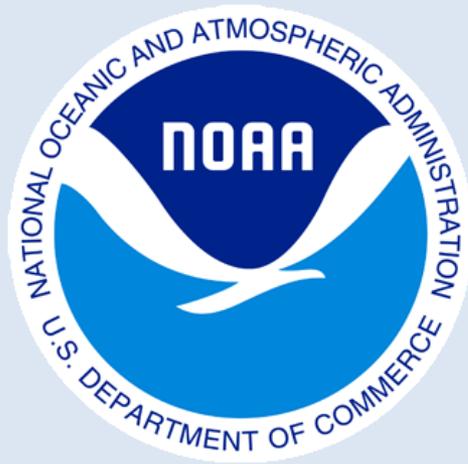


NOAA Climate Science & Services

Monthly Climate Update

A look back at August & Summer, highlights on the Arctic Sea Ice Extent, and a preview for Oct. to Dec.



Jake Crouch

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

Huug van den Dool, PhD

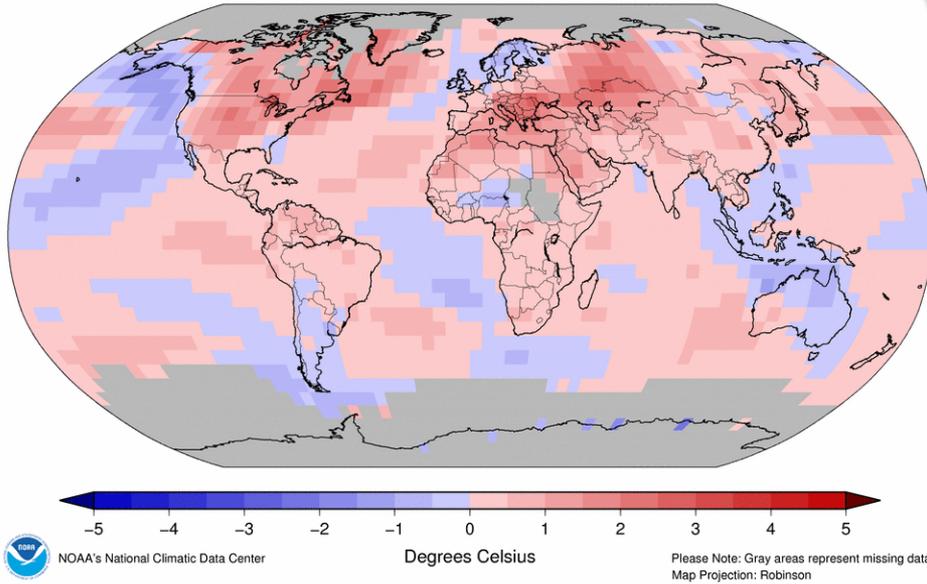
Seasonal Forecaster, Operations Branch
NOAA's Climate Prediction Center

Walt Meier, PhD

Research Scientist
National Snow and Ice Data Center

Global Climate Highlights

Land & Ocean Temperature Anomalies Jun–Aug 2012
(with respect to a 1981–2010 base period)
Data Source: GHCN–M version 3.2.0 & ERSST version 3b



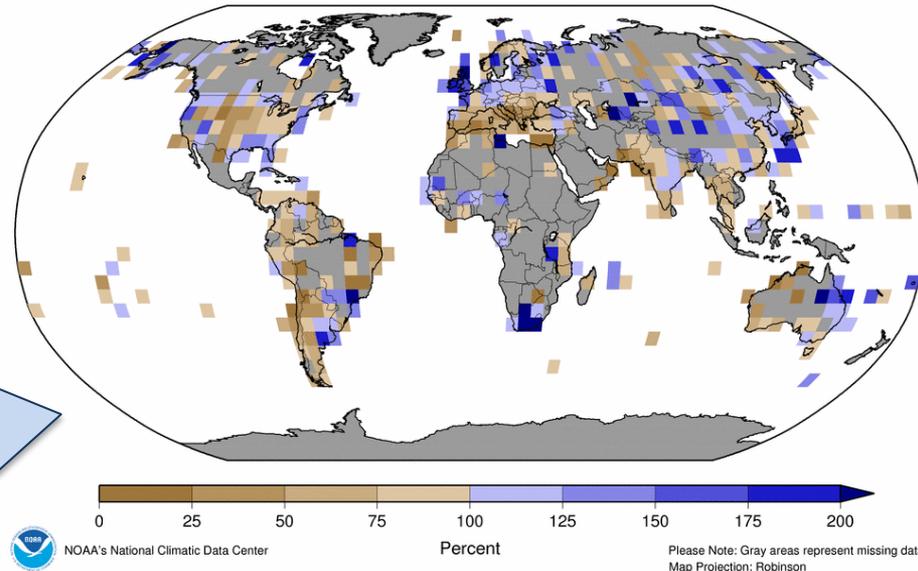
N. Hemisphere Summer 2012 Temperatures:

- 3rd warmest June-Aug globally (+0.64°C/+1.15°F)
- Land: 1st warmest; Ocean: 7th warmest
- N. Hemisphere: 2nd warmest summer
- August: 4th warmest on record (+0.62°C/+1.12°F)

Regional Analysis:

- N. America and E. Europe warmer than average
- Australia cooler than average for winter season
- ENSO-neutral conditions in Pacific

Land-Only Precipitation Percent of Normal Jun–Aug 2012
(with respect to a 1961–1990 base period)
Data Source: GHCN–M version 2



June-Aug 2012 Precipitation:

- India experienced 88 percent of average monsoonal precipitation, leading to drought.
- The U.K. had its second wettest summer.
- Typhoons Saola, Damrey, and Haikui hit China in Aug
- Bolaven strongest typhoon to hit Korea in years

Dry: Central U.S. Southern Europe, western Australia

Wet: U.K., South Africa, Queensland Australia

Global Climate Highlights

Global Temperature Rankings: January-August 2012

January-August

- Tied 2006 as the 9th warmest Jan-Aug globally (+0.56°C/+1.01°F)
- Land: 6st warmest
- Ocean: 11th warmest
- N. Hemisphere: 6th warmest
- S. Hemisphere: 12th warmest
- First year-to-date period of 2012 to rank among the ten warmest

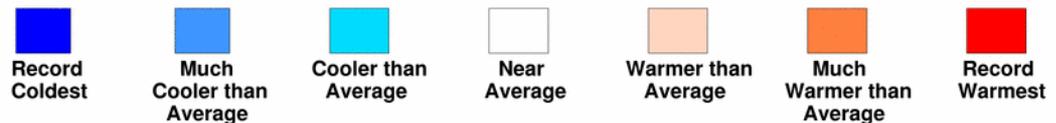
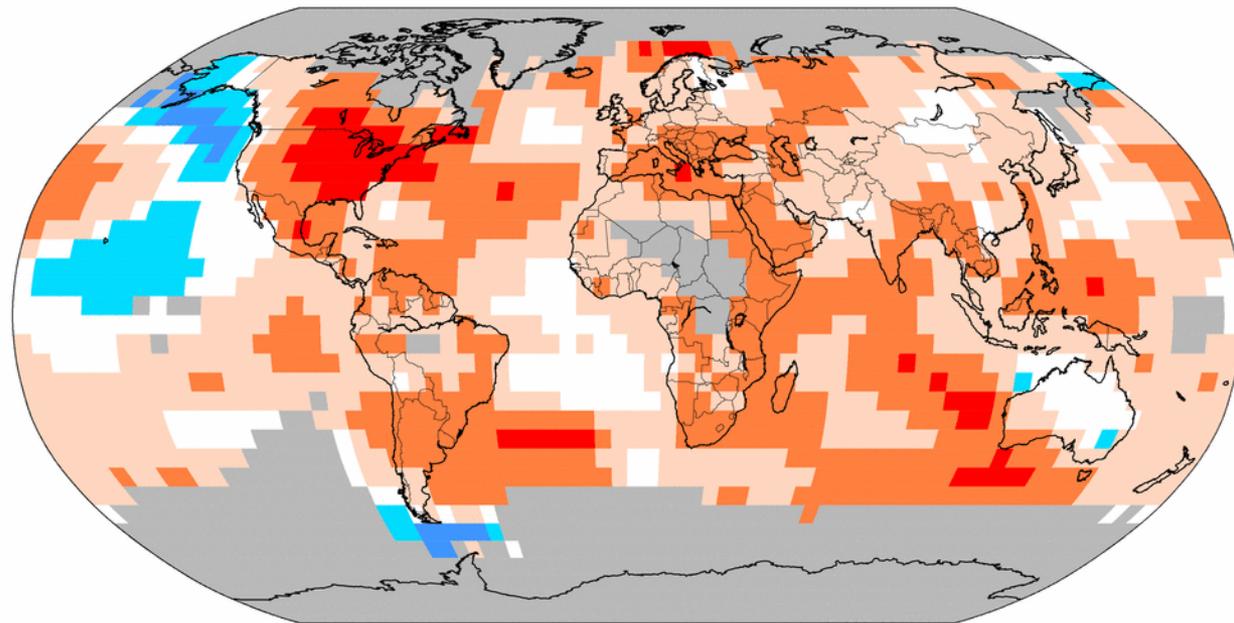
New Global Temperature Maps

- Shows relative temperature rankings around the globe
- Meant for use in conjunction with our temperature departure maps
- Provides additional historical information
- For Jan-Aug 2012, several regions of globe were record warm

Land & Ocean Temperature Percentiles Jan–Aug 2012

NOAA's National Climatic Data Center

Data Source: GHCN–M version 3.2.0 & ERSST version 3b



U.S. Climate Highlights

Nationally: Summer 3rd warmest on record – 74.4°F

Summer: National temperatures 2.3°F warmer than average

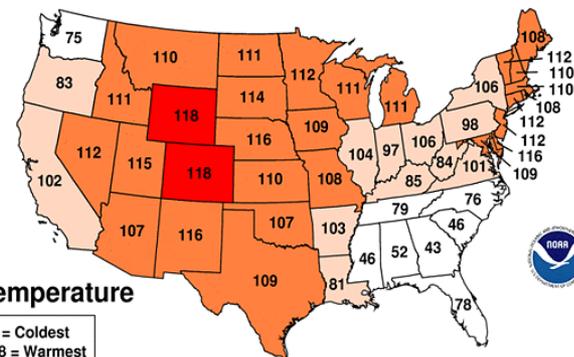
- Only summers of 2011 (74.5°F) and 1936 (74.6°F) warmer
- August was 16th warmest on record, with temperatures 1.6°F above average

Year-to-Date: First eight months of 2012 record warm

- 33 states record warm for January-August. 12 states top ten warm
- Only Washington state was near average for the period
- If Sep-Dec near-average, 2012 will be warmest year on record

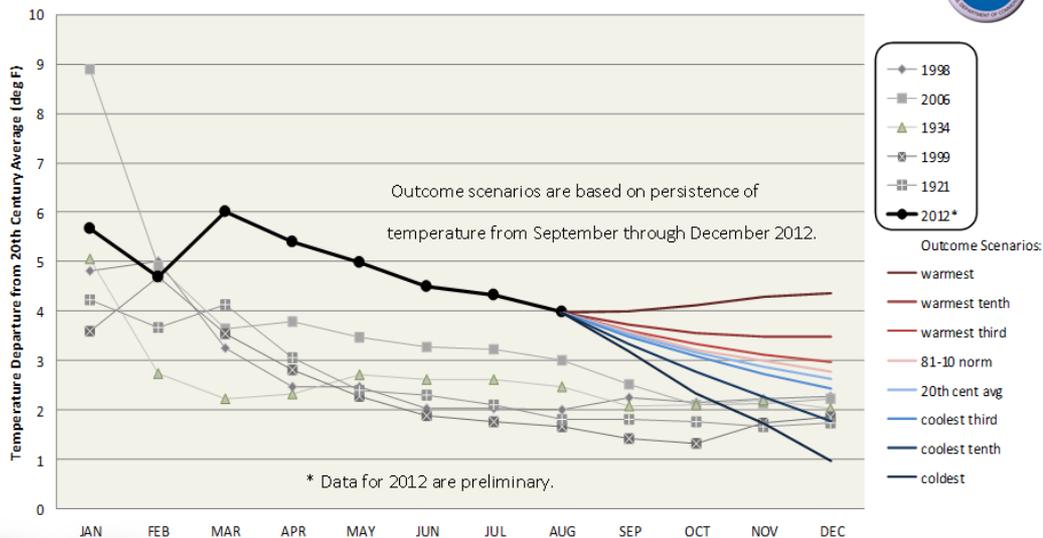
June-August 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



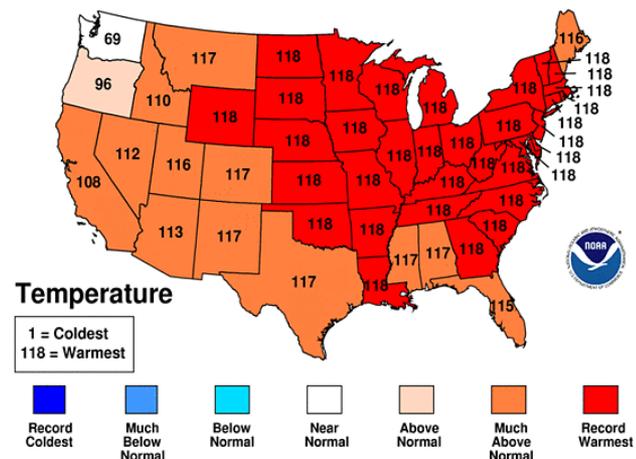
Year-to-Date Temperature Anomalies for Contiguous U.S. - 5 Warmest Years with 2012 Outcomes Based on Historical Values

NOAA's National Climatic Data Center



January-August 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



U.S. Climate Highlights

Nationally: 18th Driest Summer / 14th Driest Year-to-Date

Isaac provides some drought relief. Wildfires char over 7 million acres.

Summer

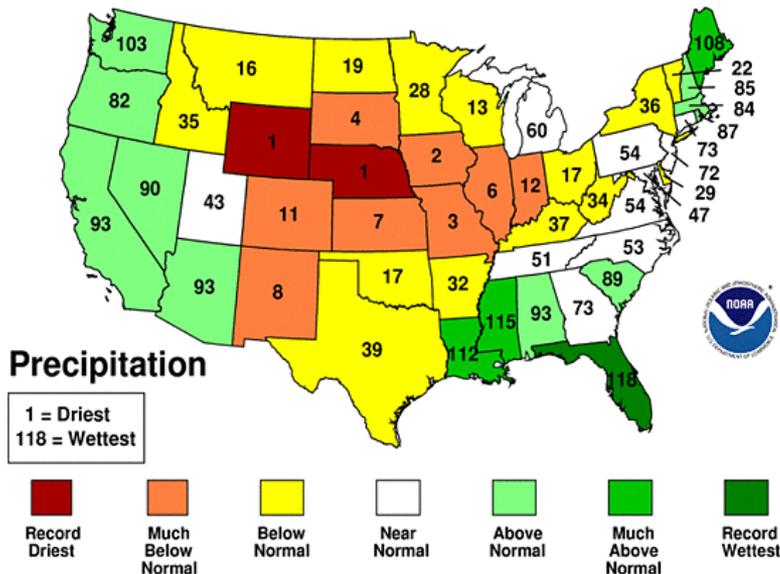
- Wet in West, Southeast, and Northeast. Florida record wet partially due to Debby and Isaac.
- Dry in Plains, Southwest, and Midwest.

Year-to-Date

- Wet in Northwest, Upper Midwest, Gulf Coast.
- Dry in Rockies, Plains, Midwest, and Mid-Atlantic.

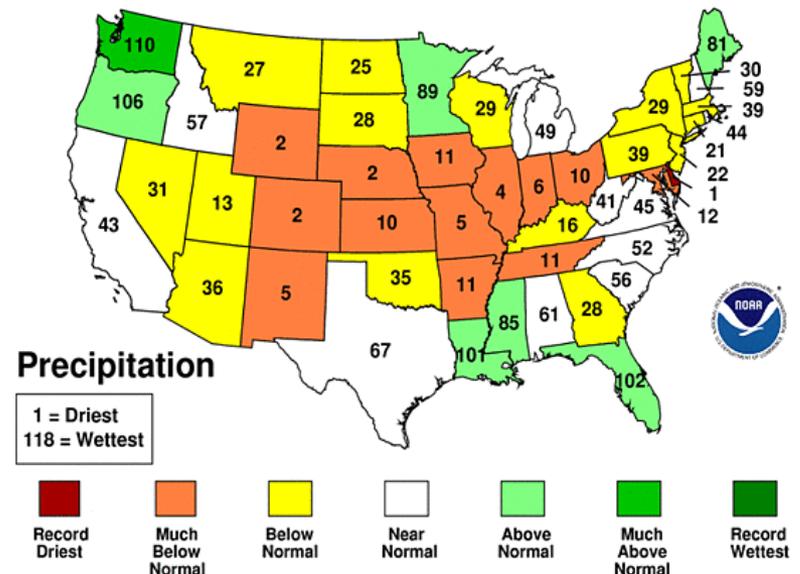
June-August 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA



January-August 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA

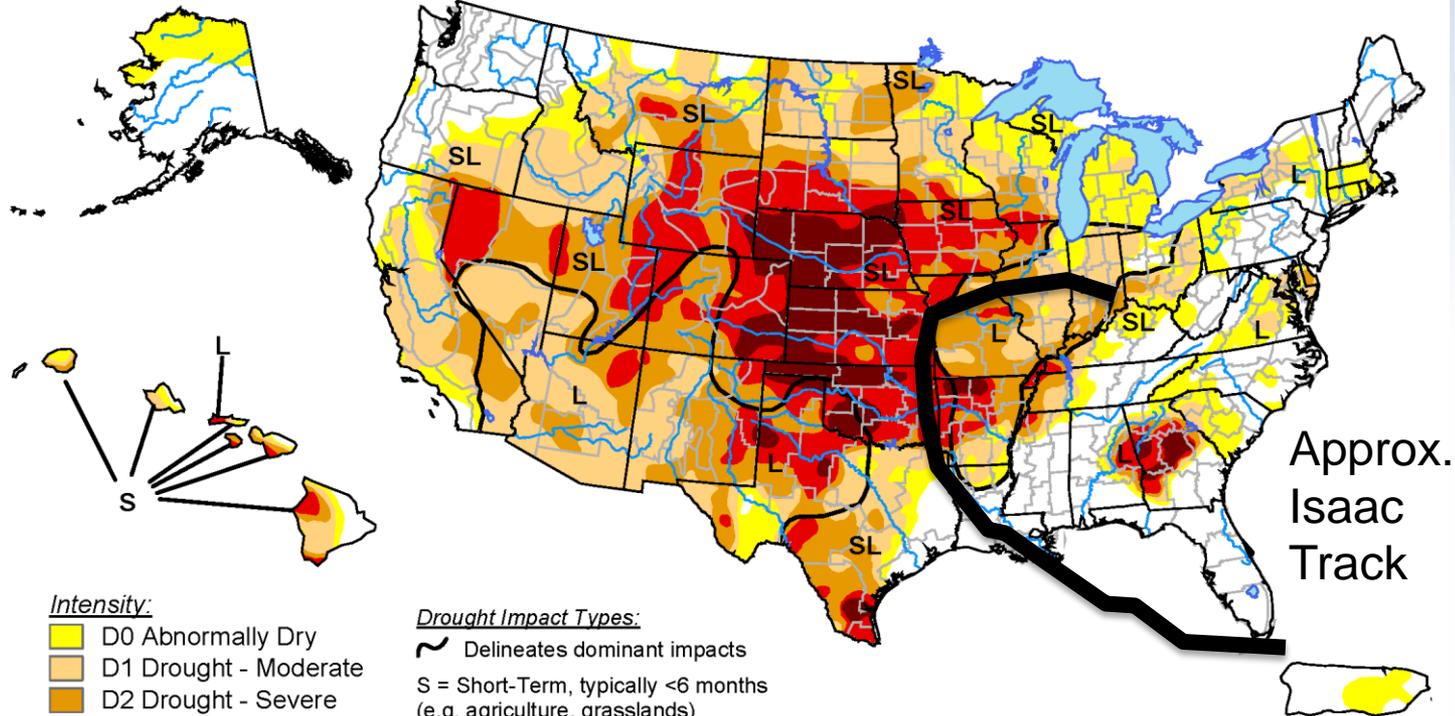


Drought

U.S. Drought Monitor

September 18, 2012

Valid 7 a.m. EDT



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.

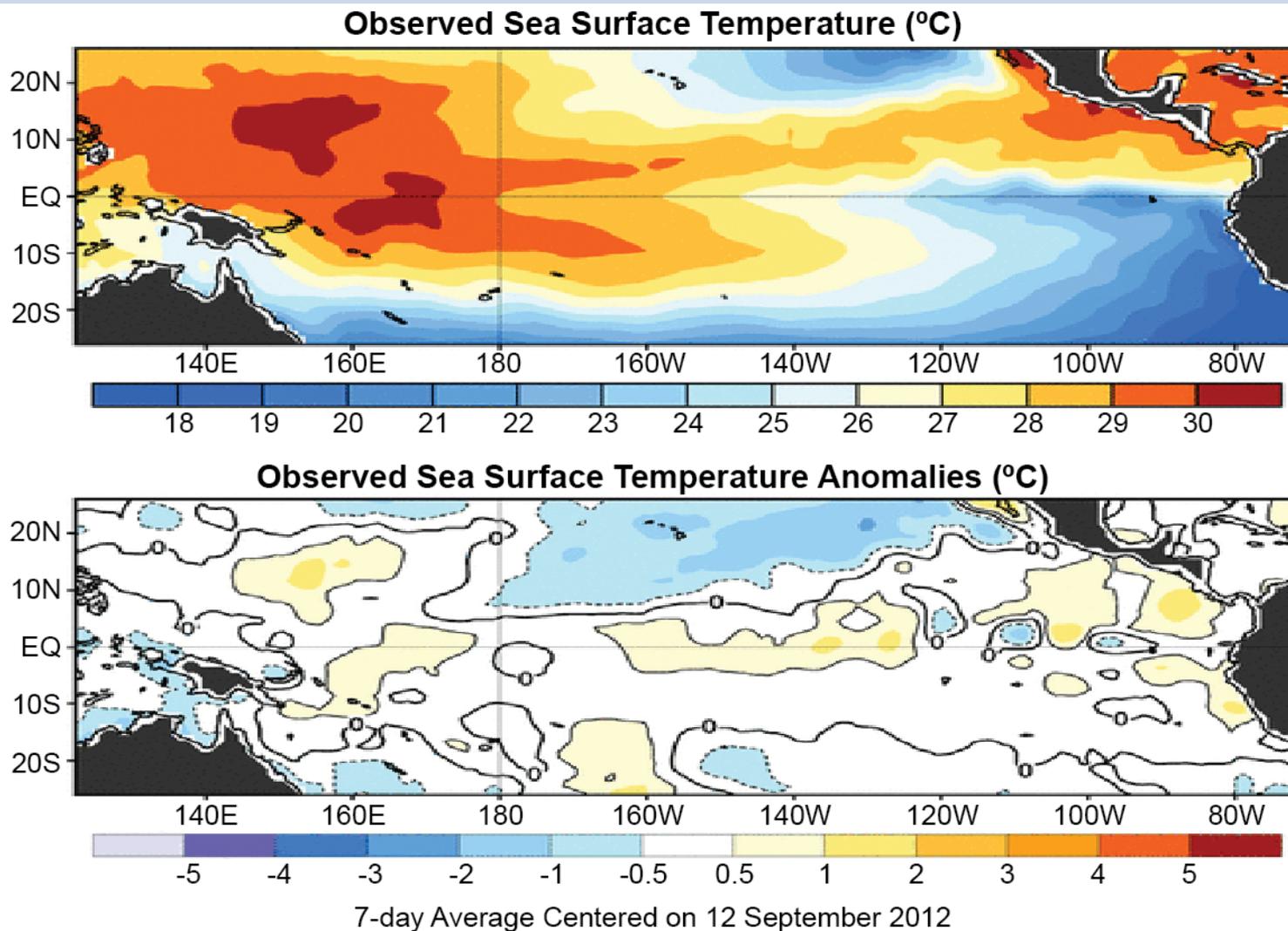
<http://droughtmonitor.unl.edu/>



Released Thursday, September 20, 2012

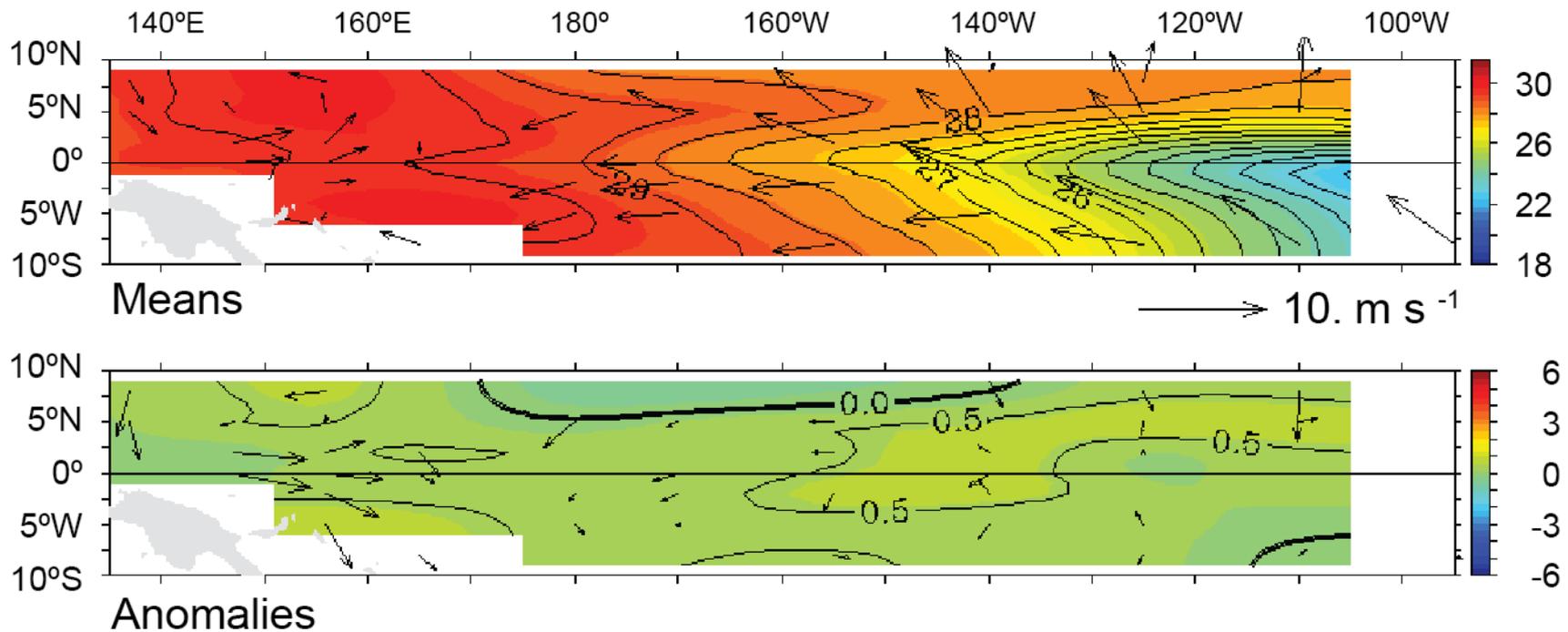
Author: David Simeral, Western Regional Climate Center

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



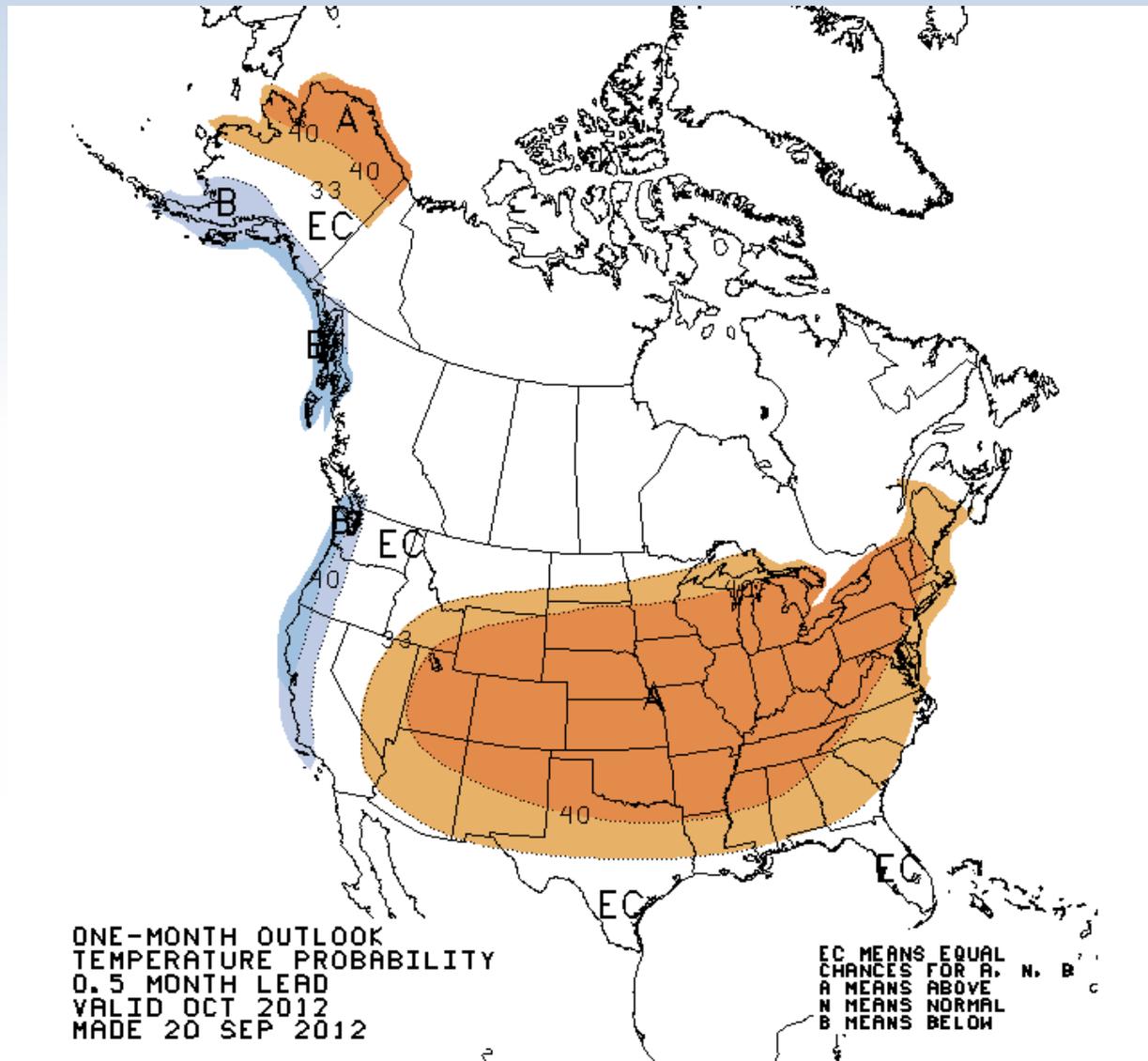
El Niño/La Niña Southern Oscillation (ENSO)

TAO/TRITON SST (°C) and Winds (M s⁻¹)

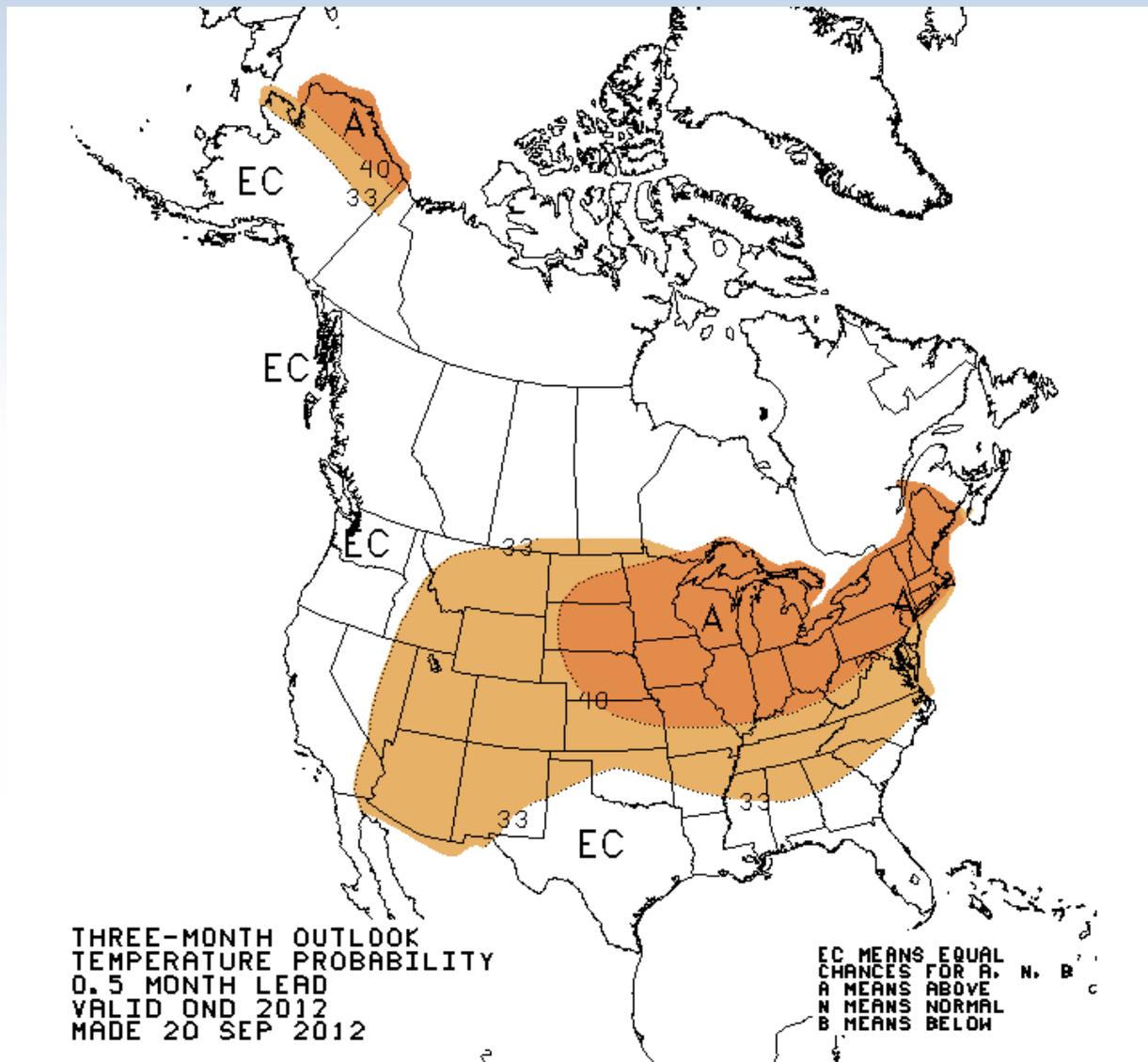


Five-Day Mean Ending on September 18, 2012

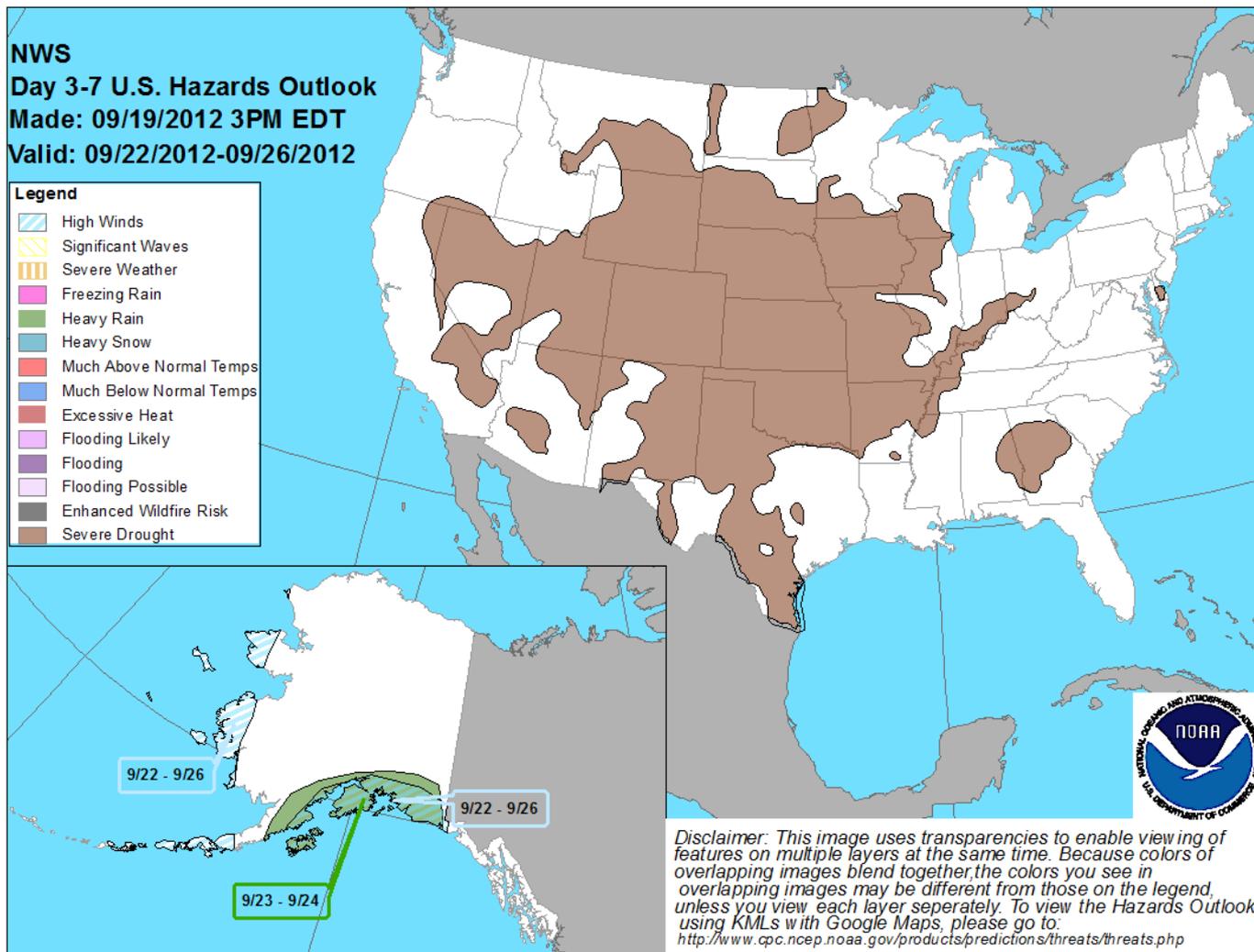
1-Month Temperature Forecast



3-Month Temperature Forecast

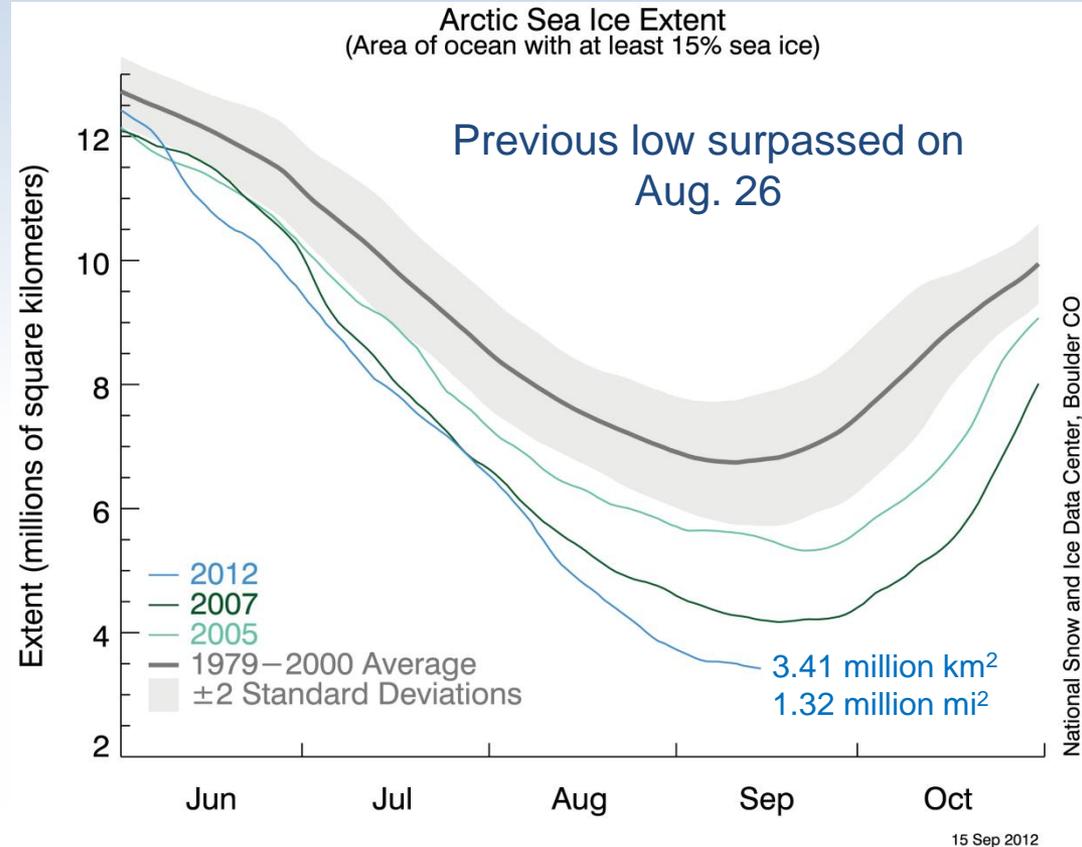
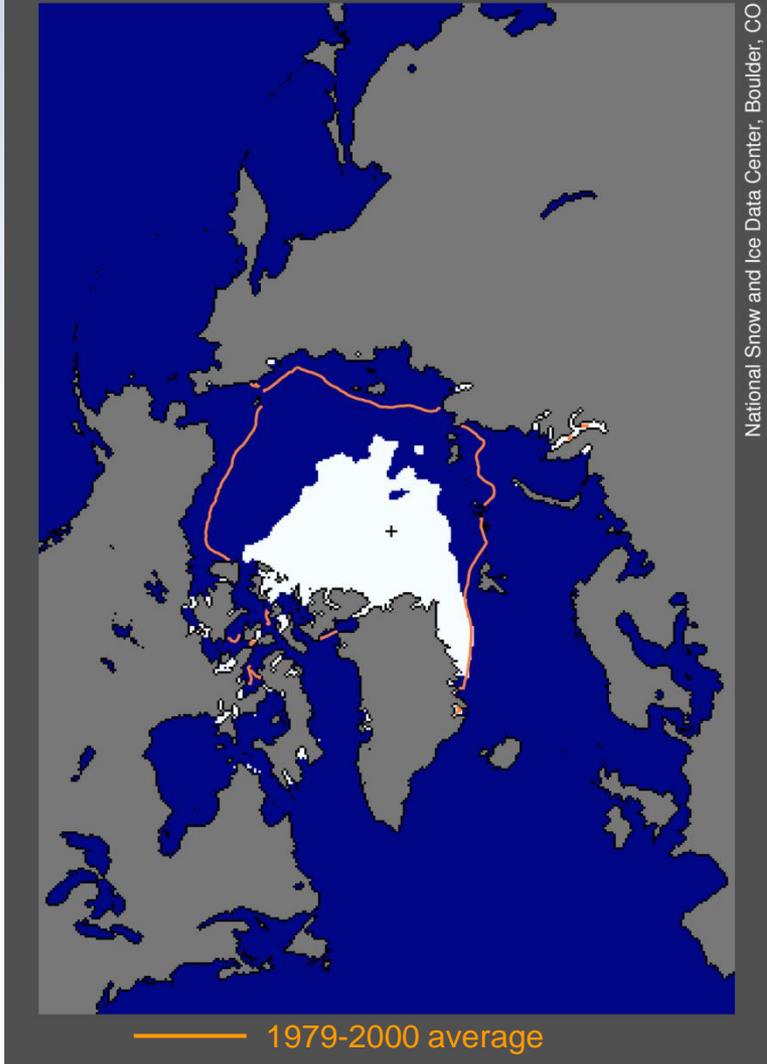


Latest U.S. Hazards Outlook for Days 3-7



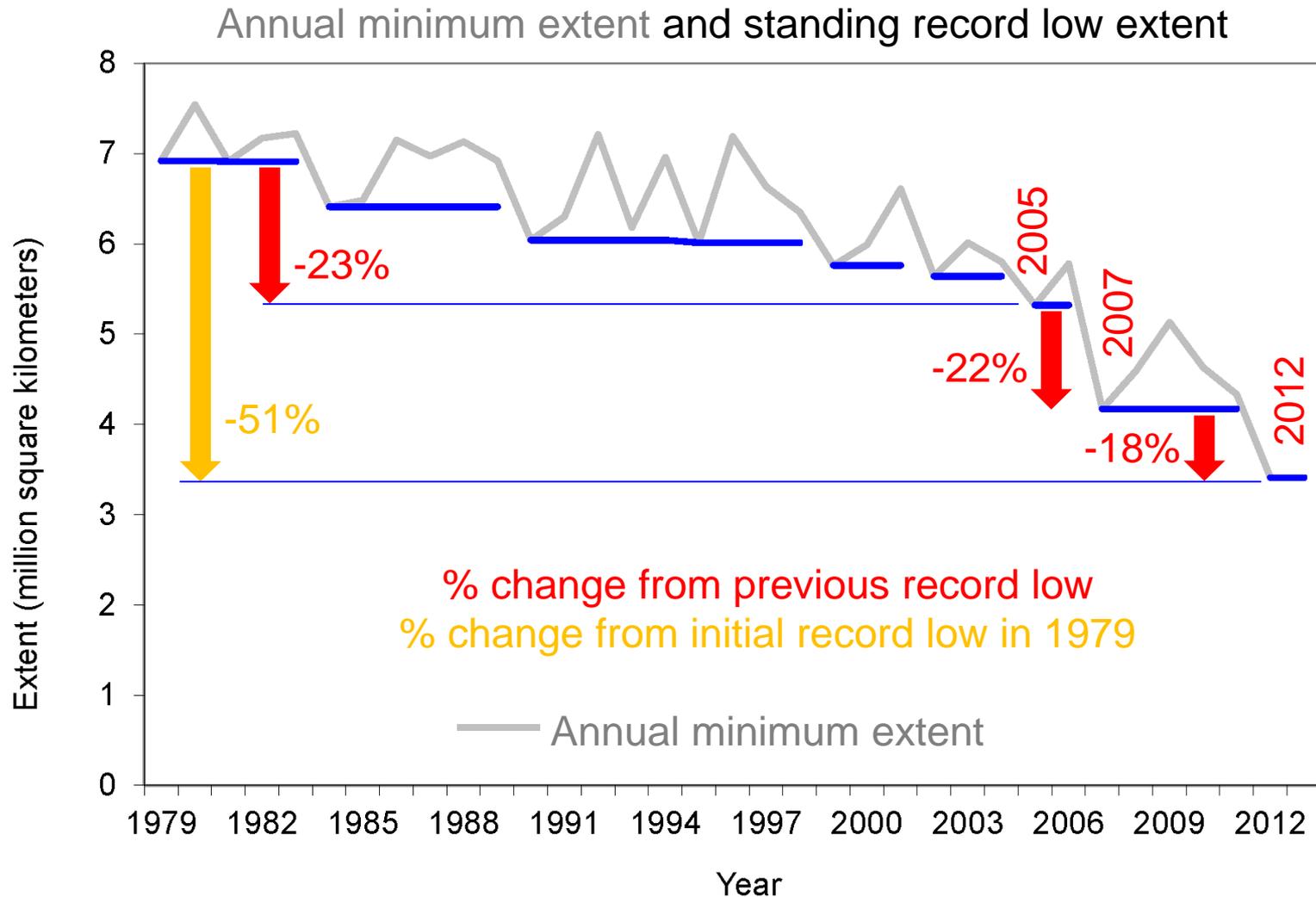
Arctic Sea Ice Minimum Extent 2012

Sea Ice Extent
09/16/2012

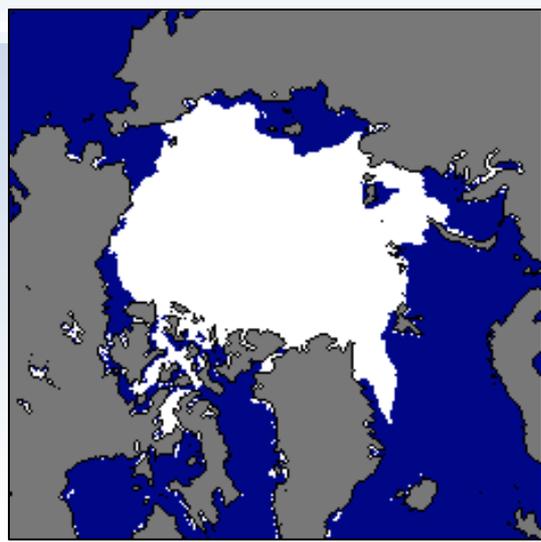


Arctic Sea Ice News and Analysis:
<http://nsidc.org/arcticseaicenews/>
 Imagery from NSIDC Sea Ice Index:
http://nsidc.org/data/seaice_index/

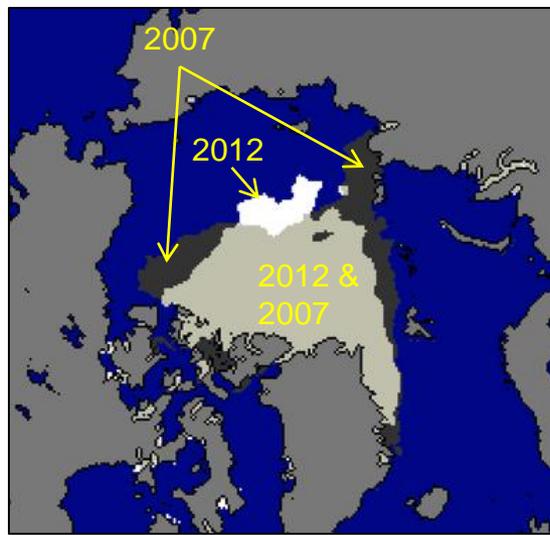
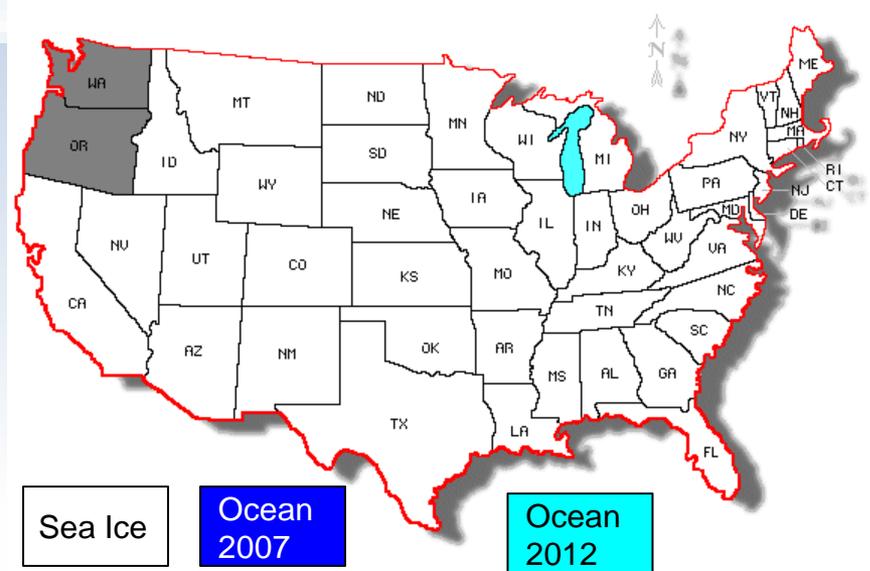
Change in Minimum Extent



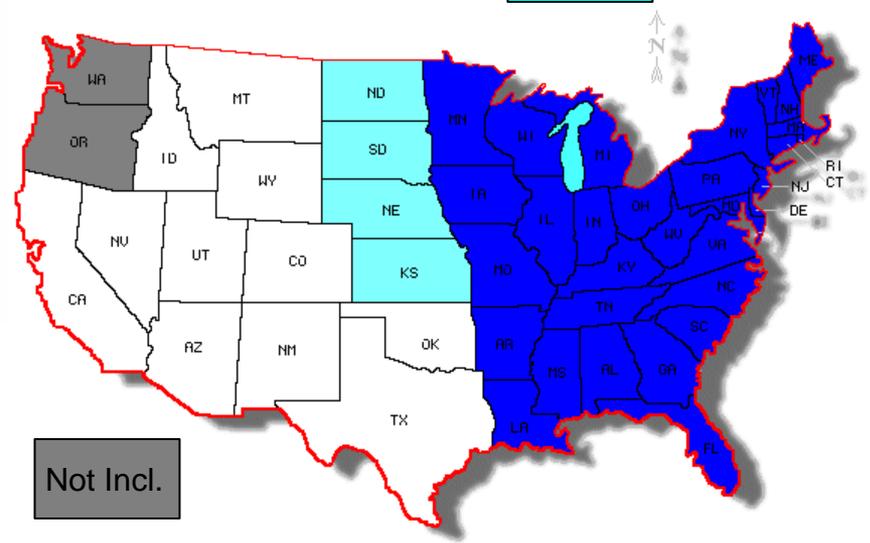
Relative Change in Extent, 1980 vs. 2012



1980

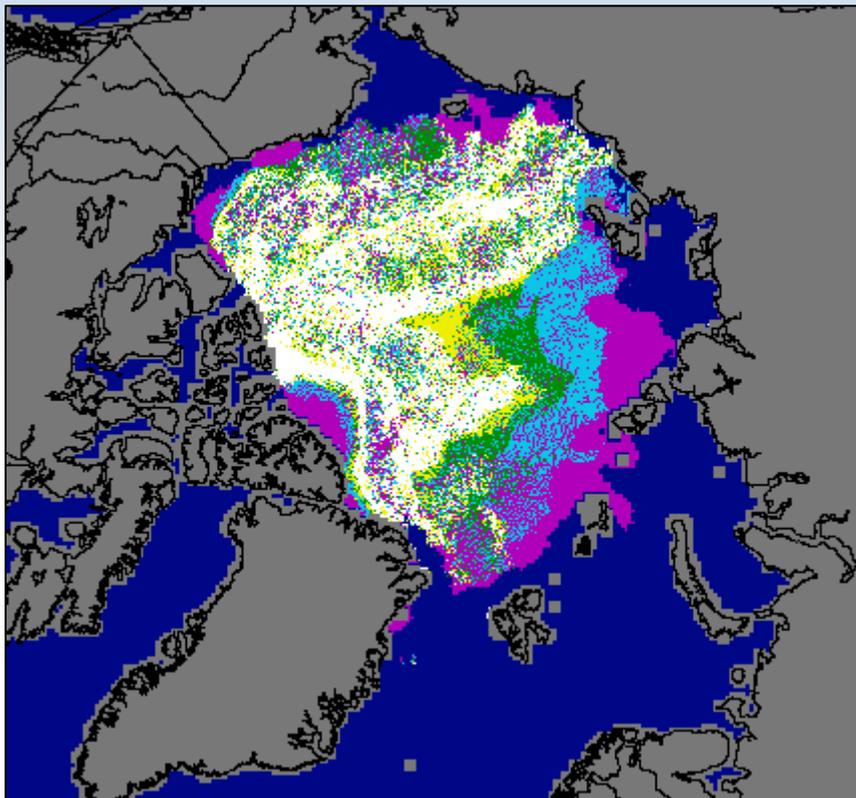


2007
2012

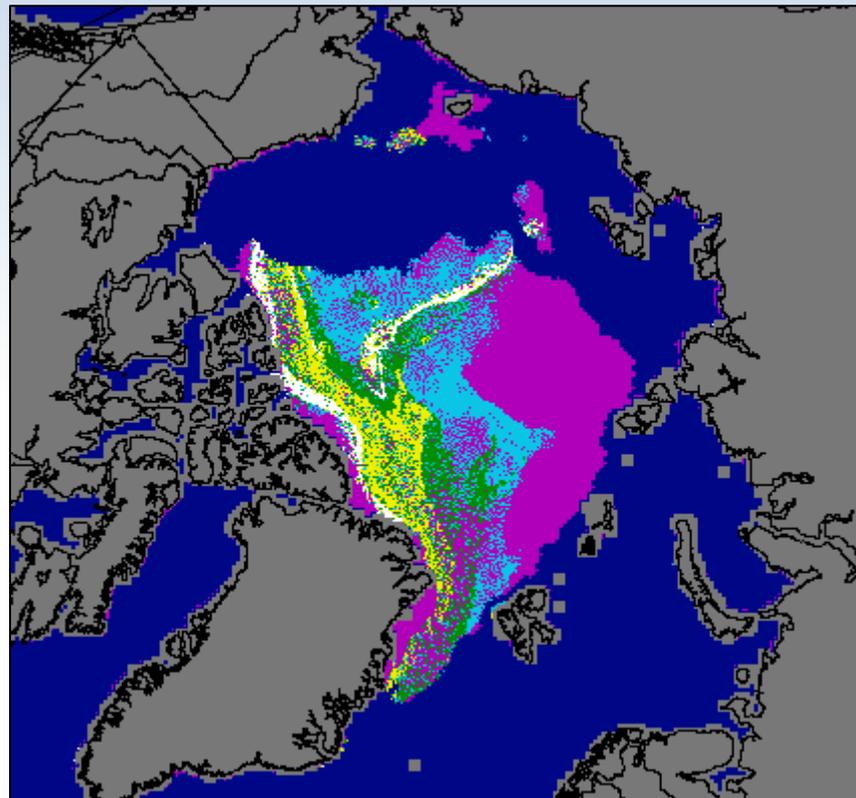


Arctic Sea Ice is Younger, Thinner

August 1985



August 2012



First-year ice (<1 year old)

Second-year ice (1-2 years old)

Third-year ice (2-3 years old)

Fourth-year ice (3-4 years old)

5+-year ice (5+ years old)

From J. Maslanik, M. Tschudi, Univ. Colorado

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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