

Massachusetts Drought Task Force Meeting NWS Update

National Weather Service

Tuesday February 7th, 2017

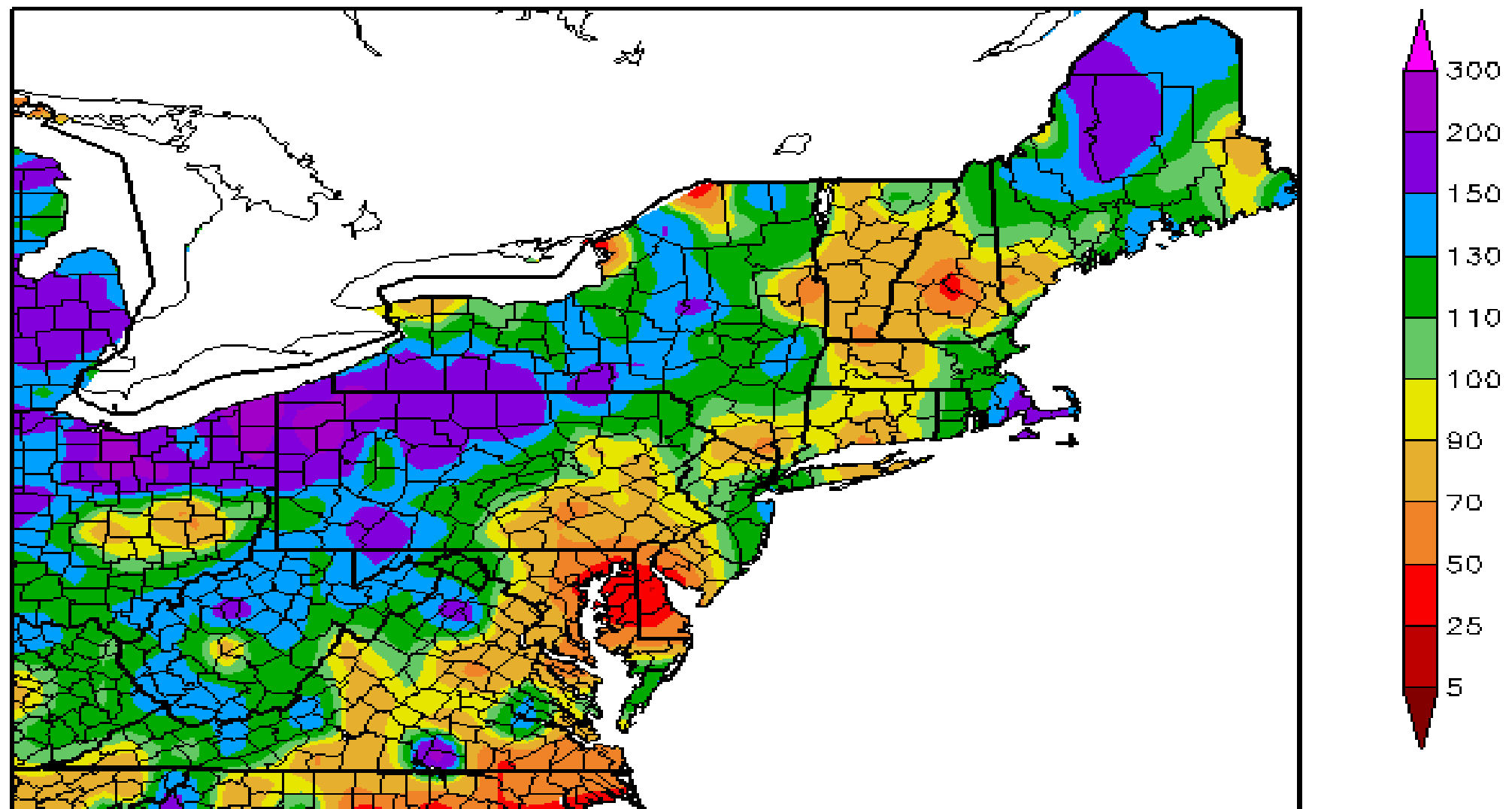
Alan Dunham, Hydrologic Program Leader

National Weather Service
Boston, MA



30 Day Percent of Normal

Percent of Normal Precipitation (%)
1/4/2017 – 2/2/2017



Snow Depth 02/03/17

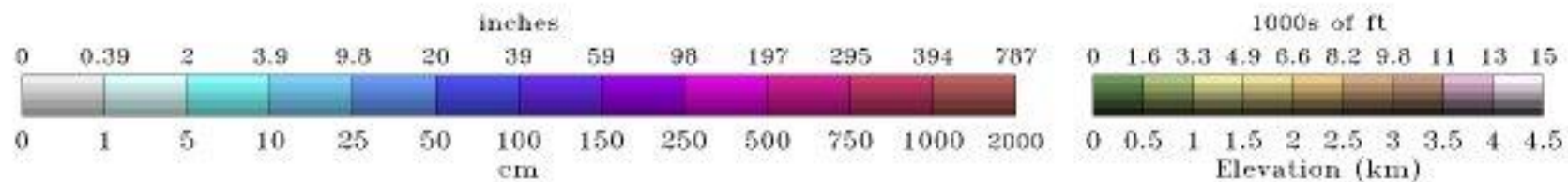
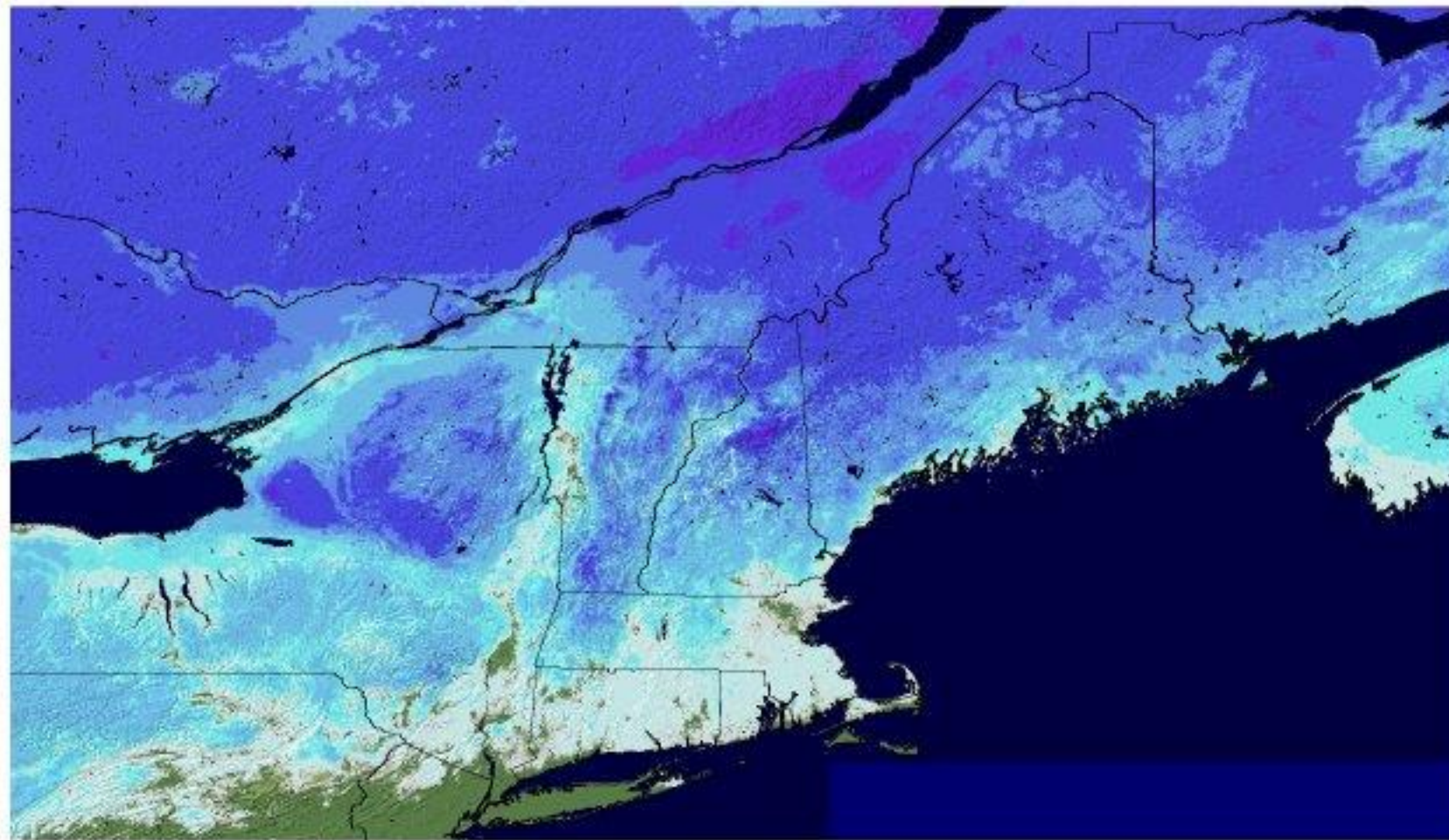
National Snow 2016-
Analysis 2017

OFFICE OF
WATER
PREDICTION

OWP

Snow Depth

2017-02-03 06 UTC



Snow/Water Equivalent 02/03/17

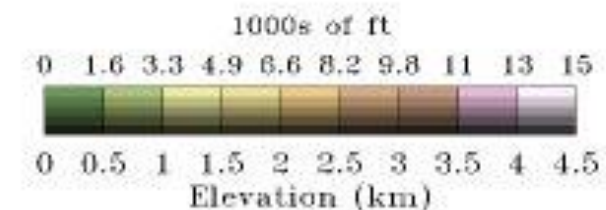
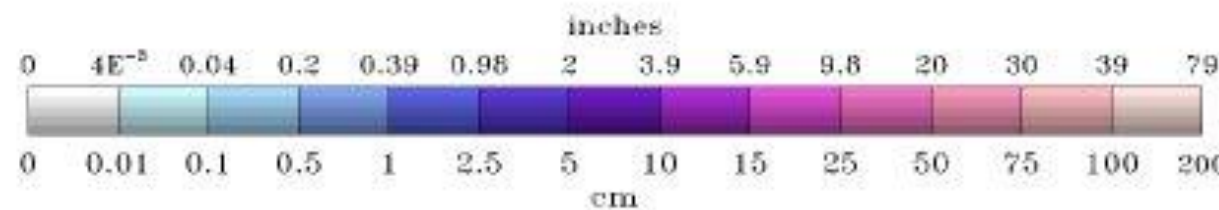
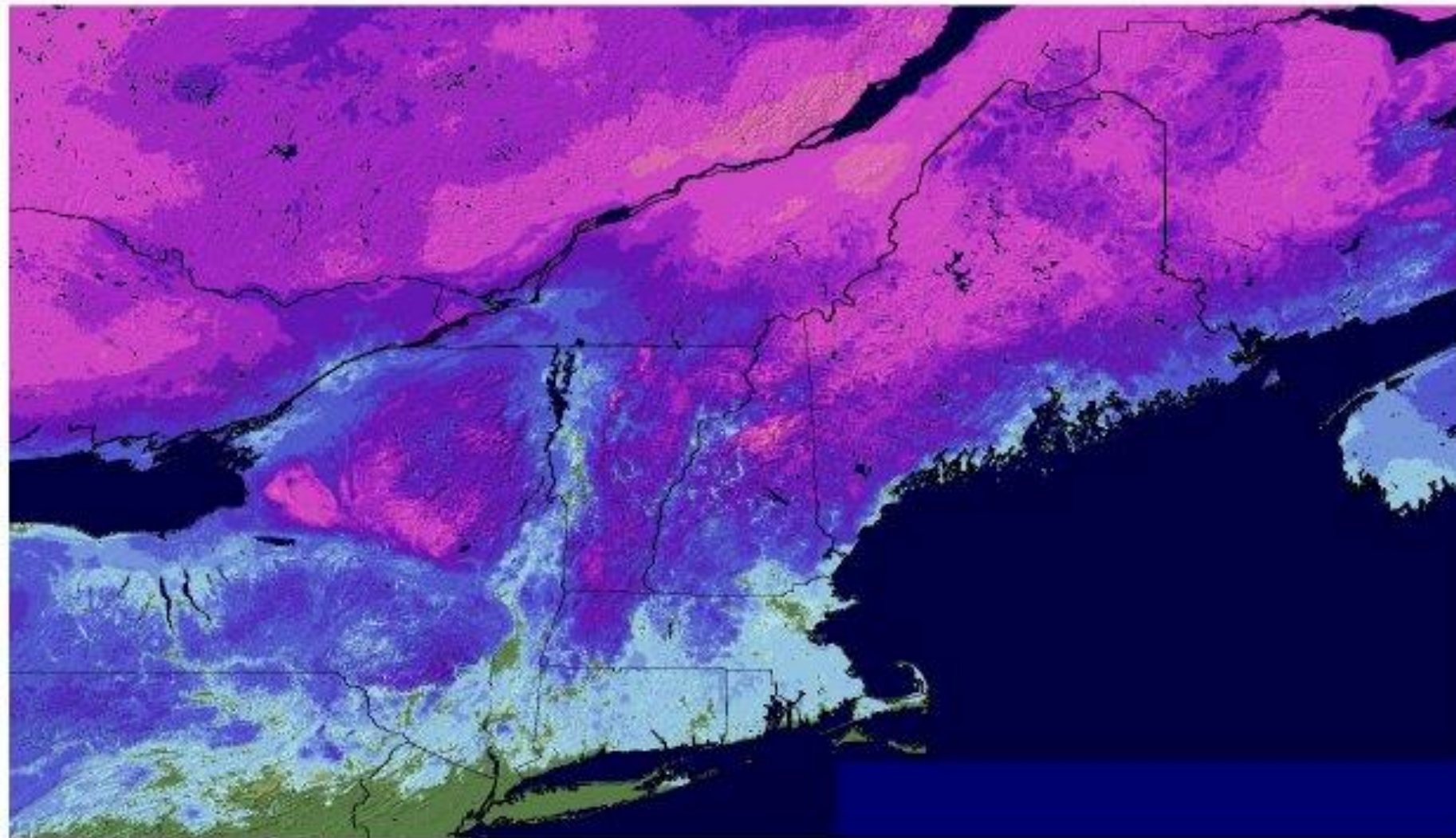
National Snow 2016-
Analysis 2017

OFFICE OF
WATER
PREDICTION

OWP

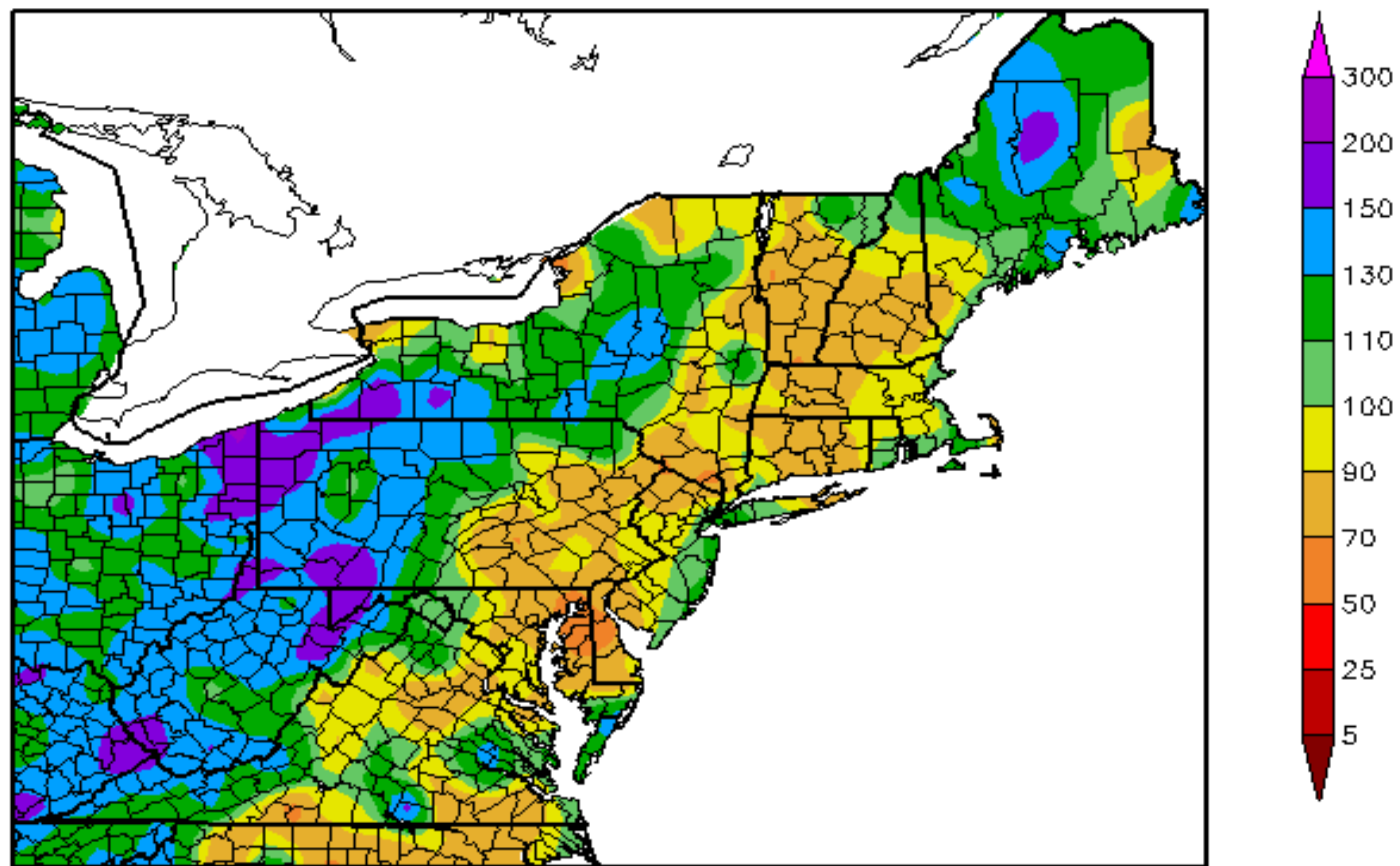
Snow Water Equivalent

2017-02-03 06 UTC



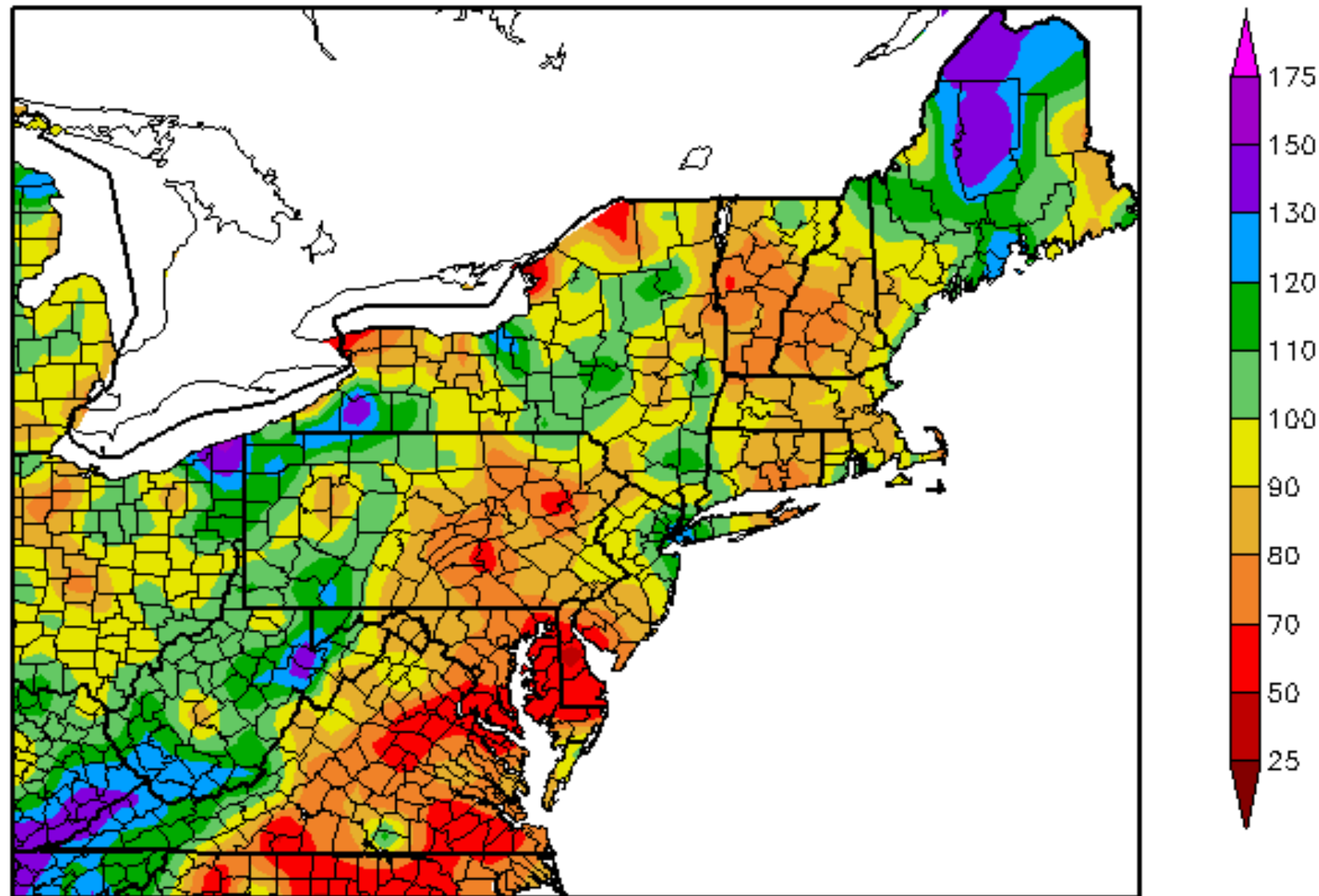
60 Day Percent of Normal

Percent of Normal Precipitation (%)
12/5/2016 - 2/2/2017



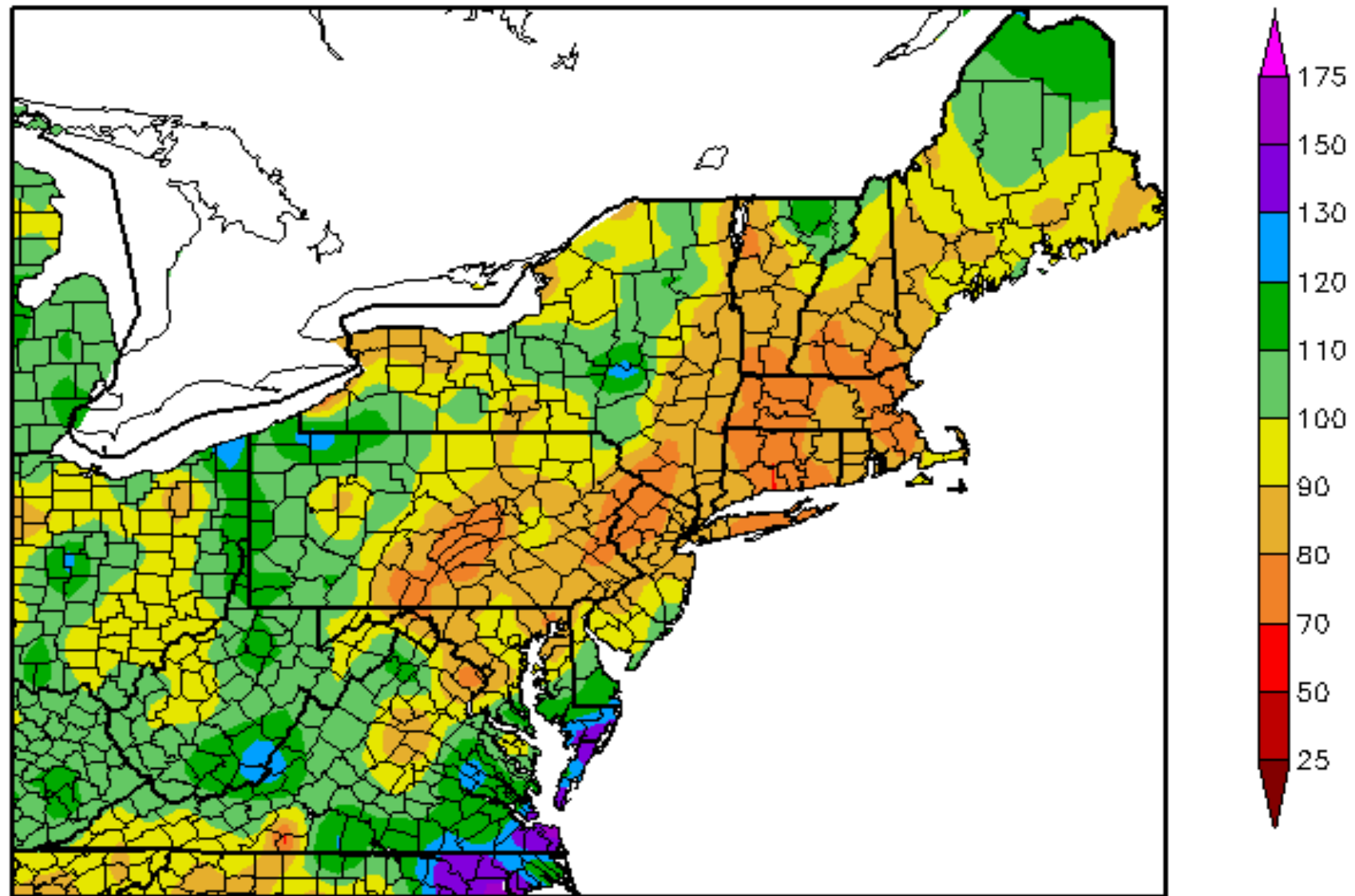
90 day Percent of Normal

Percent of Normal Precipitation (%)
11/5/2016 – 2/2/2017



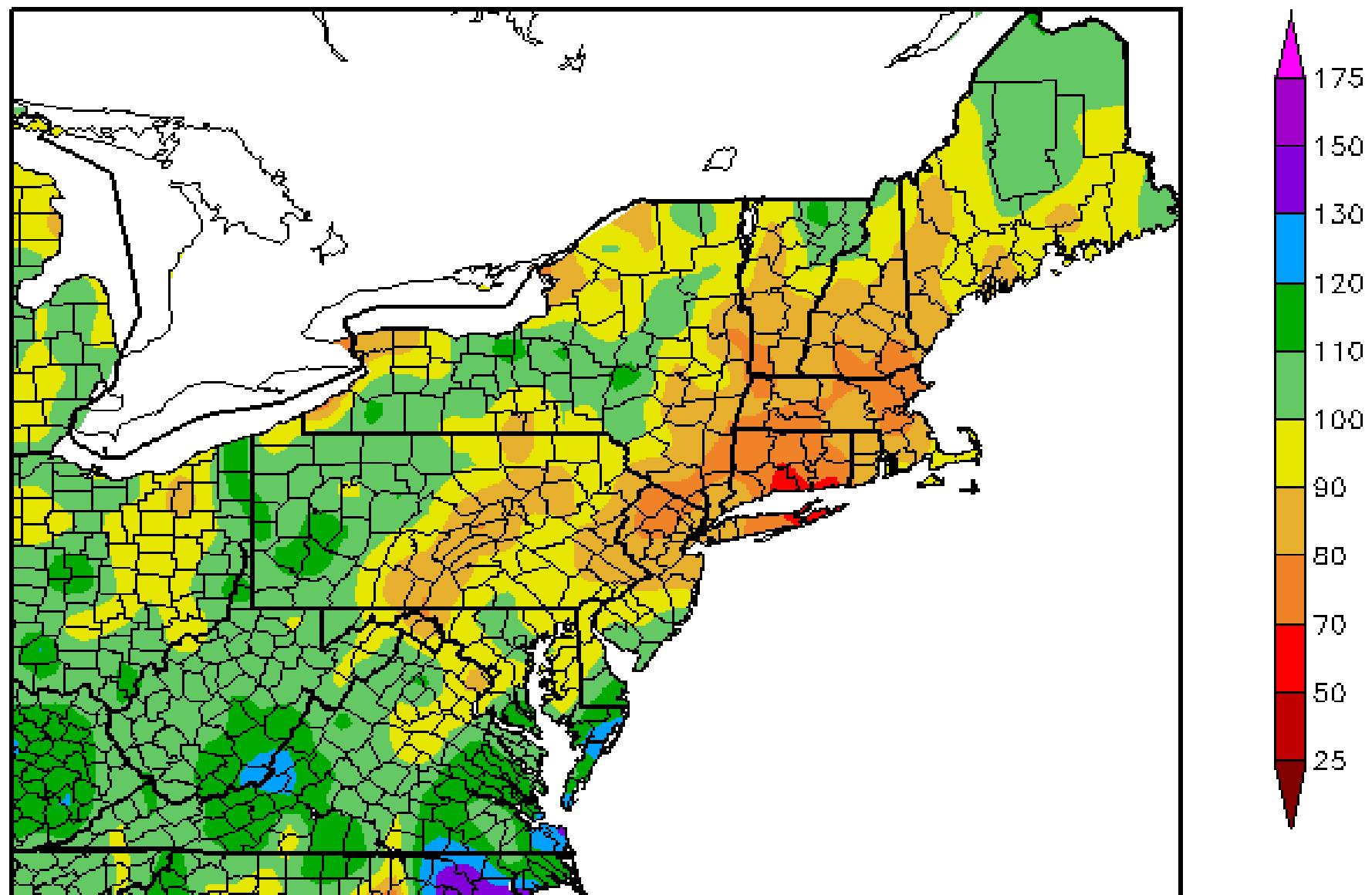
12 Month percent of Normal

Percent of Normal Precipitation (%)
2/2/2016 – 2/1/2017



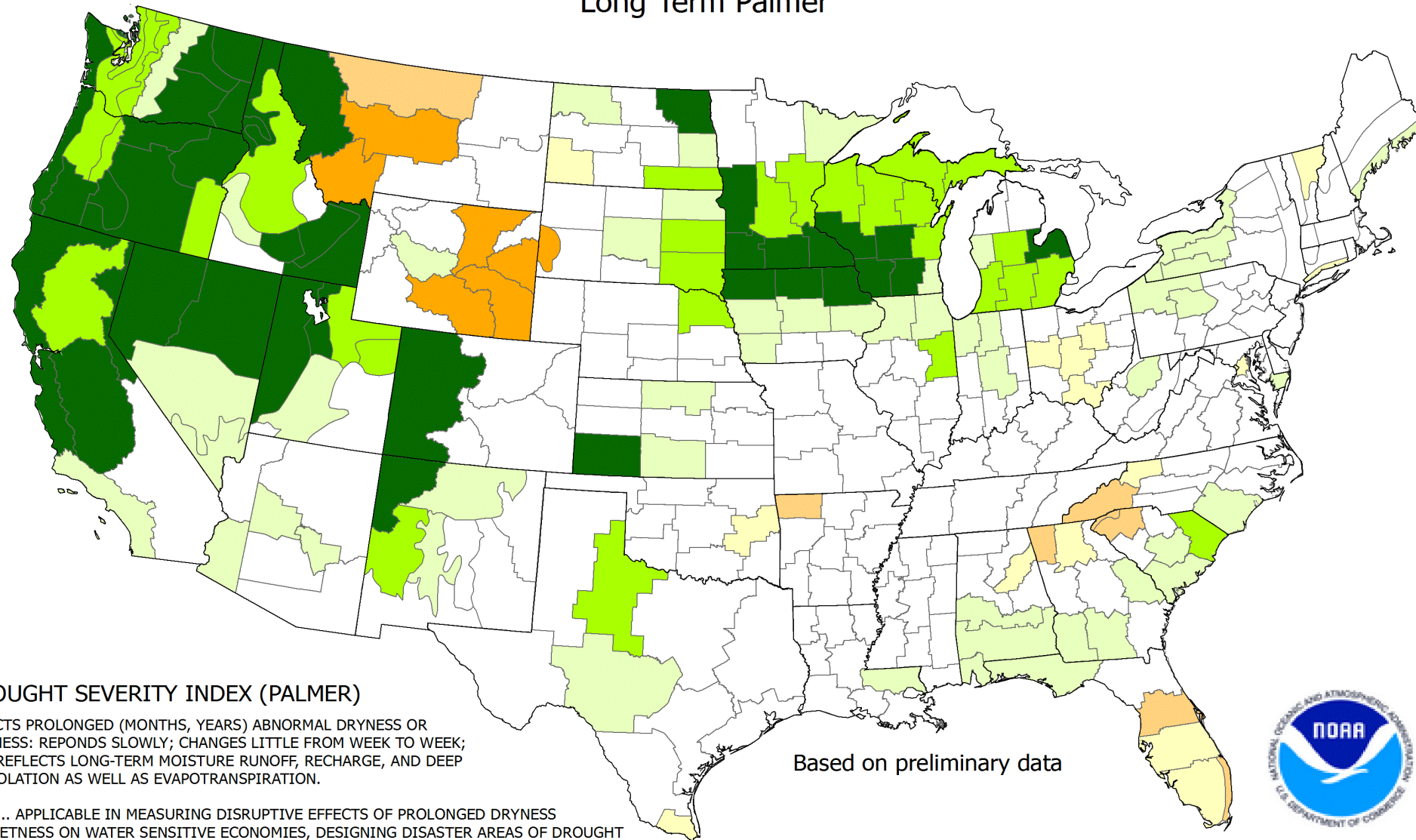
24 Month Percent of Normal

Percent of Normal Precipitation (%)
2/2/2015 – 2/1/2017



Palmer Drought Index 01/28/17

Drought Severity Index by Division
Weekly Value for Period Ending Jan 28, 2017
Long Term Palmer



DROUGHT SEVERITY INDEX (PALMER)

DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS; REponds SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION AS WELL AS EVAPOTRANSPIRATION.

USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS AND STREAMS.

LIMITATIONS... IS NOT GENERALLY INDICATIVE OFFSHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).

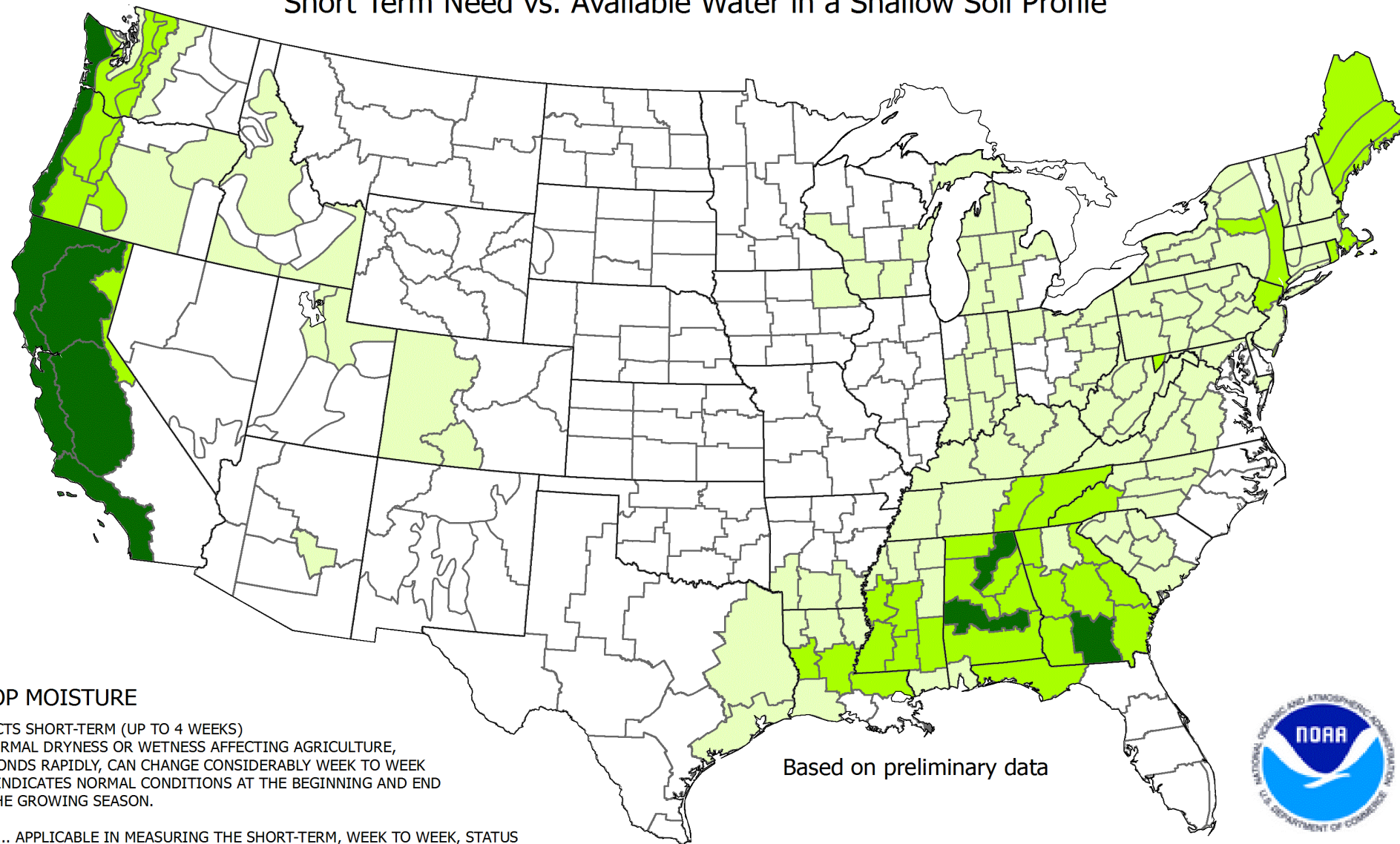
Based on preliminary data



- | | |
|-----------------------------------|--------------------------------------|
| ■ -4.0 or less (Extreme Drought) | ■ +2.0 to +2.9 (Unusual Moist Spell) |
| ■ -3.0 to -3.9 (Severe Drought) | ■ +3.0 to +3.9 (Very Moist Spell) |
| ■ -2.0 to -2.9 (Moderate Drought) | ■ +4.0 and above (Extremely Moist) |
| ■ --1.9 to +1.9 (Near Normal) | |

Crop Moisture 01/28/17

Crop Moisture Index by Division
Weekly Value for Period Ending Jan 28, 2017
Short Term Need vs. Available Water in a Shallow Soil Profile

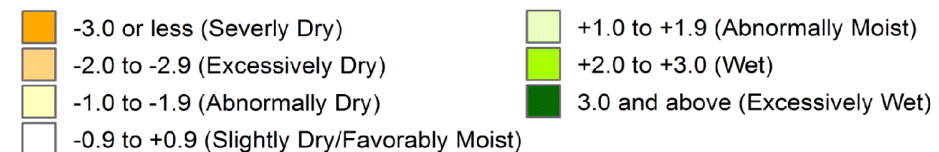


CROP MOISTURE

DEPICTS SHORT-TERM (UP TO 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE, RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.

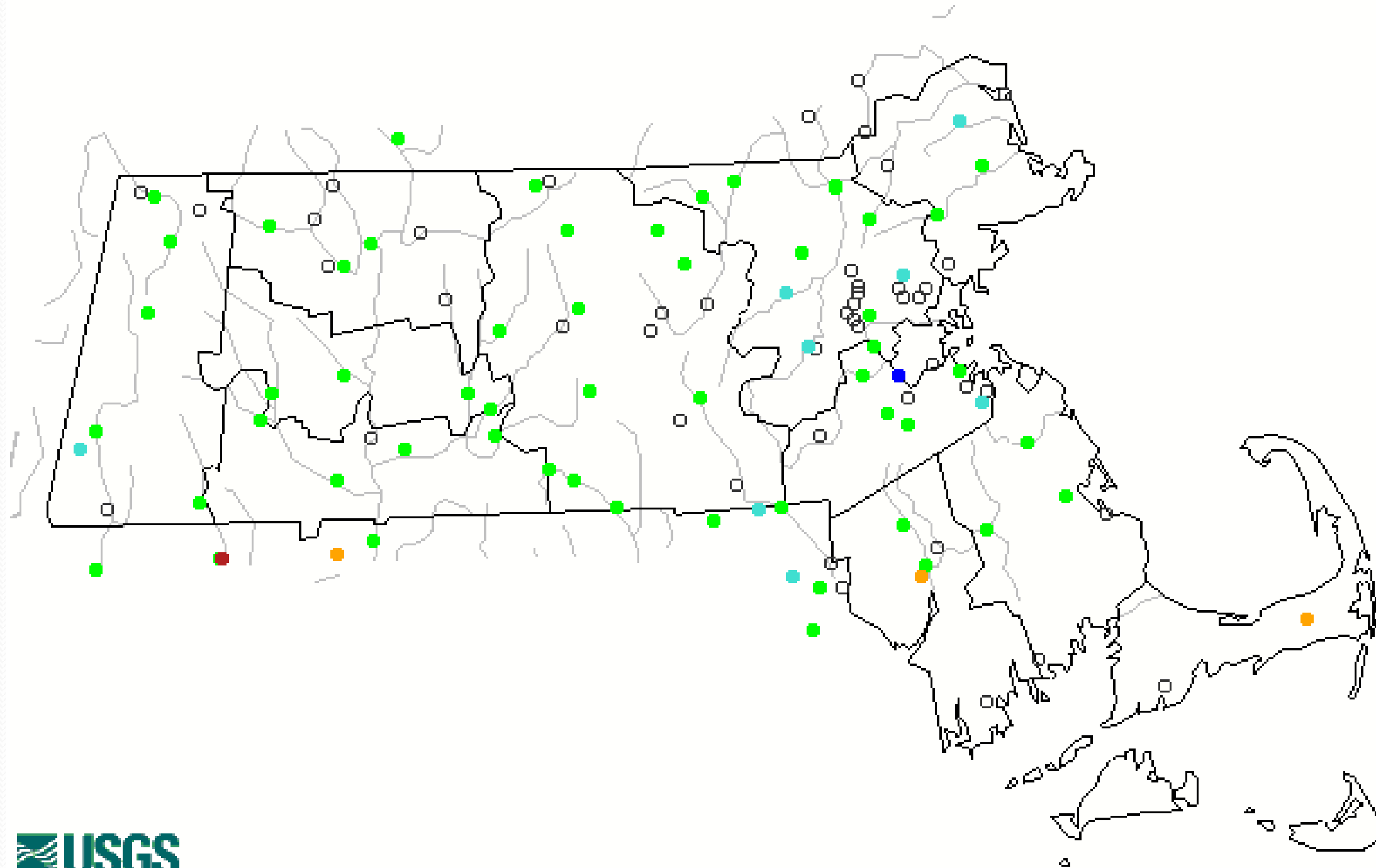
USES... APPLICABLE IN MEASURING THE SHORT-TERM, WEEK TO WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS

LIMITATIONS... MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A SHALLOW SOIL PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55F. IT IS NOT GENERALLY INDICATIVE OF THE LONG-TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.



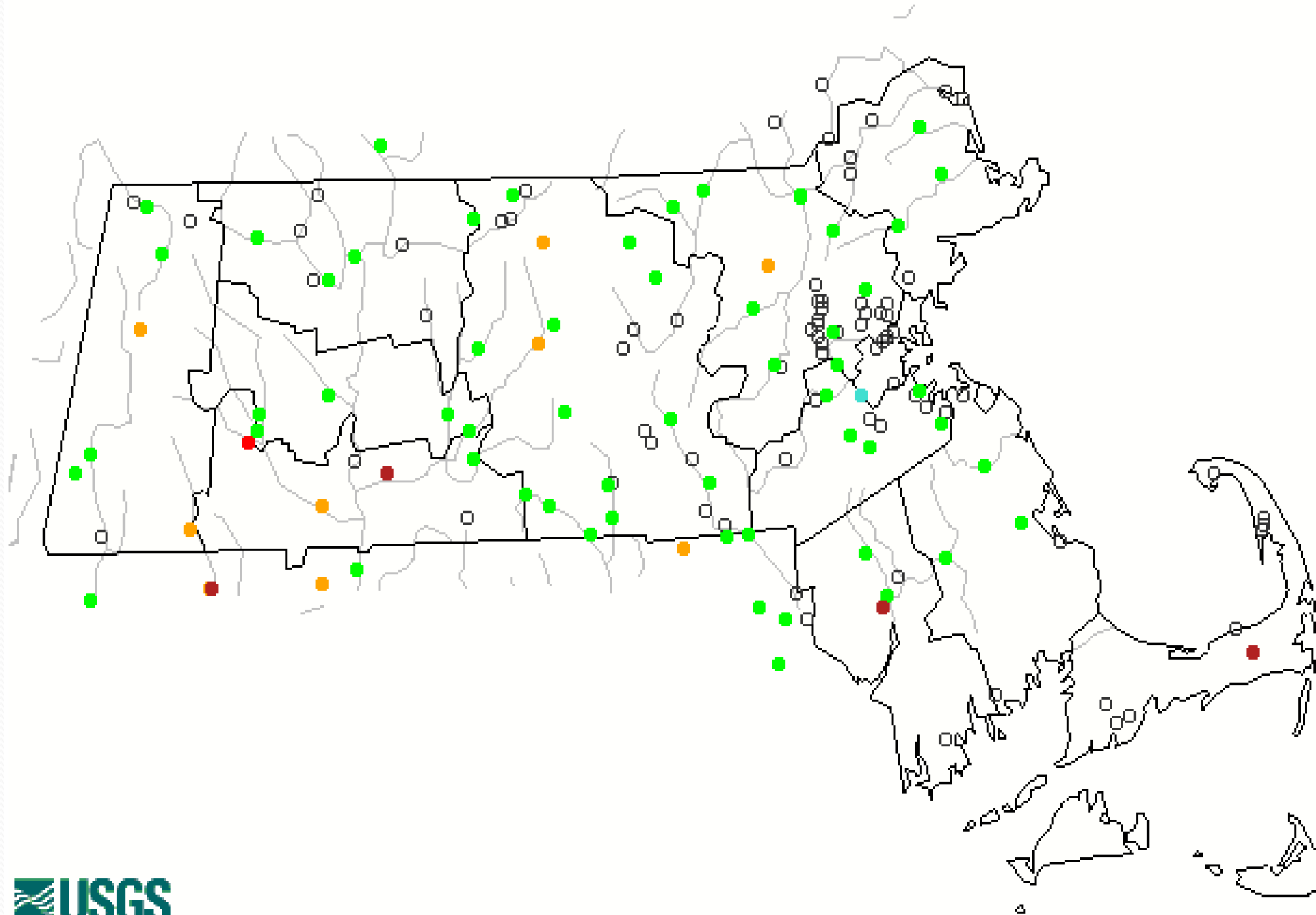
28 Day Avg Stream Flow 02/02/17

Thursday, February 02, 2017

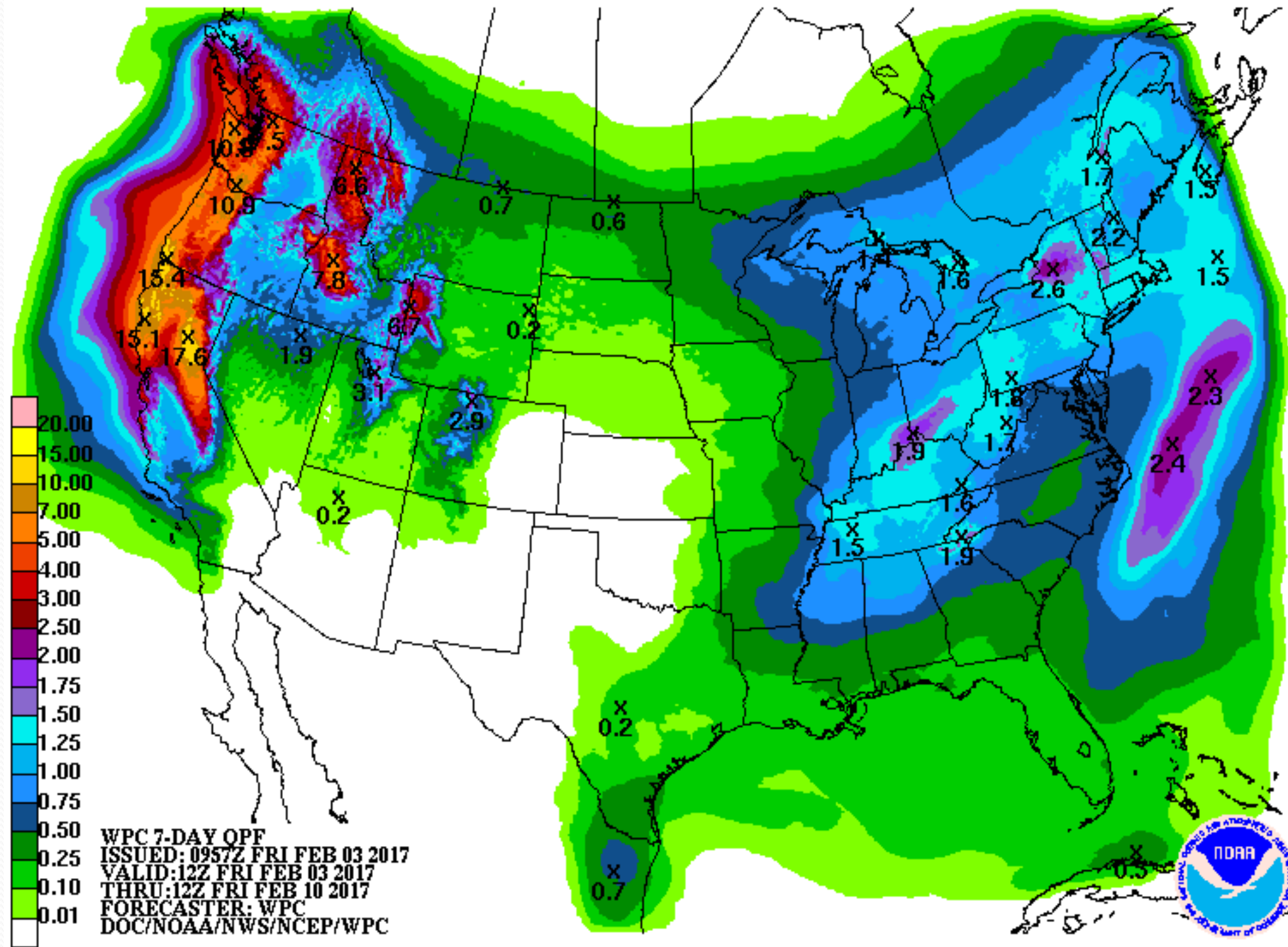


Real Time Stream flow 02/02/17

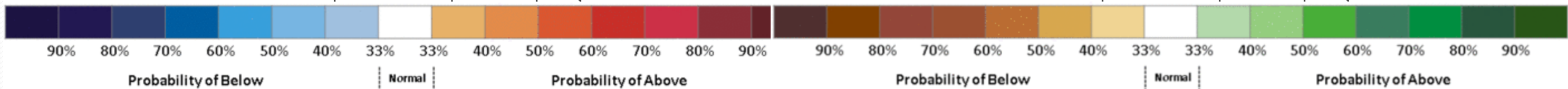
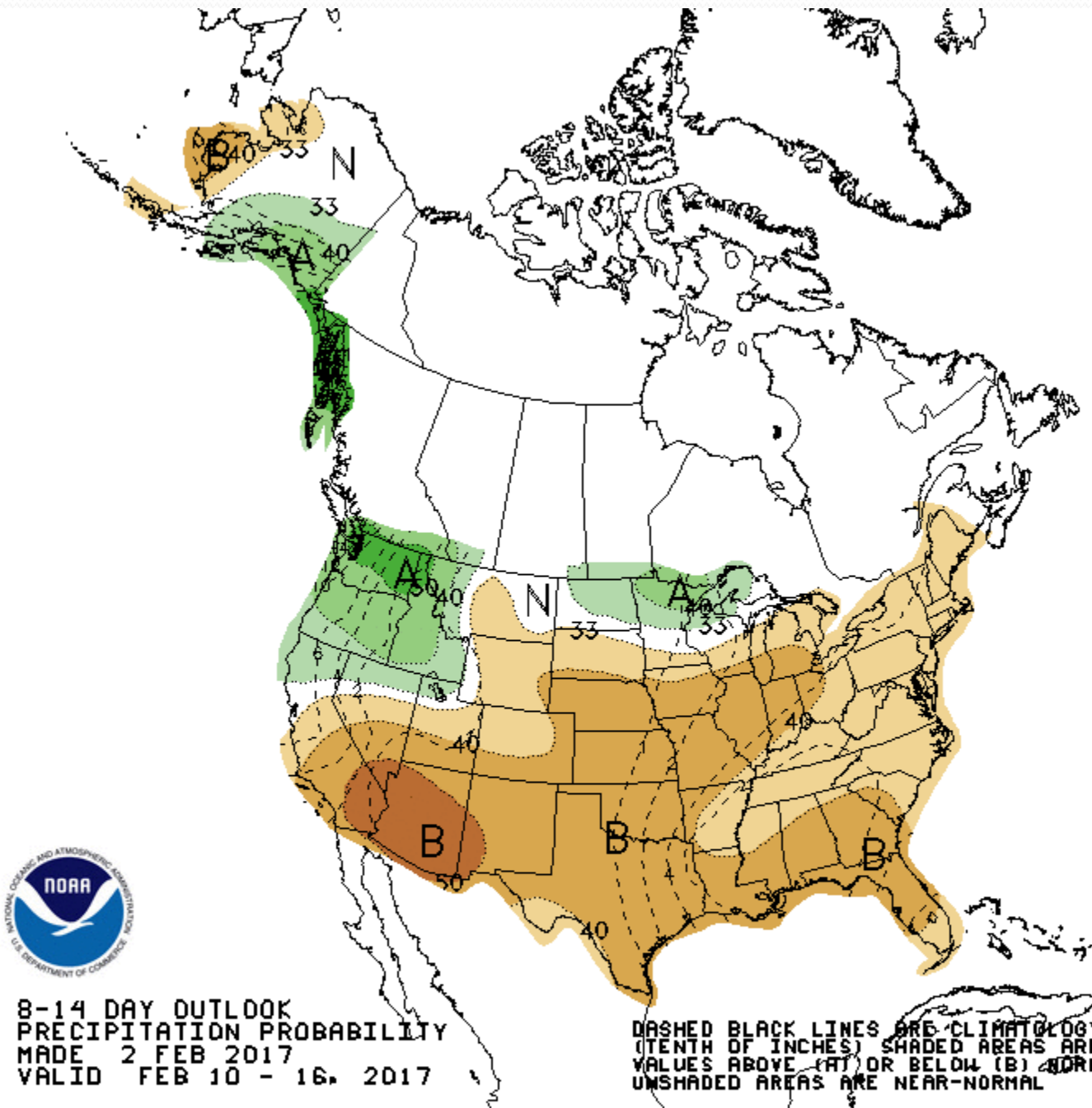
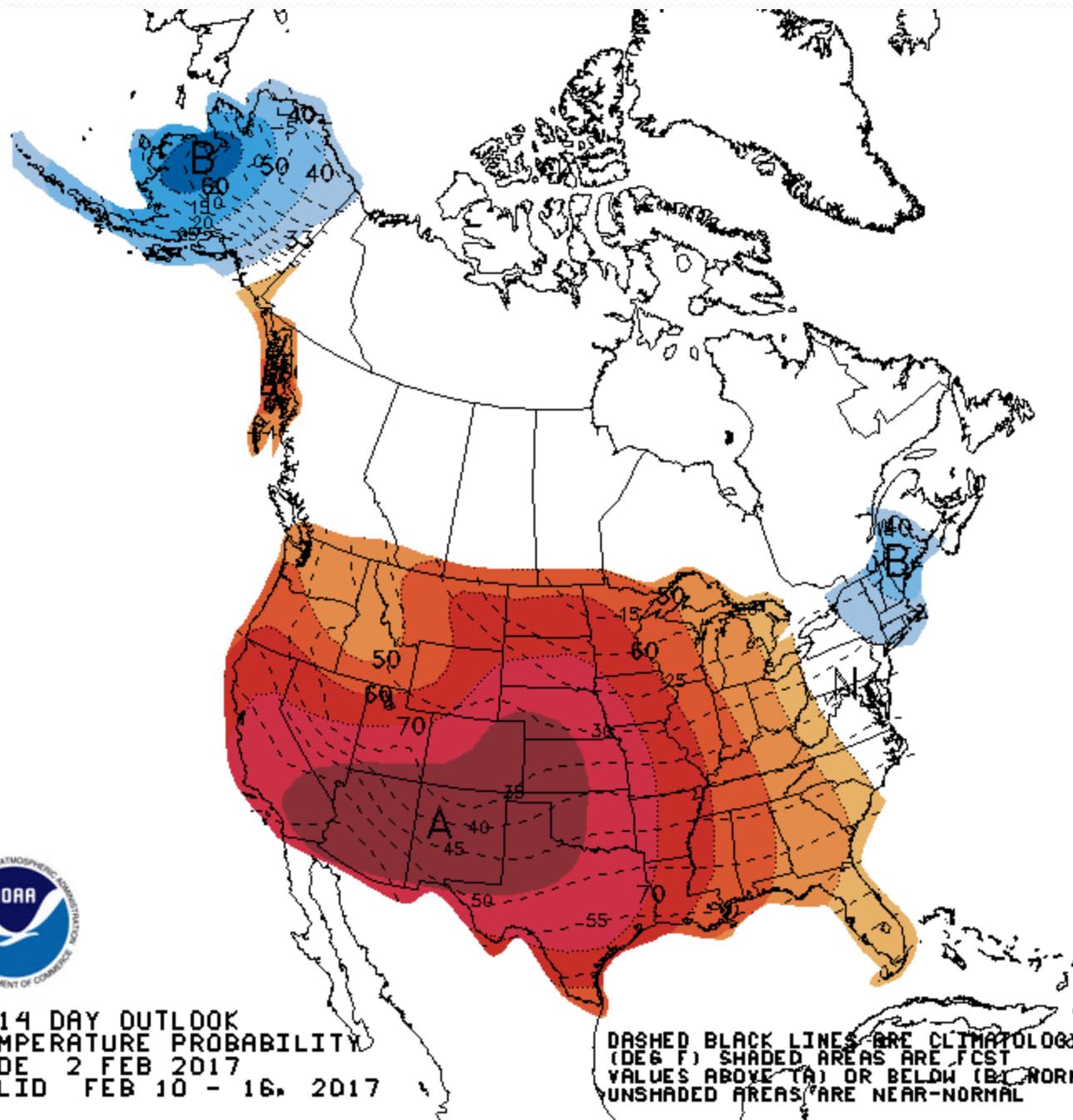
Friday, February 03, 2017 09:30ET



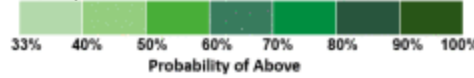
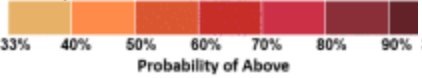
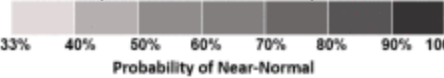
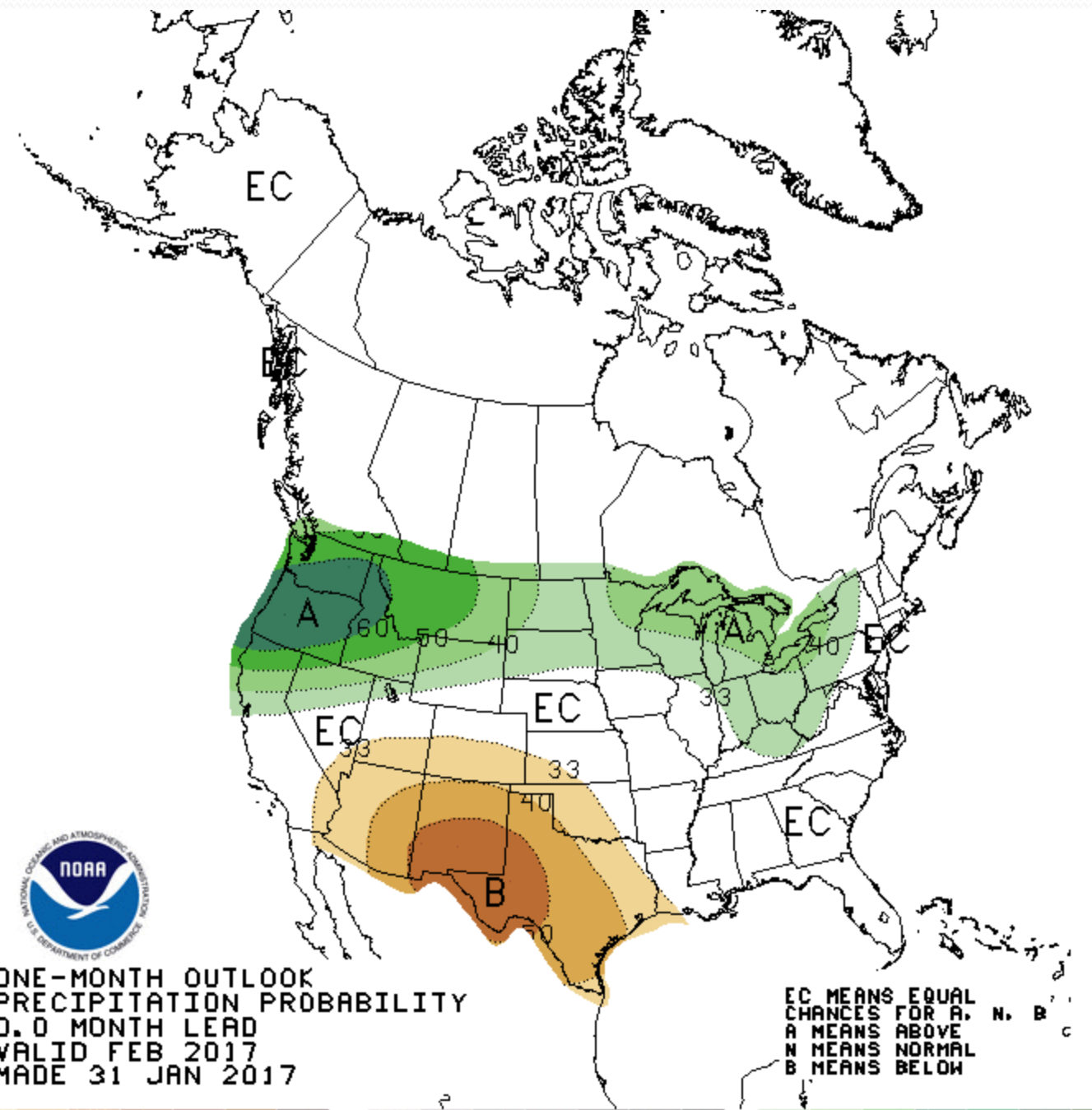
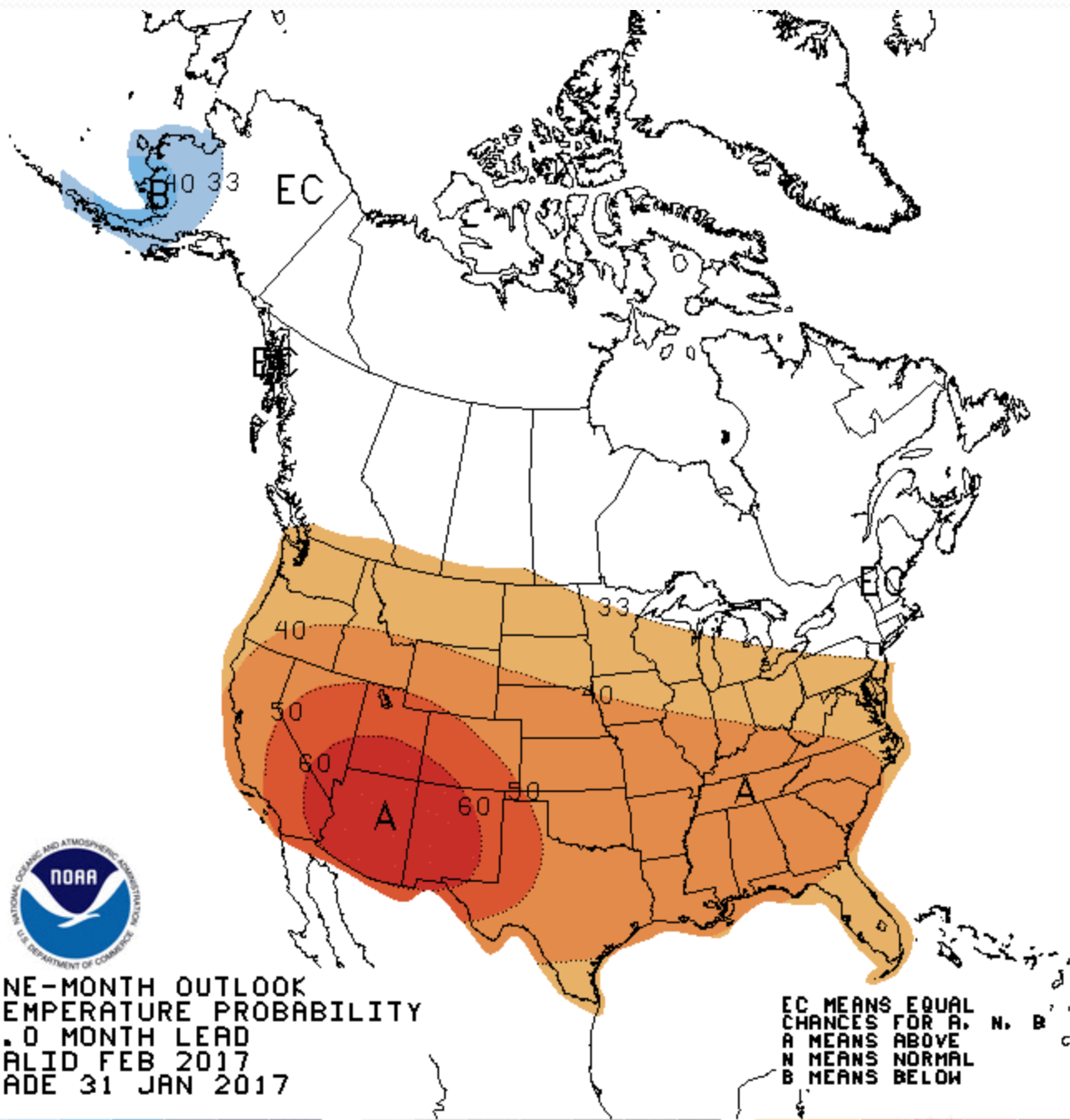
7 Day Precip Feb 03-10



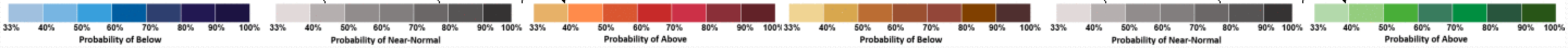
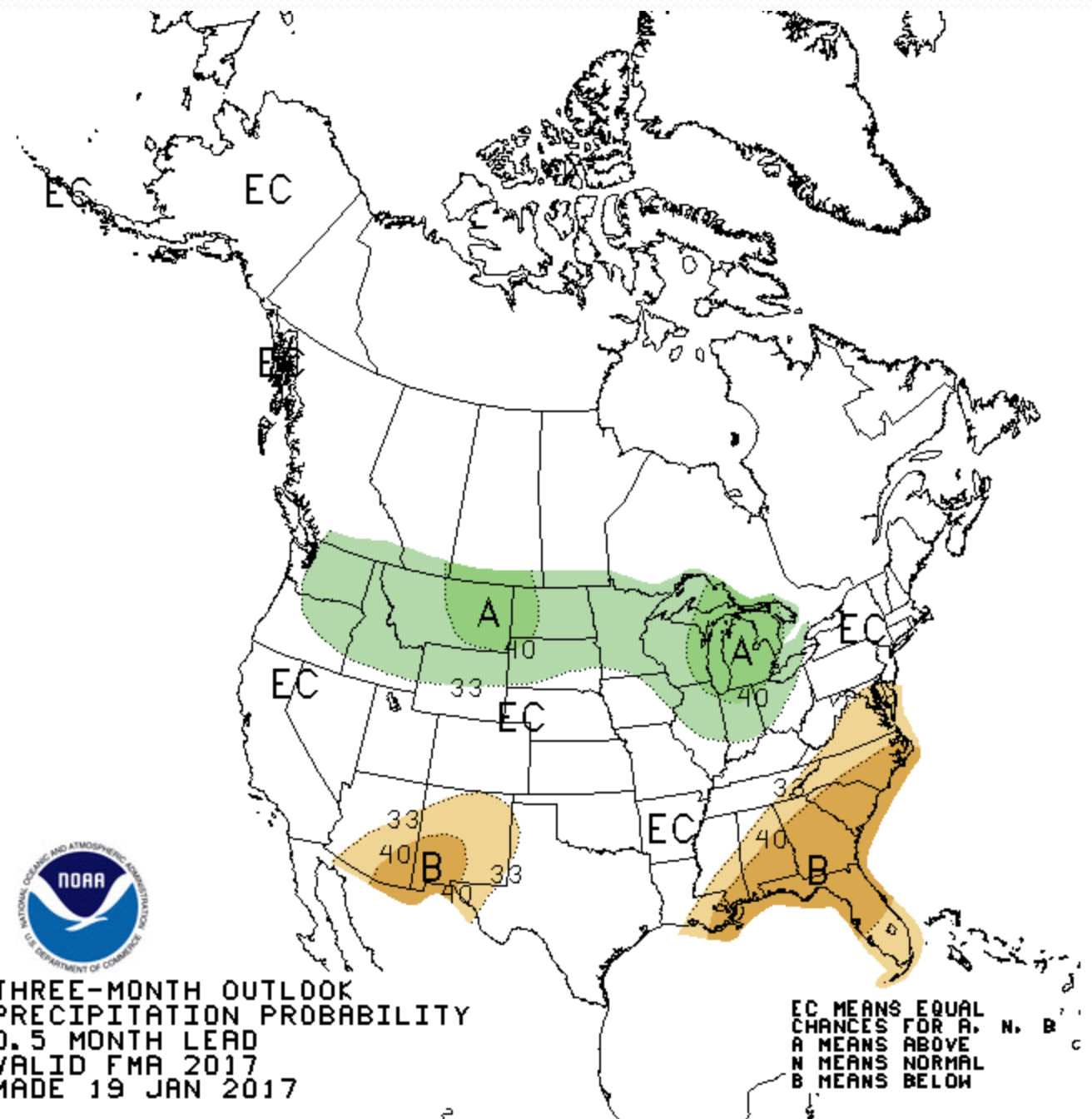
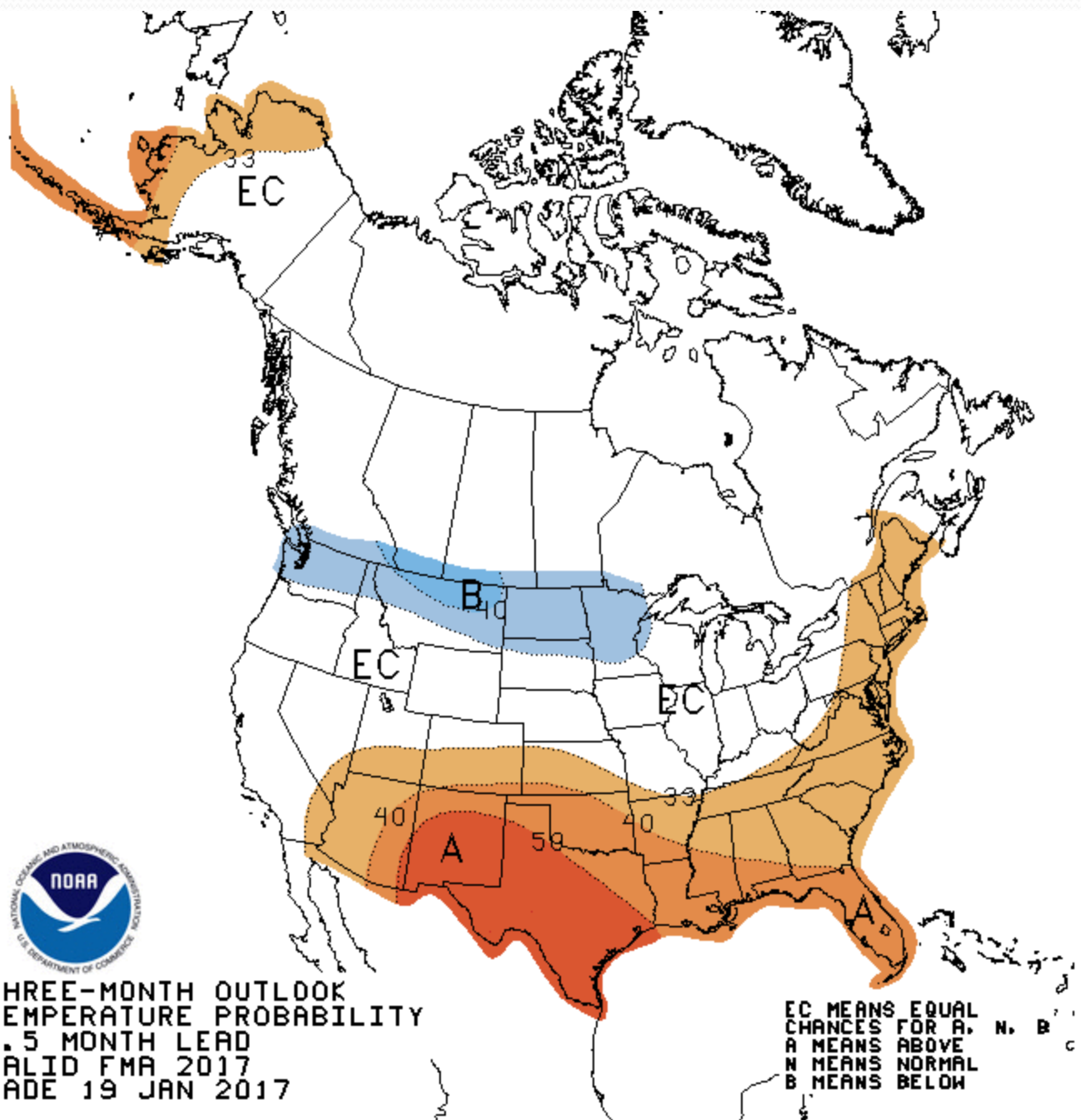
8-14 Day Fcst 02/10-16/17



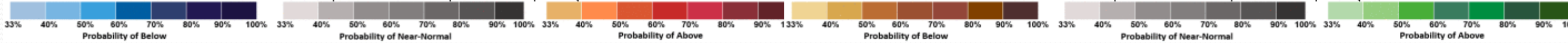
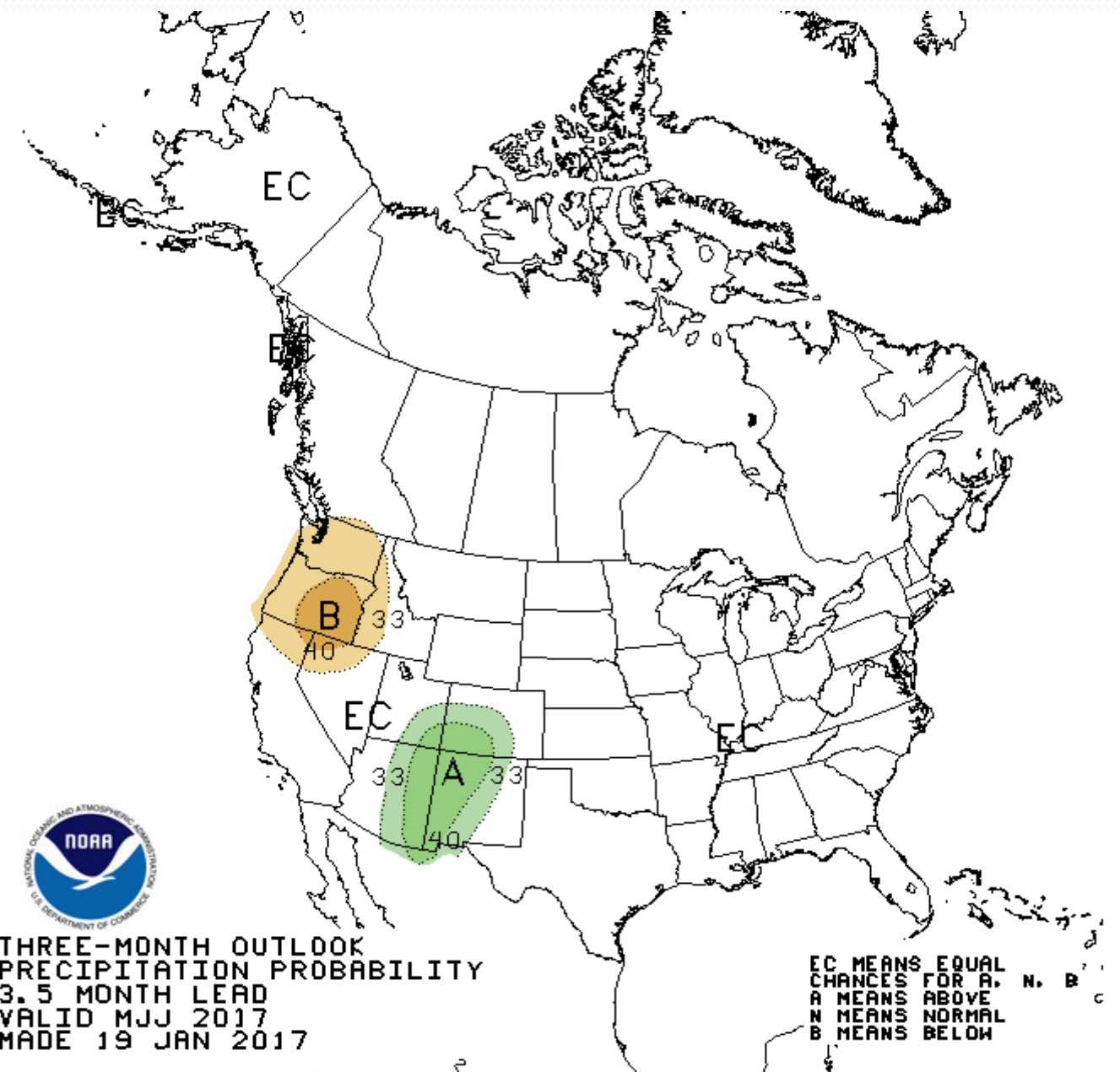
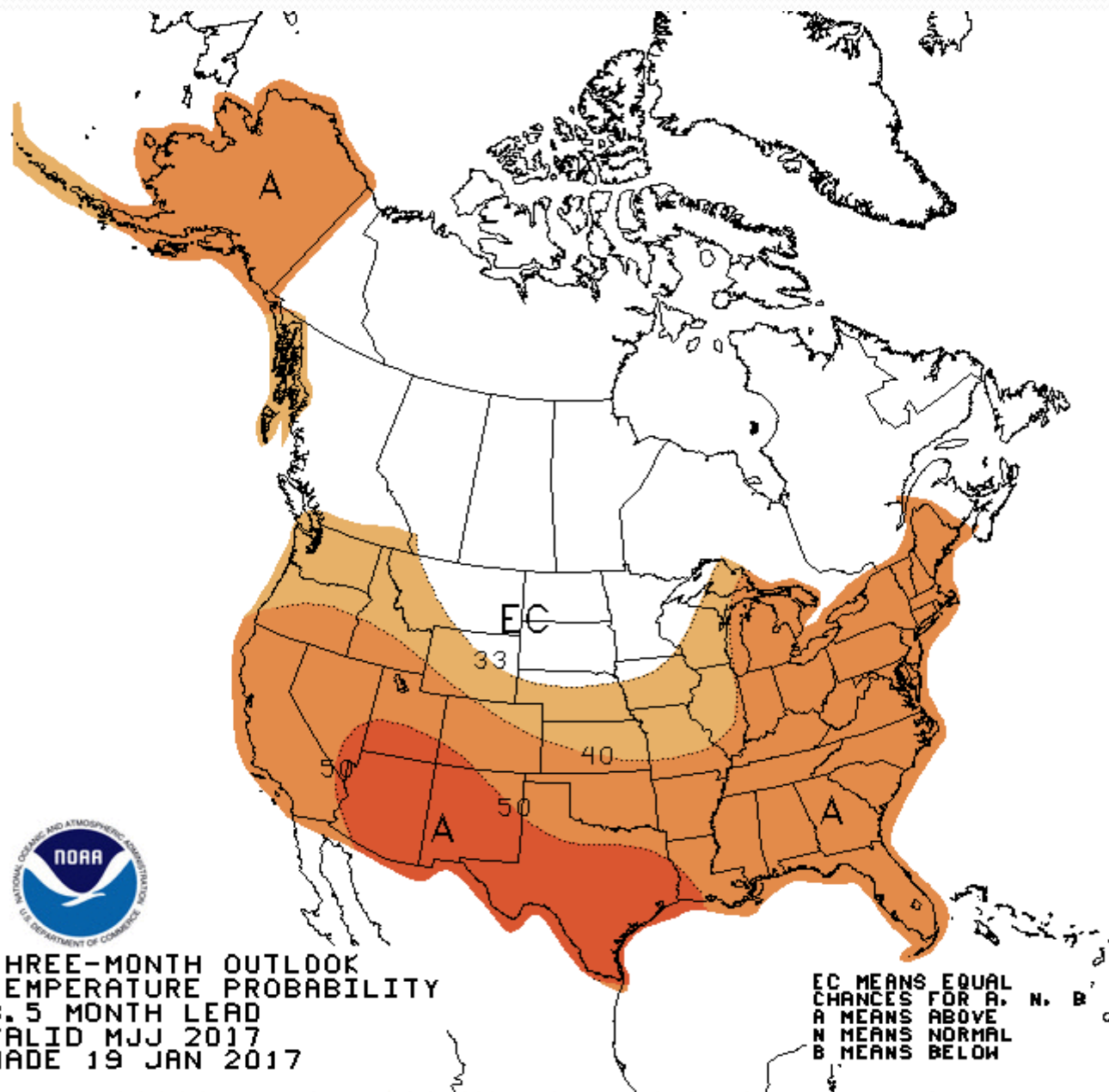
Outlook for Feb 2017



Outlook Feb, Mar, Apr 2017



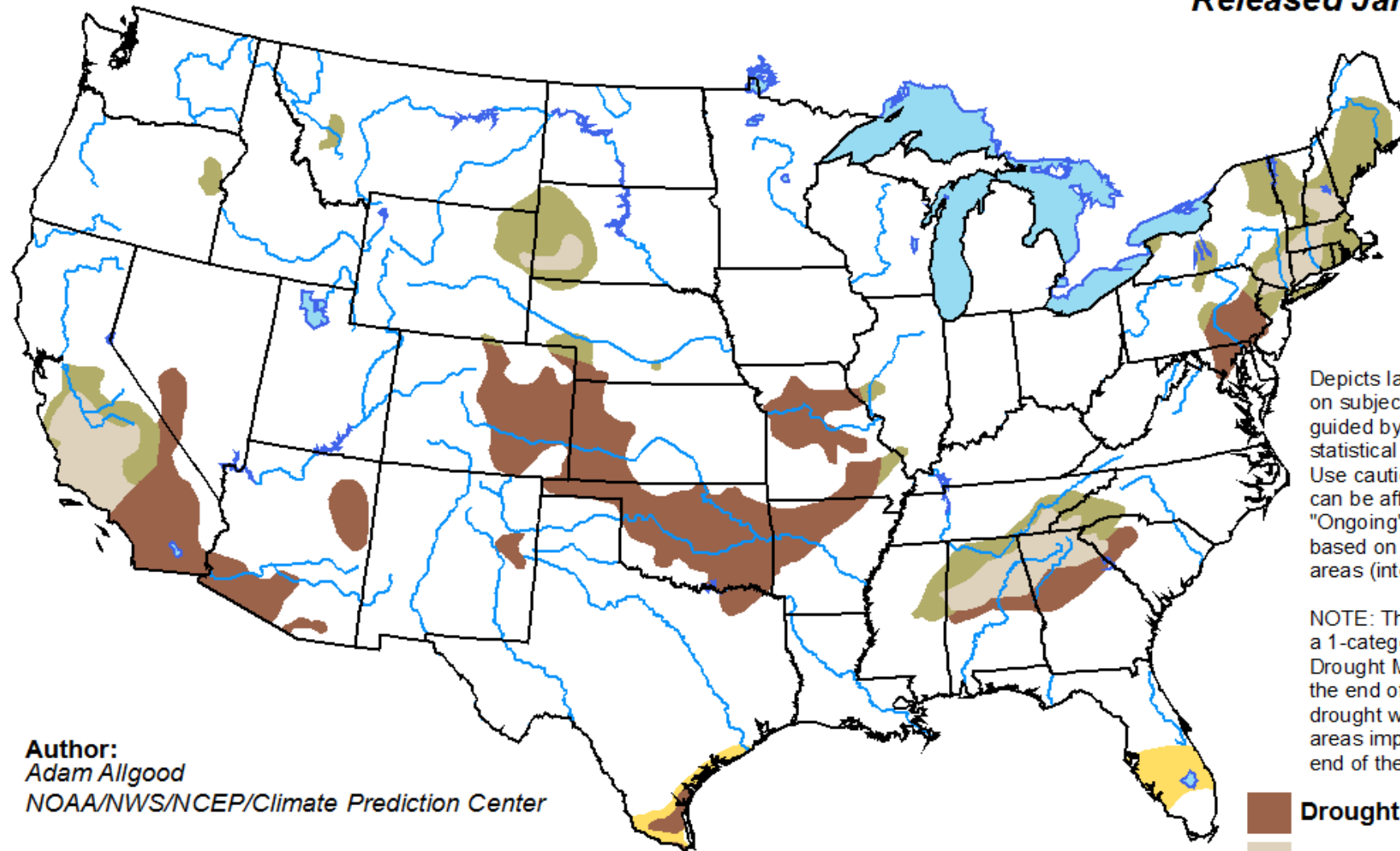
Outlook for May, June, July 2017



Drought outlook Feb

U.S. Monthly Drought Outlook Drought Tendency During the Valid Period





Valid for February 2017
Released January 31, 2017

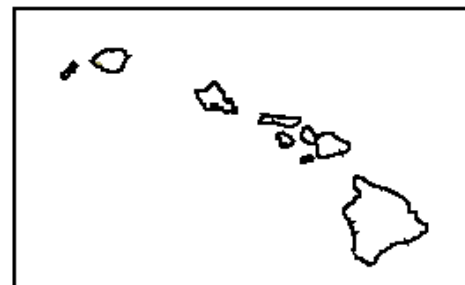
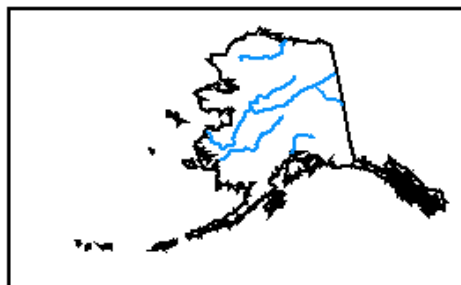


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to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

Author:
Adam Allgood
NOAA/NWS/NCEP/Climate Prediction Center

-  **Drought persists**
-  **Drought remains but improves**
-  **Drought removal likely**
-  **Drought development likely**



<http://go.usa.gov/3eZGd>