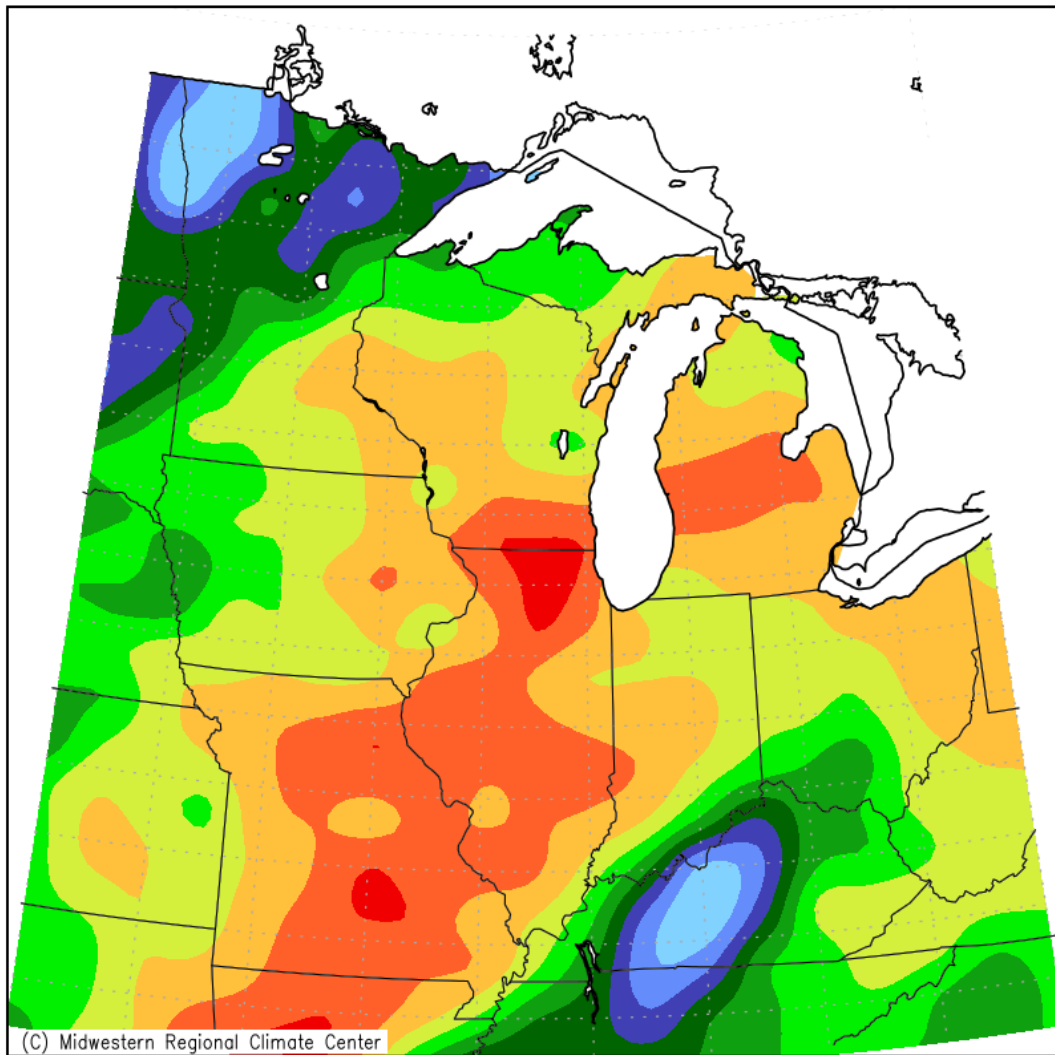
Accumulated Precipitation (in)
September 1, 2017 to September 30, 2017



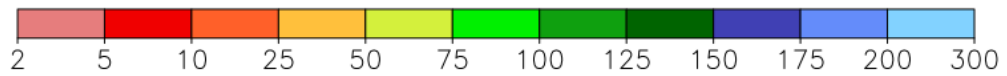
Midwestern Regional Climate Center
Illinois State Water Survey, Prairie Research Institute
University of Illinois at Urbana-Champaign

Figure 1. September Monthly Precipitation Totals

Accumulated Precipitation: Percent of Mean September 1, 2017 to September 30, 2017



Mean period is 1981–2010.



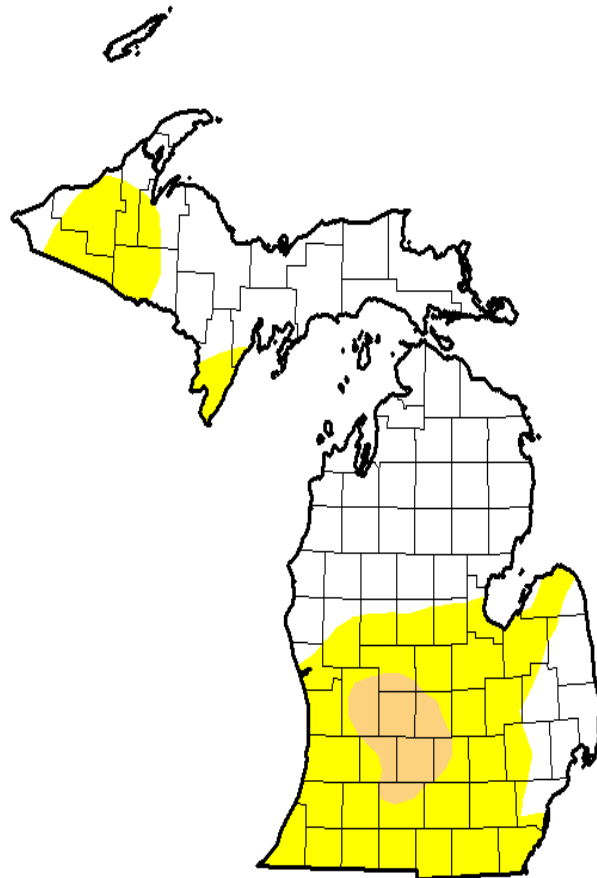
Midwestern Regional Climate Center
Illinois State Water Survey, Prairie Research Institute
University of Illinois at Urbana–Champaign

Figure 2. September Percent of Mean of Accumulated Precipitation

The recent dry spell has drought conditions to parts of Michigan as seen below (figure 3).

U.S. Drought Monitor Michigan

October 3, 2017
(Released Thursday, Oct. 5, 2017)
Valid 8 a.m. EDT



Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Anthony Artusa
NOAA/NWS/NCEP/CPC



<http://droughtmonitor.unl.edu/>

Figure 3. Drought Monitor for Michigan

Hydrologic Products issued this month:

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

