

NWS FORM E-5

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

HSA OFFICE:

Grand Rapids, MI

REPORT FOR (MONTH & YEAR):

June 2015

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

DATE:

July 24, 2015

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

Very wet conditions occurred in the month of June for the NWS GRR HSA. The greatest monthly departures were over southern parts of the HSA. The airport in Lansing received over 9 inches of rain for the month. Despite the heavy rain only 3 sites exceeded flood stage and no location reached moderate levels. The high flows seen at the end of the month reveal the overall wet conditions that occurred.

Flood Conditions

Saturday, June 13th

At 10:26 PM EDT, a flood warning was issued for southwest Calhoun county until 4:30 AM. Up to 3 inches of rain is estimated to have fallen from a thunderstorm. Small stream flooding at night was highlighted.

Sunday, June 14th

At 11:28 AM EDT a flood warning was issued for the Looking Glass River near Eagle. The river level was 6.8 feet with a flood stage of 7.0 feet. The river was forecasted to crest at 8.0 feet after midnight. The river crested at 7.41 feet at 3:45 PM EDT on the 14th.

Sunday, June 14th

At 9:37 PM EDT, the flood warning was continued for the Looking Glass River near Eagle. Minor flooding was occurring. The river level was falling.

Monday, June 15th

At 12:12 AM EDT, the flood warning was downgraded to and advisory for the Looking Glass River near Eagle.

Monday, June 15th

A Flash Flood Watch was issued at 10:43 AM EDT for southern parts of the forecast area valid through the evening.

Monday, June 15th

The Flash Flood Watch was cancelled at 10:53 AM.

Monday, June 22nd

At 11:25 PM EDT the flood warning was issued for parts of Eaton, Barry, Kalamazoo, Calhoun, Allegan, and Van Buren counties. Thunderstorms were producing heavy rain. Storm total amounts of 2 to 4 inches were forecasted

Monday, June 22nd

At 11:58 PM EDT the flood warning was issued for parts of Eaton, Jackson, Ingham and Calhoun counties. Thunderstorms were producing heavy rain. Storm total amounts of 2 to 4 inches were forecasted. Reports upstream indicated that roads were flooded as a result of the torrential rain.

Tuesday, June 23rd

At 1:55 AM EDT, the flood warning was continued for parts of Eaton, Barry, Kalamazoo, Calhoun, Allegan and Van Buren counties until 11:15 AM EDT Tuesday. Rainfall amounts of 3 to 5 inches occurred. Nighttime flooding was highlighted.

Tuesday, June 23rd

At 2:00 AM EDT, the flood warning was continued for parts of Eaton, Jackson, Ingham and Calhoun counties until noon Tuesday. Rainfall amounts of 3 to 5 inches occurred. Nighttime flooding was highlighted.

Tuesday, June 23rd

At 2:57 AM EDT a flood warning was issued for the Looking Glass river near Eagle. The river level was 7.1 feet with a flood stage of 7.0 feet. The river was forecasted to crest at 8.1 feet by Tuesday evening. The river crested at 8.68 feet at 10:45 AM EDT on the 23rd.

Tuesday, June 23rd

At 3:18 AM EDT the flood warning was continued for the Looking Glass River near Eagle. The river forecast crest was raised to 9.3 feet.

Tuesday, June 23rd

At 4:01 AM EDT, the flood warning was continued for the Looking Glass River near Eagle. Minor flooding was occurring and moderate flooding was forecasted. The forecast crest was changed to 9.0 feet.

Tuesday, June 23rd

At 10:53 AM EDT, the flood warning was continued for the Looking Glass River near Eagle. Minor flooding was occurring and moderate flooding was forecasted. The forecast crest was 9.0 feet and forecasted to occur in the afternoon.

Tuesday, June 23rd

At 11:17 AM EDT, a flood statement was issued saying the the flood warning for parts of Eaton, Barry, Kalamazoo, Calhoun, Allegan and Van Buren counties had expired.

Tuesday, June 23rd

At 2:03 PM EDT, the flood warning was continued for the Looking Glass River near Eagle. The river was near crest at 8.6 feet. Flood stage is 7.0 feet. The river was forecasted to fall into the evening.

Tuesday, June 23rd

At 5:11 PM EDT, the flood warning was continued for the Looking Glass River near Eagle. The river was at 8.3 feet. Flood stage is 7.0 feet. The river was forecasted to fall into the evening.

Tuesday, June 23rd

At 10:27 PM EDT, the flood warning was continued for the Looking Glass River near Eagle. The river was at 7.5 feet. Flood stage is 7.0 feet. The river was forecasted to continue to fall.

Wednesday, June 24th

At 12:43 AM EDT a flood warning was issued for the Sycamore Creek at Holt. The river level was 7.9 feet with a flood stage of 8.0 feet. The river was forecasted to crest at 8.0 feet by daybreak Wednesday. The river crested at 8.02 feet at 9:00 AM EDT on the 24th.

Wednesday, June 24th

At 8:41 AM EDT, the flood warning for the Looking Glass River near Eagle was downgraded to and advisory.

Wednesday, June 24th

At 4:28 PM EDT, the flood warning for the Sycamore Creek at Holt was replaced with an advisory.

The following rivers exceeded bankfull during the month of June 2015:

- Sycamore Creed near Holt, Michigan (11 days above bankfull)
- Chippewa River below Mount Pleasant, Michigan (1 day above bankfull)
- Grand River at Ionia, Michigan (13 days above bankfull)
- Looking Glass River near Eagle, Michigan (9 days above bankfull)
- Thornapple River at Hastings, Michigan (12 days above bankfull)
- Kalamazoo River near New Richmond, Michigan (7 days above bankfull)
- Grand River at Jackson, Michigan (2 days above bankfull)
- Red Cedar River near Williamson, Michigan (1 day above bankfull)
- Red Cedar River at East Lansing, Michigan (2 days above bankfull)
- Grand River near Portland, Michigan (1 day above bankfull)
- Grand River near Eaton Rapids, Michigan (2 days above bankfull)
- Battle Creek at Battle Creek, Michigan (3 days above bankfull)
- Kalamazoo River at Comstock, Michigan (5 days above bankfull)

Flood Stage Report

An NWS Form E-3 “Flood Stage Report” was sent as 3 sites exceeded flood stage.

- The Grand River at Jackson, Michigan crested at 14.20 feet on June 23rd at 3:15 am.
Flood Stage is 14.0 Feet.

- The Sycamore Creek near Holt, Michigan crested at 8.02 feet on June 24th at 10:45 am.
Flood Stage is 8.0 Feet.

- The Looking Glass River at Eagle crested above flood stage twice.
 1. 7.41 feet on June 14th at 3:45 pm.
 2. 8.68 feet on June 23rd at 10:45 am.Flood Stage is 7.0 Feet.

River Conditions

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

<u>Location</u>	<u>River</u>	<u>% of Normal</u>
Scottville	Pere Marquette	113
Whitehall	White	122
Evert	Muskegon	123
Mt. Pleasant	Chippewa	175
Lansing	Grand	581
Grand Rapids	Grand	352
East Lansing	Red Cedar	556
Hastings	Thornapple	474
Battle Creek	Battle Creek	1000
Battle Creek	Kalamazoo	482

General Hydrologic Information

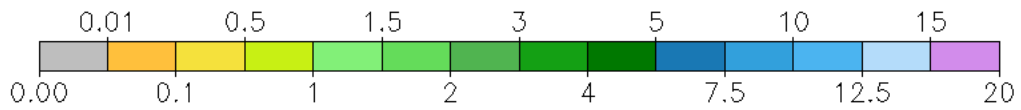
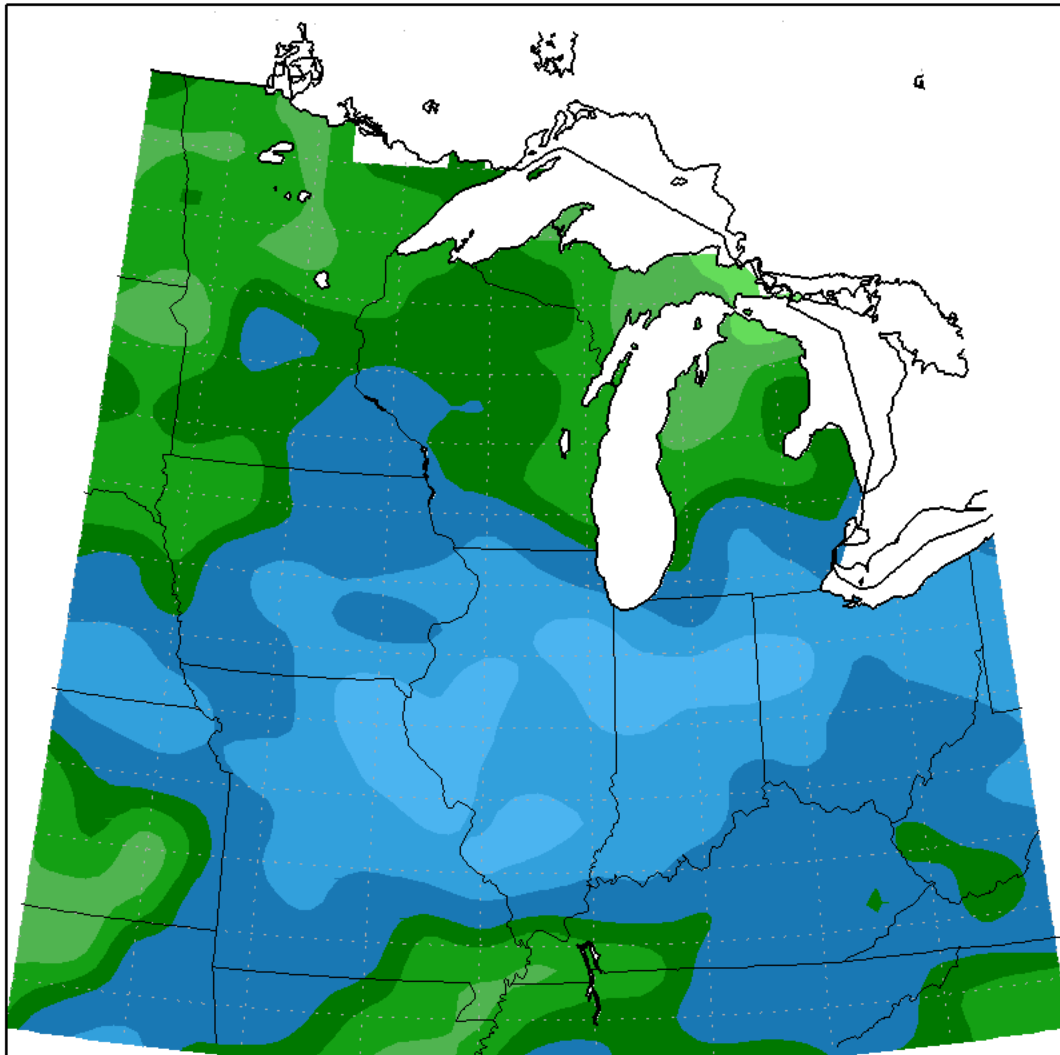
June 2015 featured below normal temperatures. Heavier than normal rainfall especially across southern parts of the hydrologic service area. This includes the upper Grand and Kalamazoo basins.

June precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 4.03, 9.03, and 3.30 inches, respectively (Figure 1). Precipitation departures for the month at these three sites were 0.26 of an inch above normal at Grand Rapids, 5.62 inches above normal at Lansing, and 0.75 inches above normal at Muskegon. Percent of mean precipitation for June 2015 is shown in Figure 2. Yearly precipitation departures were

1.62 inches below normal for Grand Rapids, 2.10 inches above normal for Lansing, and 0.91 inches above normal for Muskegon.

Temperatures for the month of June were below normal at Grand Rapids, Lansing, and Muskegon. The average monthly temperature departures were, 2.4, 1.2, and 0.5 degrees Fahrenheit respectively.

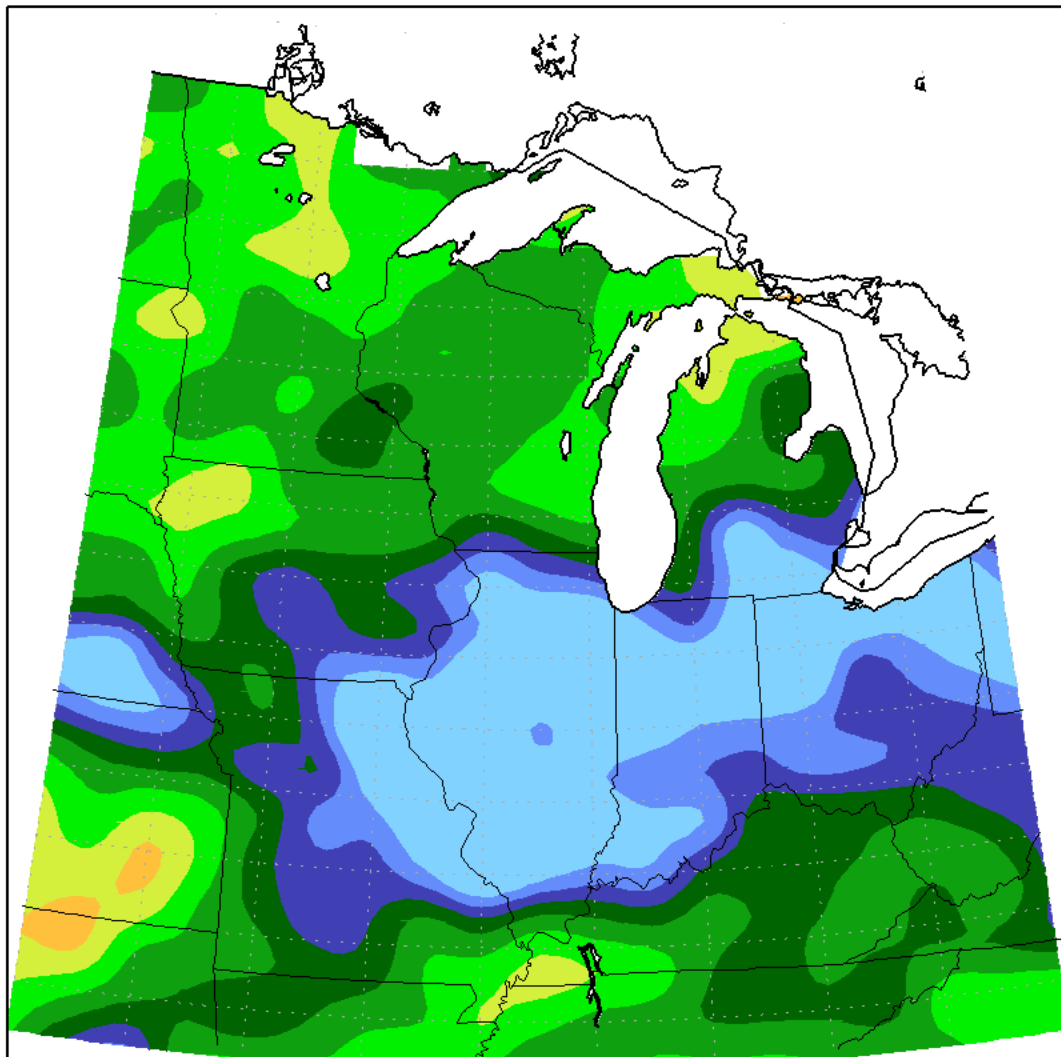
Accumulated Precipitation (in)
June 1, 2015 to June 30, 2015



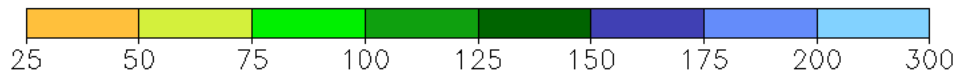
Midwestern Regional Climate Center
Illinois State Water Survey, Prairie Research Institute
University of Illinois at Urbana-Champaign

Figure 1. June Monthly Precipitation Totals

Accumulated Precipitation: Percent of Mean June 1, 2015 to June 30, 2015



Mean period is 1981–2010.



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Figure 2. June Percent of Mean of Accumulated Precipitation

Hydrologic Products issued this month:

1 Hydrologic Outlook (ARBESFGRR)
30 Hydrologic Summaries (ARBRVAGRR)
30 Daily River and Lake Summaries (ARBRVDGRR)
21 Areal Flood Advisory Statements (ARBFLSGRR)
 3 Areal Flood Warning Statements (ARBFLSGRR)
68 River Flood Advisory Statements (ARBFLSGRR)
12 River Flood Warning Statements (ARBFLSGRR)
 4 River Flood Warning(ARBFLWGRR)
 3 Areal Flood Warnings(ARBFLWGRR)
 3 Areal Flood Watches (ARBFFAGRR)
21 Hydrologic Statements (ARBRVSGRR)

News Articles and Related Documentation

None