

Heavy Rain and Record Cold

Forecast and Potential Impacts in the North Central U.S.

September 27 - October 10, 2019

Update #2

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Building a Climate-Smart Nation



Key Messages



What has changed since the last update:

1. Flood **forecasts along the Missouri River look higher** than previous forecasts.
 - a. Rain expected over the next 7 days will likely bring river levels higher, with the river levels reaching their highest points (crest) late next week (October 3-5), for most areas.
 - b. New crests will average 1 to 2 feet higher than current conditions from Brownville, NE to Leavenworth, KS. New crests will be 3-6 feet higher than current conditions from Parkville, MO to the mouth. With the exception of the Kansas City reach, Minor to Moderate flooding is anticipated from Blair, NE to the mouth. No major flooding along the Missouri River is anticipated.

NOTE: Current river forecasts available on the web do not account for the entire 7 days of forecast rainfall. The information above is from specialized contingency forecasts run by the NWS. They are subject to change and represent one possible outcome.

2. The **entire northern tier of states**, as far south as the Missouri/Iowa border will likely experience **temperatures well below normal Oct. 4-10**.
 - a. It is unknown at this time how widespread a freeze would be. There is a chance for a freeze as far south as the Missouri/Iowa border on October 4th





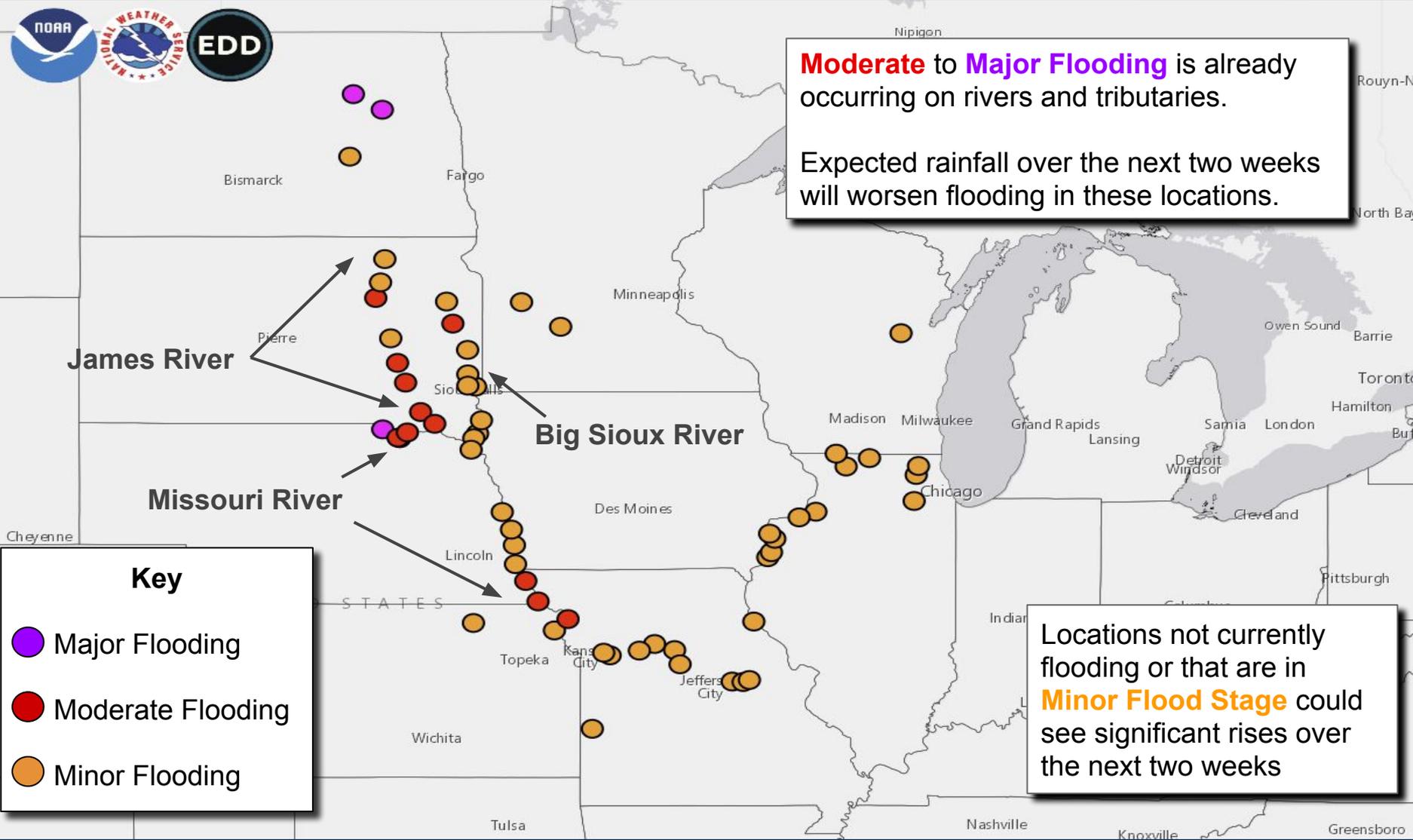
Current River Levels

Observed Flooding as of Thursday, September 26, 2019



Moderate to Major Flooding is already occurring on rivers and tributaries.

Expected rainfall over the next two weeks will worsen flooding in these locations.



Key

- Major Flooding
- Moderate Flooding
- Minor Flooding

Locations not currently flooding or that are in **Minor Flood Stage** could see significant rises over the next two weeks





Forecast Rain: September 27-October 3



Rain Amounts:

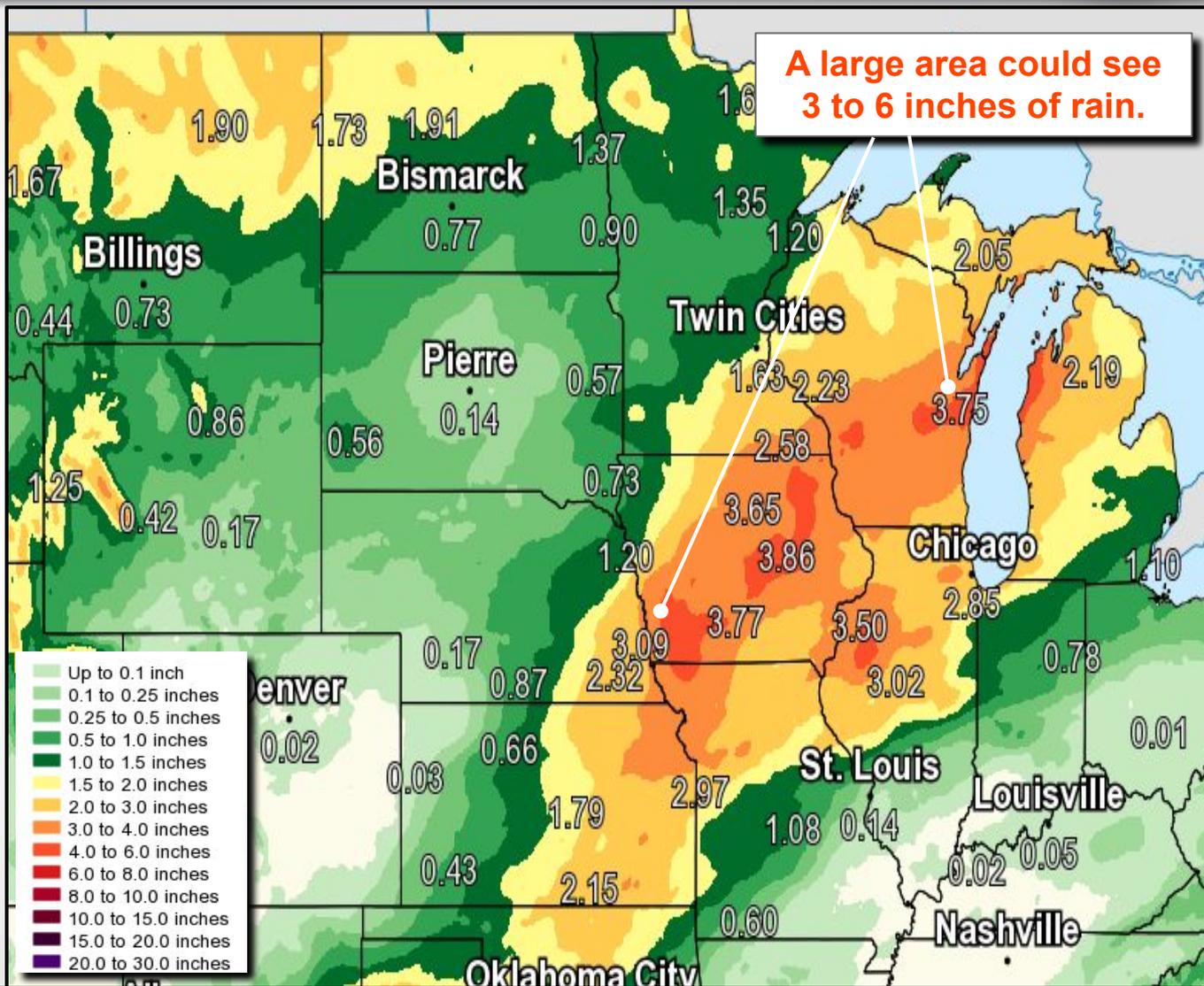
Total rainfall will range from **1 inch to over 7 inches** over much of the northern Plains, upper Mississippi Valley, and into the upper Midwest

How Certain:

High confidence that there **will be heavy rain** across this region.

When:

First Round: **Friday Night through Saturday**. This is when the heaviest rain is expected to fall across Kansas, Iowa, Missouri, and Illinois.





Best Chance For Heavy Rain: October 4 - 8



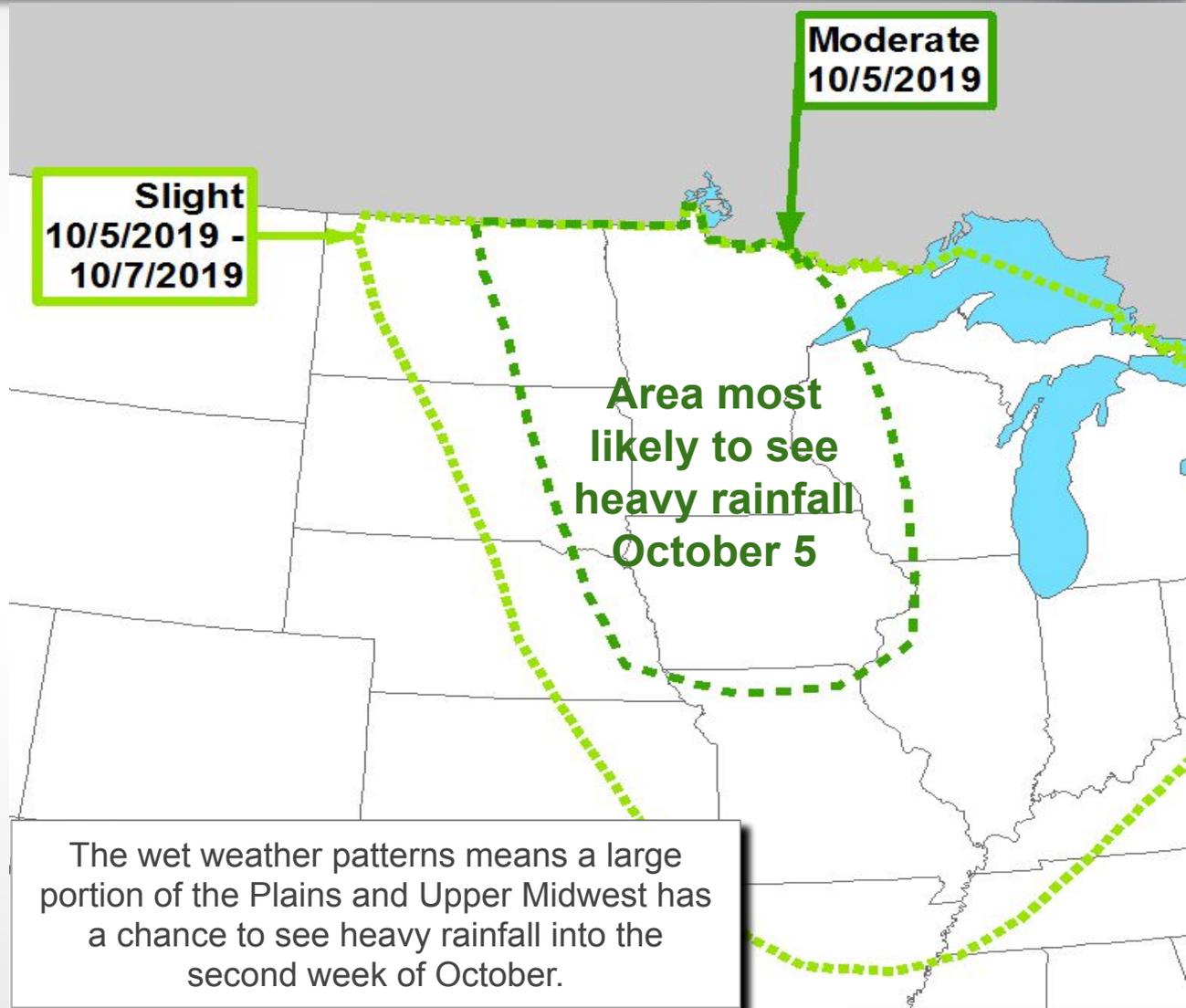
Rain Forecast:

A **period of heavy rain continues** beyond the first week (detailed on the previous slide) and persists into the second week of October.

How Certain:

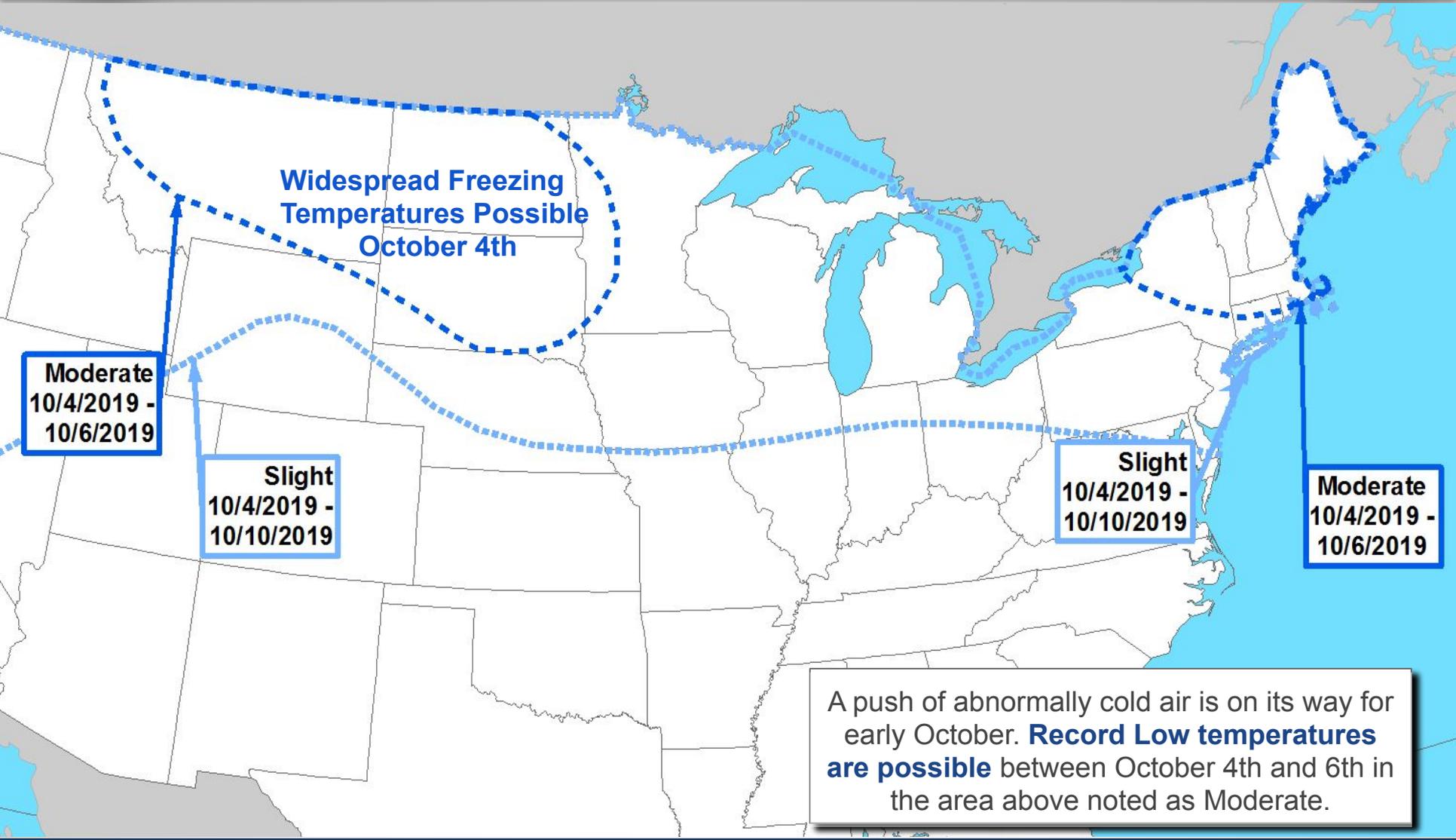
1-2 week forecasts always have a fair amount of uncertainty.

However, the chance for heavy rain exists over a broad region through October 8.



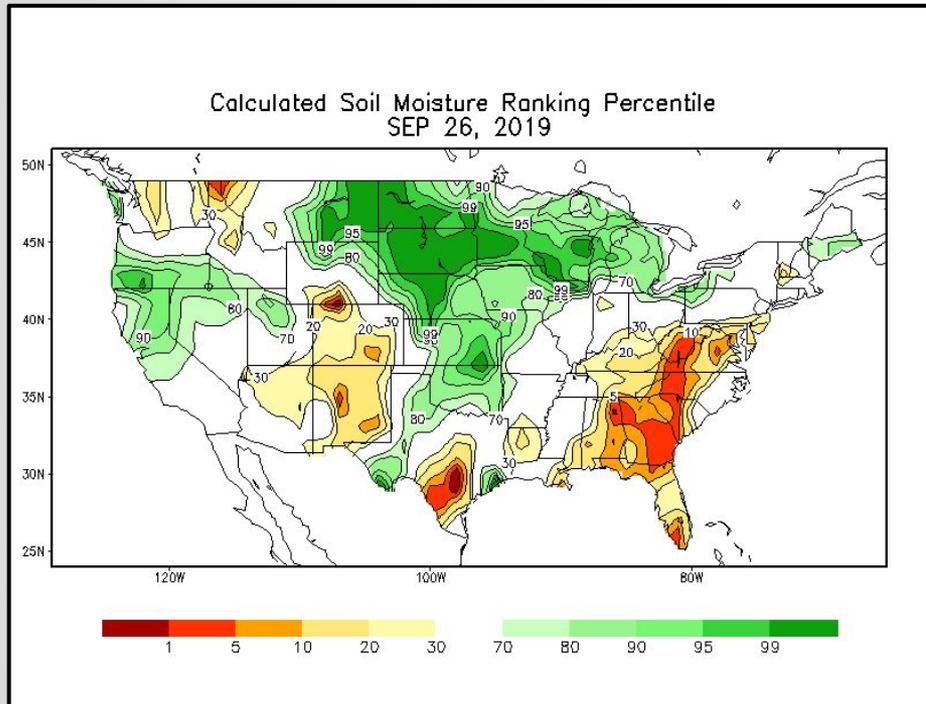


Best Chance For Freezing Temperatures: October 4 - 10



A push of abnormally cold air is on its way for early October. **Record Low temperatures are possible** between October 4th and 6th in the area above noted as Moderate.





Moisture:

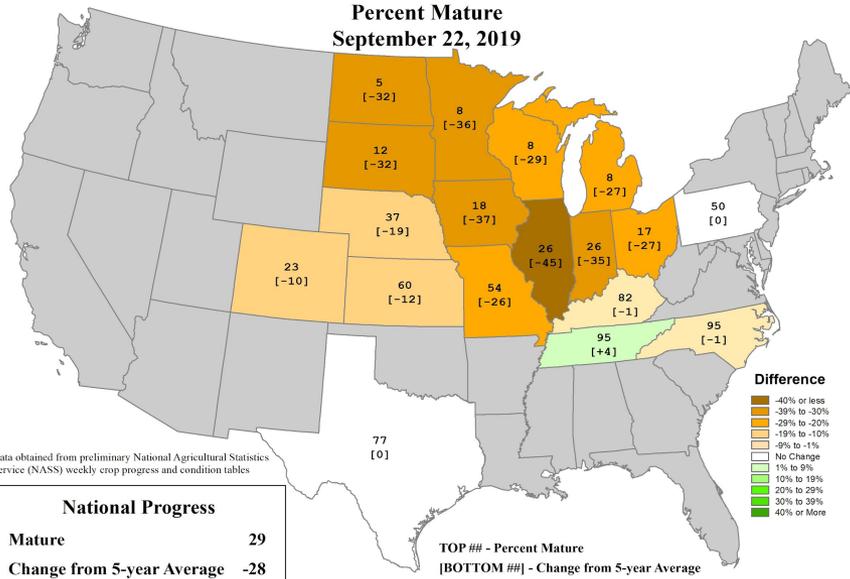
- Flooded/wet fields will limit field access for beginning fall harvest
- Wet fields will produce quicker runoff with even lesser rains
- Soils will dry very slowly in expected cooler conditions.

Risk:

- Harvest will be slowed/stopped
- Soils will compact more easily leading to additional soil damage

U.S. Corn Progress

Percent Mature
September 22, 2019



Data obtained from preliminary National Agricultural Statistics Service (NASS) weekly crop progress and condition tables

Corn Crop Progress - Percent Mature (USDA-NASS data Sept. 22). Plains states some of the furthest behind in the country.

Plot Courtesy USDA-OCE

Harvest:

- Harvest further delayed by wet soils and limited field access/slow dry down
- Some crops may not be able to be harvested until soils freeze

Freeze:

- Increasing chance of freeze - north
- Likely sub-freezing temperature will kill off some immature crops
- Freeze not early climatologically, but too early for crops this year



Potential Societal Impacts



Transportation will likely be affected including interstates, highways, rural roads, and river navigation.



Infrastructure impacts include continued levee stress, erosion issues, sewer water discharge, and exposed utilities.

Recreation cancellations and park closures are possible.

Flooding may impact some of the same areas still recovering from the flooding that occurred this spring.

Freezing temperatures may bring an end to the growing season across portions of the northern and high plains.



Get the latest weather and water forecasts:

For weather forecasts: weather.gov

For river forecasts: <https://water.weather.gov/ahps/forecasts.php>

For flood safety information: www.weather.gov/safety/flood

