MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

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

DATE: January 6th, 2018

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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

Flood impacts were minimal this month…largely the result of below normal precipitation and colder than normal weather. Ice did form on most rivers by the end of the month…with some elevated water levels as a result.

Flood Conditions

No significant flooding was noted in the month of December. Only one river did briefly exceed bankfull levels this month.

The following rivers exceeded bankfull during the month of December 2017:

- Looking Glass River near Eagle, Michigan (4 days above bankfull)

Flood Stage Report

No forecast points exceeded flood stage in our HSA during the month of December 2017. As a result, no NWS Form E-3 “Flood Stage Report” was issued.
**River Conditions**

The end of the December 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>*</td>
</tr>
<tr>
<td>Whitehall</td>
<td>White</td>
<td>*</td>
</tr>
<tr>
<td>Evart</td>
<td>Muskegon</td>
<td>*</td>
</tr>
<tr>
<td>Mt. Pleasant</td>
<td>Chippewa</td>
<td>*</td>
</tr>
<tr>
<td>Lansing</td>
<td>Grand</td>
<td>89</td>
</tr>
<tr>
<td>Grand Rapids</td>
<td>Grand</td>
<td>*</td>
</tr>
<tr>
<td>East Lansing</td>
<td>Red Cedar</td>
<td>93</td>
</tr>
<tr>
<td>Hastings</td>
<td>Thornapple</td>
<td>85</td>
</tr>
<tr>
<td>Battle Creek</td>
<td>Battle Creek</td>
<td>98</td>
</tr>
<tr>
<td>Battle Creek</td>
<td>Kalamazoo</td>
<td>115</td>
</tr>
</tbody>
</table>

* Ice impacted

**General Hydrologic Information**

The month of December featured mainly below normal amounts of precipitation for the hydrologic service area. What did fall was mostly snow. Ice formed on many rivers and that resulted in some elevated levels.

December precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 1.96, 1.32, and 2.57 inches, respectively (Figure 1). Monthly departures were -0.71, -0.55 and 0.22 inches respectively. Yearly departures were 1.16, 7.85, and 3.05 inches for Grand Rapids, Lansing and Muskegon respectively. Percent of mean precipitation for December 2017 is shown in Figure 2.

Temperatures for the month of December were below normal at Grand Rapids, Lansing and Muskegon. The average monthly temperature departures for these sites were, -4.8, -4.3 and -4.0 degrees Fahrenheit respectively.
Figure 1. December Monthly Precipitation Totals
Figure 2. December 2017 Percent of Mean of Accumulated Precipitation
Hydrologic Products issued this month:

31 Hydrologic Summaries (ARBRVAGRR)
1 Probabilistic Hydrologic Outlook (ARBESFGRR)
12 Areal Flood Advisory Statements (ARBFLSGRR)