**Summary**

Several rounds of heavy rain resulted in above normal rainfall for much of the region. The greatest departures were in the Kalamazoo and portions of the upper Grand Basin. Minor flooding occurred in these regions.

**Flood Conditions**

**Sunday, May 13th**
At 730 AM a flood warning was issued for the following rivers:
Sycamore Creek at Holt affecting Ingham County. Flood Stage is 8.0 ft. The river was forecasted to rise to 8.8 ft on the 14th. Heavy rainfall was forecasted to cause the river to exceed flood stage.

**Sunday, May 13th**
At 946 AM the flood warning was continued for the following rivers:
Sycamore Creek at Holt affecting Ingham County. Minor flooding was forecasted.

**Sunday, May 13th**
At 1011 PM the flood warning was continued for the following rivers:
Sycamore Creek at Holt affecting Ingham County. Minor flooding was forecasted.

**Monday, May 14th**
At 339 AM an areal flood watch was issued for southern parts of the CWA including the region south of Grand Rapids, until Tuesday Morning. Rainfall amounts of 1 to 3 inches was expected to lead to flooded roads.

**Monday, May 14th**
At 959 AM an areal flood warning was issued for Van Buren and Kalamazoo Counties until 400 PM. Rainfall amounts of 1 to 3 inches was expected to lead to flooded roads.
Monday, May 14th
At 1034 AM the areal flood watch was continued for southern parts of the CWA

Monday, May 14th
At 1138 AM a flood warning was issued for the following rivers:
Portage River near Vicksburg affecting Kalamazoo County. Flood Stage is 5.0 ft. The river was forecasted to rise to 5.2 ft on the 15th. Recent and forecasted heavy rainfall was forecasted to cause the river to exceed flood stage.

Monday, May 14th
At 1142 AM the flood warning was continued for the following rivers:
Sycamore Creek at Holt affecting Ingham County. Minor flooding was forecasted.

Monday, May 14th
At 211 PM the areal flood warning was cancelled for Van Buren and Kalamazoo.

Monday, May 14th
At 300 PM the areal flood watch was continued for southern parts of the CWA

Monday, May 14th
At 1002 PM the areal flood watch was continued for southern parts of the CWA

Monday, May 14th
At 1104 PM a flood warning was issued for the following rivers:
Grand River at Jackson affecting Jackson County. Flood Stage is 14.0 ft. The river was forecasted to rise to near 14.0 ft overnight. Recent and predicted heavy rainfall was forecasted to cause the river to exceed flood stage.

Monday, May 14th
At 1108 PM the flood warning was continued for the following rivers:
Sycamore Creek at Holt affecting Ingham County. Minor flooding was forecasted.
Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.

Tuesday, May 15th
At 410 AM the areal flood watch was continued for southern parts of the CWA

Tuesday, May 15th
At 744 AM the areal flood watch was allowed to expire.

Tuesday, May 15th
At 914 AM the flood warning was continued for the following rivers:
Sycamore Creek at Holt affecting Ingham County. Minor flooding was forecasted.
Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.
Grand River at Jackson affecting Jackson County. Minor flooding was forecasted.
Tuesday, May 15th
At 1208 PM the flood warning was continued for the following rivers:
Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.

Tuesday, May 15th
At 935 PM the flood warning was cancelled for
  Sycamore Creek at Holt affecting Ingham County.
The flood warning was continued for the following rivers:
  Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.
Grand River at Jackson affecting Jackson County. Minor flooding was forecasted.

Wednesday, May 16th
At 1019 AM the flood warning was cancelled for
  Grand River at Jackson affecting Jackson County.
The flood warning was continued for the following rivers:
  Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.

Wednesday, May 16th
At 932 PM the flood warning was continued for the following rivers:
  Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.

Thursday, May 17th
At 1021 AM the flood warning was continued for the following rivers:
  Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.

Thursday, May 17th
At 949 PM the flood warning was continued for the following rivers:
  Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.

Friday, May 18th
At 1028 AM the flood warning was continued for the following rivers:
  Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.
Saturday, May 19th
At 1033 AM a flood warning was issued for the following rivers:
Portage River near Vicksburg affecting Kalamazoo County. Flood Stage is 5.0 ft. The river was forecasted remain near 5.5 ft during the day and then fall below flood stage by Monday.

Sunday, May 20th
At 1110 AM the flood warning was continued for the following rivers:
Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.

Sunday, May 20th
At 856 PM the flood warning was continued for the following rivers:
Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.

Monday, May 21st
At 1019 AM the flood warning was continued for the following rivers:
Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.

Monday, May 21st
At 1017 PM the flood warning was continued for the following rivers:
Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.

Tuesday, May 22nd
At 1155 AM the flood warning was cancelled for the following rivers:
Portage River near Vicksburg affecting Kalamazoo County. Minor flooding was forecasted.

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The following rivers exceeded bankfull during the month of May 2018:

- Looking Glass River near Eagle, Michigan (1 day above bankfull)
- Red Cedar River near Williamston, Michigan (2 days above bankfull)
- Red Cedar River near East Lansing, Michigan (5 days above bankfull)
- Grand River near Lansing, Michigan (3 days above bankfull)
- Thornapple River above Hastings, Michigan (11 days above bankfull)
- Kalamazoo River at Marshall (5 days above bankfull)
- Kalamazoo River at Comstock (7 days above bankfull)
- Kalamazoo River at New Richmond (12 days above bankfull)
- Grand River at Jackson, Michigan (7 days above bankfull)
- Sycamore Creek at Holt, Michigan (9 days above bankfull)
- Grand River at Ionia, Michigan (12 days above bankfull)
- Portage River near Vicksburg, Michigan (16 days above bankfull)
- St. Joseph River at Burlington, Michigan (9 days above bankfull)
**Flood Stage Report**

Three forecast points exceeded flood stage in our HSA during the month of May 2018. Thus, the NWS Form E-3 “Flood Stage Report” was issued.

**River Conditions**

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

<table>
<thead>
<tr>
<th>Location</th>
<th>River</th>
<th>% of Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scottville</td>
<td>Pere Marquette</td>
<td>106</td>
</tr>
<tr>
<td>Whitehall</td>
<td>White</td>
<td>112</td>
</tr>
<tr>
<td>Evart</td>
<td>Muskegon</td>
<td>172</td>
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<tr>
<td>Mt. Pleasant</td>
<td>Chippewa</td>
<td>295</td>
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<tr>
<td>Lansing</td>
<td>Grand</td>
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<td>East Lansing</td>
<td>Red Cedar</td>
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<tr>
<td>Hastings</td>
<td>Thornapple</td>
<td>190</td>
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<tr>
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<td>Battle Creek</td>
<td>166</td>
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<tr>
<td>Battle Creek</td>
<td>Kalamazoo</td>
<td>153</td>
</tr>
</tbody>
</table>

**General Hydrologic Information**

The month of May featured above normal precipitation. The greatest departures were along the Kalamazoo River Basin with some locations over 200 percent above normal.

May precipitation for Grand Rapids, Lansing, and Muskegon, Michigan, was 5.64, 4.97, and 4.62 inches, respectively (Figure 1). Monthly departures were 1.66, 1.61 and 1.37 inches respectively. Yearly departures were 3.12, 4.37, and 3.70 inches for Grand Rapids, Lansing and Muskegon respectively. Percent of mean precipitation for May 2018 is shown in Figure 2.

Temperatures for the month of May were well above normal at Grand Rapids, Lansing and Muskegon. The average monthly temperature departures for these sites were 6.1, 7.0 and 5.9 degrees Fahrenheit respectively.
Figure 1. May 2018 Monthly Precipitation Totals
Figure 2. May 2018 Percent of Mean of Accumulated Precipitation
Hydrologic Products issued this month:

31 Hydrologic Summaries (ARBRVAGRR)
  1 Probabilistic Hydrologic Outlook (ARBESFGRR)
31 Daily River Forecasts (ARBRVDGRR)
31 Hydrologic Statements ARBRVSGRR)
31 River Flood Advisory Statements (ARBFLSGRR)
18 River Flood Warning Statements (ARBFLSGRR)
4 Areal Flood Advisory Statements (ARBFLSGRR)
1 Areal Flood Warning Statements (ARBFLSGRR)
4 River Flood Warnings (ARBFLWGRR)
1 Areal Flood Warning (ARBFLWGRR)

News Articles and Related Documentation

None