

NWS FORM E-5

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

HSA OFFICE:

Grand Rapids, MI
REPORT FOR (MONTH & YEAR):
June 2020

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

DATE:

July 8, 2020

TO: NATIONAL WEATHER SERVICE (W/OS31)
HYDROMETEOROLOGICAL INFO CENTER
1325 EAST-WEST HIGHWAY, RM 13468
SILVER SPRING, MD 20910

SIGNATURE:
Daniel K. Cobb, MIC
Andrew Dixon, Service Hydrologist

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

June 2020 was generally warmer than normal and drier than normal across the area. Several rounds of convective rains moved through the area during the month. Each of these created some “bullseyes” of locally heavy rainfall (on the order of around 2 inches), but was not widespread enough to cause significant river responses. A few areal flood advisories were needed to handle the heaviest parts of these events, mainly for ponding water in low spots and poor drainage areas.

Meanwhile, Lake Michigan rose by an additional 1-2 inches over the course of the month, resulting in the 6th straight new monthly record on Lake Michigan-Huron.

Flood Conditions

The major river systems in Southwest and West-Central Michigan started the month between the 75th and 90th percentile, due to the lingering recovery from the heavy rains in May. Generally dry weather for most of the month allowed most rivers to drop down to near-normal levels by the 3rd week of June. A few rounds of thunderstorms on the 22nd and again on the 26th got rivers rising up to near the 75th percentile again before falling to end the month. No significant river flooding was observed during the month.

Flood Stage Report

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

River Conditions

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

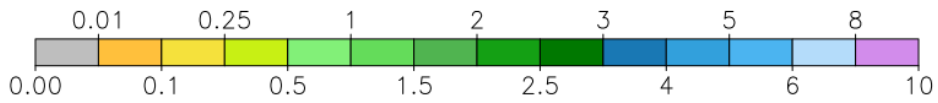
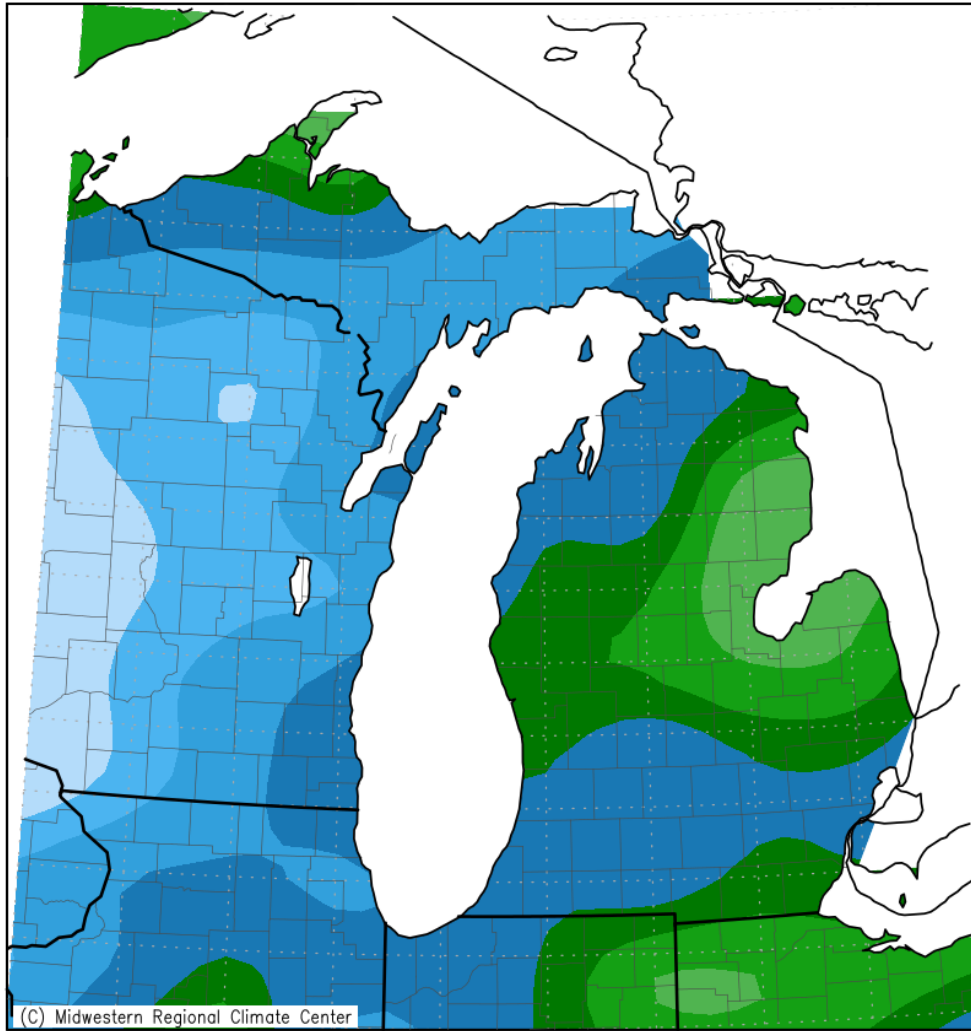
<u>Location</u>	<u>River</u>	<u>% of Normal</u>
Scottville	Pere Marquette	117
Whitehall	White	109
Evart	Muskegon	153
Mt. Pleasant	Chippewa	166
Lansing	Grand	355
Grand Rapids	Grand	188
East Lansing	Red Cedar	223
Hastings	Thornapple	335
Battle Creek	Battle Creek	500
Battle Creek	Kalamazoo	240

General Hydrologic Information

June precipitation amounts for Grand Rapids, Lansing, and Muskegon, Michigan, were 2.84, 2.00, and 2.48 inches, respectively (Figure 1). Monthly departures were -0.93, -1.45, and -0.07 inches, respectively. Yearly departures were +1.92, +3.76 and +6.18 inches for Grand Rapids, Lansing and Muskegon respectively. Percent of mean precipitation for June 2020 is shown in Figure 2.

Temperatures for the month of June were cooler than normal at Grand Rapids, Lansing and Muskegon. The monthly average temperature departures for these sites were +1.2, +1.9, and +2.7 degrees Fahrenheit, respectively.

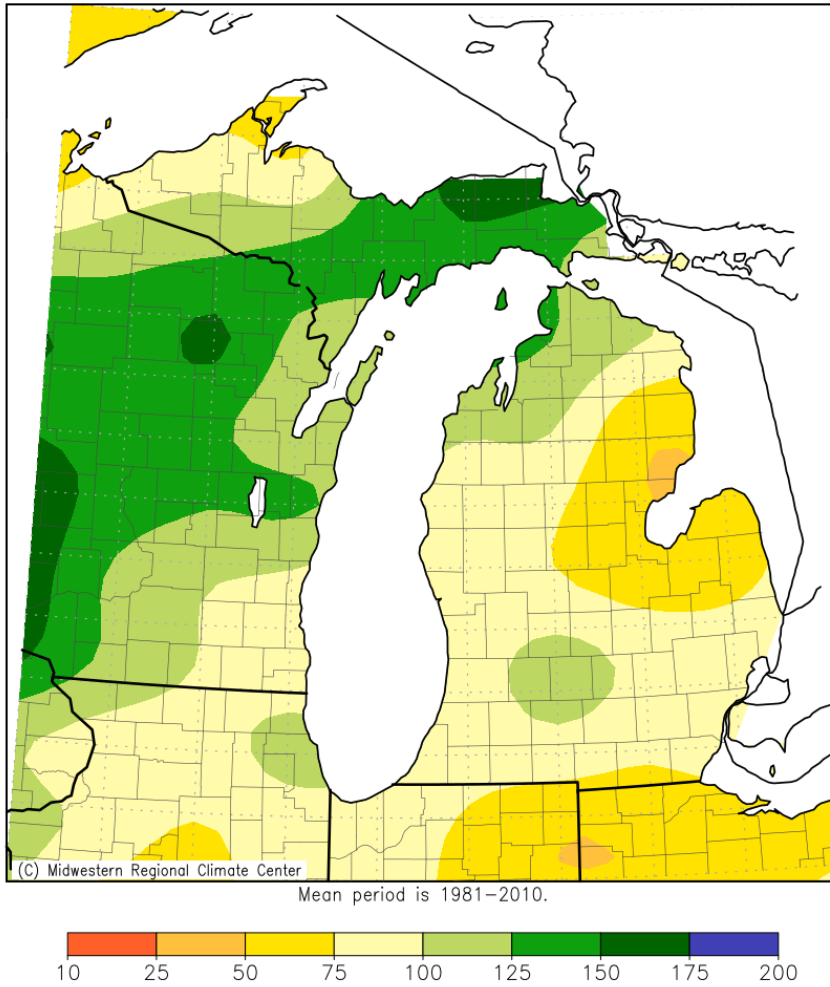
Accumulated Precipitation (in)
June 1, 2020 to June 30, 2020



Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 7/8/2020 11:56:52 AM CDT

Figure 1. June 2020 Monthly Precipitation Totals

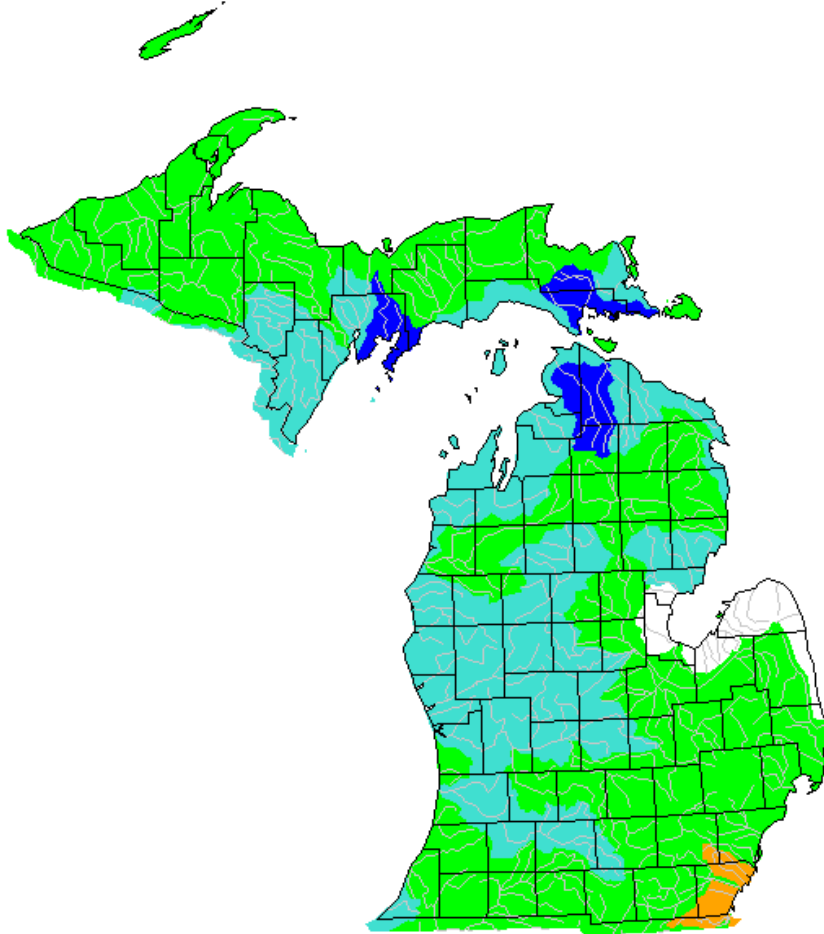
Accumulated Precipitation: Percent of Mean
June 1, 2020 to June 30, 2020



Midwestern Regional Climate Center
cli-MATE: MRCC Application Tools Environment
Generated at: 7/8/2020 11:57:35 AM CDT

Figure 2. June 2020 Percent of Mean of Accumulated Precipitation.

June 2020











Explanation - Percentile classes								
								
Low	<10	10-24	25-75	76-90	>90	High	No Data	
	Much below normal	Below normal	Normal	Above normal	Much above normal			

Figure 3. USGS monthly average streamflow for June, grouped by significant hydrologic units. Note streamflows near to slightly above average across most of the Lower Peninsula of Michigan.

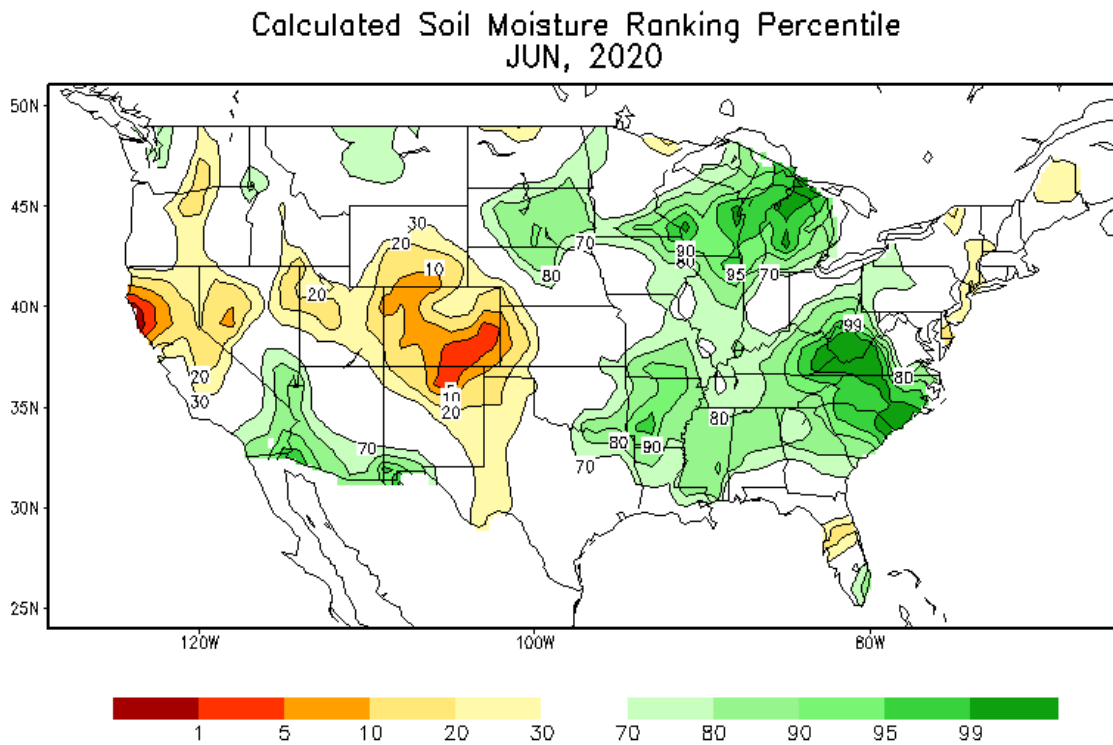


Figure 4. Chart of monthly values of soil moisture, by percentile ranking. This is the 21st consecutive month West Michigan has been at or above the 80th percentile. This saturated ground leads to increased runoff efficiency of rainfall into rivers and streams.

Hydrologic Products issued this month:

- 30 Hydrologic Summaries (ARBRVAGRR)
- 1 Probabilistic Hydrologic Outlook (ARBESFGRR)
- 0 Event-driven Hydrologic Outlook (ARBESFGRR)
- 26 Daily River Forecasts (ARBRVDGRR)
- 5 Areal Flood Advisory Statements (ARBFLSGRR)
- 0 Flood Warning Statements (ARBFLWGRR)
- 0 Flood Watch Statements (ARBFFAGRR)
- 10 River Statements (ARBRVSGRR)

News Articles and Related Documentation

<https://www.woodtv.com/weather/rising-waters/lake-michigan-breaks-another-record-forecasted-to-drop/>