National Weather Service
Preliminary Spring Flood Outlook

Jeff Zogg, Senior Hydrologist
National Weather Service – Des Moines, IA
February 28, 2020
# Spring Flood Outlook

**As of 2/26**

<table>
<thead>
<tr>
<th>River</th>
<th>Spring Flood Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mississippi River</td>
<td>Much Above Normal</td>
</tr>
<tr>
<td>Missouri River above Platte River</td>
<td>Above Normal</td>
</tr>
<tr>
<td>Missouri River below Platte River</td>
<td>Much Above Normal</td>
</tr>
<tr>
<td>Tributaries to Mississippi River in Iowa</td>
<td>Above Normal (Variable in northeast Iowa)</td>
</tr>
<tr>
<td>Big Sioux River</td>
<td>Much Above Normal</td>
</tr>
<tr>
<td>Other Tributaries to Missouri River in Iowa</td>
<td>Above Normal</td>
</tr>
</tbody>
</table>

**National Weather Service 2020 Spring Flood Outlook Schedule**

- Thursday, February 13, 2020
- Thursday, February 27, 2020
- Thursday, March 12, 2020
Levee Breaches on Missouri River
As of 2/25

Map Legend
2019 Levee Breach Locations
- Open
- Closed

Levees
- Levee
- Floodwall
- Closure
- High Ground
- Road
- Railroad
- Bridge

Levee System Status
- NA
- Active
- Inactive
- ?

URL: https://www.nwo.usace.army.mil/Omaha-District-System-Restoration-Team/
Precipitation % of Normal
Past 30 Days

Percent of Normal Precipitation (%)
1/26/2020 - 2/24/2020

Generated 2/25/2020 at HPRCC using provisional data.
NOAA Regional Climate Centers
Temperature Dep from Normal
Past 30 Days

Departure from Normal Temperature (F)
1/15/2020 – 2/13/2020

Generated 2/14/2020 at HPRCC using provisional data.
Snowpack
Water Equiv & Depth vs. Normal, 2/15/2020

Snow Depth vs. Normal

Snow Water Equivalent
Snowpack

Water Equiv & Depth vs. Normal, 2/25/2019

Snow Depth vs. Normal

Snow Water Equivalent
Soil Moisture Percentile
Current Values & Change, 2/24

Calculated Soil Moisture Ranking Percentile
FEB 24, 2020

Calculated Soil Moisture Anomaly Change
FEB 24, 2020 from JAN.31

Current Percentiles
Soil Temperatures/Ground Frost

Temperatures in F, 2/12

12 inch Soil Temps

4 inch Soil Temps
Current Streamflow
Values vs. Normal (Percentiles), 2/25

Explanation - Percentile classes

<table>
<thead>
<tr>
<th>Low</th>
<th>&lt;10</th>
<th>10-24</th>
<th>25-75</th>
<th>76-90</th>
<th>&gt;90</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Much below normal</td>
<td>Below normal</td>
<td>Normal</td>
<td>Above normal</td>
<td>Much above normal</td>
<td></td>
</tr>
</tbody>
</table>
Temp/Precip Outlooks

Temperature on Left

Precipitation on Right

Mar_2020

Mar_2020

Mar-Apr-May_2020

Mar-Apr-May_2020
### Spring Flood Outlook Factors

As of 2/26

<table>
<thead>
<tr>
<th>Factor</th>
<th>Contribution to Flood Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snowpack</td>
<td>Increased Risk</td>
</tr>
<tr>
<td>Soil Moisture</td>
<td>Increased Risk</td>
</tr>
<tr>
<td>Frost Depth</td>
<td>Lowered Risk</td>
</tr>
<tr>
<td>Streamflow/Stream Levels</td>
<td>Increased Risk</td>
</tr>
<tr>
<td>Precipitation Outlook</td>
<td>Increased Risk (Missouri River)</td>
</tr>
</tbody>
</table>
## Spring Flood Outlook
### As of 2/26

<table>
<thead>
<tr>
<th>River</th>
<th>Spring Flood Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mississippi River</td>
<td>Much Above Normal</td>
</tr>
<tr>
<td>Missouri River above Platte River</td>
<td>Above Normal</td>
</tr>
<tr>
<td>Missouri River below Platte River</td>
<td>Much Above Normal</td>
</tr>
<tr>
<td>Tributaries to Mississippi River in Iowa</td>
<td>Above Normal (Variable in northeast Iowa)</td>
</tr>
<tr>
<td>Big Sioux River</td>
<td>Much Above Normal</td>
</tr>
<tr>
<td>Other Tributaries to Missouri River in Iowa</td>
<td>Above Normal</td>
</tr>
</tbody>
</table>

### National Weather Service 2020 Spring Flood Outlook Schedule
- Thursday, February 13, 2020;
- Thursday, February 27, 2020;
- Thursday, March 12, 2020

**Building a Weather-Ready Nation**
Levee Breaches on Missouri River
As of 2/25

URL: https://www.nwo.usace.army.mil/Omaha-District-System-Restoration-Team/
Thank You

- **NWS Office Contacts**
  - **Des Moines** – 515-270-4501
    - Jeff Zogg (Hydrologist): jeff.zogg@noaa.gov
    - Chad Hahn (Warning Coordination Meteorologist): chad.hahn@noaa.gov
  - **La Crosse, WI** – 608-784-8275
    - John Wetenkamp (Hydrologist): john.wetenkamp@noaa.gov
    - Todd Shea (Warning Coordination Meteorologist): todd.shea@noaa.gov
  - **Quad Cities, IA/IL** – 563-391-6729
    - Jessica Brooks (Hydrologist): jessica.brooks@noaa.gov
    - Rich Kinney (Warning Coordination Meteorologist): rich.kinney@noaa.gov
  - **Sioux Falls, SD** – 605-330-4247
    - Mike Gillispie (Hydrologist): michael.gillispie@noaa.gov
    - Peter Rogers (Warning Coordination Meteorologist): peter.rogers@noaa.gov
  - **Omaha, NE** – 402-359-5732
    - Dave Pearson (Hydrologist): david.pearson@noaa.gov
    - Brian Smith (Warning Coordination Meteorologist): brian.e.smith@noaa.gov