

Major Cold and Wet Spring Event: Potential Impacts in the North Central U.S. April 26-May 9, 2017

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Building a Climate-Smart Nation



Key Points



- Freezing temperatures in some freeze-sensitive areas through the next 2 weeks
 - Impacts: Freeze-sensitive agriculture, horticulture, landscaping, and gardening
- Chilly air temperatures and rain and/or snow, with cool soil temperatures
 - Impacts: Planting operations, livestock





Temperatures: April 26-May 1

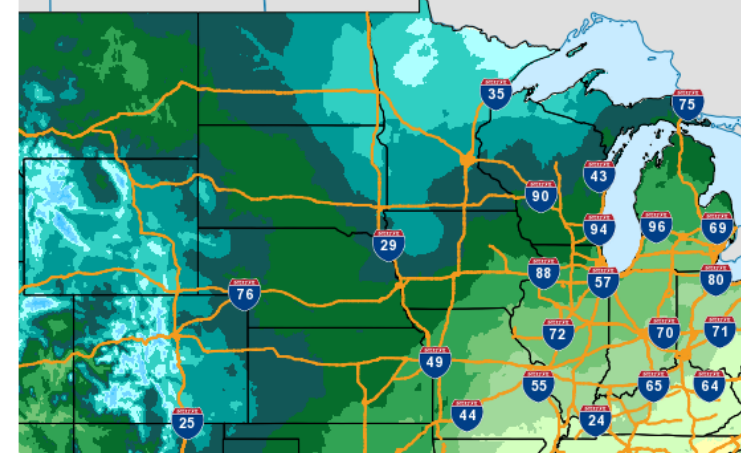
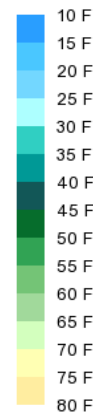


- *Top right:* Coldest high temperatures on any day between April 27 and May 2
- *Bottom right:* Coldest low temperatures on any day between April 27 and May 2
- **Freezing temperatures** possible from the central and northern Plains to the Great Lakes
- **Much below-normal high temperatures** possible across the area
- Conditions may occur on **several days** through the period
- For local weather updates now through 7 days: <http://www.weather.gov/>

Coldest High Temperature



Valid Ending Tuesday May 2nd, 2017 at 7 PM CDT

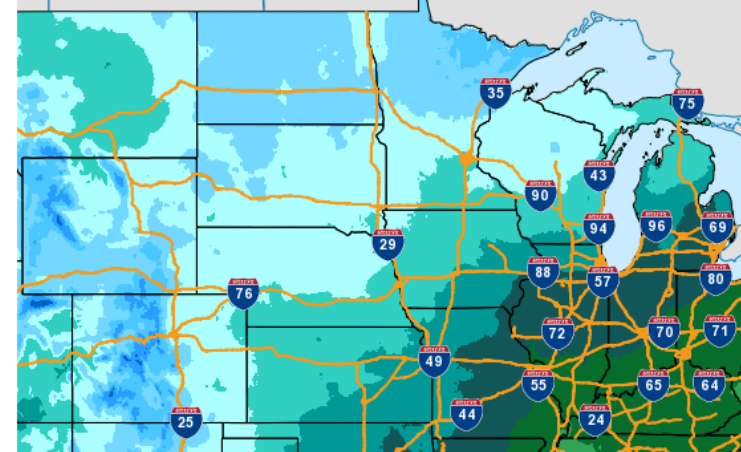
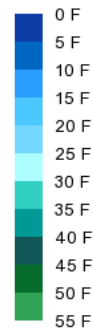


Graphic Created

Coldest Low Temperature



Valid Ending Tuesday May 2nd, 2017 at 7 AM CDT



Graphic Created
April 26th, 2017
11:38 AM CDT

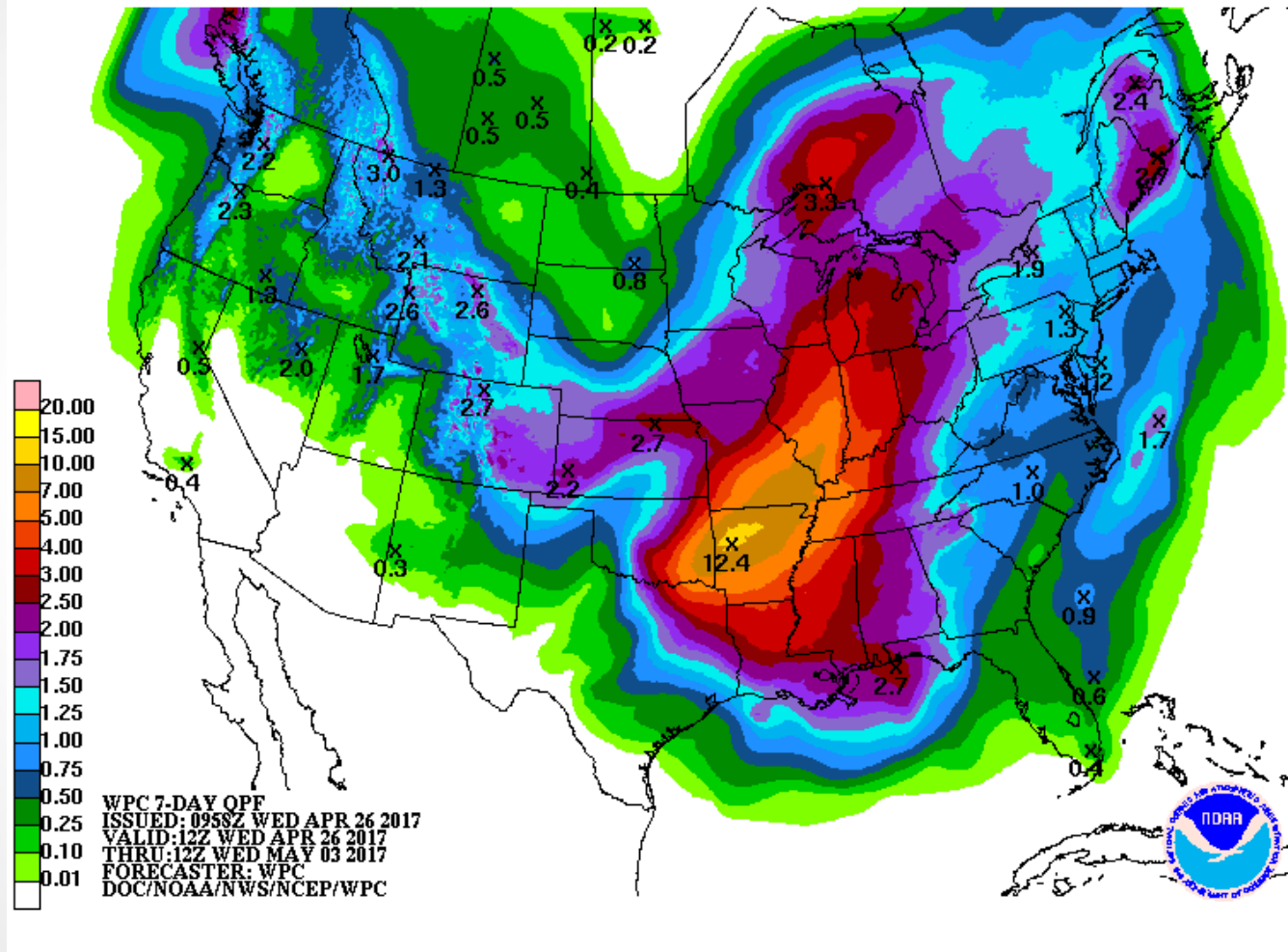




Precipitation: April 26-May 2



- Image: Total forecasted precipitation for the whole week (actual precipitation often is more spotty or varied in coverage)
- **Unusually wet** conditions likely for much of the central U.S. for April 26-May 3
- Combined with cool temperatures

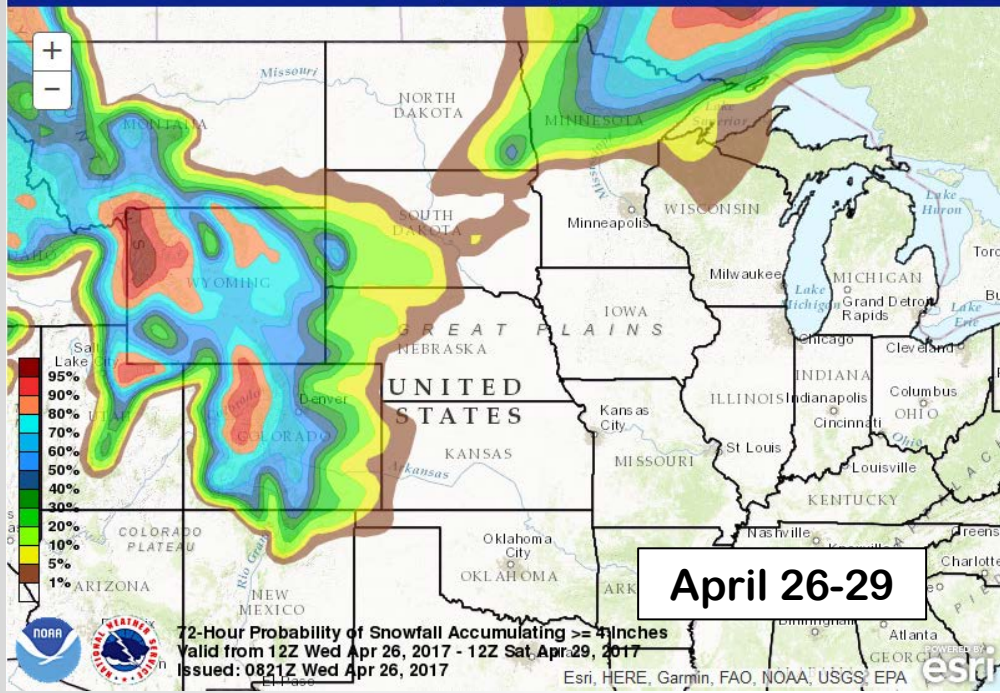




Snowfall: April 26-May 2

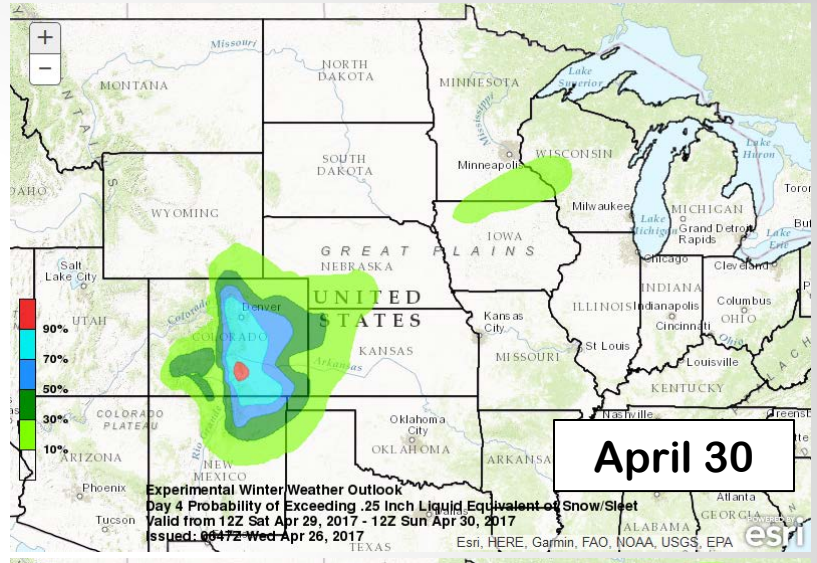


72-Hour Probability of Snow Accumulating $\geq 4"$
Valid 12 UTC Wed April 26 through 12 UTC Sat April 29



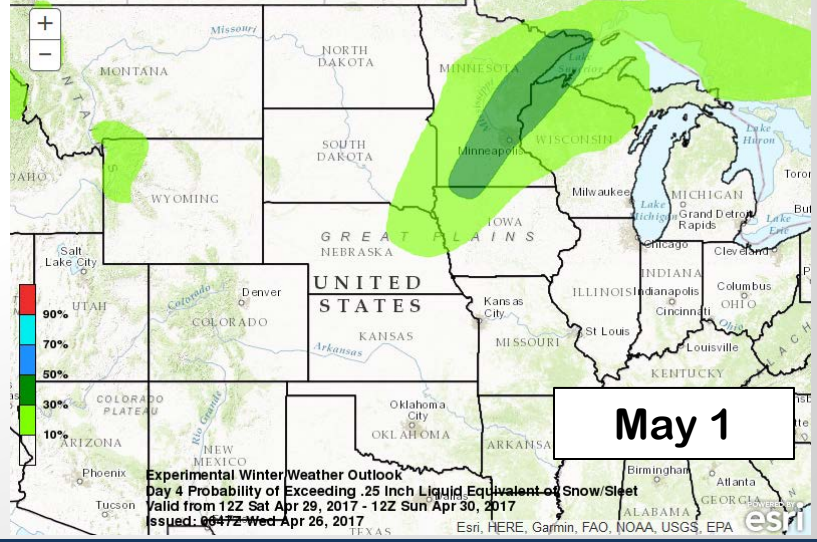
April 26-29

72-Hour Probability of Snowfall Accumulating ≥ 4 inches
Valid from 12Z Wed Apr 26, 2017 - 12Z Sat Apr 29, 2017
Issued: 0821Z Wed Apr 26, 2017



April 30

Experimental Winter Weather Outlook
Day 4 Probability of Exceeding .25 Inch Liquid Equivalent of Snow/Sleet
Valid from 12Z Sat Apr 29, 2017 - 12Z Sun Apr 30, 2017
Issued: 0647Z Wed Apr 26, 2017



May 1

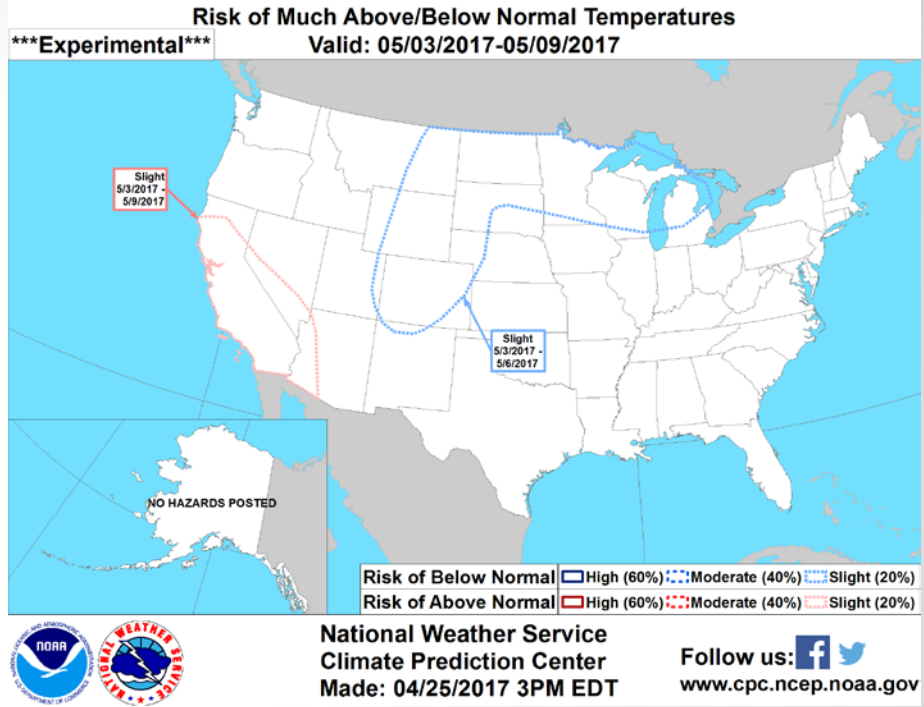
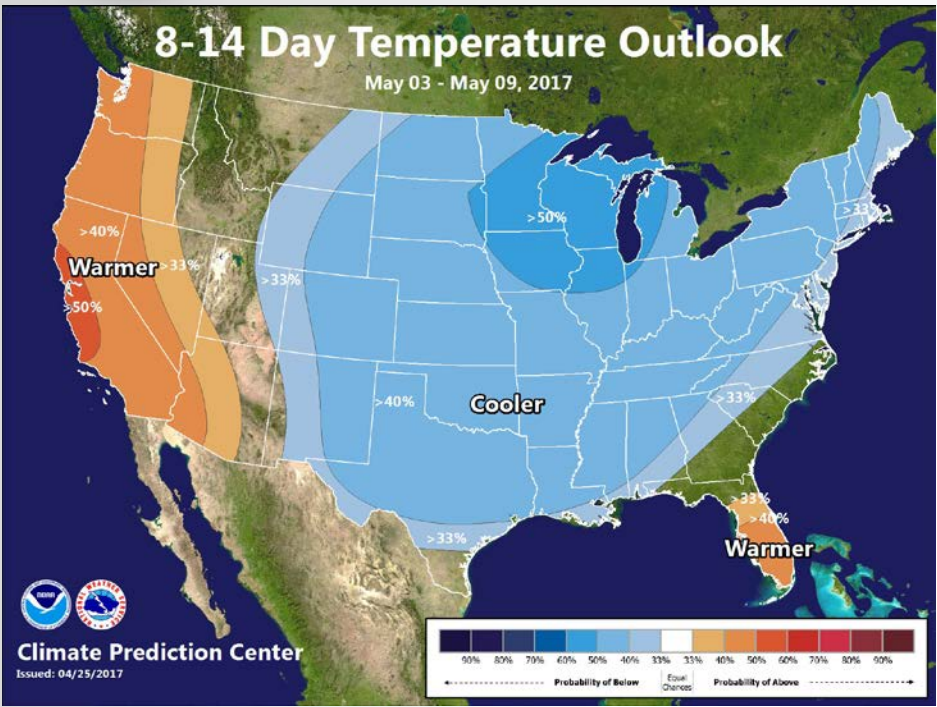
Experimental Winter Weather Outlook
Day 4 Probability of Exceeding .25 Inch Liquid Equivalent of Snow/Sleet
Valid from 12Z Sat Apr 29, 2017 - 12Z Sun Apr 30, 2017
Issued: 0647Z Wed Apr 26, 2017

- Top left: Chance of snow $>4"$ total for April 26-29
- Top right: Chance of snow $>0.25"$ liquid equivalent for April 30
- Bottom right: Chance of snow $>0.25"$ liquid equivalent for May 1
- Significant snowfall possible in Wyoming, Colorado





8- to 14-Day Temperature Outlook: May 3-9, 2017



- Odds favor below-normal temperatures
- Odds slightly favor much below-normal temperatures
- Highest chances in the western Great Lakes to upper Midwest

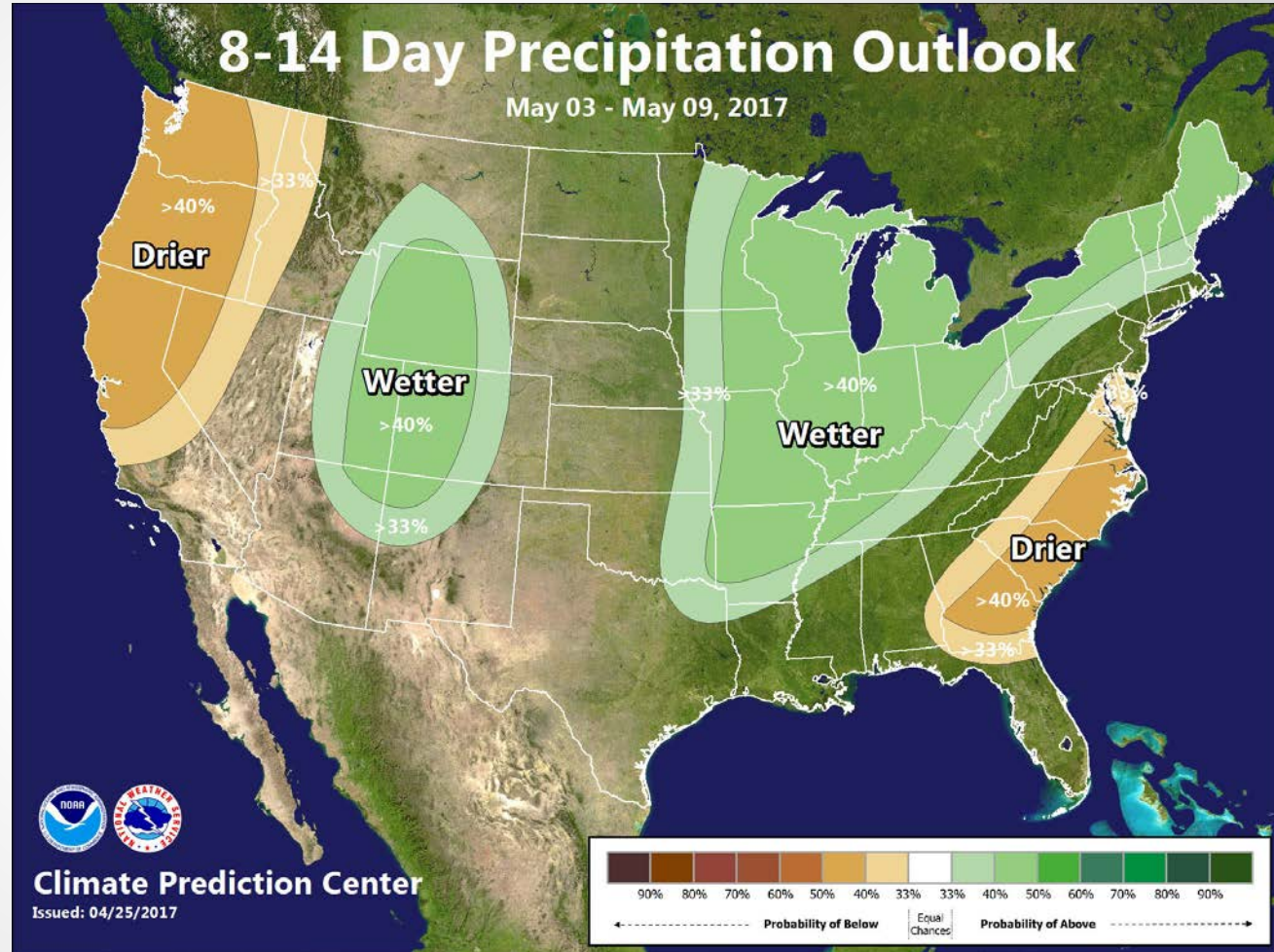




8- to 14-Day Precipitation Outlook: May 3-9, 2017



- Odds favor above-normal precipitation
- Highest chances in the Great Lakes to Mississippi River valley
- Thus... cold and wet conditions remain possible through the next 2 weeks





Freeze:

- Wheat growth
- Apple and other fruit tree blooms
- Home gardens and landscaping



Cold and Rain:

- Corn planting and seed germination
- Livestock health, especially calves
- Soil compaction and nutrient loss
- Inaccessible fields



Temperature:

- Continuous cold, wet soil and cloud cover will keep soils very cool

Moisture:

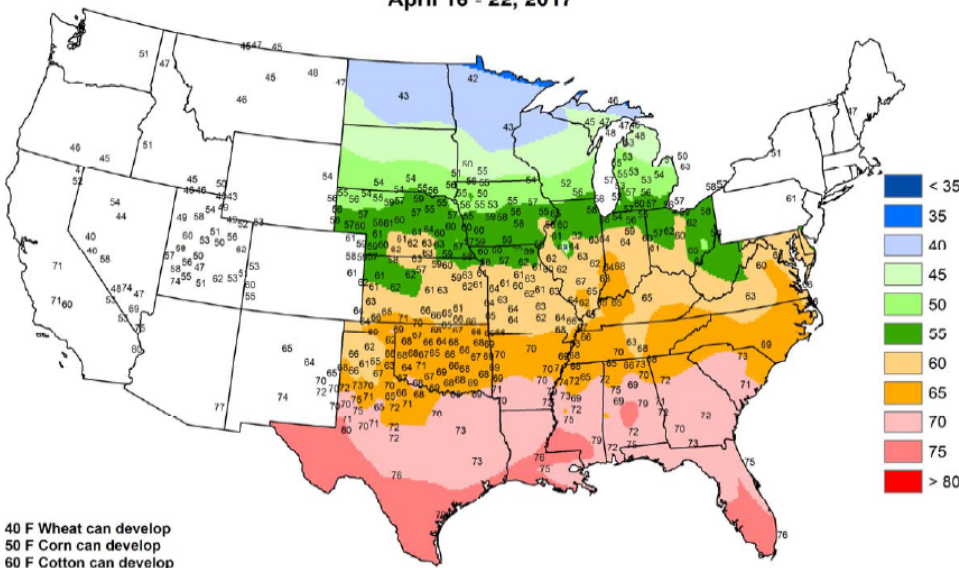
- Flooded fields/slow field access
- Contribute to nutrient loss
- Increased crop disease issues
- Impact root growth

Risk:

- Likely delay additional planting
- Heaviest rain expected southern/eastern Corn Belt
- Most plains and Midwest will likely have some wetness

Average Soil Temperature (Deg. F, 4" Bare)

April 16 - 22, 2017



40 F Wheat can develop
50 F Corn can develop
60 F Cotton can develop

Based on preliminary data.

Supplemental data provided by Alabama A&M University, Bureau of Reclamation - Pacific Northwest Region AgriMet Program, High Plains Regional Climate Center, Illinois State Water Survey, Iowa State University, Louisiana AgriClimatic Information System, Mississippi State University, Oklahoma Mesonet, Purdue University, University of Missouri and USDA/NRCS Soil Climate Analysis Network.



USDA Weekly Weather and Crop Bulletin



Freezing conditions:

- Wheat, horticultural, fruits, perennials most at risk based on development (different risk temperature at different stages: fruits, wheat)
- Freeze risk management very likely
- Exposed home vegetation need to monitor forecasts

Cold conditions:

- Most field crops less risk of freeze, more risk sitting in cold soils
- Slow crop development
- Increased disease risk
- Replant may be necessary

<http://crops.extension.iastate.edu/cropnews/2012/05/imbibitional-chilling-and-variable-emergence>

Cold, Rain, Winds:

- Young livestock should be monitored because of prolonged cold/wet conditions over the 1-2 weeks
- Snow accumulations could add to risk in Plains, northern states

