

NOAA Climate Science & Services

Monthly Climate Update

A look back at January and a preview of March through May

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Climate Scientist, Climate Monitoring Branch,
NOAA's National Climatic Data Center

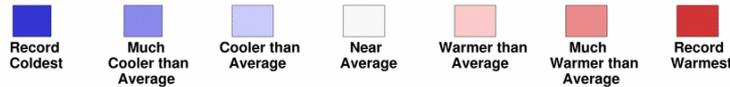
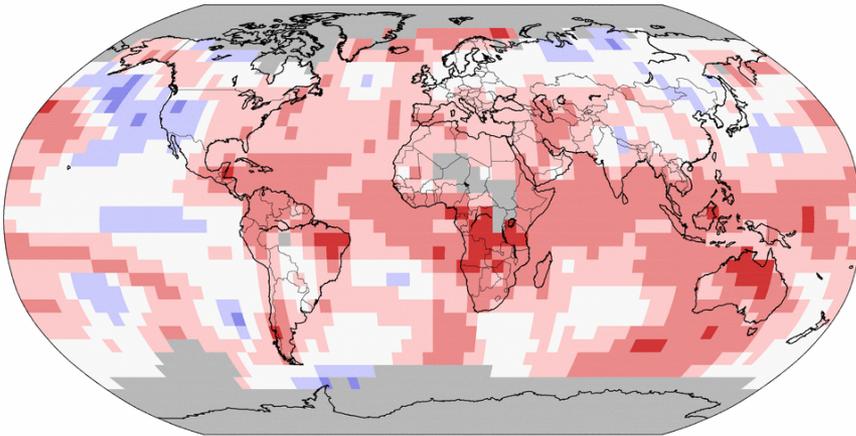
Dan Collins

Seasonal Forecaster, Operations Branch
NOAA's Climate Prediction Center



Global Climate Highlights

Land & Ocean Temperature Percentiles Jan 2013
 NOAA's National Climatic Data Center
 Data Source: MLOST version 3.5.3



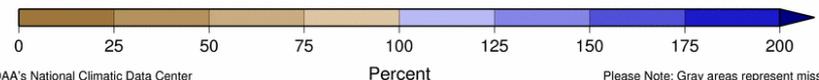
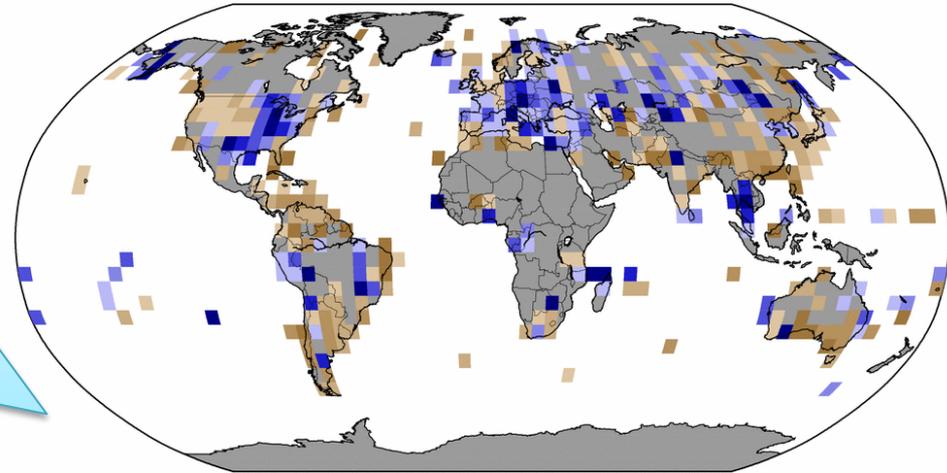
January 2013 Temperatures:

- 9 warmest January globally (+0.54°C/+0.97°F)
- Land: 13th warmest ; Ocean: 8th warmest
- N. Hemisphere: 11th warmest
- S. Hemisphere: 8th warmest

Regional Analysis:

- Australia: record warm Jan. maximum temperatures
- Hungary, Austria, Spain: warmer than average
- U.K: slightly cooler than average

Land-Only Precipitation Percent of Normal Jan 2013
 (with respect to a 1961–1990 base period)
 Data Source: GHCN–M version 2



Please Note: Gray areas represent missing data
 Map Projection: Robinson

- Parts of Middle East received rare snowfall
- Post-tropical cyclone Freda hit New Caledonia and Cyclone Dumile hit La Reunion and Mauritius
- Torrential rainfall and flooding in parts of S. Africa
- Dryness in Australia led to significant wildfires

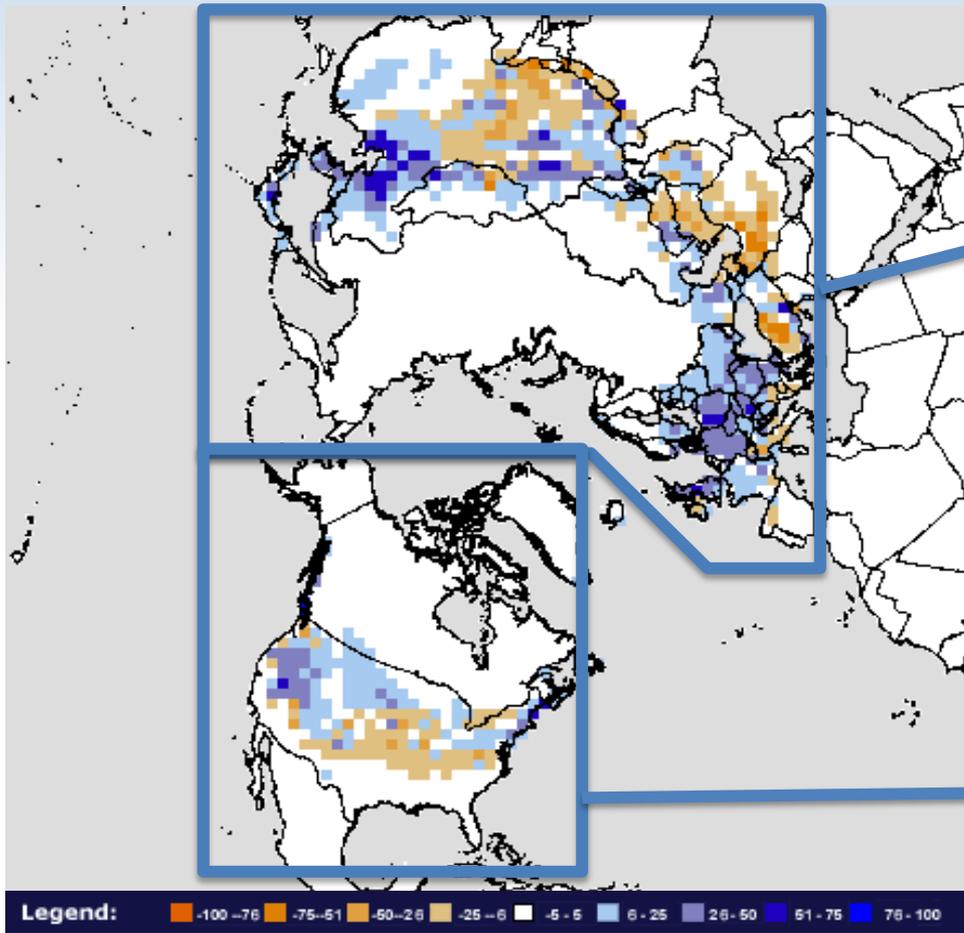
Dry: China, Australia, Caribbean, Argentina

Wet: Europe, Middle East, southern Africa

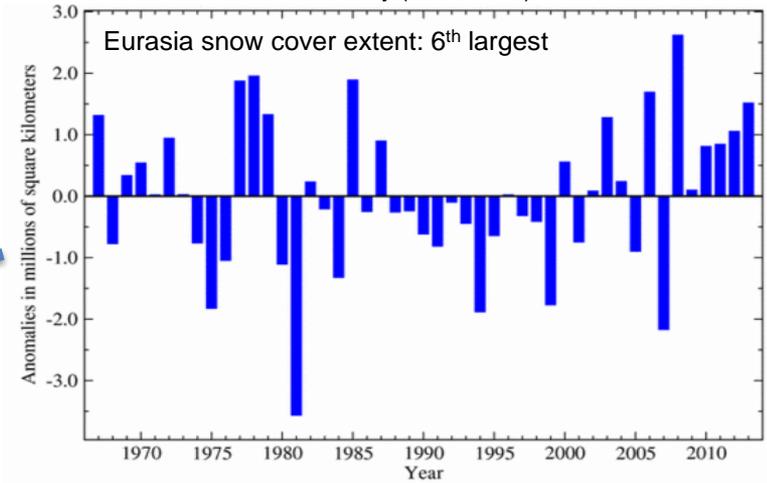


Global Climate Highlights

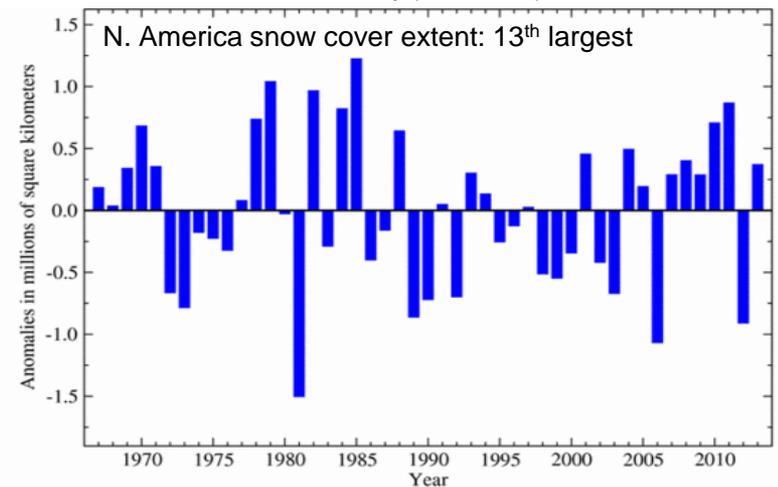
N. Hemisphere snow cover extent: 6th largest



Eurasia Snow Cover Anomalies January (1967-2013)



North America Snow Cover Anomalies January (1967-2013)

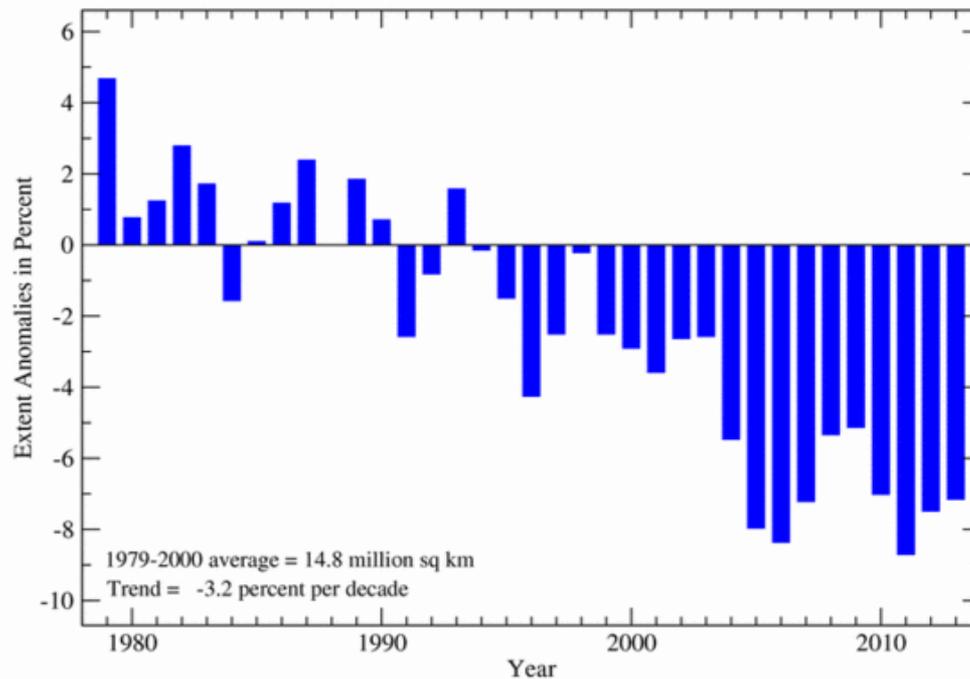


Global Climate Highlights

January Arctic Sea Ice: 6th smallest on record

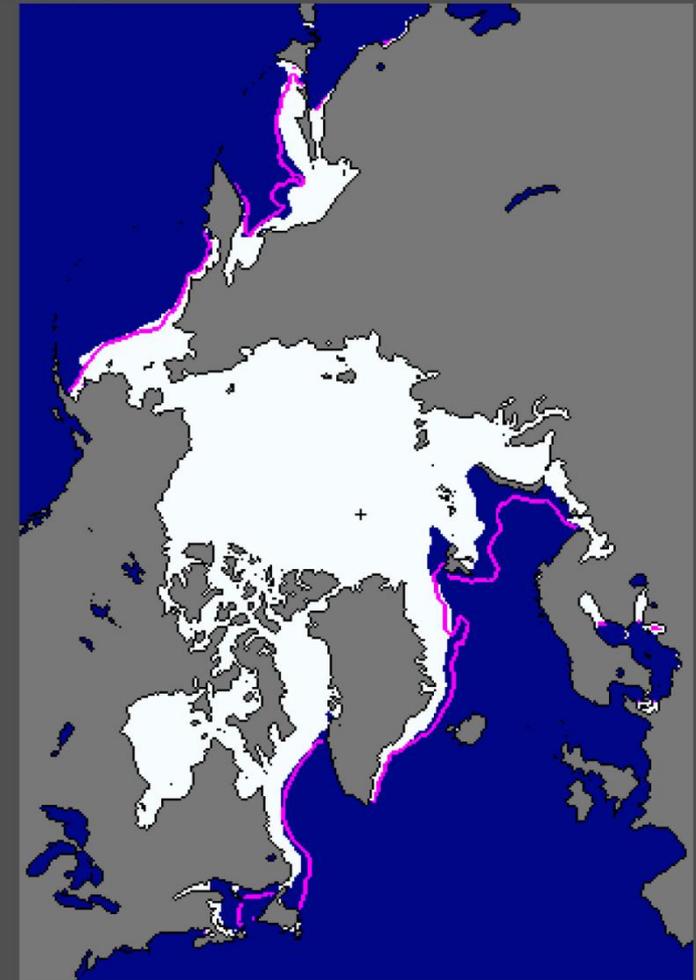
- Arctic sea continued to expand during January
- Below-average ice on Atlantic side of Arctic
- January 2013 sea ice 7.2 percent below average

Northern Hemisphere Sea Ice Extent
January Anomalies, 1979-2013



Data provided by the National Snow and Ice Data Center (NSIDC)

Sea Ice Extent
Jan 2013



Total extent = 13.8 million sq km

National Snow and Ice Data Center, Boulder, CO



U.S. Climate Highlights

January: warmer and wetter than average nationally
 Drought continues for 55.8% of contiguous United States

January Temperature: 1.6°F above average

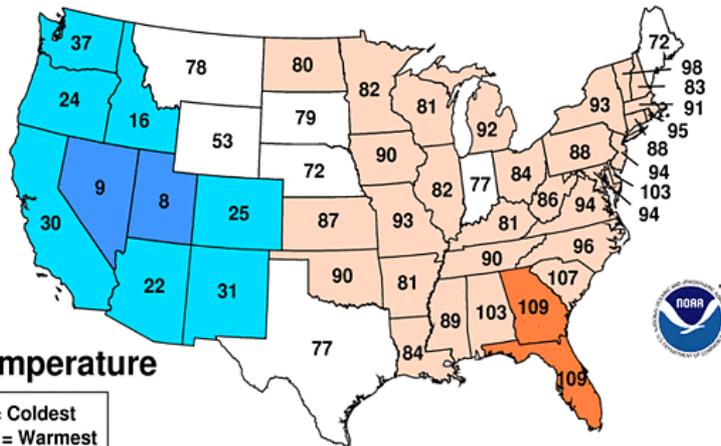
- Warm: Much of the eastern US and Alaska
- Cool: Western US, NV and UT top ten cold

January Precipitation: 0.14" above average

- Wet: S. Plains, Gulf Coast, Midwest, Mid-Atlantic
- Dry: West, Southeast, Northeast

January 2013 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



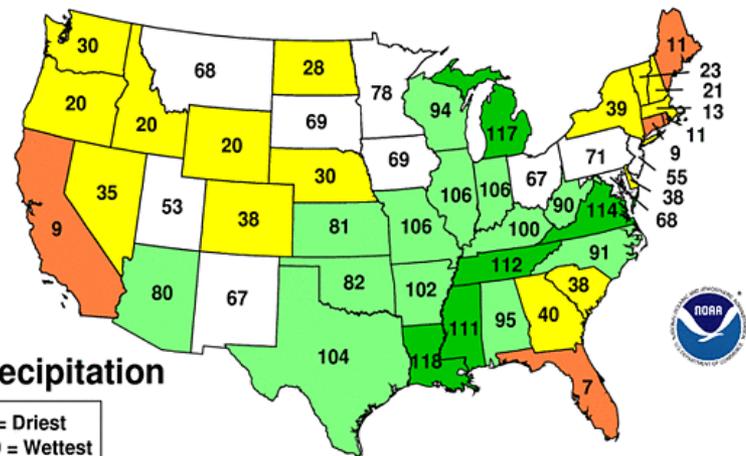
Temperature

1 = Coldest
119 = Warmest



January 2013 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



Precipitation

1 = Driest
119 = Wettest

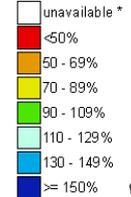


U.S. Climate Highlights

Westwide SNOTEL Current Snow Water Equivalent (SWE) % of Normal

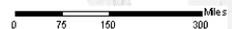
Jan 31, 2013

Current Snow Water Equivalent (SWE) Basin-wide Percent of 1981-2010 Median



* Data unavailable at time of posting or measurement is not representative at this time of year

Provisional data subject to revision



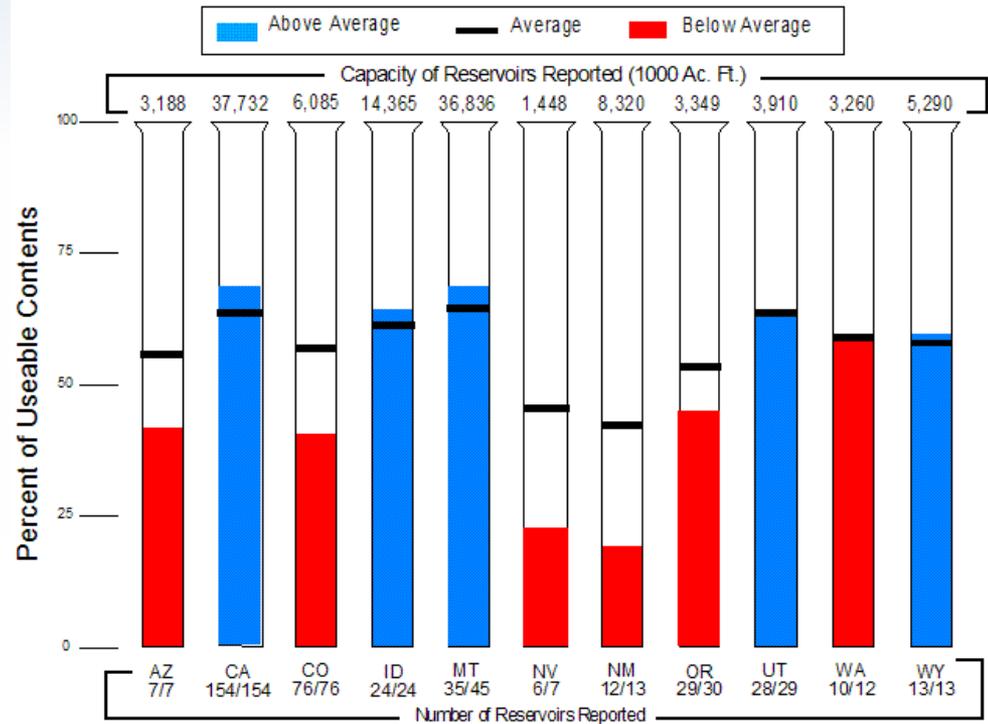
The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

Prepared by the USDA/NRCS National Water and Climate Center, Portland, Oregon <http://www.wcc.nrcs.usda.gov/gis/>
Based on data from <http://www.wcc.nrcs.usda.gov/reports/>
Science contact: Jim Maron@por.usda.gov 503 414 3047

Snow Water Content in West

- Below-average across Central and Southern Rockies
- Reservoirs much below average in AZ, CO, NM, NV
- Rest of the West snow water near and above average

Reservoir Storage as of February 1, 2013



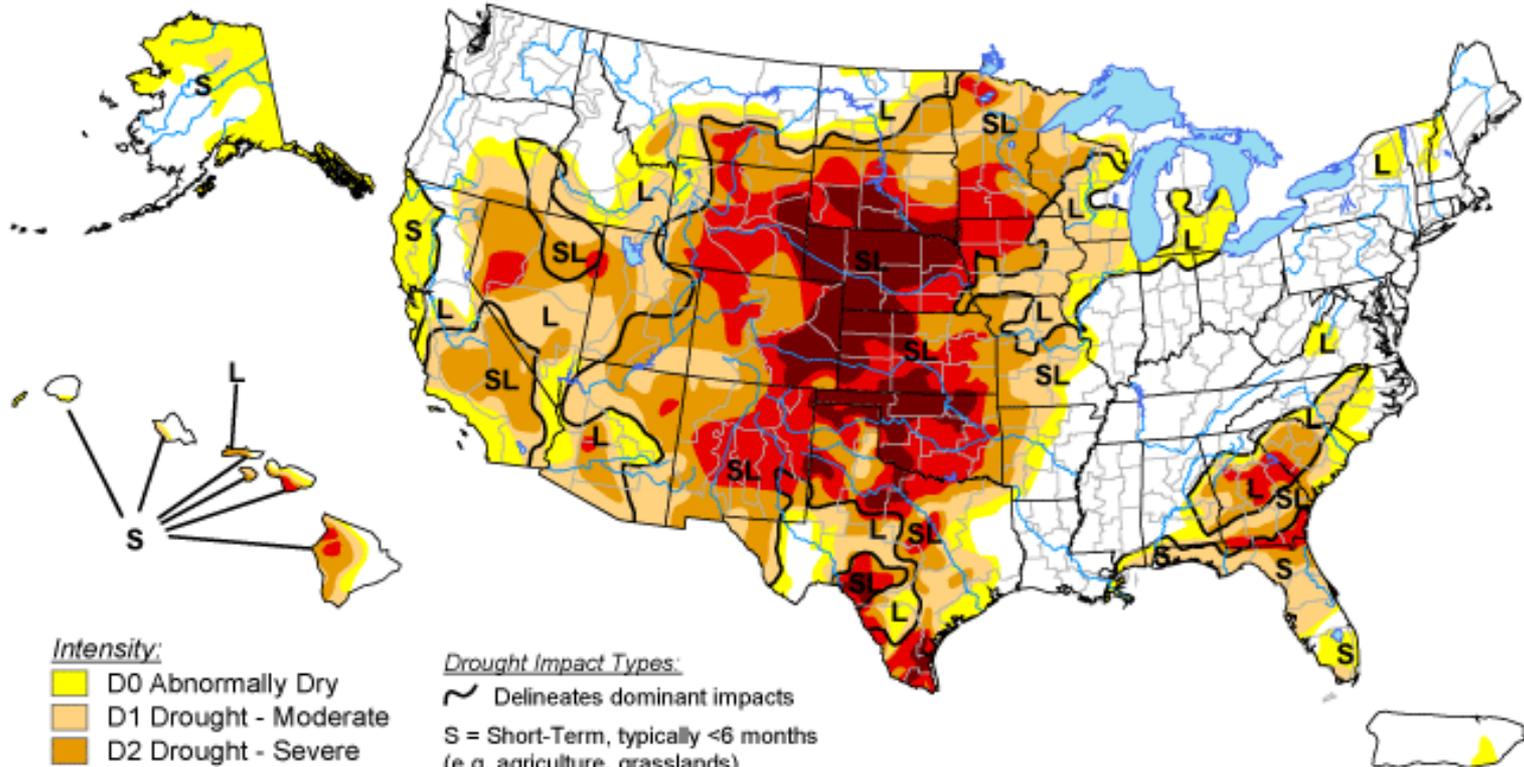
Prepared by: USDA, Natural Resources Conservation Service, National Water and Climate Center, Portland, OR <http://www.wcc.nrcs.usda.gov>



U.S. Climate Highlights

U.S. Drought Monitor

February 19, 2013
Valid 7 a.m. EST



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

- ~ Delineates dominant impacts
- S = Short-Term, typically <6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically >6 months (e.g. hydrology, ecology)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu/>

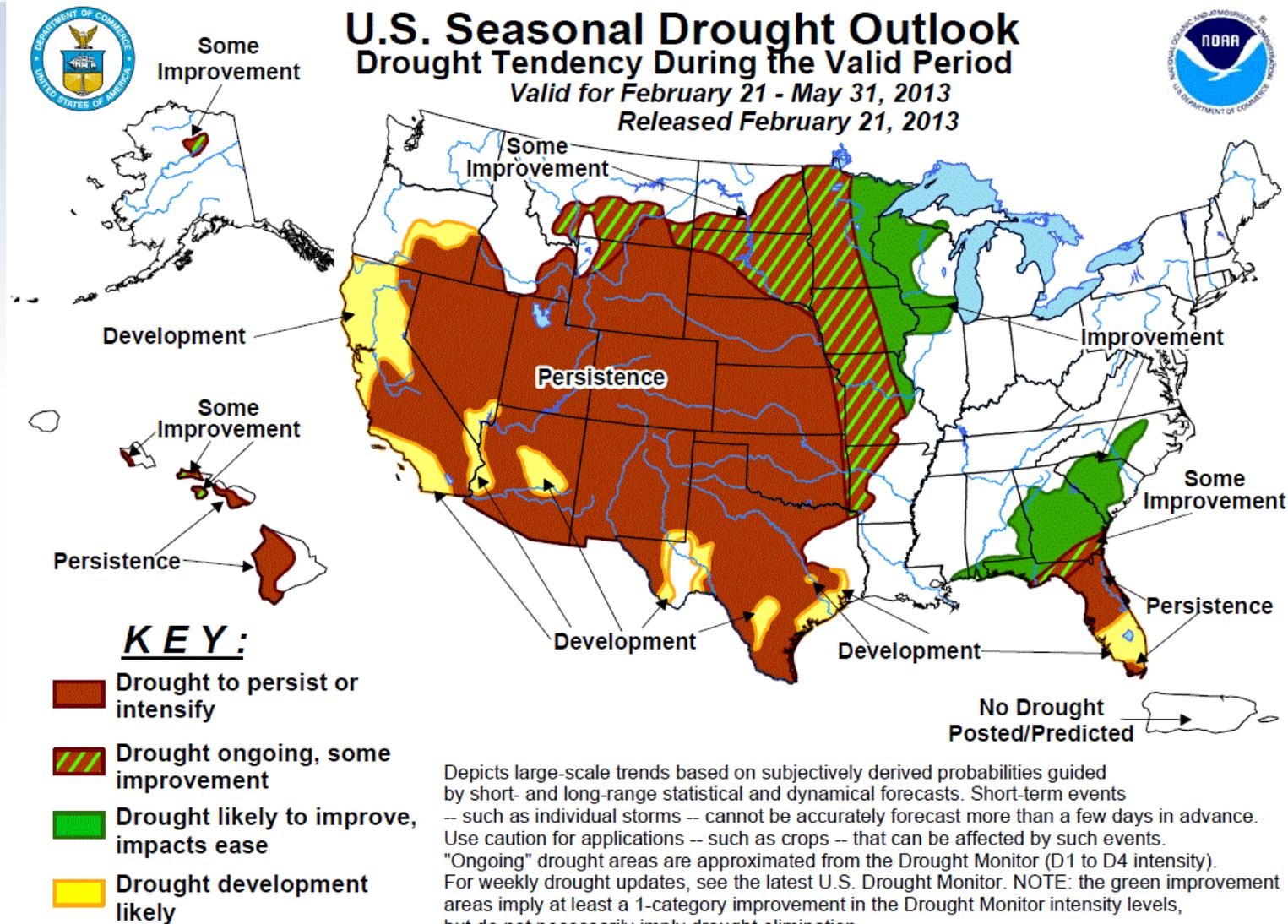


Released Thursday, February 21, 2013

Author: Brian Fuchs, National Drought Mitigation Center

U.S. Drought Outlook

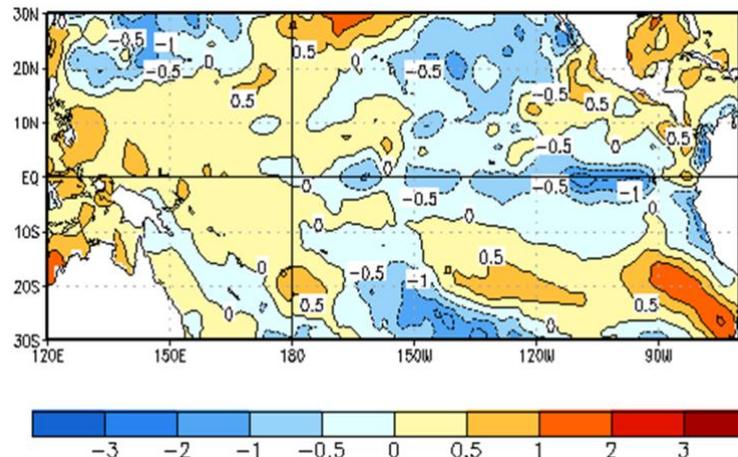
3-month forecast



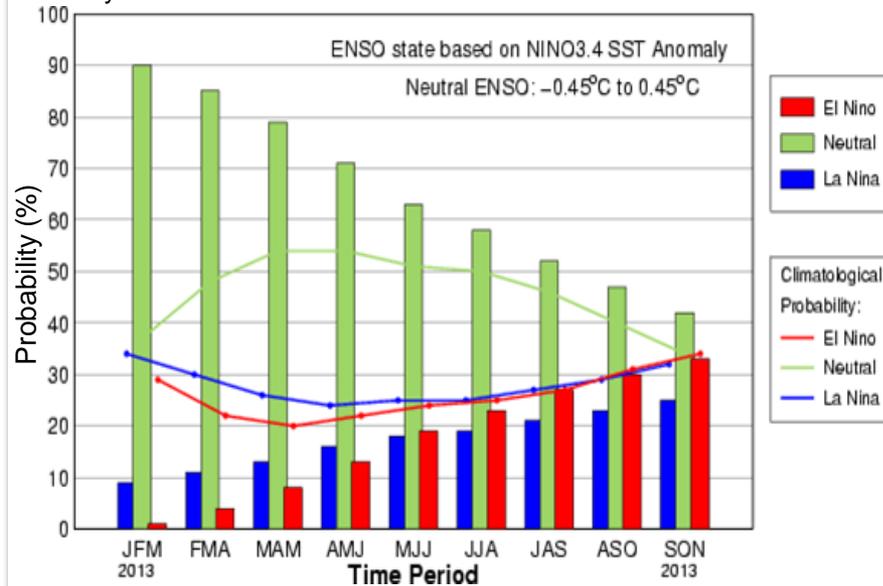
El Niño/La Niña Southern Oscillation (ENSO) Sea Surface Temperature Update

- ENSO-neutral conditions continue
- Equatorial sea surface temps. are slightly above average across the Western Pacific and below average across the Eastern Pacific
- Atmospheric circulation over tropical Pacific is near average
- ENSO-neutral favored through the N. Hemisphere spring 2013

Average SST Anomalies
20 Jan 2013 – 15 Feb 2013

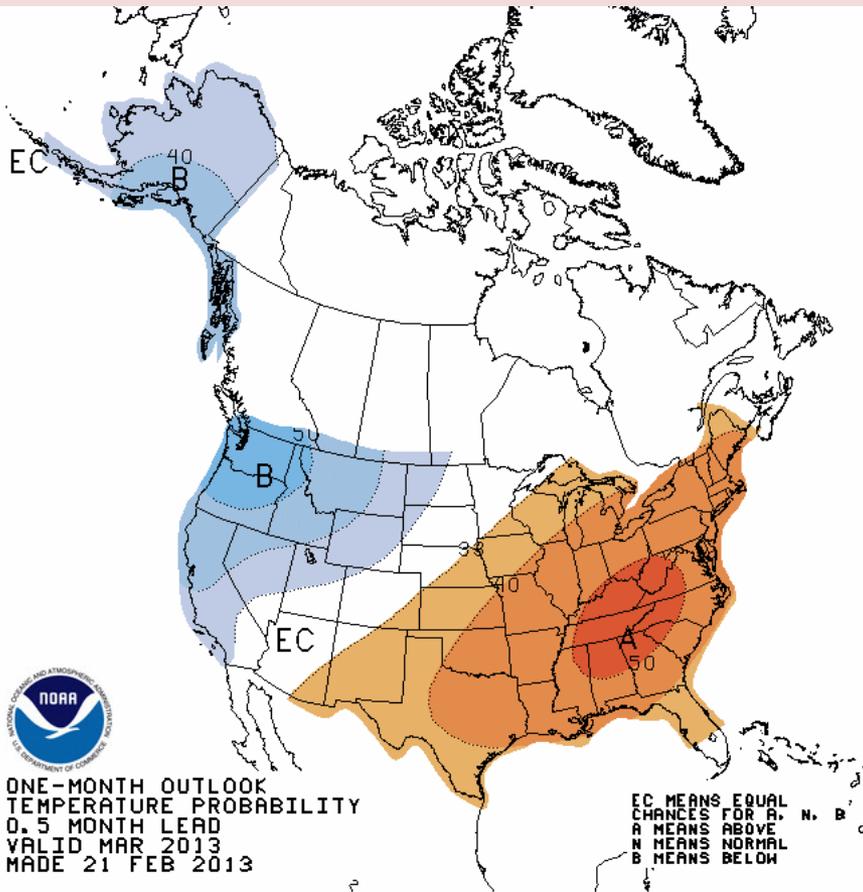


Early-Feb CPC/IRI Consensus Probabilistic ENSO Forecast

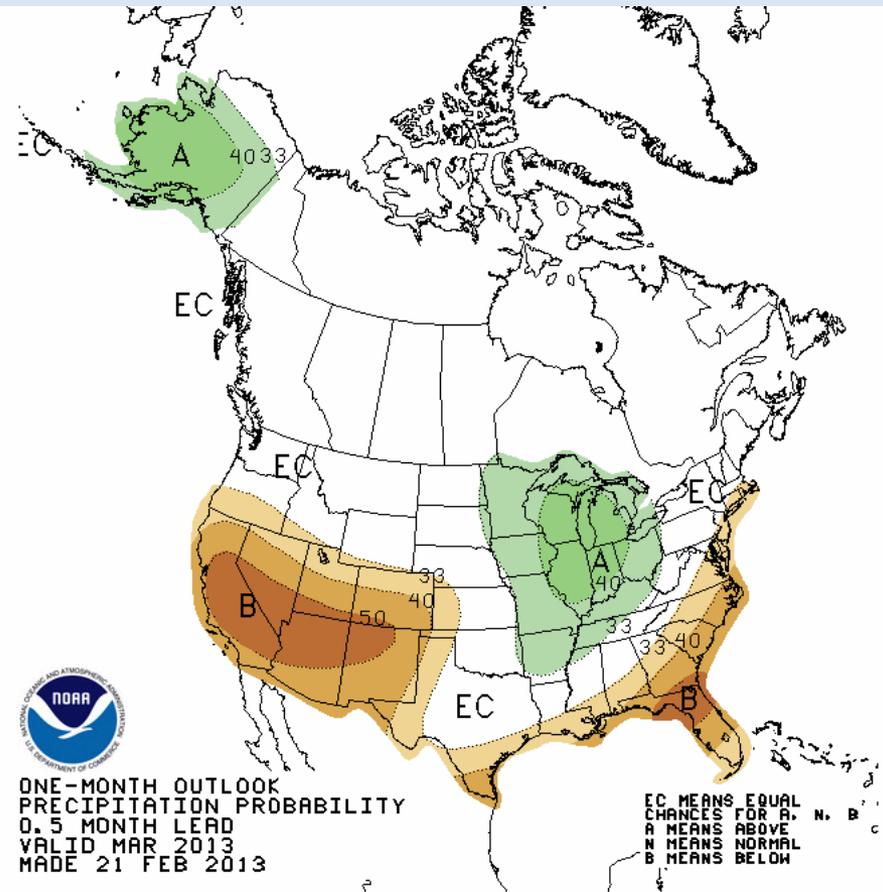


Monthly Forecast (March)

March Average Temperature Probability

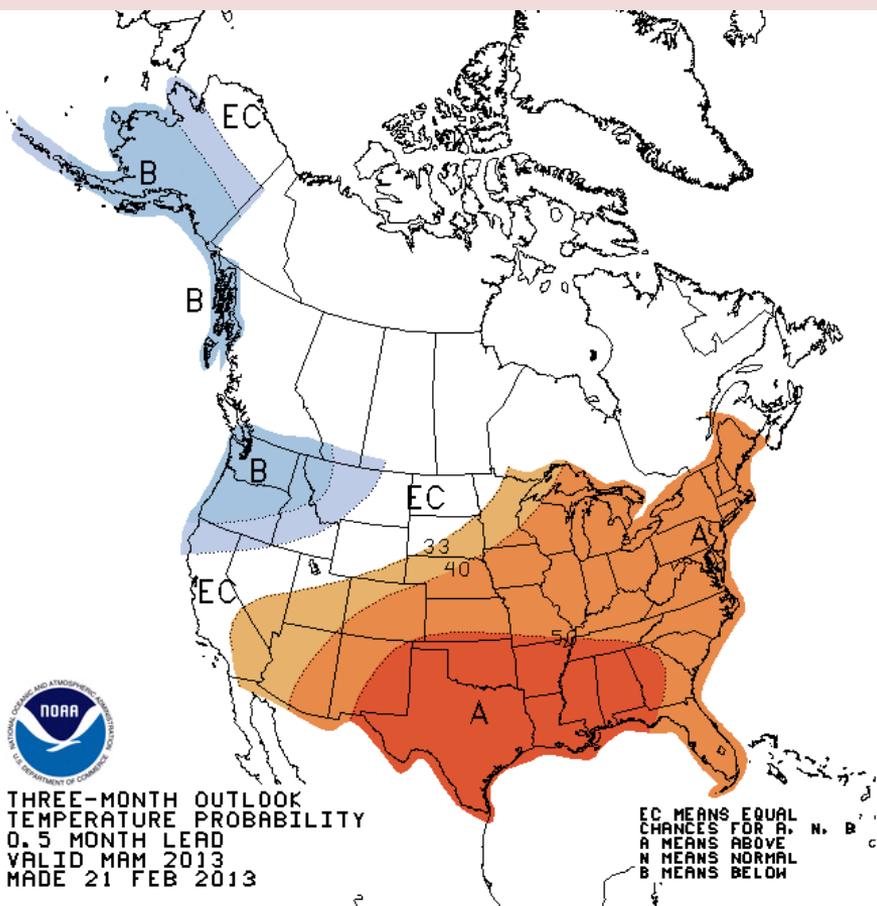


March Total Precipitation Probability

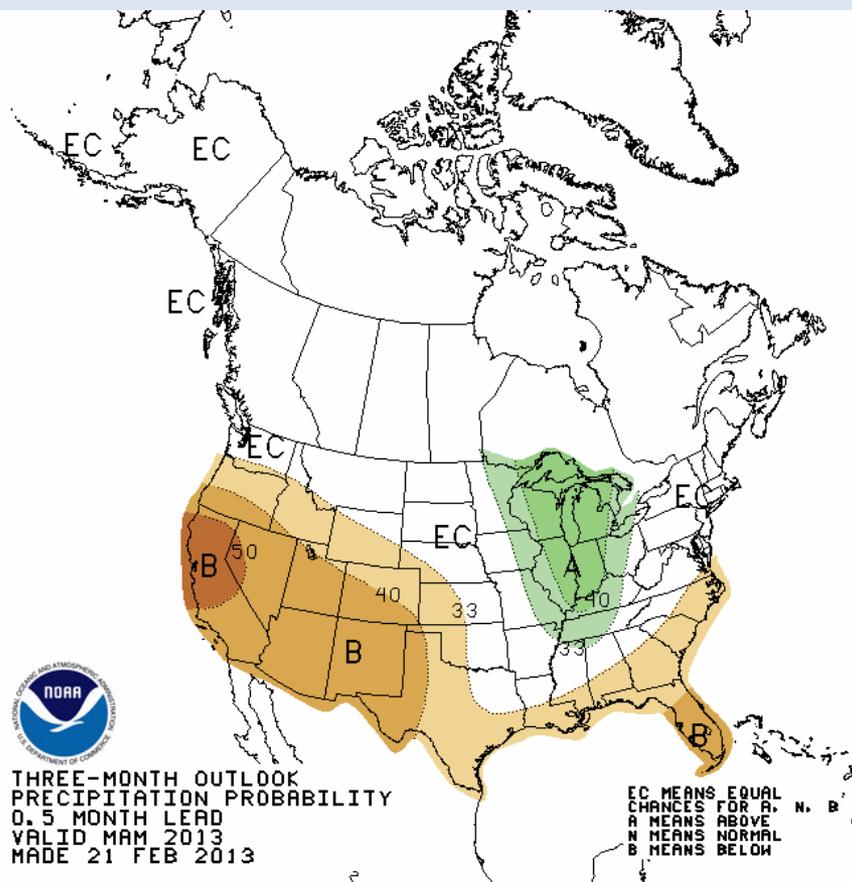


Seasonal Forecast (Mar-Apr-May)

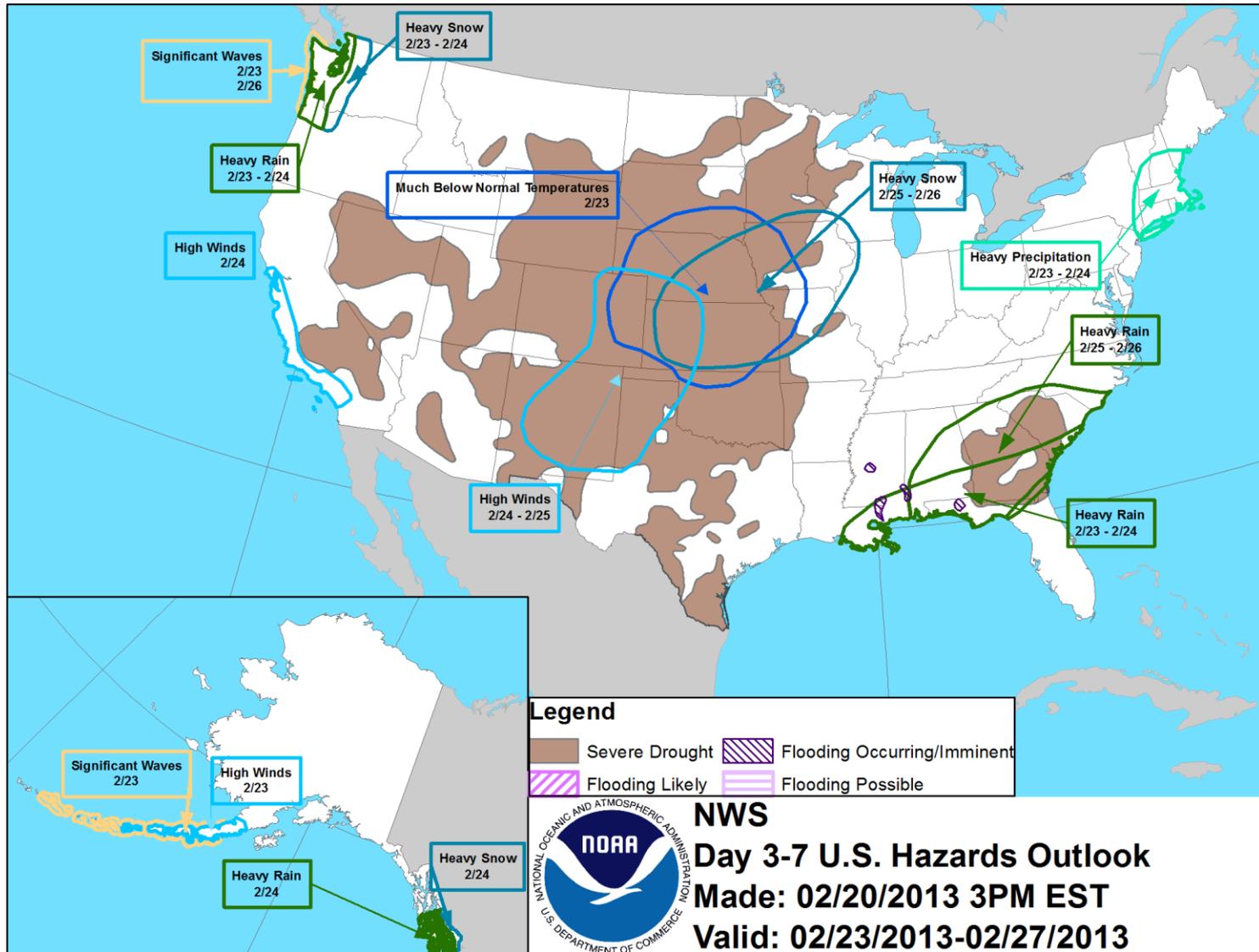
Mar-Apr-May Average Temperature Probability



Mar-Apr-May Total Precipitation Probability



U.S. Hazards Outlook



For More Information



Today's Presentation:

- <http://www.ncdc.noaa.gov/sotc/briefings>

NOAA's National Climatic Data Center: www.ncdc.noaa.gov

- Monthly climate reports (U.S. & Global): www.ncdc.noaa.gov/sotc/

NOAA's Climate Prediction Center: www.cpc.ncep.noaa.gov

U.S. Drought Monitor: <http://droughtmonitor.unl.edu/>

Climate Portal: www.climate.gov

National Snow & Ice Data Center: <http://nsidc.org/arcticseaicenews/>

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