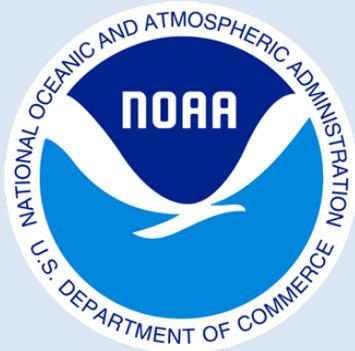


NOAA Climate Science & Services

Monthly Climate Update



Deke Arndt

Chief, Monitoring Branch, NOAA's National Centers for Environmental Information

Russell Martin

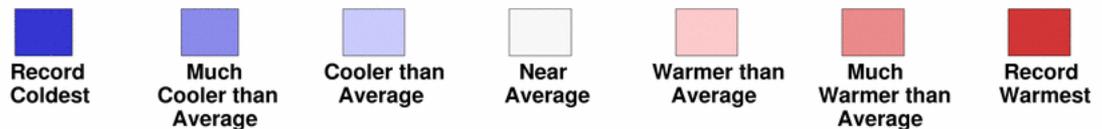
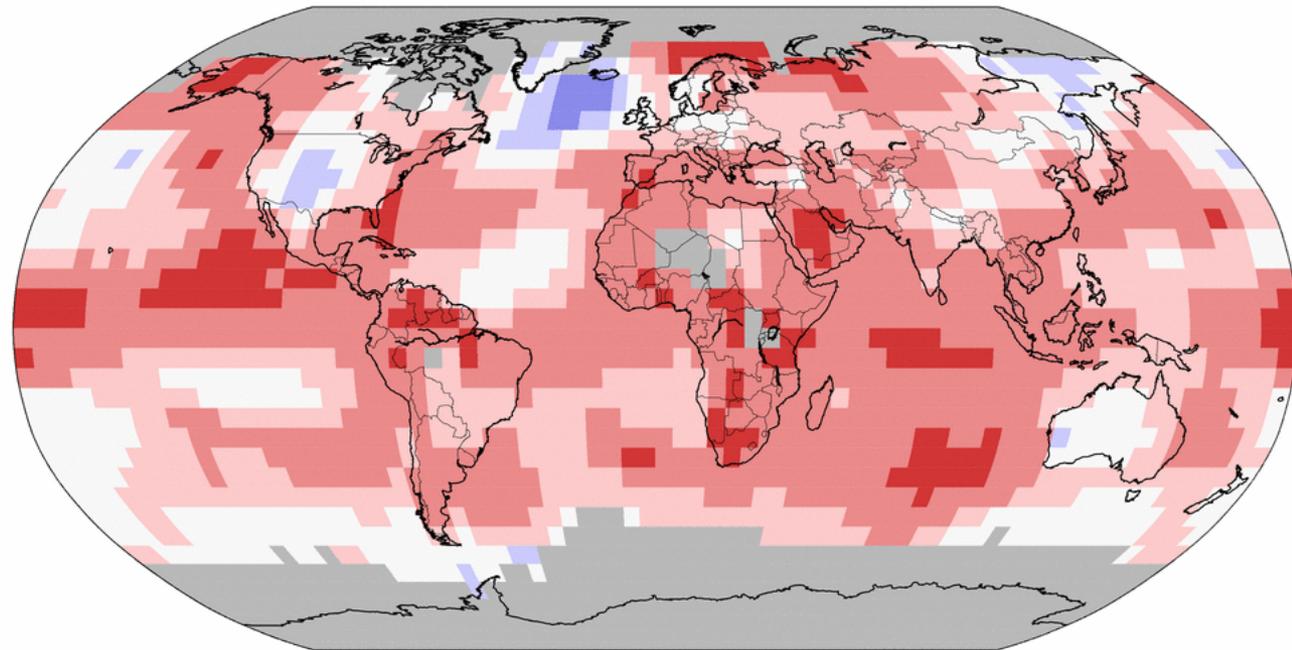
Drought Monitor Focal Point, Northeast Regional Climate Center

Steve Baxter

Seasonal Forecaster, Operational Prediction Branch, NOAA's Climate Prediction Center

Global Temperature: May 2015

Land and Ocean Temperature Percentiles May 2015



Sun Jun 14 19:50:58 EDT 2015

The global temperature record dates to 1880 (136 years)

- May +1.57°F warmer than 20th century average
 - warmest May on record
 - 4th largest departure of any *month* on record
- Land: +2.30°F
 - warmest May (tied)
- Ocean: +1.30°F
 - warmest May
- All 3 components (land, ocean, global) were record warm for the season (Mar-May)

Global Temperature: Jan-May 2015

January-May 2015 was record warm for the year-to-date

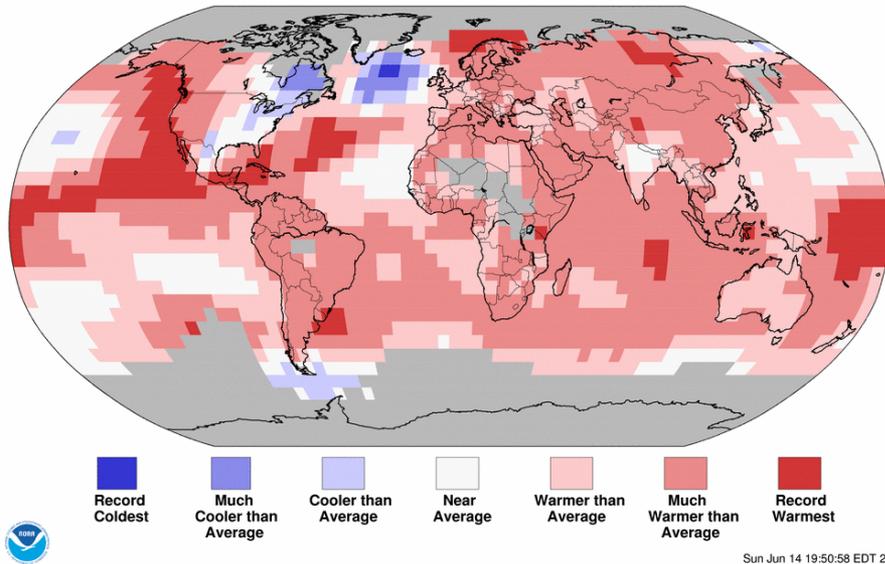
Global Temperature (record warm): +1.53°F

Land Temperature (record warm): +2.56°F

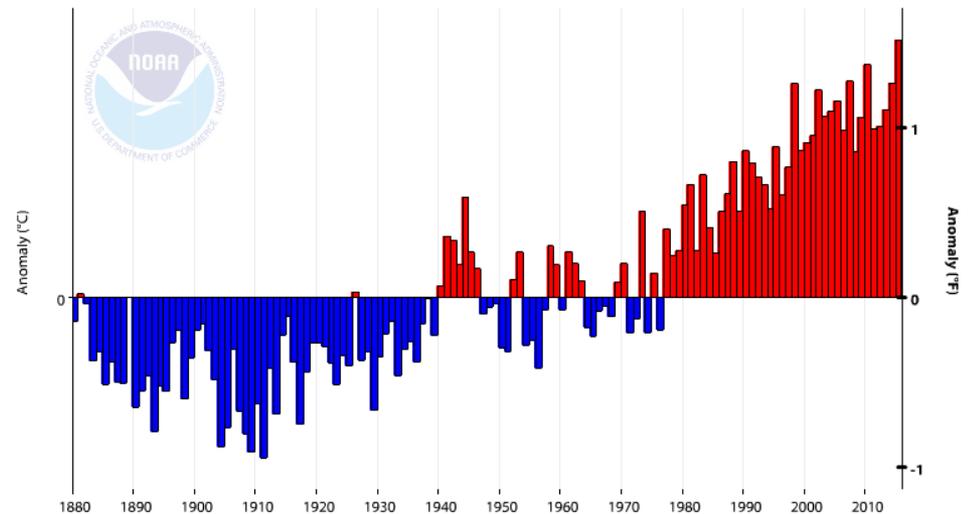
Ocean Temperature (record warm*): +1.13°F

Land and Ocean Temperature Percentiles January-May 2015

Data Source: GHCN-M version 3.3.0 & ERSST version 4.0.0



Global Land and Ocean Temperature Departure from 20th Century Average, January-May



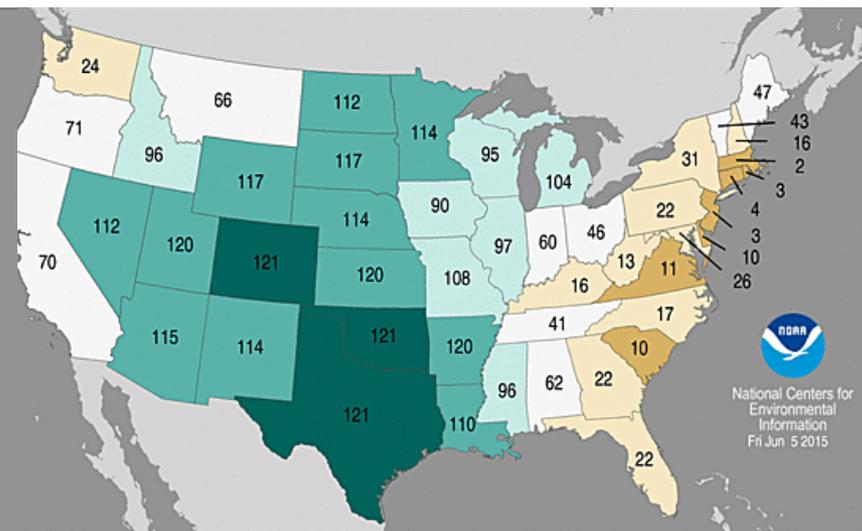
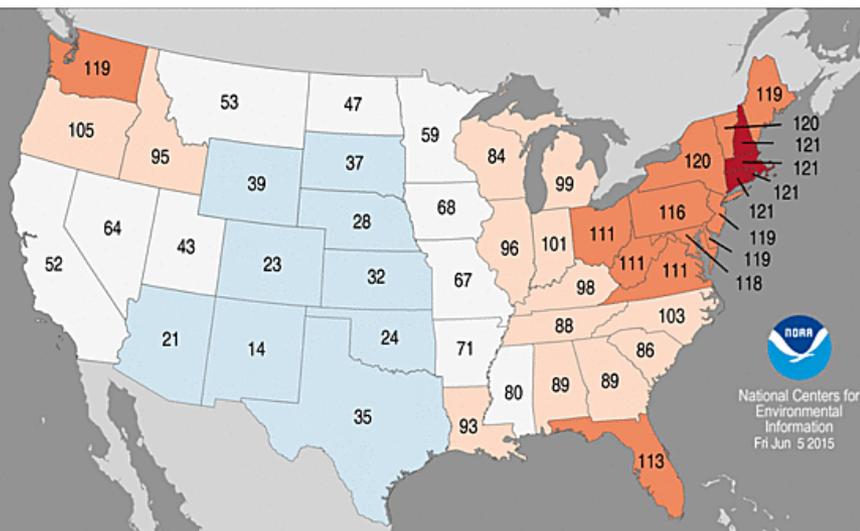
Contiguous U.S. May 2015

Temperature: 60.8°F, +0.6°F, 48th warmest May (“near average”)

Precipitation: 4.36”, +1.45”, wettest May and month on record

Statewide Temperature Ranks, May 2015
Period: 1895-2015 (121 years)

Statewide Precipitation Ranks, May 2015
Period: 1895-2015 (121 years)



National Centers for Environmental Information
Fri Jun 5 2015

National Centers for Environmental Information
Fri Jun 5 2015

- Cool southern & central Plains & Rockies.
- Warm eastern ½ of US; Northeast warm
 - CT, MA, NH, RI warmest May; 11 states top five
- Alaska: warmest May in 91 years of records

- CO, OK, TX – wettest Mays on record.
 - OK, TX: wettest *month* on record. CO: 2nd wettest; WY: 5th wettest; KS: tie-7th wettest
- Generally dry to very dry in the East and along the Pacific coast
- Alaska snow cover extent record small for May

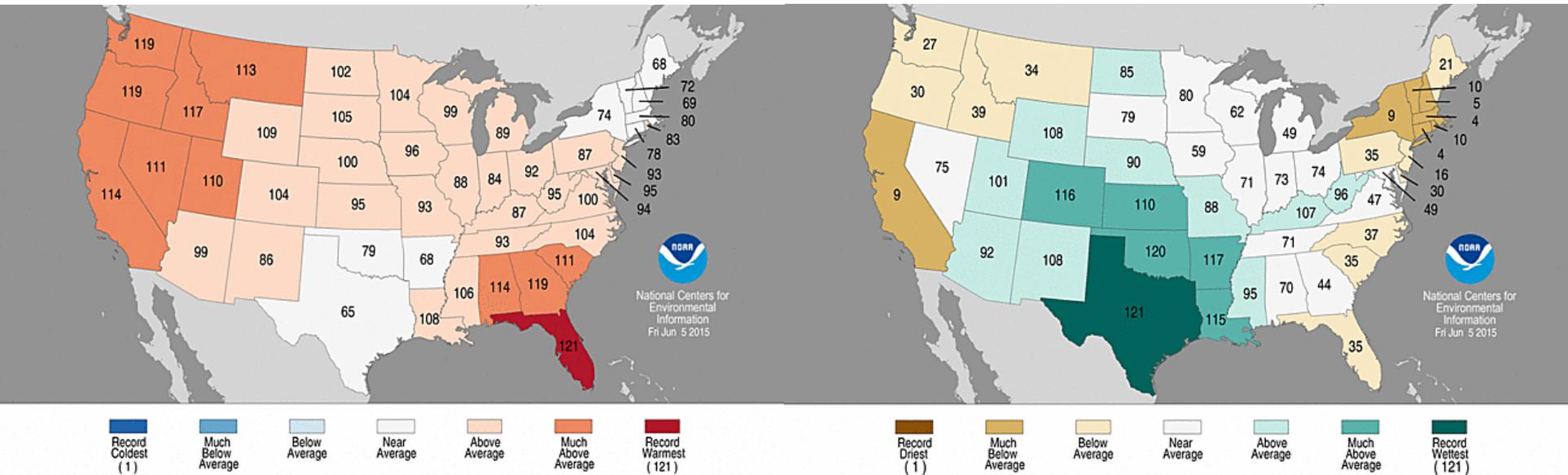


Contiguous U.S. Spring 2015

Temperature: 53.2°F, +2.2°F, 11th warmest spring
Precipitation: 9.33", +1.39", 11th wettest spring

Statewide Temperature Ranks, March-May 2015
 Period: 1895-2015 (121 years)

Statewide Precipitation Ranks, March-May 2015
 Period: 1895-2015 (121 years)



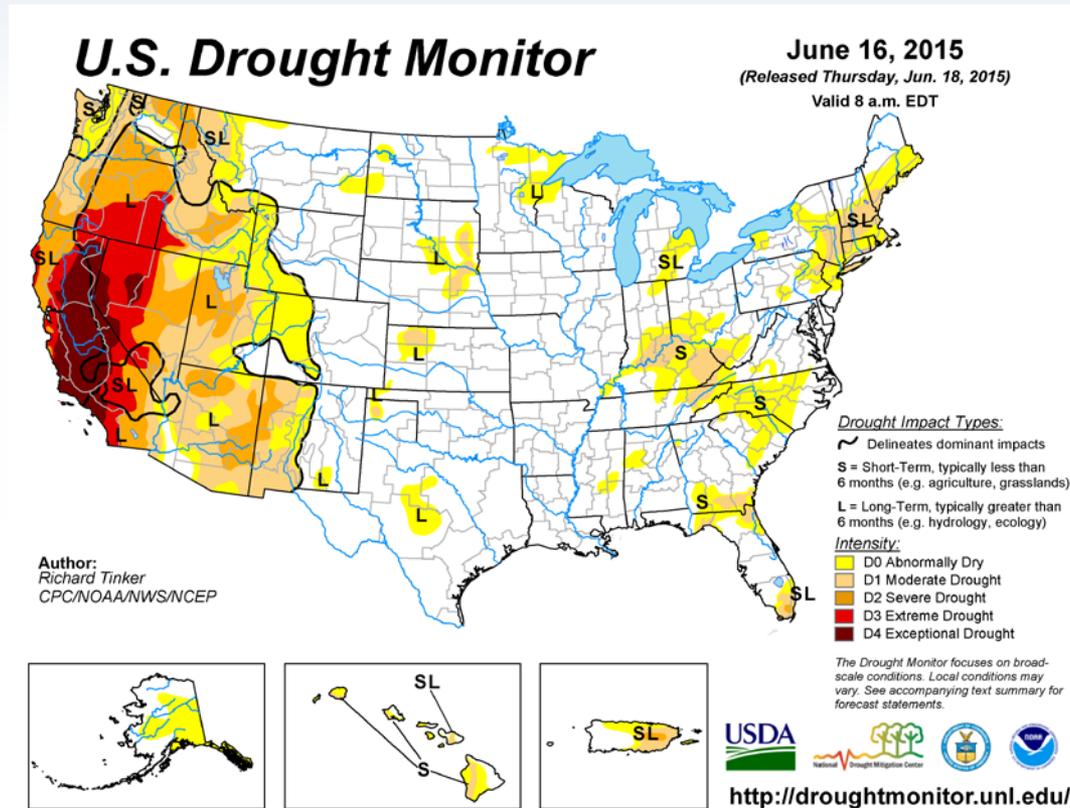
- The US was generally warm during Spring, particularly West and the Southeast
 - Florida had a record warm spring
- Drought-breaking precipitation during the latter half of spring fell on the Plains
 - Texas observed its wettest spring on record; Oklahoma its second-wettest

Current U.S. Drought

24.7% of Contiguous U.S. in Drought

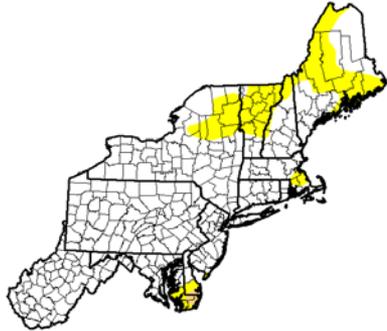
(↓ ~13 percentage points since early May)

- **Significant Improvement:** Central and Southern Plains and Rockies
- **Degradation:** Parts of the Northeast, Ohio Valley, and Puerto Rico
- **Short term improvement:** Great Basin



2012 Drought Sequence

U.S. Drought Monitor Northeast



March 6, 2012
(Released Thursday, Mar. 8, 2012)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	82.27	17.73	0.45	0.00	0.00	0.00
Last Week 288/2012	81.09	19.91	0.45	0.00	0.00	0.00
3 Months Ago 1/4/2012	100.00	0.00	0.00	0.00	0.00	0.00
Start of Calendar Year 1/1/2012	97.77	2.23	0.00	0.00	0.00	0.00
Start of Water Year 8/7/2011	97.24	2.76	0.00	0.00	0.00	0.00
One Year Ago 3/6/2011	94.48	15.52	1.38	0.00	0.00	0.00

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

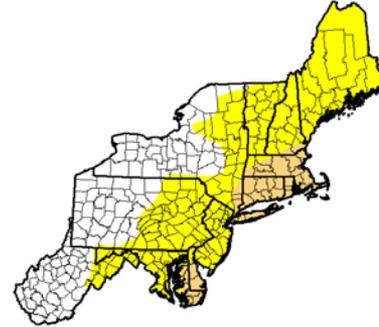
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Michael Brier of
NCDC/NOAA



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

U.S. Drought Monitor Northeast



April 3, 2012
(Released Thursday, Apr. 5, 2012)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	36.11	63.89	9.87	0.00	0.00	0.00
Last Week 307/2012	52.73	47.27	3.98	0.00	0.00	0.00
3 Months Ago 1/3/2012	97.77	2.23	0.00	0.00	0.00	0.00
Start of Calendar Year 1/1/2012	97.77	2.23	0.00	0.00	0.00	0.00
Start of Water Year 8/7/2011	97.24	2.76	0.00	0.00	0.00	0.00
One Year Ago 4/3/2011	89.15	10.85	2.79	0.00	0.00	0.00

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

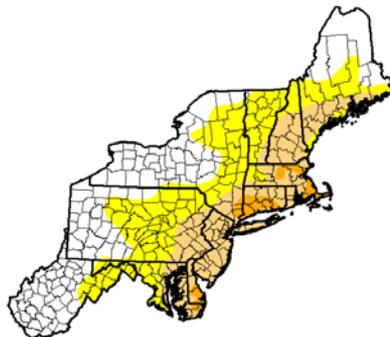
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Brian Fuchs
National Drought Mitigation Center



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

U.S. Drought Monitor Northeast



May 1, 2012
(Released Thursday, May 3, 2012)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	40.23	59.77	25.95	3.48	0.00	0.00
Last Week 4/24/2012	35.89	64.11	25.95	4.07	0.00	0.00
3 Months Ago 1/4/2012	83.96	16.04	0.45	0.00	0.00	0.00
Start of Calendar Year 1/1/2012	97.77	2.23	0.00	0.00	0.00	0.00
Start of Water Year 8/7/2011	97.24	2.76	0.00	0.00	0.00	0.00
One Year Ago 5/1/2011	94.80	5.20	0.00	0.00	0.00	0.00

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

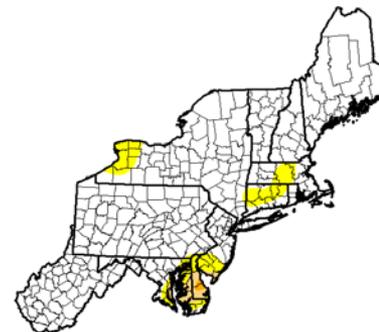
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Matthew Rosencrans
CPC/NCEP/MWS/NOAA



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

U.S. Drought Monitor Northeast



June 5, 2012
(Released Thursday, Jun. 7, 2012)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	91.34	8.66	1.90	0.19	0.00	0.00
Last Week 5/29/2012	70.83	29.17	4.99	0.24	0.00	0.00
3 Months Ago 3/6/2012	82.27	17.73	0.45	0.00	0.00	0.00
Start of Calendar Year 1/1/2012	97.77	2.23	0.00	0.00	0.00	0.00
Start of Water Year 8/7/2011	97.24	2.76	0.00	0.00	0.00	0.00
One Year Ago 6/5/2011	98.82	1.18	0.00	0.00	0.00	0.00

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

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

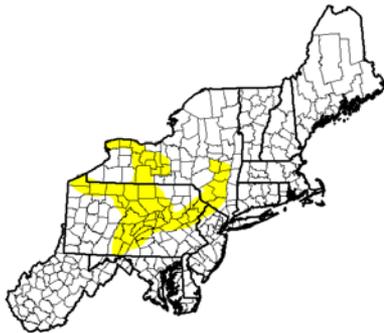
Author:
David Miskus
NOAA/NWS/NCEP/CPD



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

2015 Drought Sequence

U.S. Drought Monitor Northeast



March 17, 2015
(Released Thursday, Mar. 19, 2015)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	84.26	15.74	0.00	0.00	0.00	0.00
Last Week 3/10/2015	86.10	13.90	0.00	0.00	0.00	0.00
3 Months Ago 12/16/2014	85.44	14.56	0.00	0.00	0.00	0.00
Start of Calendar Year 1/1/2015	86.73	13.27	0.00	0.00	0.00	0.00
Start of Water Year 10/1/2014	65.00	34.12	3.56	0.00	0.00	0.00
One Year Ago 3/18/2014	96.05	3.95	0.00	0.00	0.00	0.00

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

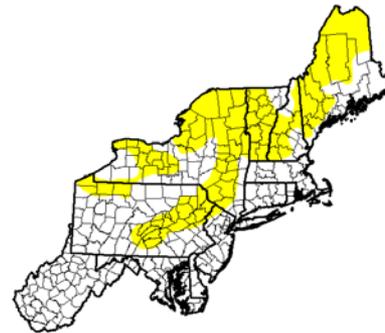
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Chris Fenimore
NCCO@NOAA/NOAA



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

U.S. Drought Monitor Northeast



April 28, 2015
(Released Thursday, Apr. 30, 2015)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	60.23	39.77	0.00	0.00	0.00	0.00
Last Week 4/21/2015	59.99	40.01	0.00	0.00	0.00	0.00
3 Months Ago 1/17/2015	82.29	17.71	0.00	0.00	0.00	0.00
Start of Calendar Year 1/1/2015	86.73	13.27	0.00	0.00	0.00	0.00
Start of Water Year 10/1/2014	65.00	34.12	3.56	0.00	0.00	0.00
One Year Ago 4/29/2014	97.93	2.07	0.00	0.00	0.00	0.00

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

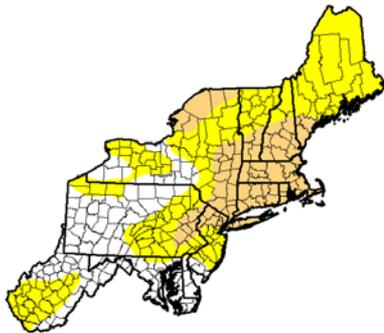
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Anthony Artusa
NOAA@WSN/CPC/ICPC



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

U.S. Drought Monitor Northeast



May 26, 2015
(Released Thursday, May 28, 2015)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	29.44	70.56	23.64	0.00	0.00	0.00
Last Week 5/19/2015	36.04	63.96	22.74	0.00	0.00	0.00
3 Months Ago 2/16/2015	82.69	17.31	0.00	0.00	0.00	0.00
Start of Calendar Year 1/1/2015	86.73	13.27	0.00	0.00	0.00	0.00
Start of Water Year 10/1/2014	65.00	34.12	3.56	0.00	0.00	0.00
One Year Ago 5/27/2014	98.69	1.32	0.00	0.00	0.00	0.00

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

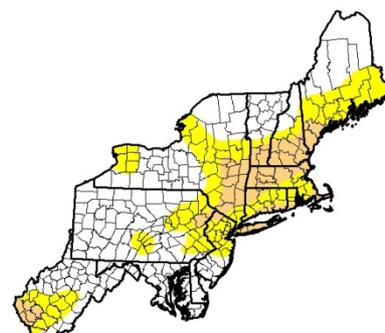
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Brad Rippey
U.S. Department of Agriculture



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

U.S. Drought Monitor Northeast



June 16, 2015
(Released Thursday, Jun. 18, 2015)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	57.83	42.17	13.97	0.00	0.00	0.00
Last Week 6/9/2015	54.25	45.75	12.89	0.00	0.00	0.00
3 Months Ago 3/17/2015	84.26	15.74	0.00	0.00	0.00	0.00
Start of Calendar Year 1/1/2015	86.73	13.27	0.00	0.00	0.00	0.00
Start of Water Year 10/1/2014	65.00	34.12	3.56	0.00	0.00	0.00
One Year Ago 6/17/2014	99.04	0.96	0.00	0.00	0.00	0.00

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

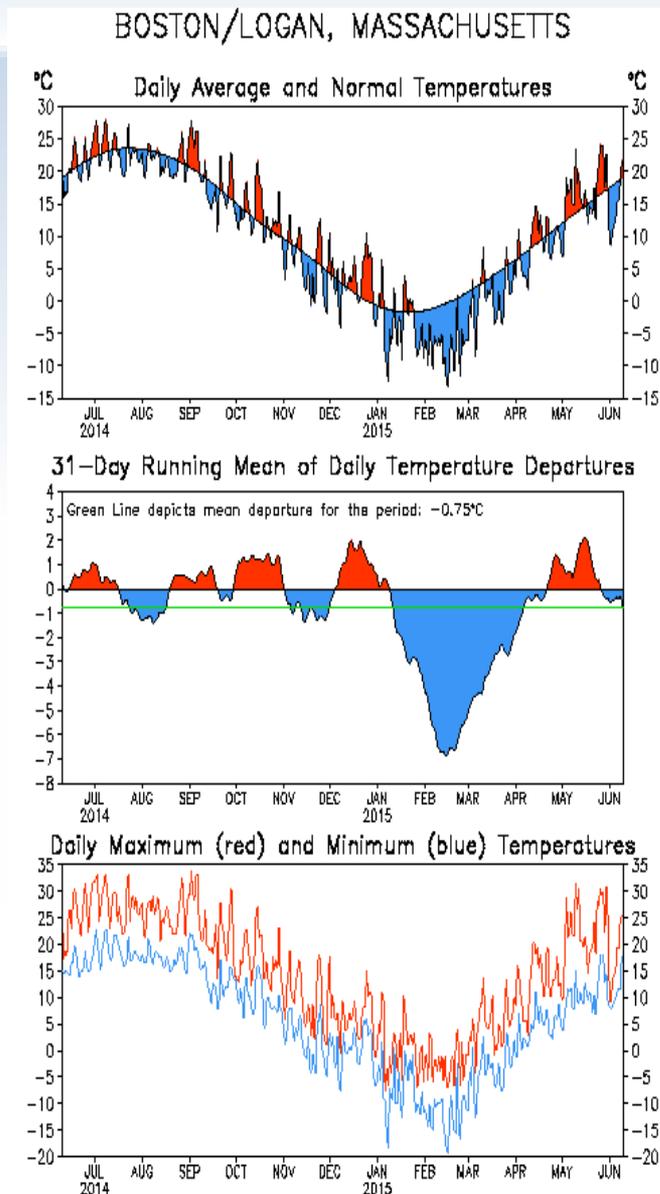
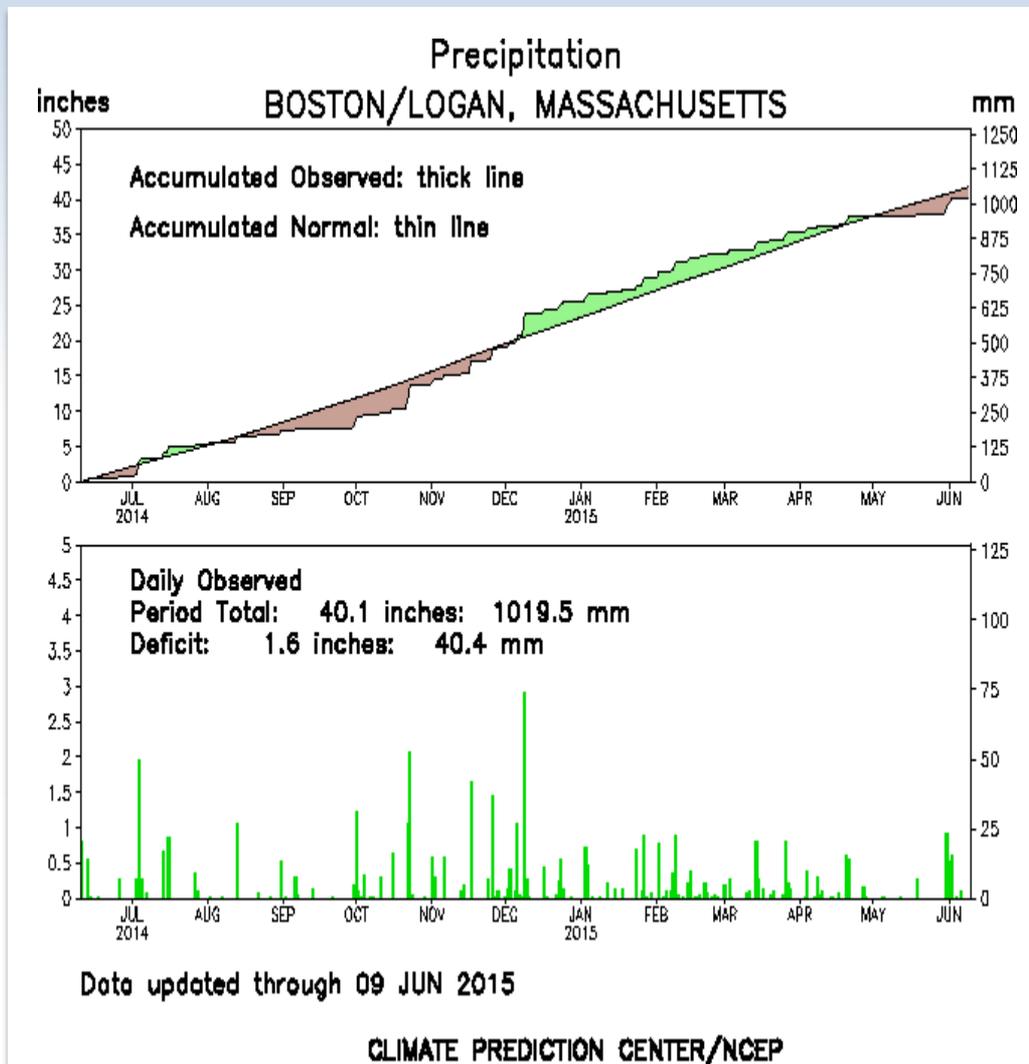
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Richard Tinker
CPC@NOAA/NWS/NCEP

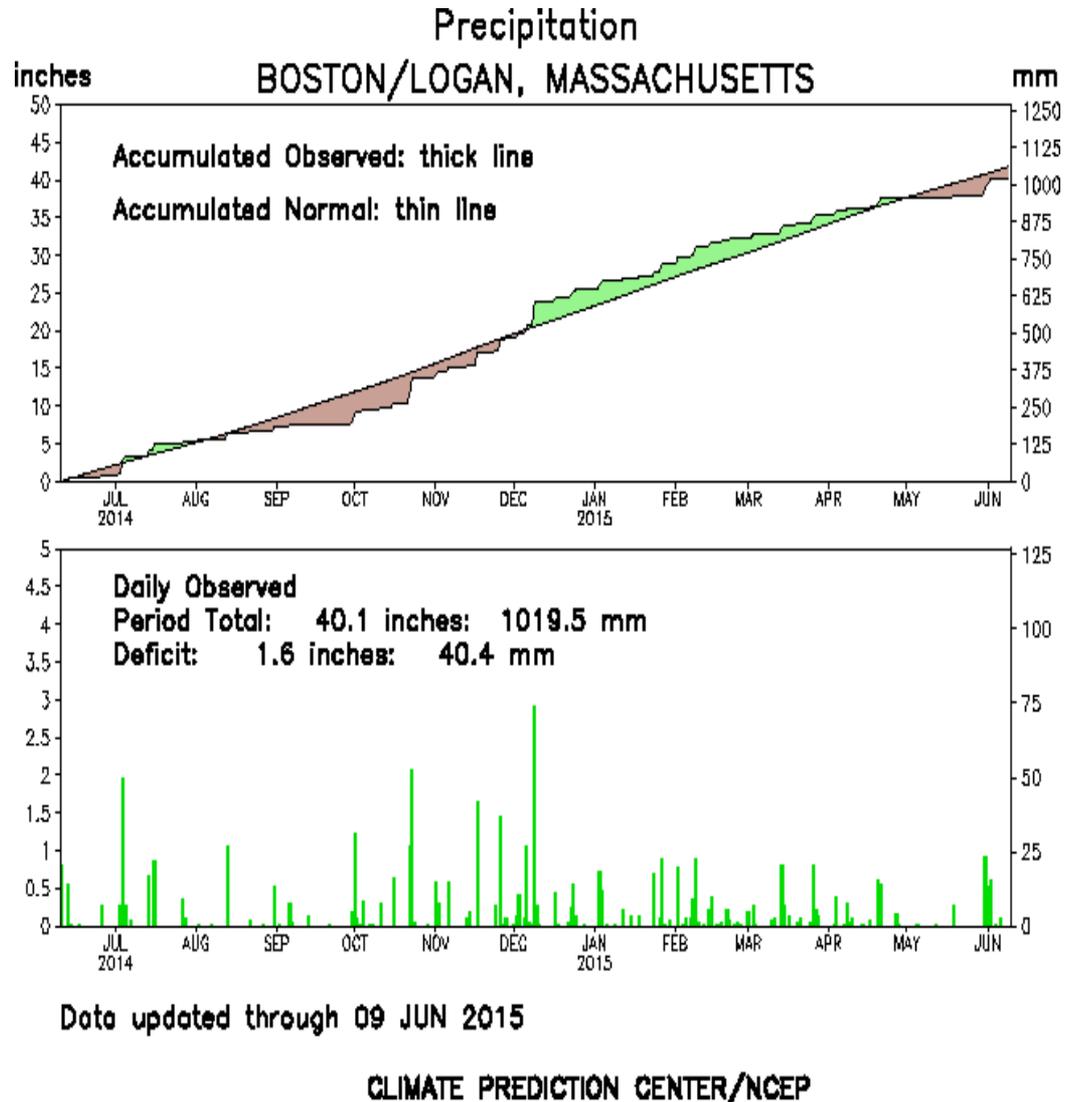


<http://droughtmonitor.unl.edu/>

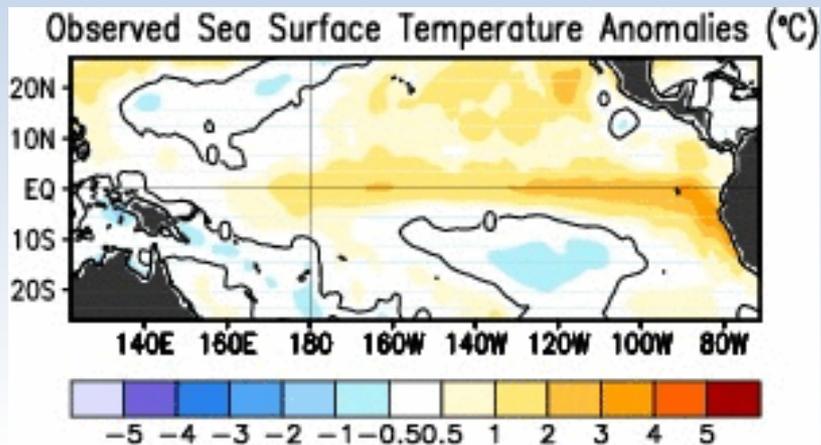
Boston Precipitation and Temperature



Boston Precipitation Time Series



Sea Surface Temperatures and ENSO

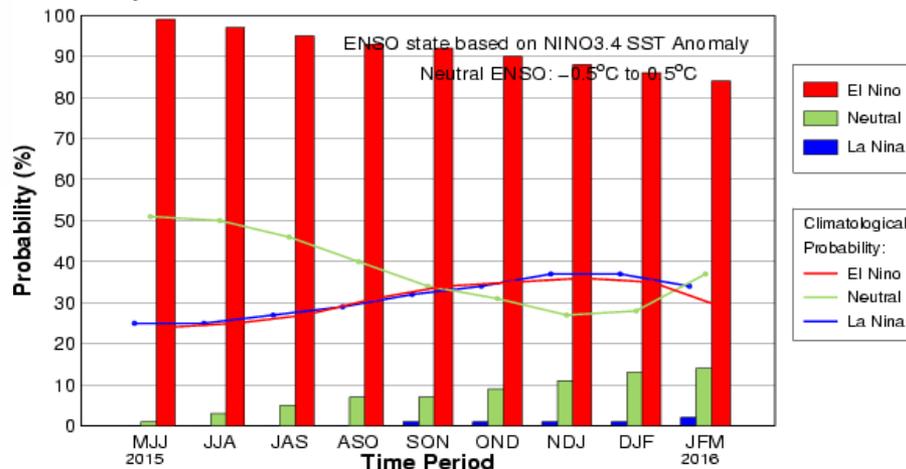


- Sea surface temperatures
 - Above normal SSTs continue across the equatorial Pacific
 - Anomalies exceed +2.0 C across parts of the eastern Pacific

7-day Average Centered on 10 June 2015

Early June CPC/IRI Consensus Probabilistic ENSO Forecast

Early-Jun CPC/IRI Consensus Probabilistic ENSO Forecast



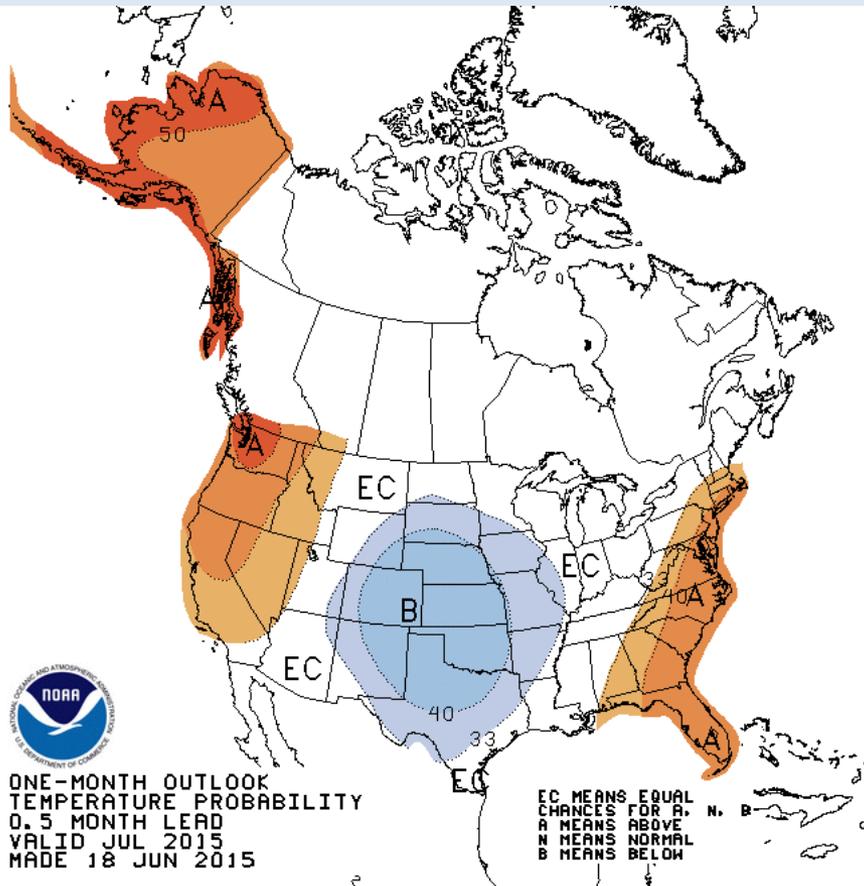
• ENSO forecast

- Probabilities of El Niño through JFM 2016 exceed 80%
- A moderate to strong El Niño is likely to persist through the upcoming winter season

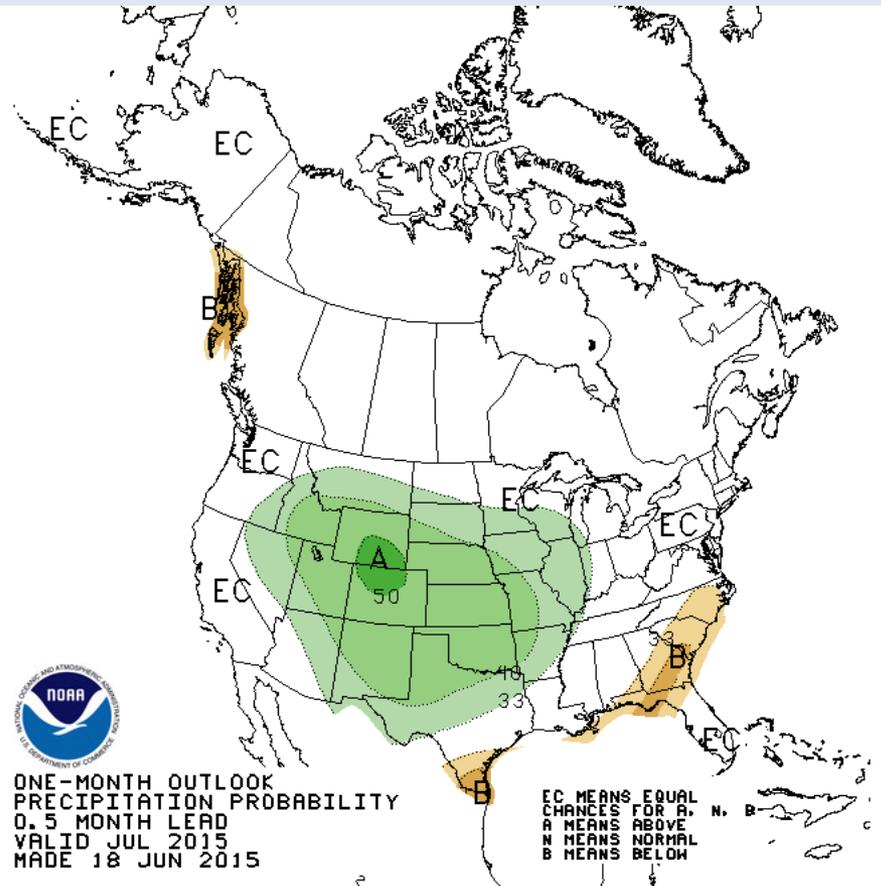


Monthly Forecast (July)

July Average Temperature Probability

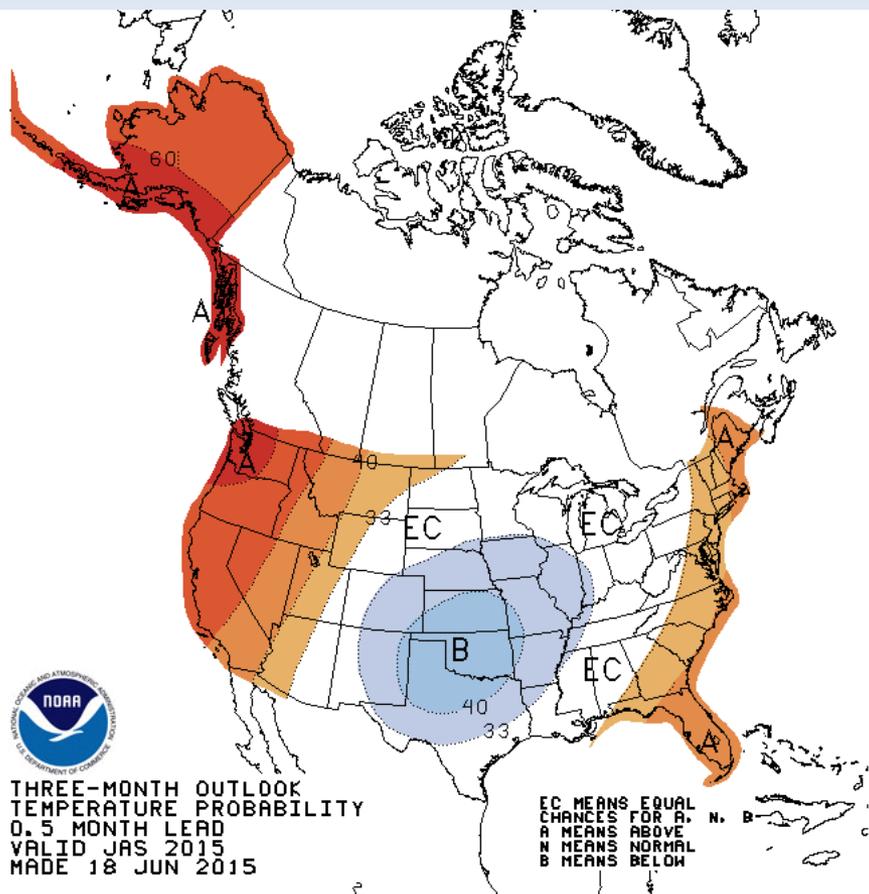


July Total Precipitation Probability

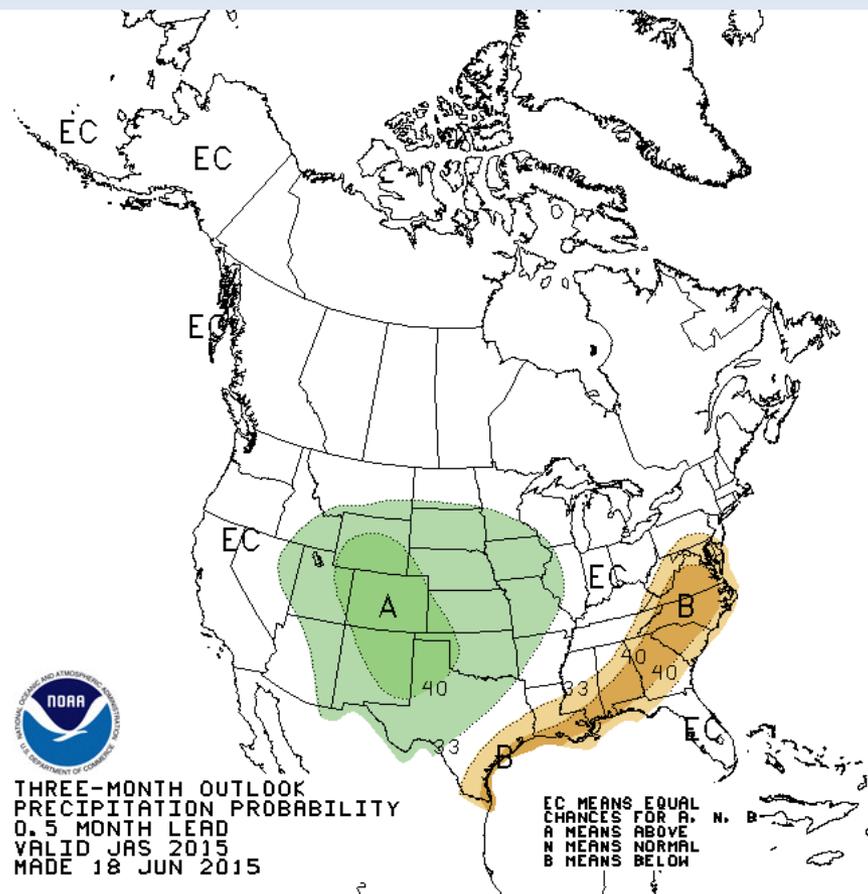


Seasonal Forecast (July-August-Sept)

July-September Average Temperature Probability

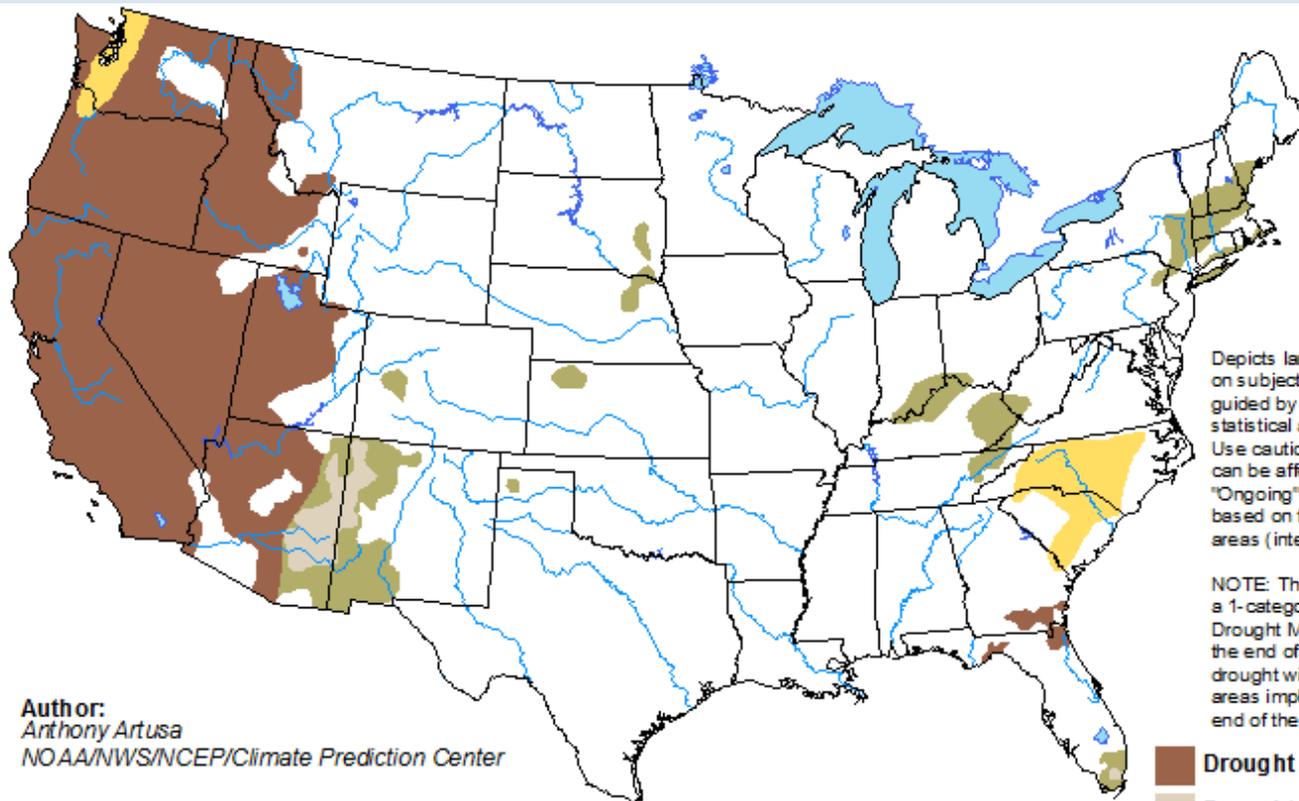


July-September Total Precipitation Probability



U.S. Drought Outlook

Drought Tendency During the Valid Period
June 18 – September 30, 2015; Released June 18, 2015

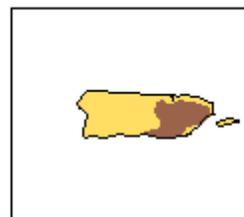
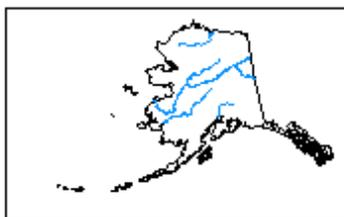


Author:
Anthony Artusa
NOAA/NWS/NCEP/Climate Prediction Center

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

-  Drought persists/intensifies
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely



<http://go.usa.gov/hHTe>

For More Information



TODAY'S PRESENTATION:

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

NOAA's National Centers for Environmental Information

www.ncdc.noaa.gov

- Monthly climate reports (U.S. & Global): www.ncdc.noaa.gov/sotc/
- Dates for upcoming reports: <http://www.ncdc.noaa.gov/monitoring-references/dyk/monthly-releases>

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

U.S. Drought Monitor: <http://drought.gov>

Climate Portal: www.climate.gov

Media Contacts:

- Brady.Phillips@noaa.gov, 202-482-2365 (NOAA Office of Communications)