MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

DATE: January 9, 2015

SIGNATURE: Daniel K. Cobb, MIC
Mark Sekelsky

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**

The tranquil pattern continued for the month of December with no major hydrologic impacts. The main event occurred at the end of the month when snowmelt combined with 1 to 2 inches of. While above normal flows occurred as a result of this event, no flooding was observed.

**Flood Conditions**

No flooding occurred. Several advisories were issued at the end of the month to cover the rises associated with a heavy rain event. Less rain fell than forecasted and only one forecast point reached bankfull.

The following rivers exceeded bankfull during the month of December 2014:

- Sycamore Creek near Holt, Michigan (1 day above bankfull)

**Flood Stage Report**

No forecast points exceeded flood stage in our HSA during the month of December 2014. As a result, no NWS Form E-3 “Flood Stage Report” was sent.
**River Conditions**

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

<table>
<thead>
<tr>
<th>Location</th>
<th>River</th>
<th>% of Normal</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scottville</td>
<td>Pere Marquette</td>
<td>135</td>
<td></td>
</tr>
<tr>
<td>Whitehall</td>
<td>White</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Evart</td>
<td>Muskegon</td>
<td>143</td>
<td></td>
</tr>
<tr>
<td>Mt. Pleasant</td>
<td>Chippewa</td>
<td>152</td>
<td>Dec 30(^{th}), ice affected afterwards</td>
</tr>
<tr>
<td>Lansing</td>
<td>Grand</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>Grand Rapids</td>
<td>Grand</td>
<td>155</td>
<td></td>
</tr>
<tr>
<td>East Lansing</td>
<td>Red Cedar</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>Hastings</td>
<td>Thornapple</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Battle Creek</td>
<td>Battle Creek</td>
<td>153</td>
<td></td>
</tr>
<tr>
<td>Battle Creek</td>
<td>Kalamazoo</td>
<td>110</td>
<td></td>
</tr>
</tbody>
</table>

**General Hydrologic Information**

December 2014 featured above normal temperatures and below normal precipitation. December precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 1.57, 1.56, and 1.72 inches, respectively (Figure 1). Precipitation departures for the month at these three sites were 0.93 of an inch below normal at Grand Rapids, 0.31 inches below normal at Lansing, and 0.83 of an inch below normal at Muskegon. Percent of mean precipitation for December 2014 is shown in Figure 2. Yearly precipitation departures were 2.01 of an inch above normal for Grand Rapids, 5.71 inches above normal for Lansing, and 5.11 inches above normal for Muskegon, Michigan.

Temperatures for the month of December were above normal at Grand Rapids, Lansing, and Muskegon. The average monthly departures were, 2.7, 3.3, and 2.5 degrees Fahrenheit respectively.

Towards the end of the month, average temperatures fell below 20 degrees, leading to ice formation. This caused some of the levels to be affected, however no impacts resulted.
Figure 1. December Monthly Precipitation Totals
Accumulated Precipitation: Percent of Mean
December 1, 2014 to December 31, 2014

Mean period is 1981–2010.

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

Figure 2. December Percent of Mean of Accumulated Precipitation
Hydrologic Products issued this month:

8 River Flood Advisories (ARBFLSGRR)
1 Hydrologic Outlook (ARBESFGRR)
3 River Statements (ARBRVSGRR)
31 Hydrologic Summaries (ARBRVAGRR)
31 Daily River and Lake Summary (ARBRVDGRR)

News Articles and Related Documentation

None