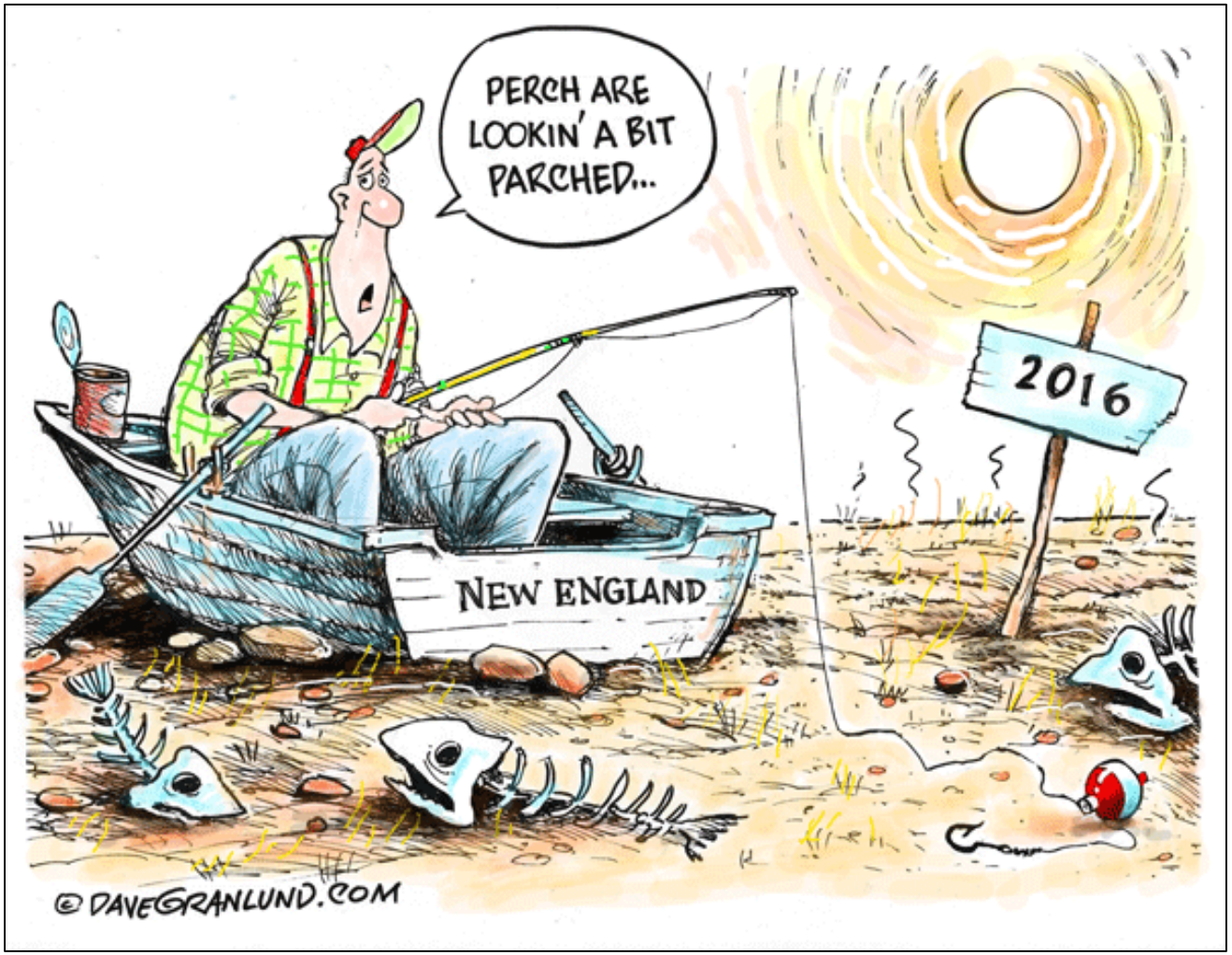
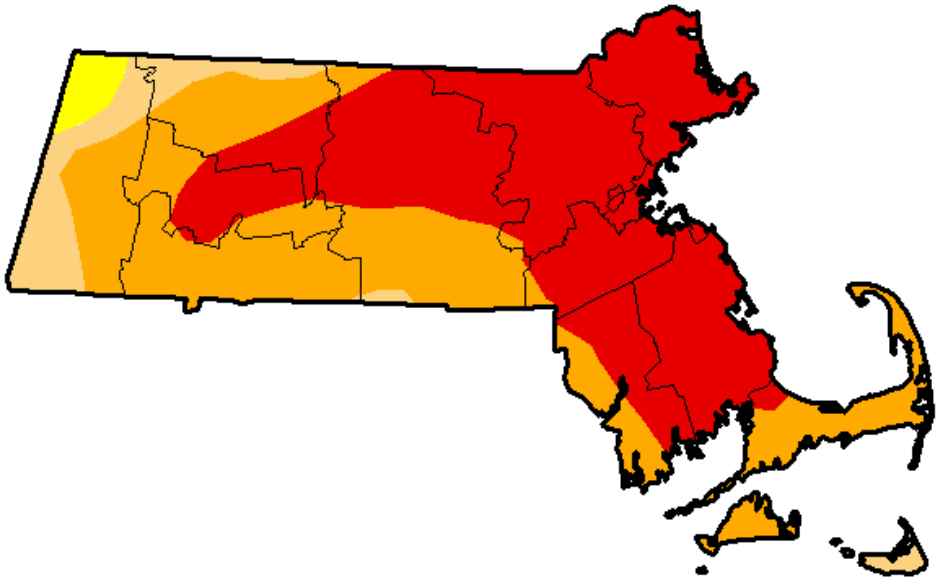
U.S. Drought Monitor Forum
Brad Rippey, USDA Meteorologist, Washington, D.C.
Great New England Drought of 2016



K Bar S Lodge
Keystone, South Dakota, April 3 – 5, 2016

U.S. Drought Monitor

Massachusetts



Aug. 9, 2016: First-ever D3 in MA;
Peak coverage: 52% on Oct. 4, 2016

October 4, 2016

(Released Thursday, Oct. 6, 2016)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	98.15	89.95	52.13	0.00
Last Week 9/27/2016	0.00	100.00	98.15	89.95	52.13	0.00
3 Months Ago 7/5/2016	0.70	99.30	54.99	29.65	0.00	0.00
Start of Calendar Year 12/29/2015	22.85	77.15	26.34	0.00	0.00	0.00
Start of Water Year 9/27/2016	0.00	100.00	98.15	89.95	52.13	0.00
One Year Ago 10/6/2015	22.34	77.66	13.81	0.00	0.00	0.00

Intensity:

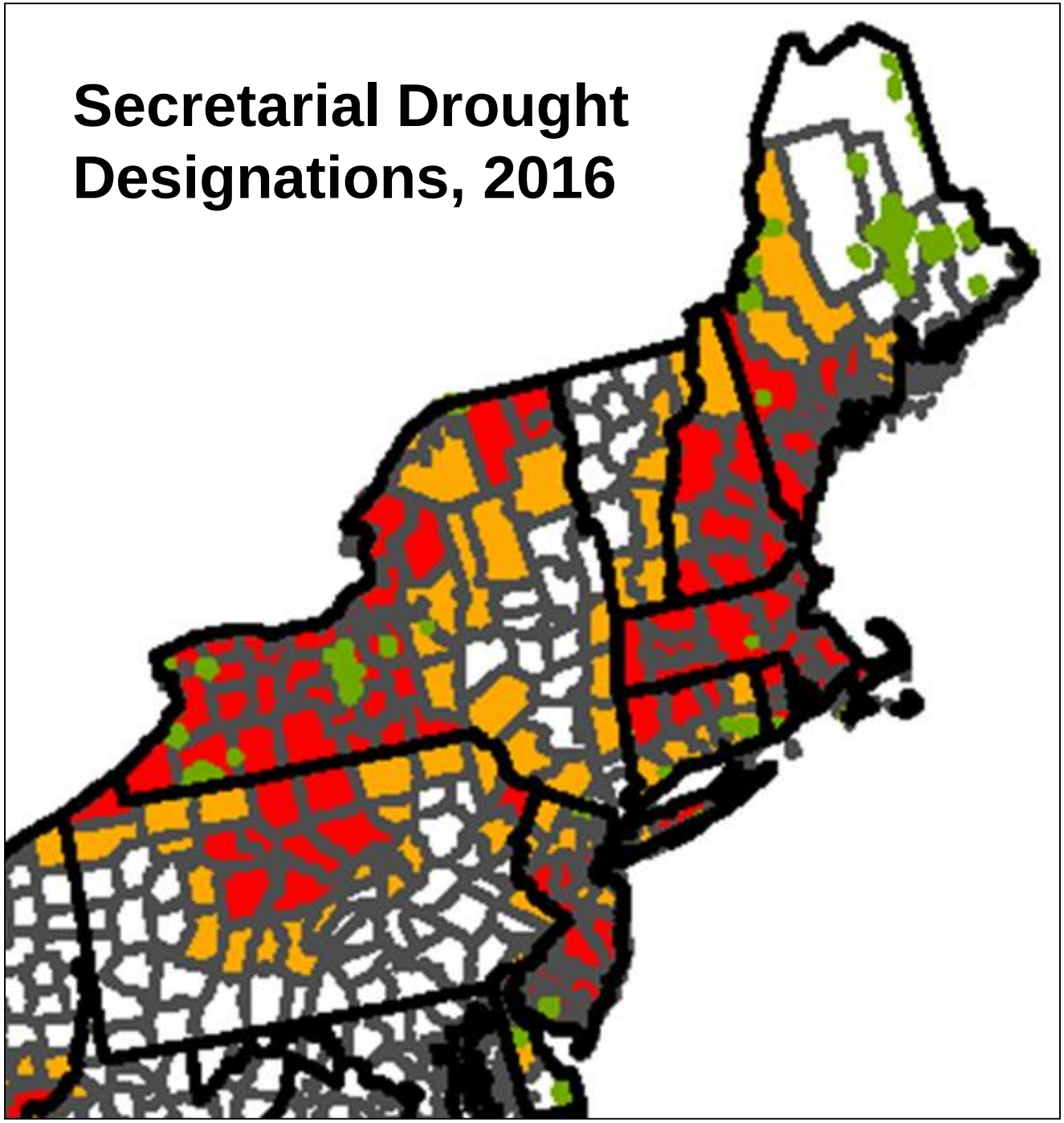
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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

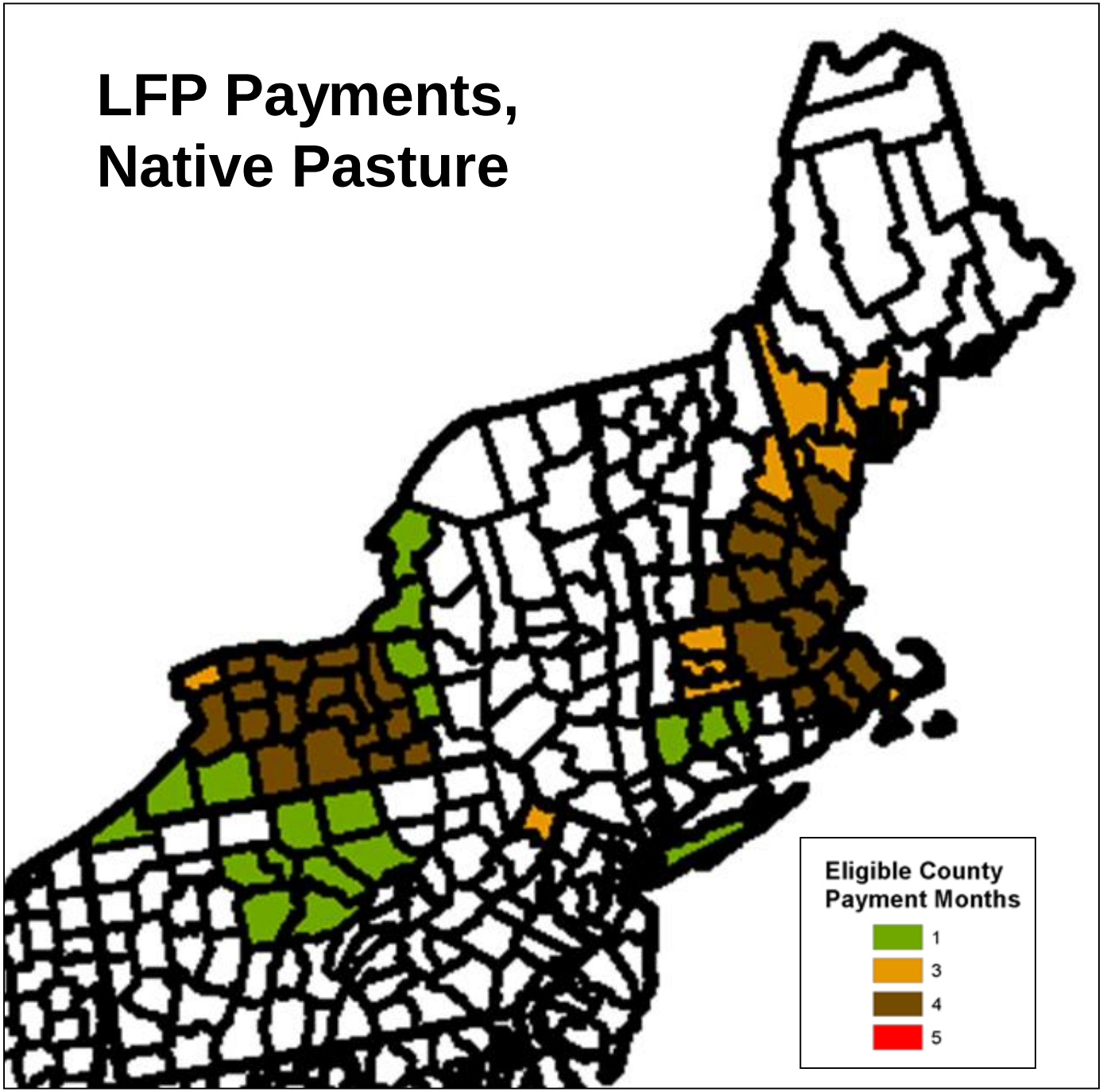
Author:
Brian Fuchs
National Drought Mitigation Center

http://droughtmonitor.unl.edu/

Secretarial Drought Designations, 2016



LFP Payments, Native Pasture

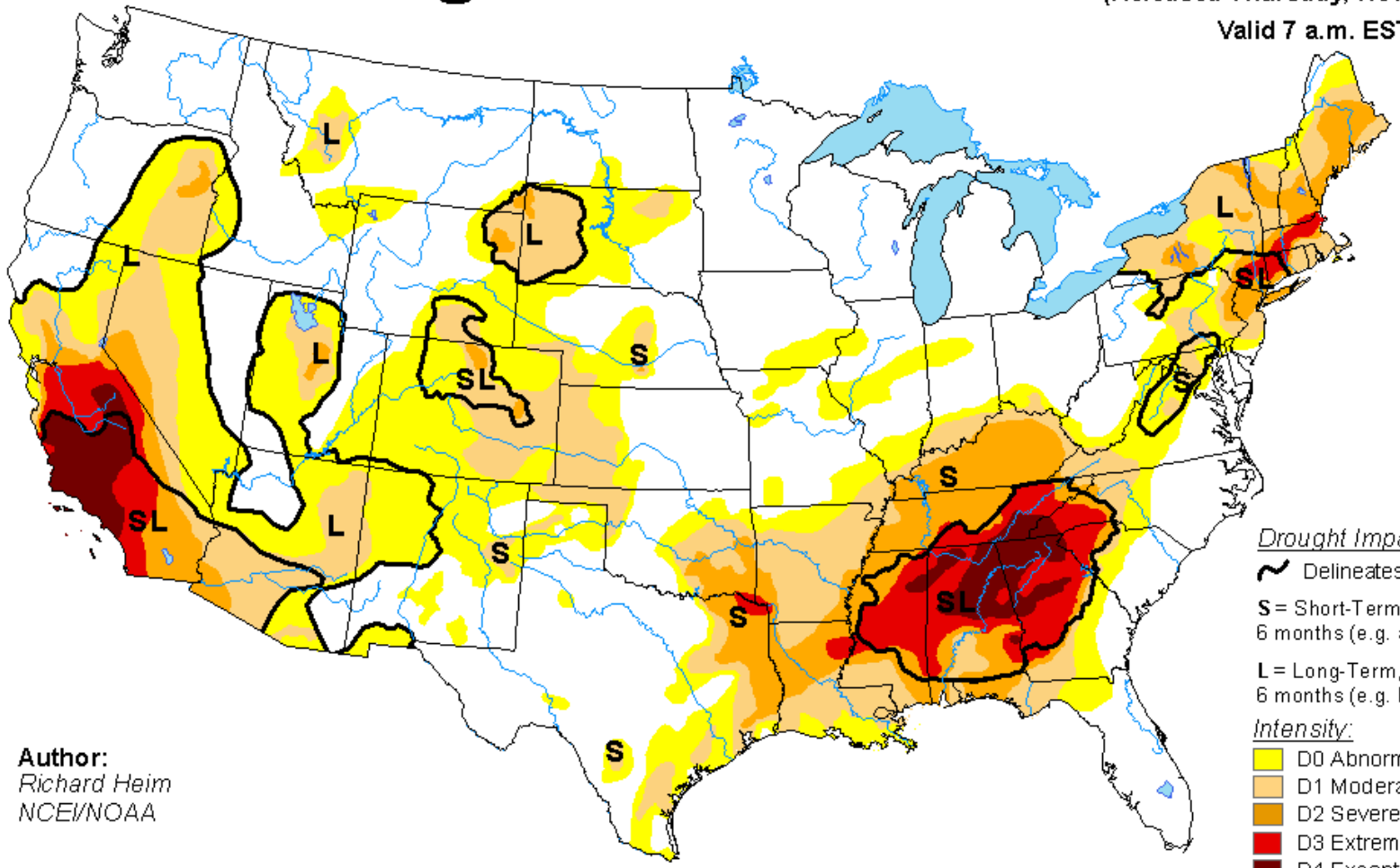


U.S. Drought Monitor

November 15, 2016

(Released Thursday, Nov. 17, 2016)

Valid 7 a.m. EST



Author:
Richard Heim
NCEI/NOAA

Drought Impact Types:

~ Delineates dominant impacts

S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

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

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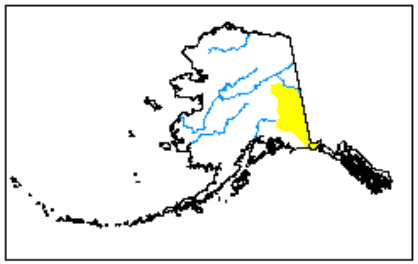
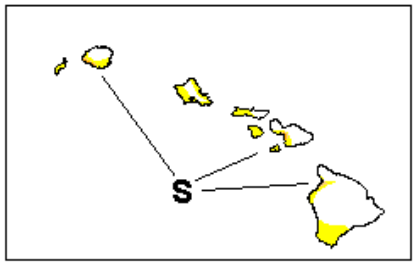




USDA

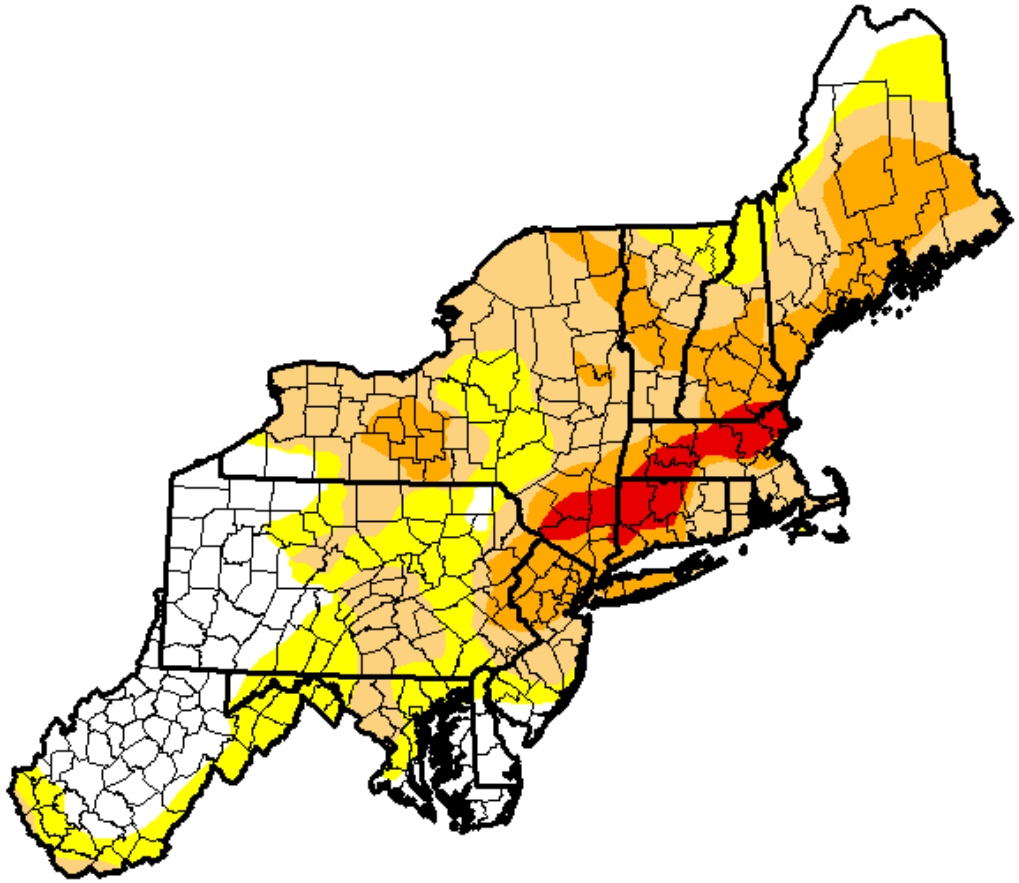
National Drought Mitigation Center

NOAA

http://droughtmonitor.unl.edu/

U.S. Drought Monitor

Northeast



November 15, 2016

(Released Thursday, Nov. 17, 2016)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	22.18	77.82	55.62	22.71	3.95	0.00
Last Week *11/8/2016*	28.37	71.63	50.70	17.62	1.37	0.00
3 Months Ago *8/16/2016*	42.57	57.43	26.80	12.02	2.32	0.00
Start of Calendar Year *12/29/2015*	62.10	37.90	6.60	0.00	0.00	0.00
Start of Water Year *9/27/2016*	21.72	78.28	40.32	19.59	6.68	0.00
One Year Ago *11/17/2015*	71.36	28.64	6.39	0.00	0.00	0.00

Intensity:

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

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

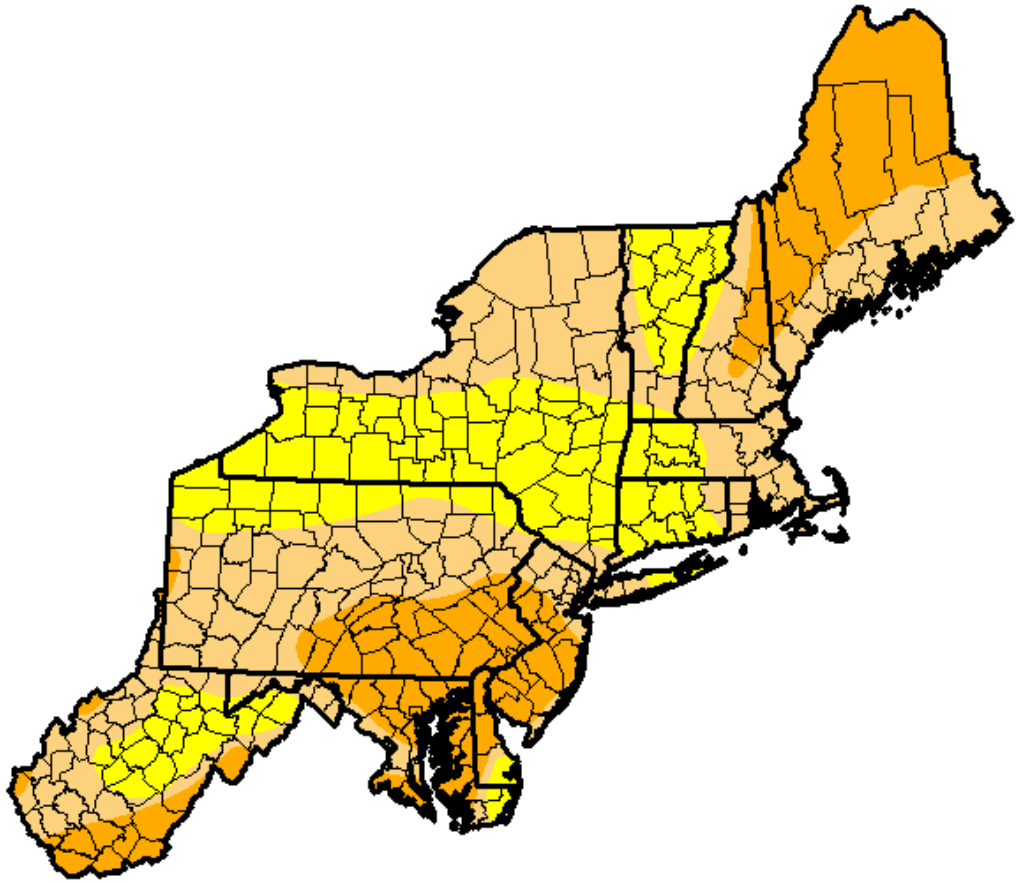
Author:
Richard Heim
NCEI/NOAA

56% of Northeast in Drought

http://droughtmonitor.unl.edu/

U.S. Drought Monitor

Northeast



September 10, 2002

(Released Thursday, Sep. 12, 2002)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	70.46	26.61	0.00	0.00
Last Week *9/3/2002*	12.33	87.67	42.15	17.96	0.00	0.00
3 Months Ago *6/11/2002*	62.20	37.80	14.41	3.55	0.00	0.00
Start of Calendar Year *1/1/2002*	22.26	77.74	51.46	26.77	9.35	0.00
Start of Water Year *9/25/2001*	45.60	54.40	30.32	12.85	0.00	0.00
One Year Ago *9/11/2001*	84.11	15.89	4.18	0.61	0.00	0.00

Intensity:

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

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

Author:
Douglas Le Comte
CPC/NOAA

70% of Northeast in Drought

http://droughtmonitor.unl.edu/

Percentiles and the U.S. Drought Monitor

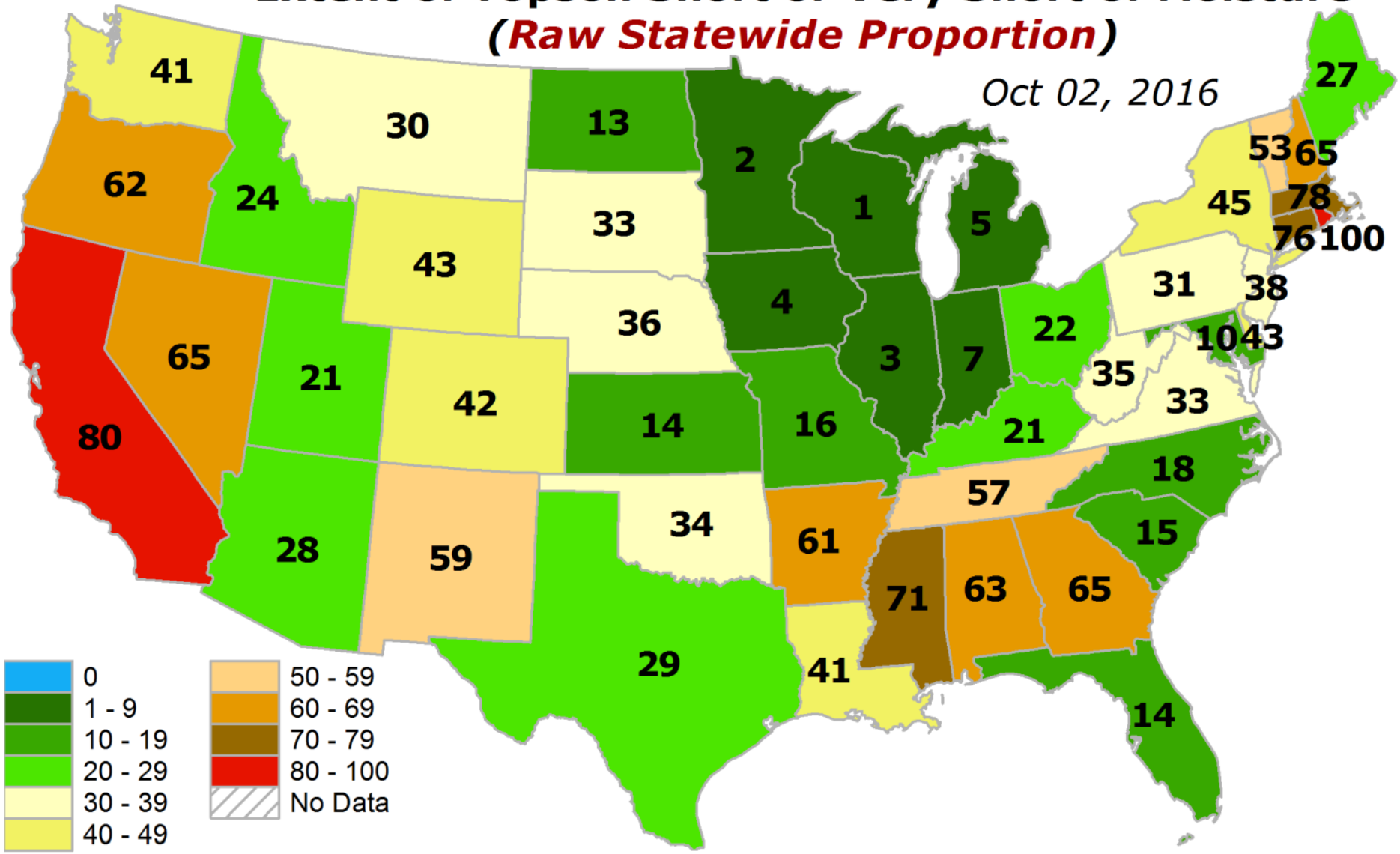
- Advantages of percentiles:
  - Can be applied to any parameter
  - Can be used for any length of data record
  - Helps to put drought in historical perspective

- D4, Exceptional Drought: once per 50 to 100 years
- D3, Extreme Drought: once per 20 to 50 years
- D2, Severe Drought: once per 10 to 20 years
- D1, Moderate Drought: once per 5 to 10 years
- D0, Abnormally Dry: once per 3 to 5 years

Extent of Topsoil Short or Very Short of Moisture

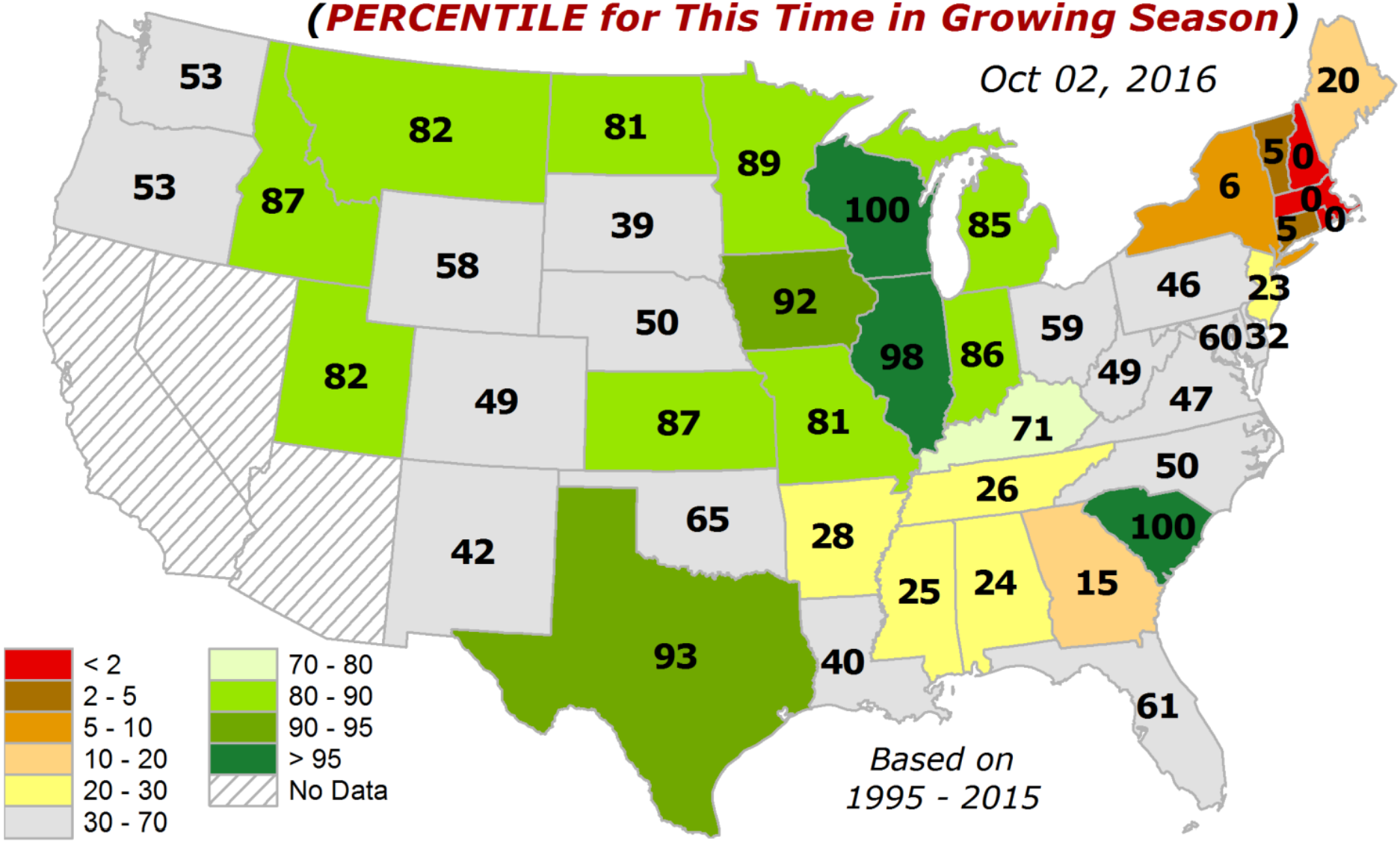
(*Raw Statewide Proportion*)

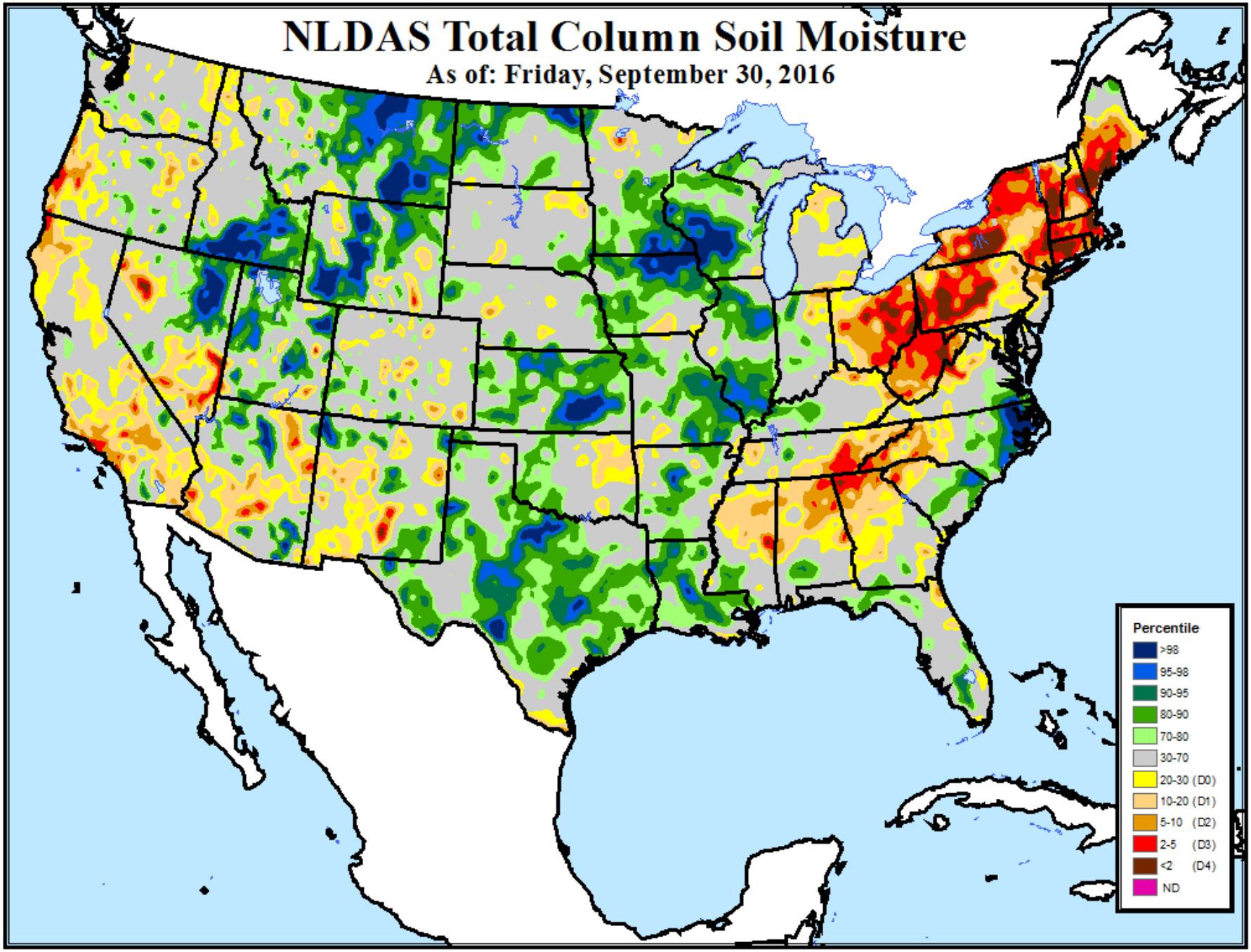
Oct 02, 2016



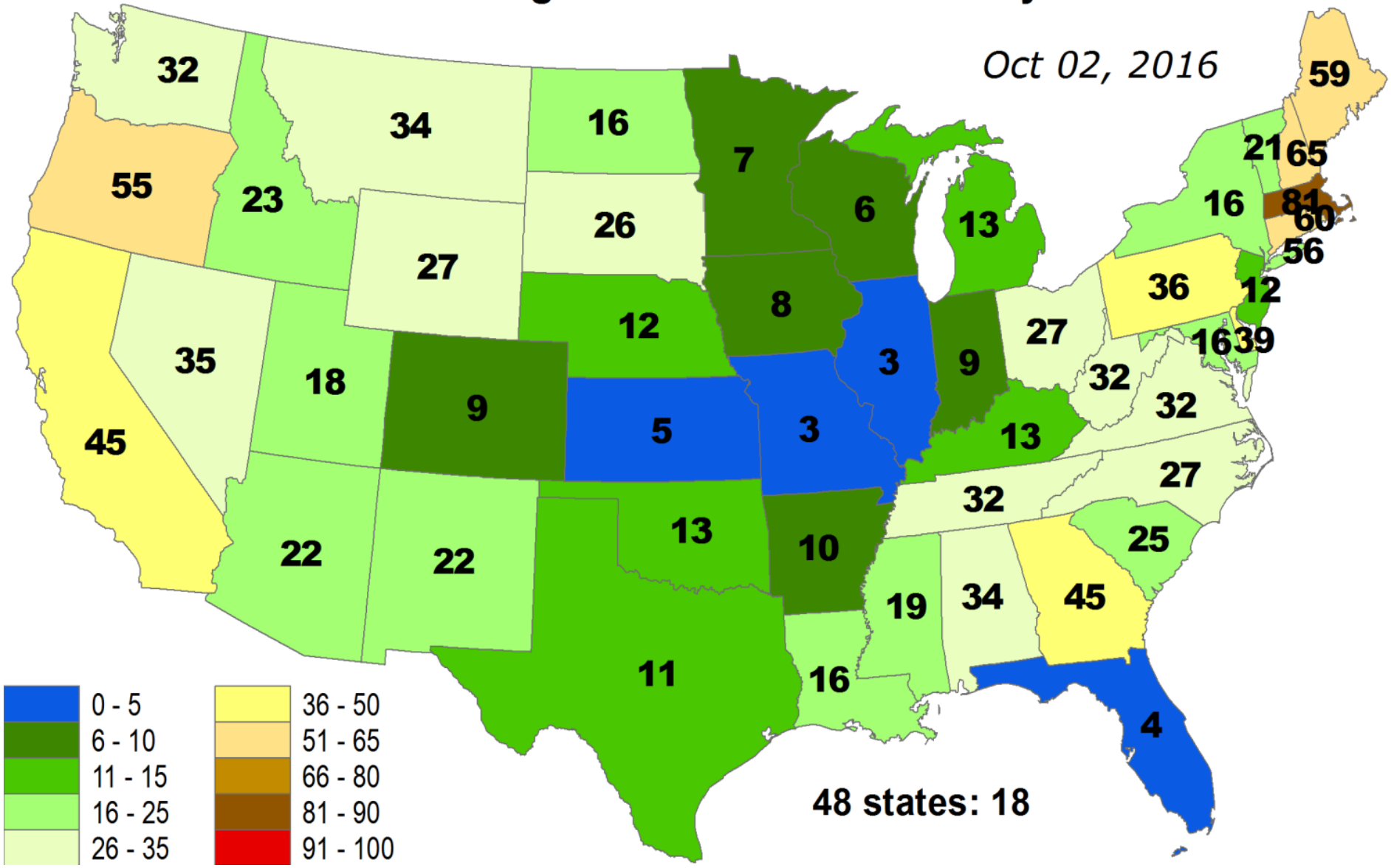
Extent of Topsoil Short or Very Short of Moisture
(*PERCENTILE for This Time in Growing Season*)

Oct 02, 2016

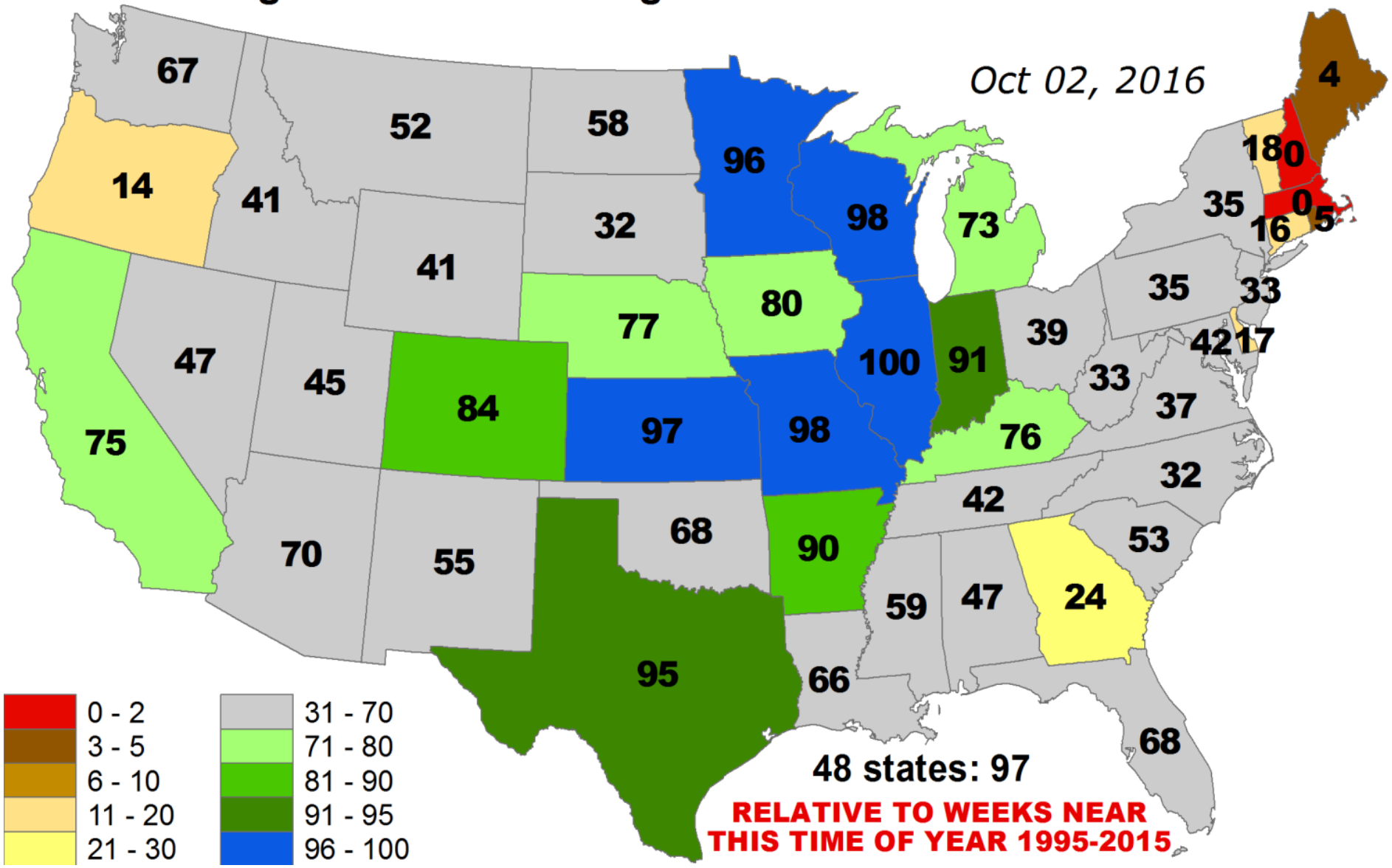



NLDAS Total Column Soil Moisture
As of: Friday, September 30, 2016
Percentile
>98
95-98
90-95
80-90
70-80
30-70
20-30 (D0)
10-20 (D1)
5-10 (D2)
2-5 (D3)
<2 (D4)
ND

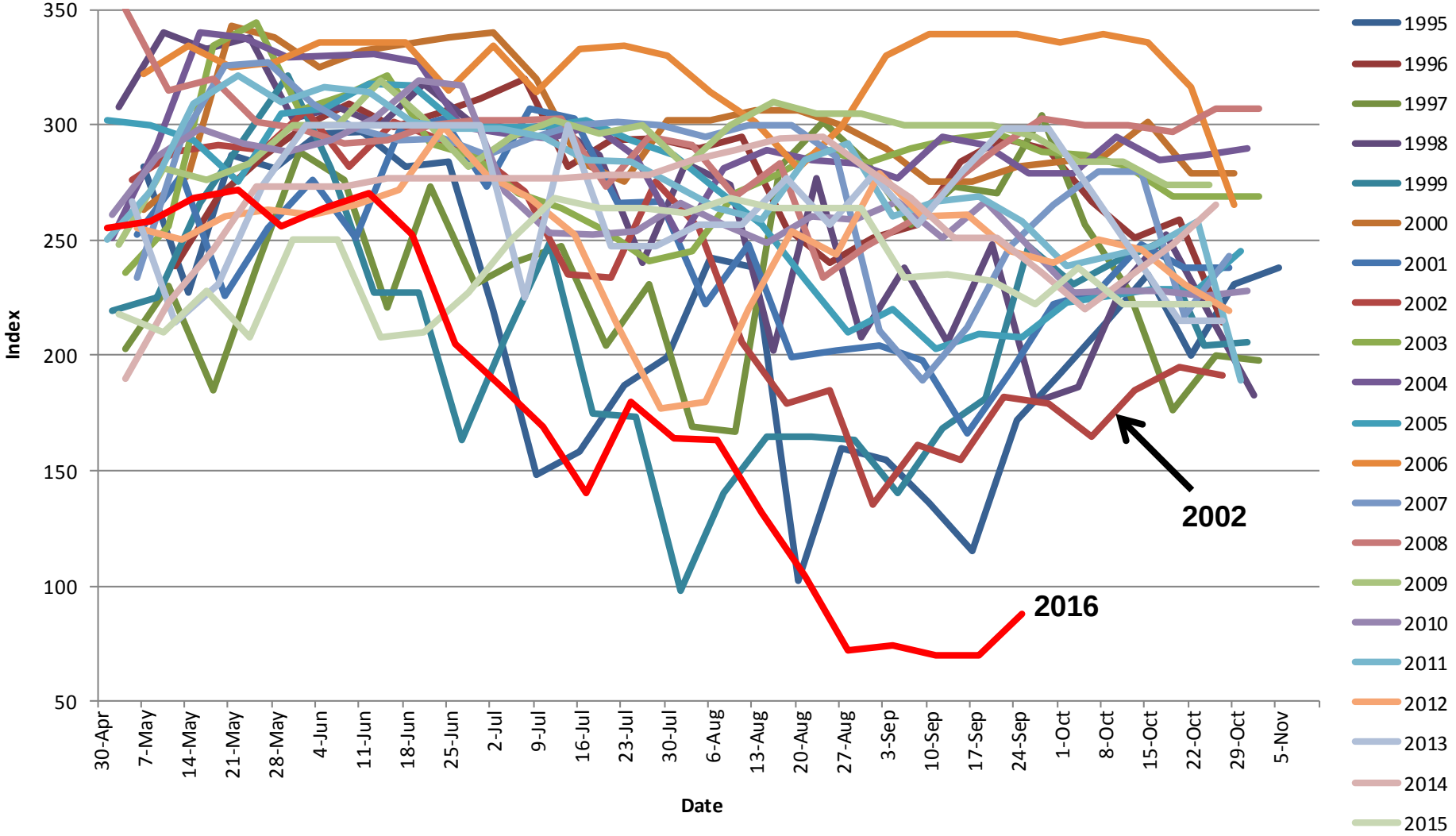
Percent of Pasture & Range Land in "Poor" or "Very Poor" Condition



Average Pasture and Range Land Condition PERCENTILE



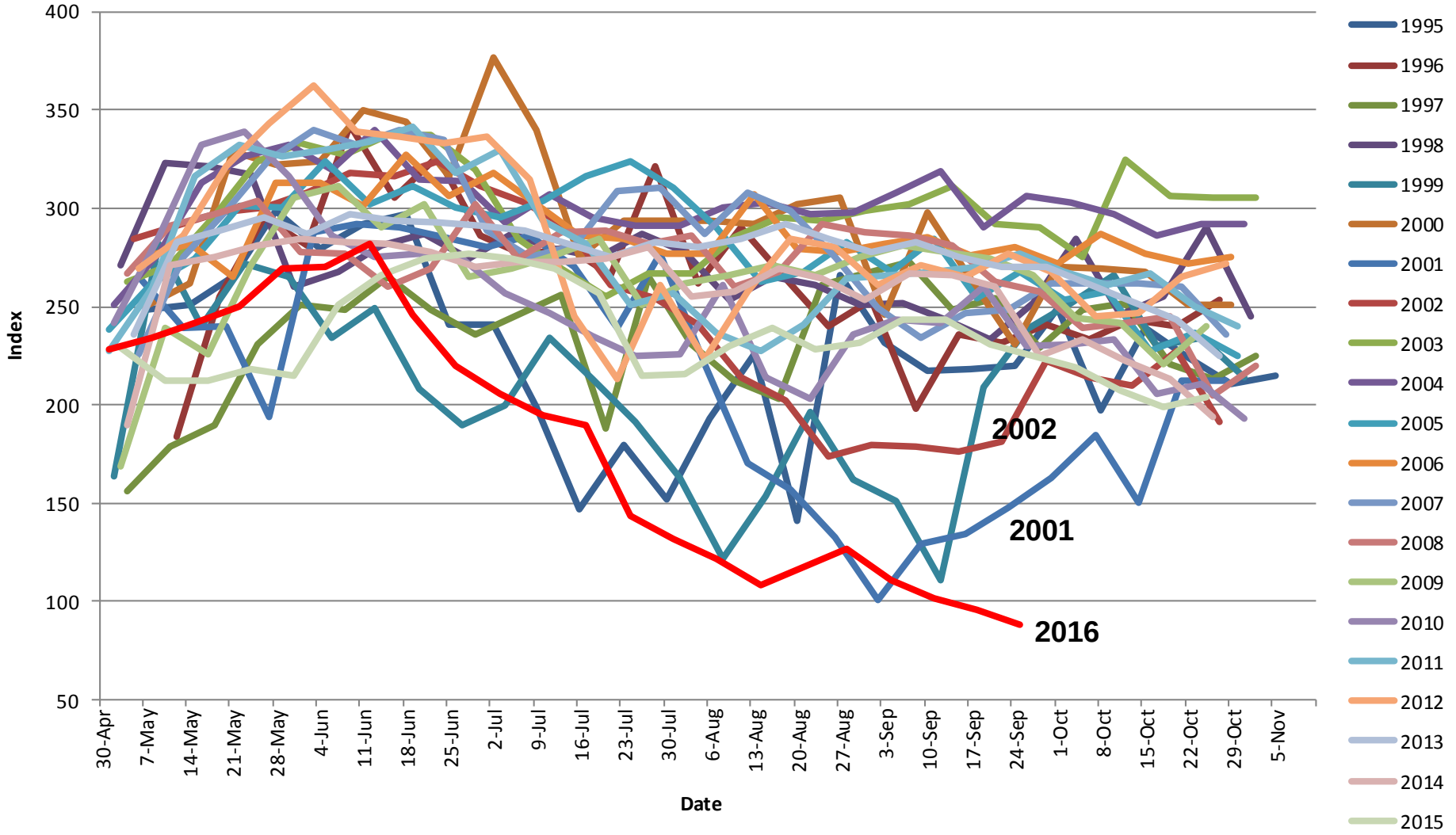
MA PASTURE AND RANGE Condition Index



Based on NASS crop progress data.

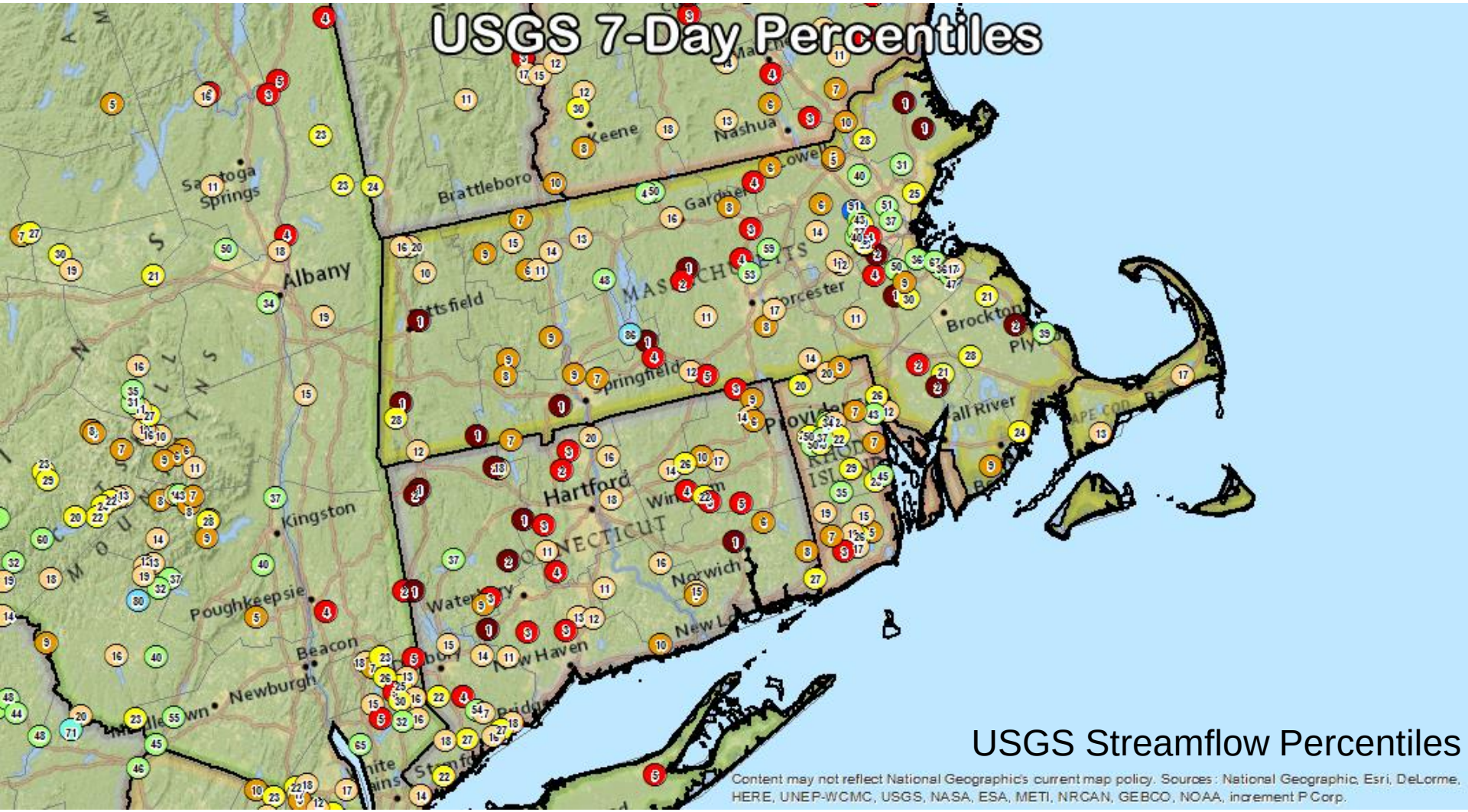
Index Weighting: Excellent = 4; Good = 3; Fair = 2; Poor = 1; Very Poor = 0

NH PASTURE AND RANGE Condition Index

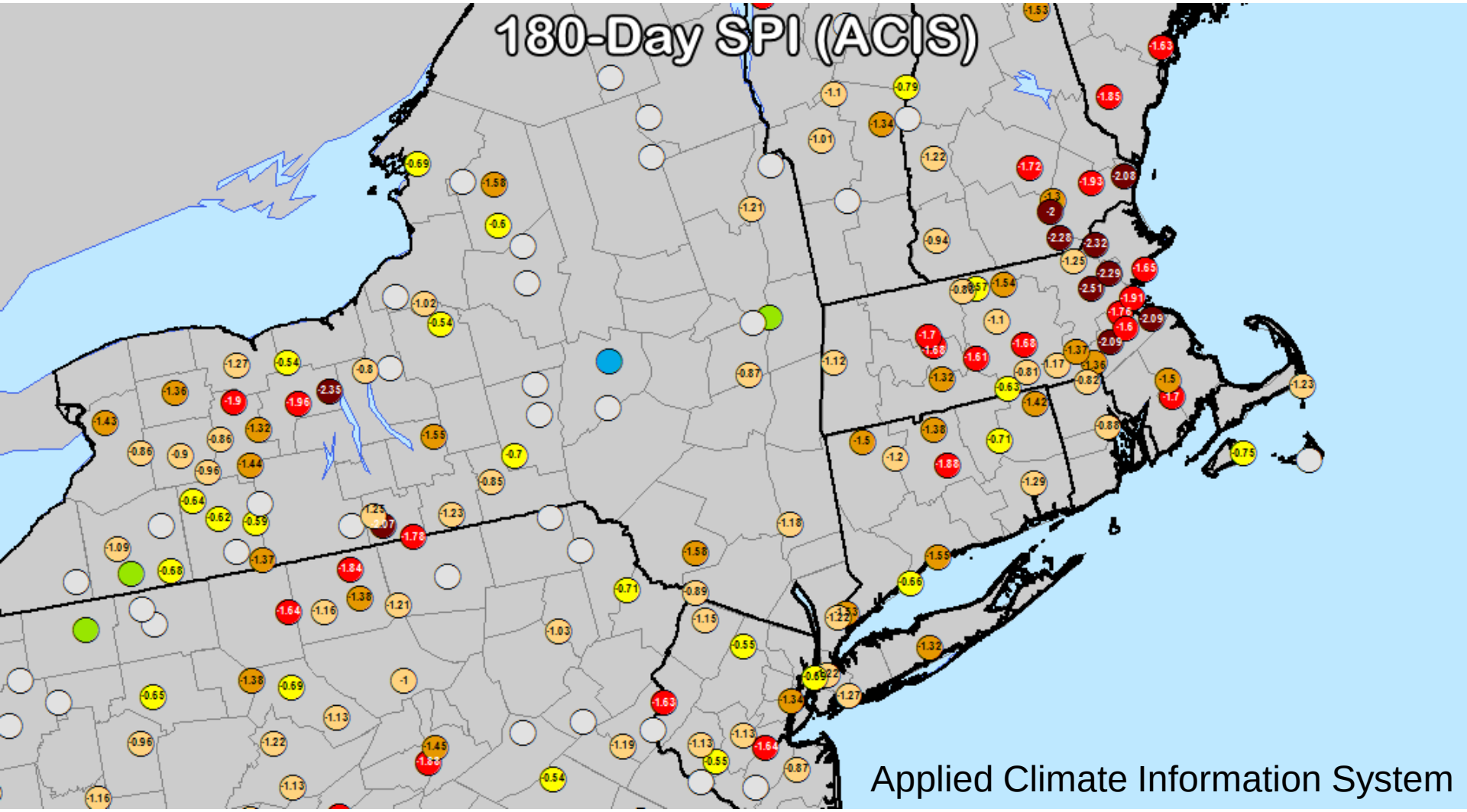


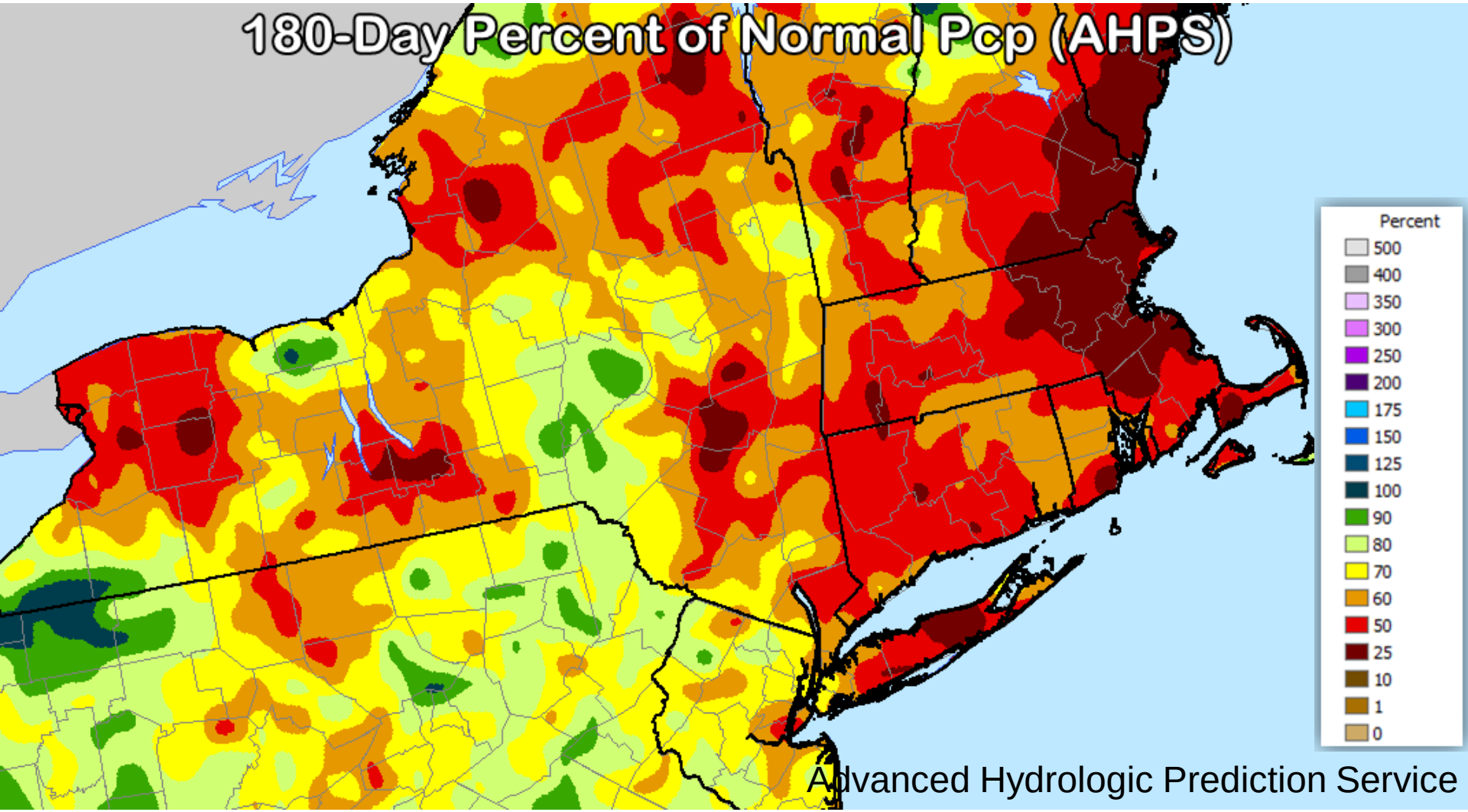
Based on NASS crop progress data.

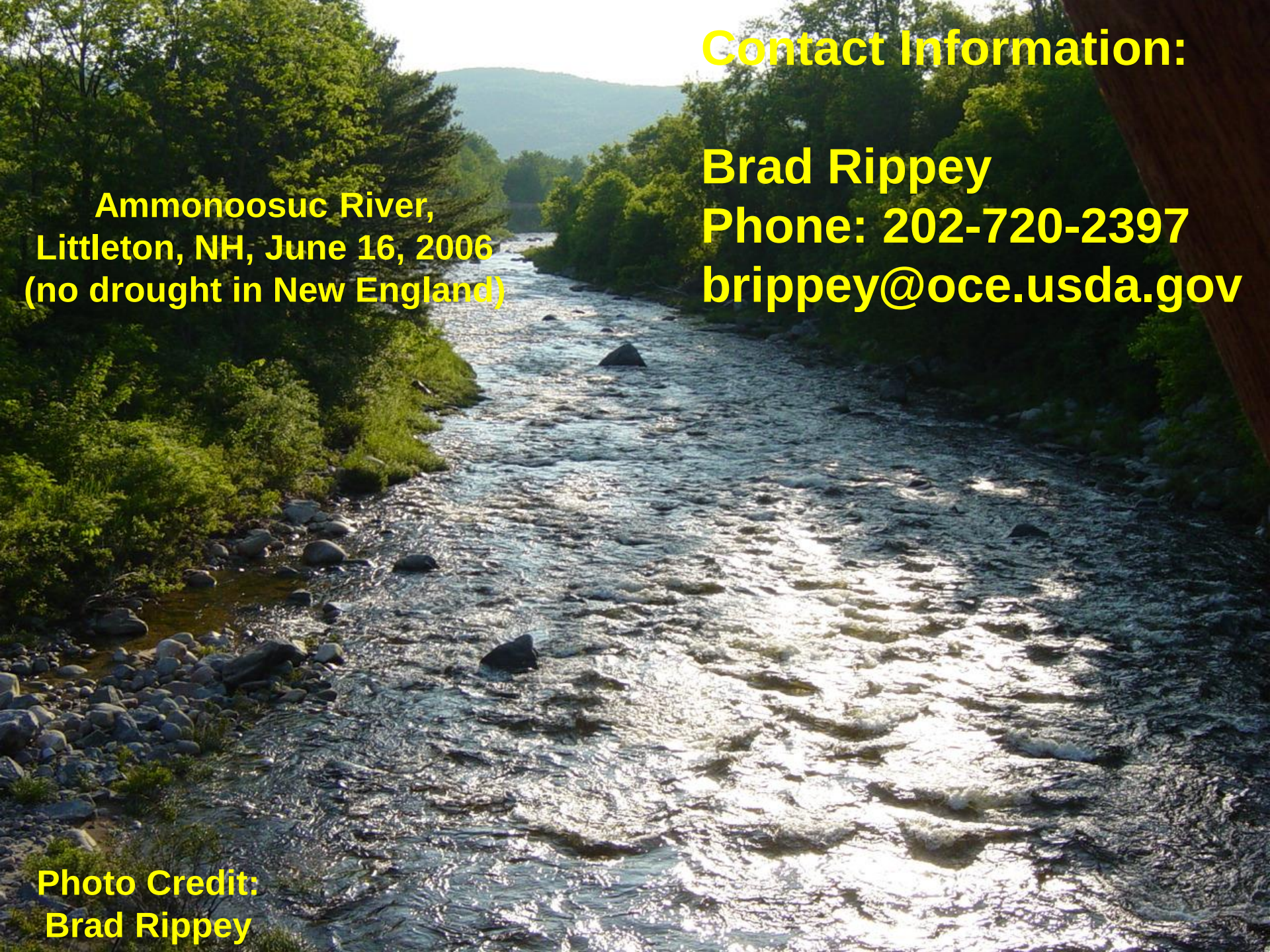
Index Weighting: Excellent = 4; Good = 3; Fair = 2; Poor = 1; Very Poor = 0



USGS Streamflow Percentiles


180-Day SPI (ACIS)
Applied Climate Information System


180-Day Percent of Normal Pcp (AHPS)
Percent
500
400
350
300
250
200
175
150
125
100
90
80
70
60
50
25
10
1
0
Advanced Hydrologic Prediction Service



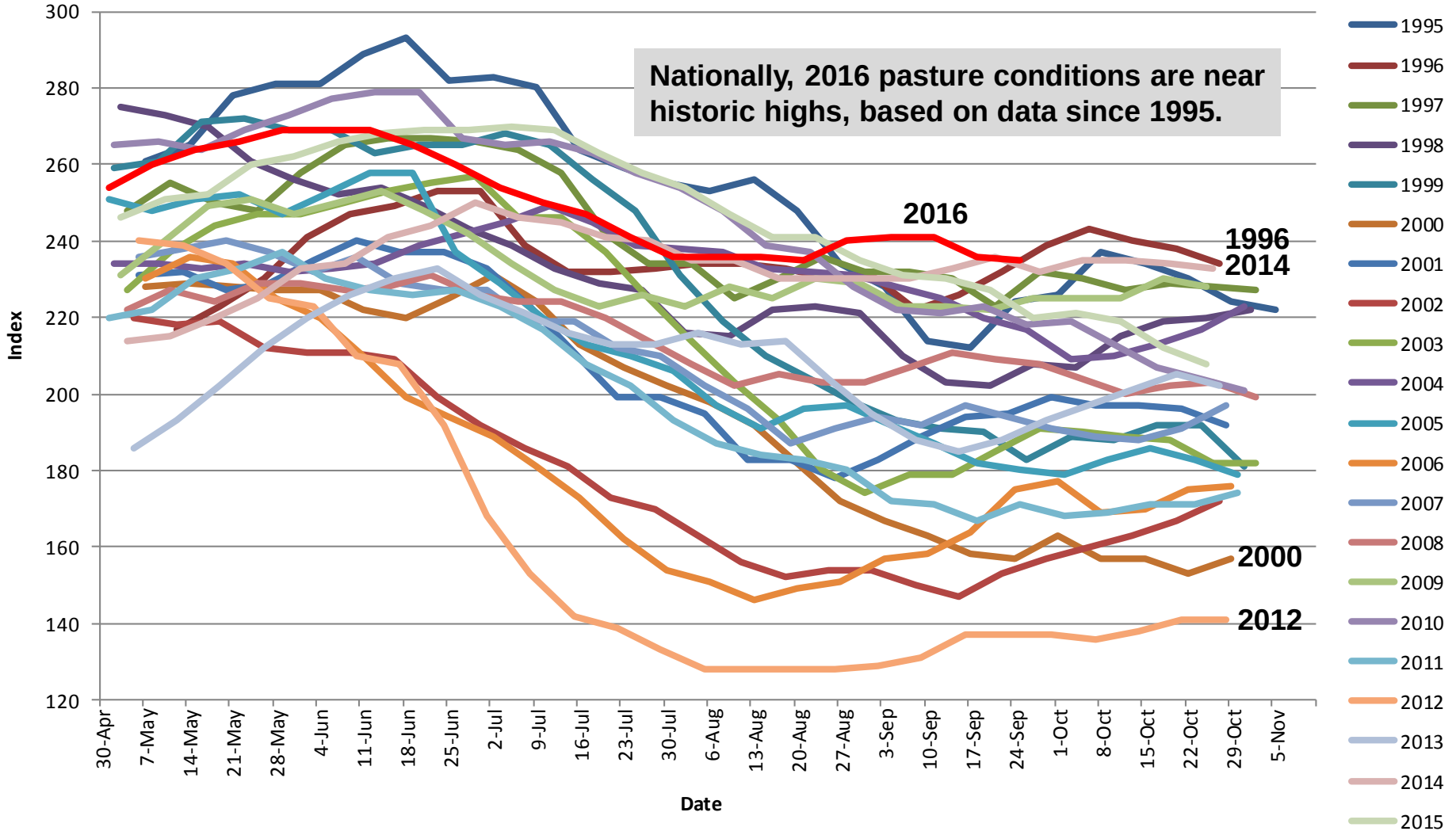
Ammonoosuc River,
Littleton, NH, June 16, 2006
(no drought in New England)

Contact Information:

Brad Rippey
Phone: 202-720-2397
brippey@oce.usda.gov

Photo Credit:
Brad Rippey

U.S. PASTURE AND RANGE Condition Index



Based on NASS crop progress data.

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