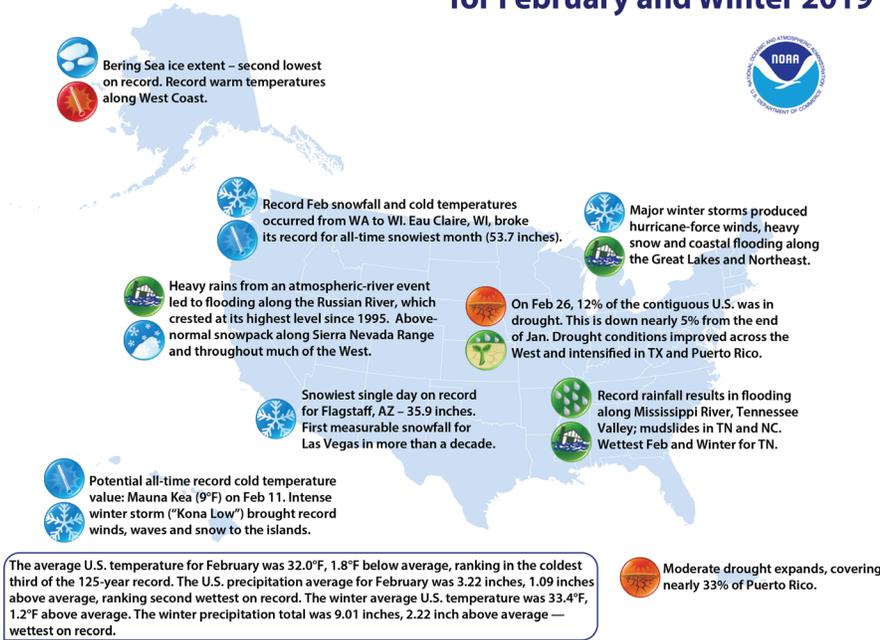




National – Significant Events for December 2018–February 2019

U.S. Selected Significant Climate Anomalies and Events for February and Winter 2019



Highlights for the Midwest

After a warm first half of the season, much of the Midwest was hit by repeated doses of winter weather.

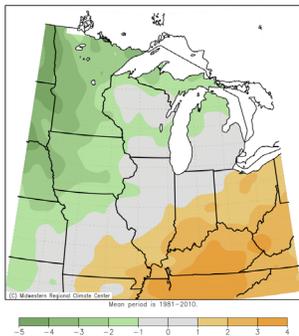
- Arctic air across the region in the last few days of January brought frigid temperatures and wind chills.
- Illinois set a new statewide record for minimum temperature with a -38°F reading at Mt. Carroll on January 31st.
- Blizzard conditions on February 23rd in Iowa, Minnesota, and Wisconsin with blowing snow drifting to several feet.
- Ice jams on numerous rivers due to freezing and thawing in February.

February records for precipitation and snow were common across the upper Midwest, with many more February precipitation records in the Ohio River Valley where mostly rain fell.

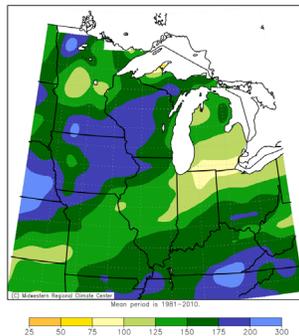
Significant events from December 2018 through February 2019 across the United States.

Regional – Climate Overview for December 2018–February 2019

Winter Temperature Departure from Normal



Winter Precipitation % of Normal



Winter temperatures for the 3-month period of December to February ranged from a few degrees below normal in the northwest to a few degrees above normal in the southeast. The first half of the season was well above normal across the region followed by shots of very cold temperatures which at times reached across the Ohio River Valley and other times mainly affected the northwestern parts of the region. Temperatures reached the coldest values in several years with readings below -50°F in northern Minnesota and readings of -40°F or below into Iowa, Wisconsin, and Upper Michigan. Precipitation

was well above normal in the Midwest, ranking as the third wettest winter back to 1895. February was particularly wet, ranking as the second wettest, topped only by last February. The precipitation in February fell mostly as rain in the southeastern regions and as snow in the northwestern areas. Between those two areas, and in northwestern Minnesota, totals were closer to normal, but nearly everywhere was above normal for precipitation. More than 100 stations set February snowfall records in the upper Midwest including Eau Claire, Wisconsin, which also set its record for the snowiest month ever. Many of these locations also set February records for precipitation as well. In the Ohio River Valley, there were dozens of stations that also set February precipitation records.

Precipitation Records Monthly Totals (February)



Regional Impacts – December 2018–February 2019

Water

Ohio River flooding was a problem in February due to heavy and numerous rains. Near the confluence with the Mississippi River, flooding reached major level. In the Upper Mississippi River basin, the heavy snows and frozen ground has upped the potential for major flooding in these areas. The widespread water in the snowpack along with reduced infiltration into soils could inundate rivers due to warming or rainfall.



Deep snow drifting in Iowa. Photo credit: Lori Valasek.

Agriculture

Livestock was stressed by the outbreak of Arctic air at the end of January. That cold, and continued cold in February, led to loss of calves. Another stressor on livestock has been the very wet conditions, which can lead to lessened feeding and increases in disease. The coldest temperatures in several years caused damage to both grapes and peaches. Pest dieback is anticipated due to the cold as well. Frost depths are very deep in locations that had little snow when the Arctic air arrived.



Monthly snowfall records set in February 2019. All locations with at least 30 years of data.

Snow and Ice

Numerous significant snows hit the northwestern parts of the Midwest repeatedly over a six-week span. One of the worst accidents in Wisconsin history involved 131 vehicles, 70 injuries, and 1 fatality. More than 100 Midwest stations set new records for February snowfall. Most were in Iowa, southern Minnesota, Wisconsin, and Upper Michigan. Road maintenance budgets were hard pressed due to the number of events. Ice storms in eastern Iowa were also problematic due to the number of events.

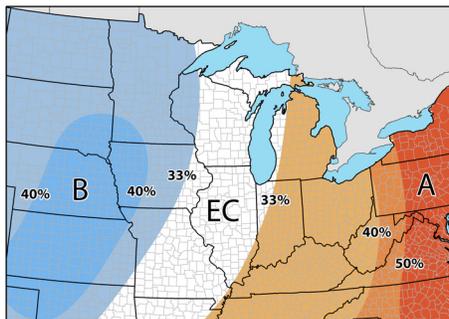
Regional Outlook – April–June 2019

The outlook for April through June temperatures shows increased chances of below-normal temperatures in the northwestern Midwest and increased chances of above-normal temperatures in the southeastern Midwest. In between, from Missouri to Upper Michigan, there are equal chances of above, below, or near-normal.

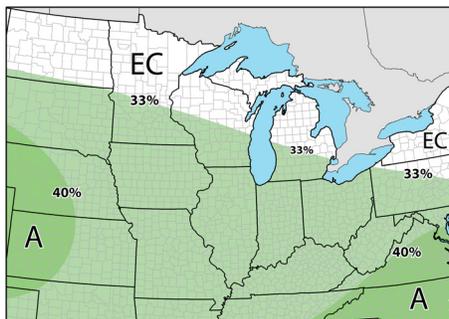
Precipitation outlooks for the same period are for increased chances of above-normal conditions for most of the Midwest with equal chances in the northern half of Minnesota, Wisconsin, and Michigan.

The spring flood outlook indicates a greater than 50% chance of major flooding on the Missouri River in western Iowa and northwestern Missouri, the Mississippi River from Minneapolis to the Missouri bootheel, and the Red River of the North in northwestern Minnesota.

Temperature



Precipitation



A = Above normal N = Normal
B = Below normal EC = Equal chances

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