

Massachusetts Drought Task Force Meeting NWS Update

National Weather Service

Wednesday October 5th, 2016

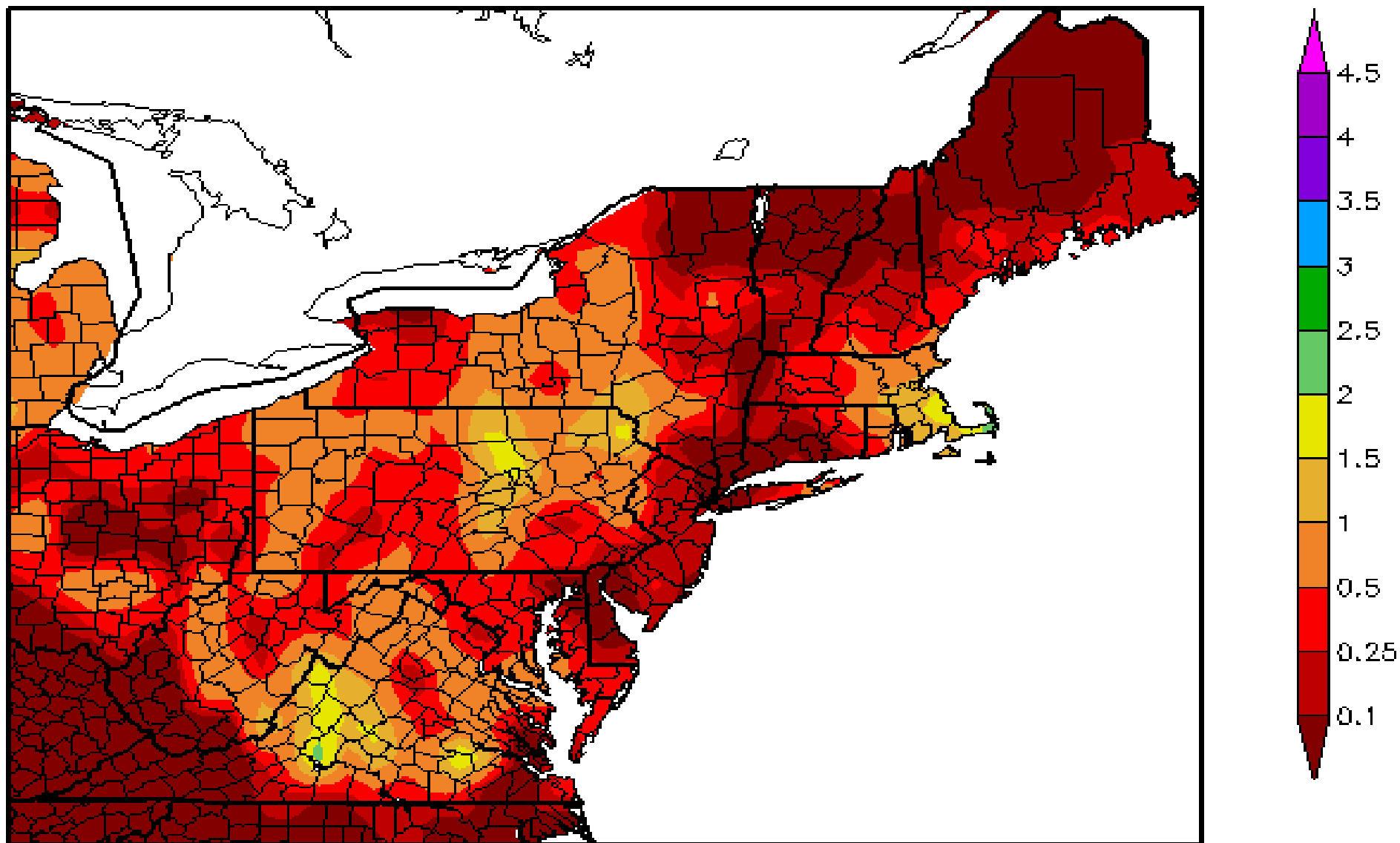
Alan Dunham, Hydrologic Program Leader

National Weather Service
Boston, MA

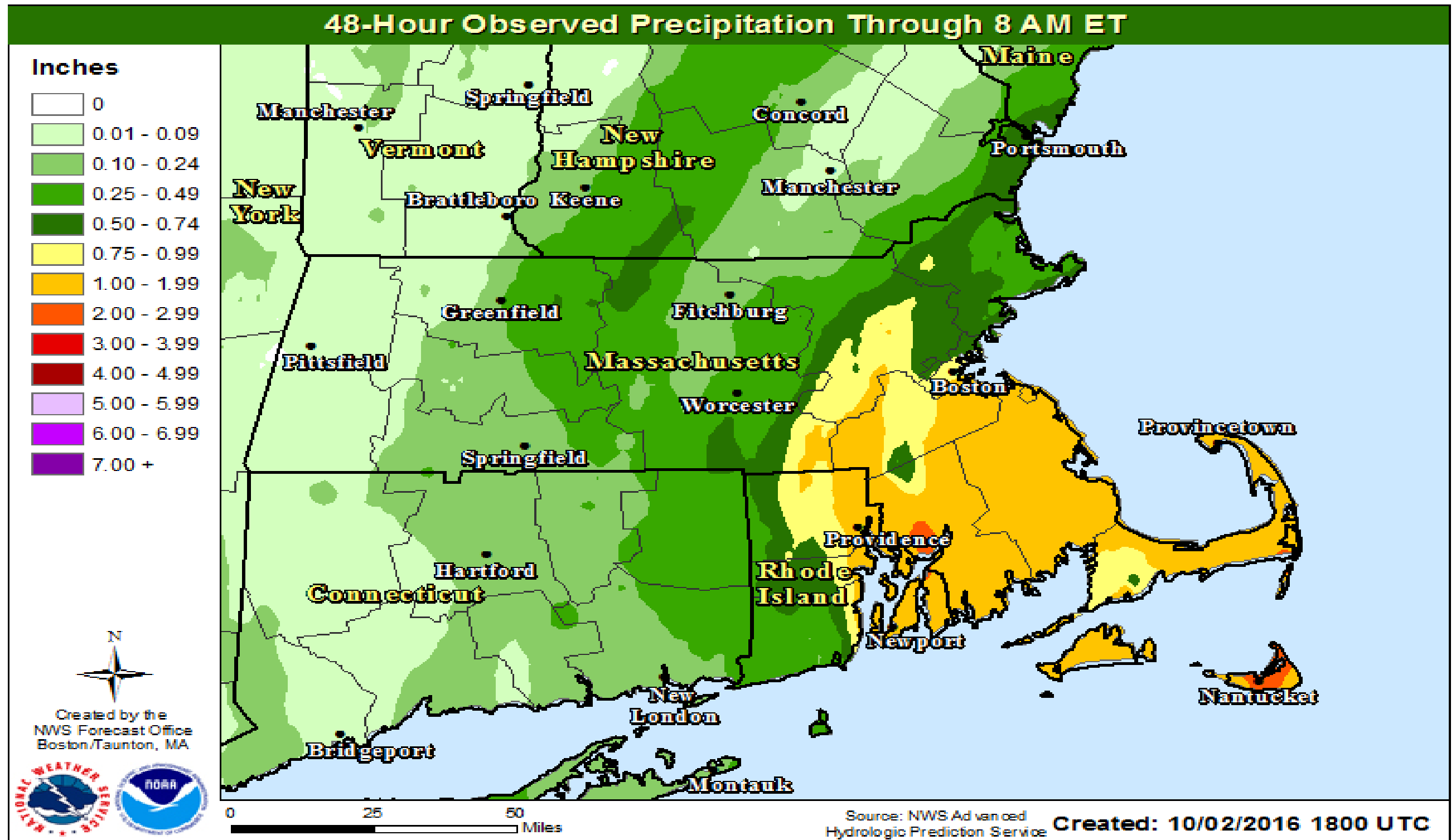


Precipitation for Oct

Precipitation (in)
10/1/2016 – 10/2/2016

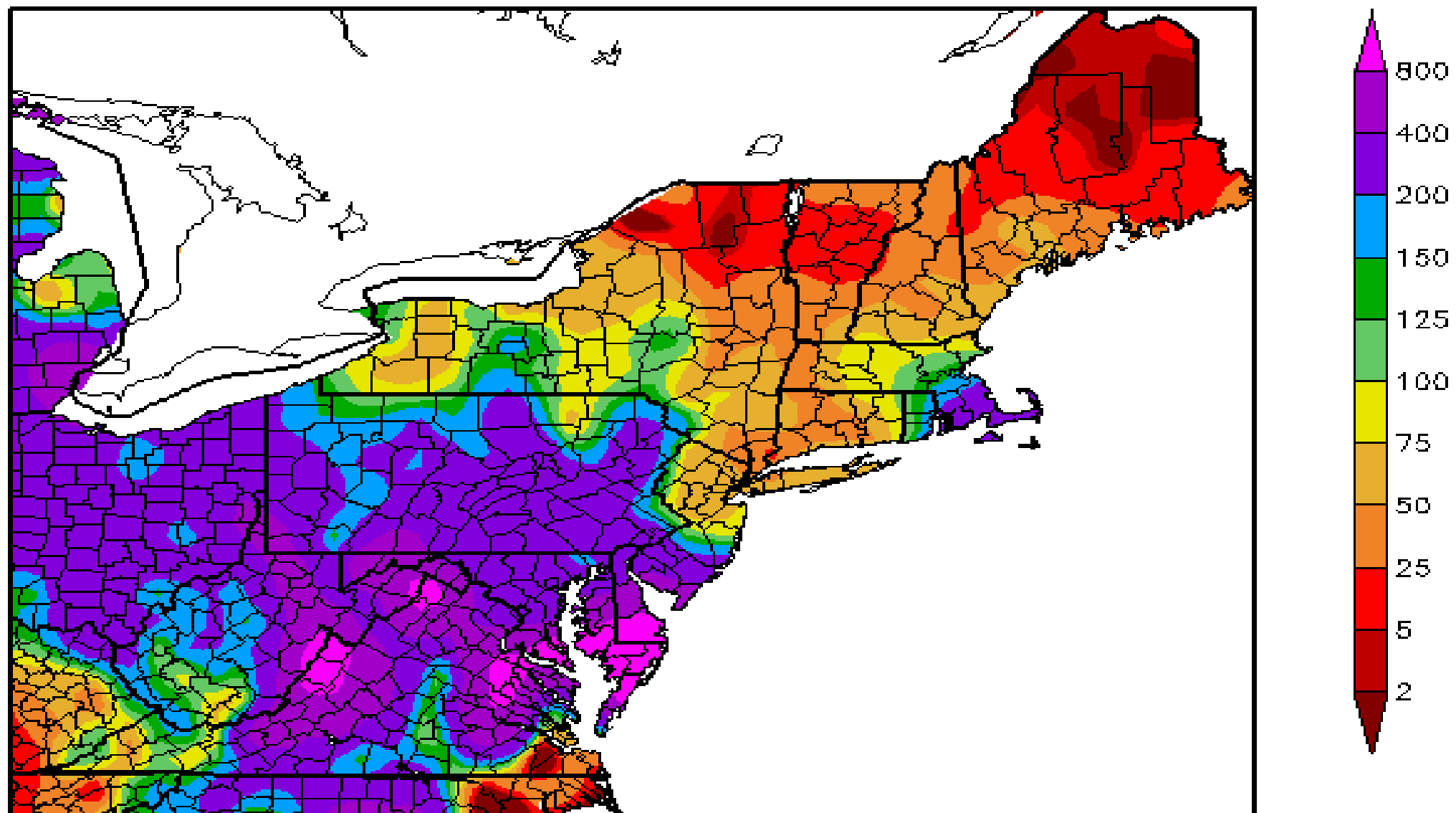


48 Hour Precip ending 18Z 10/02/16



7 Day percent of Normal

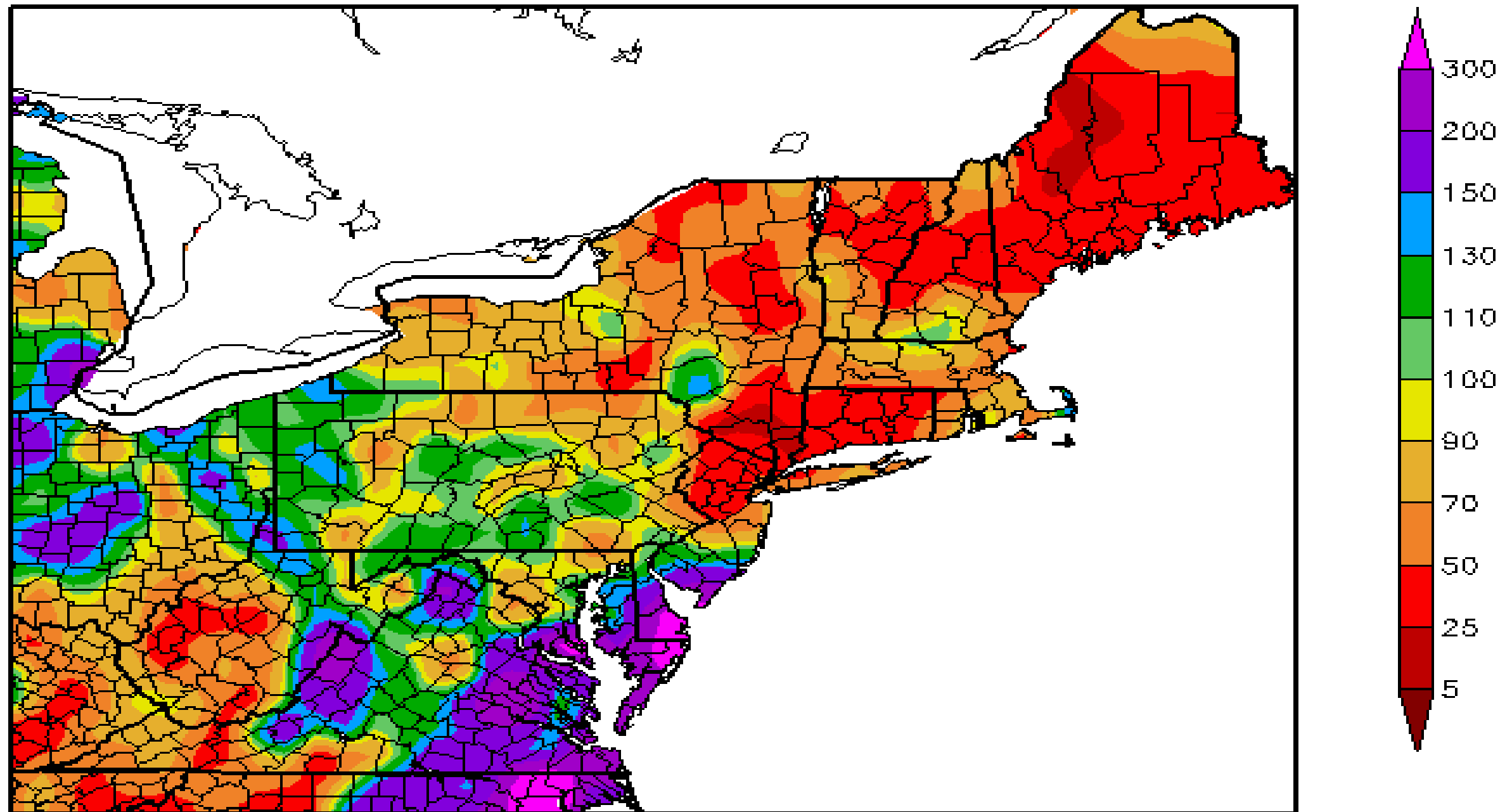
Percent of Normal Precipitation (%)
9/26/2016 – 10/2/2016



30 Day Percent of Normal

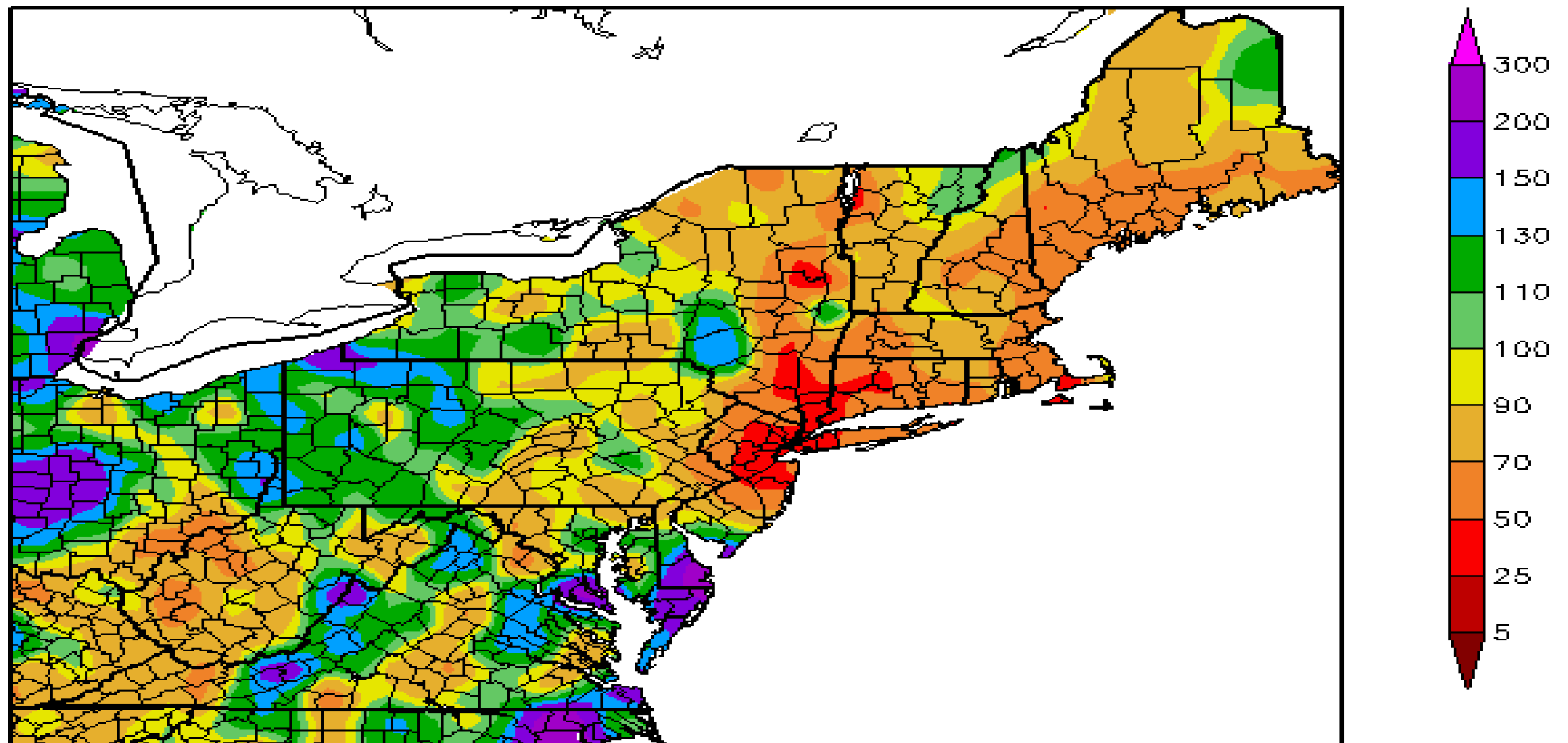
Percent of Normal Precipitation (%)

9/3/2016 – 10/2/2016



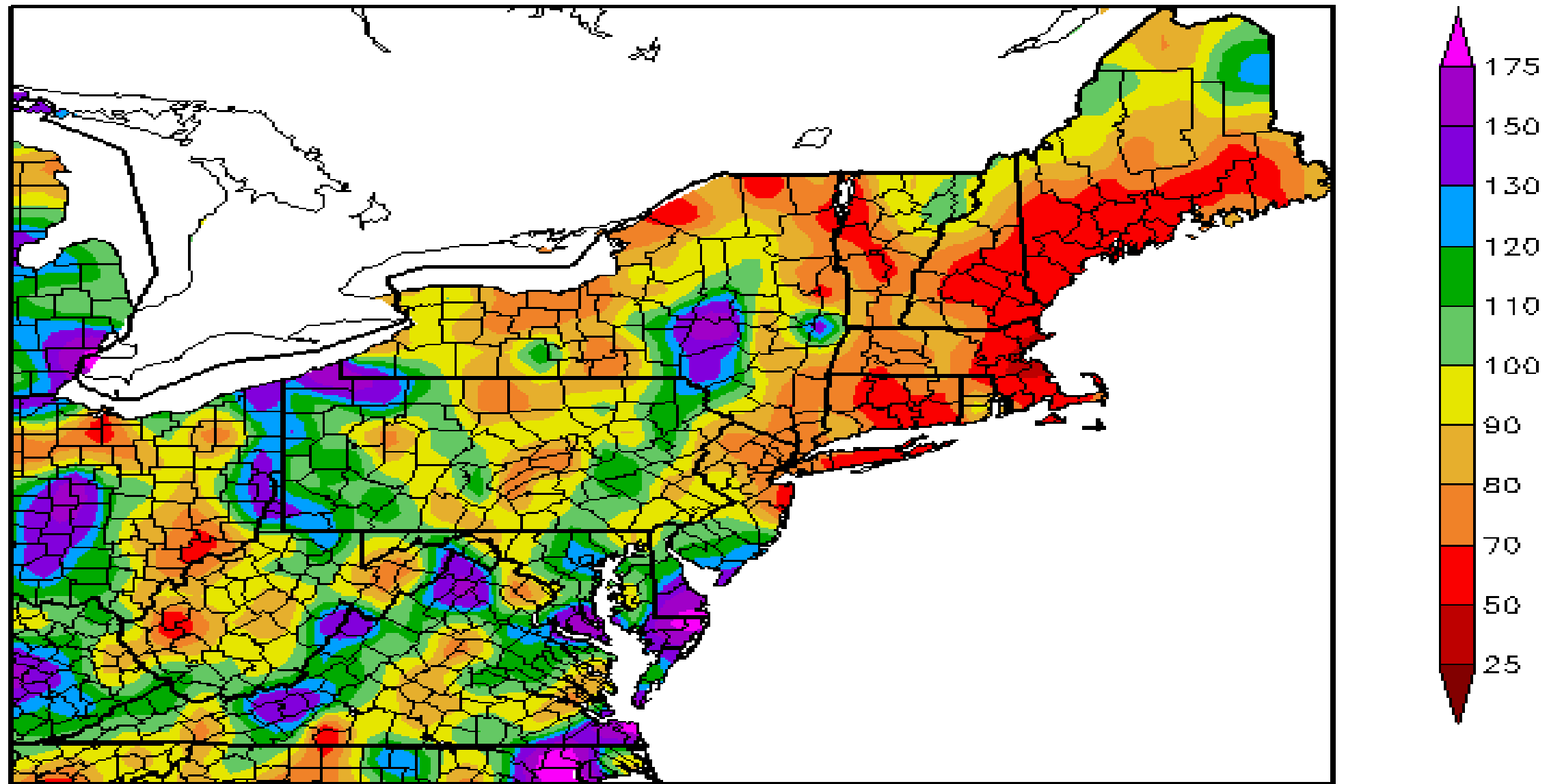
60 Day percent of normal

Percent of Normal Precipitation (%)
8/4/2016 – 10/2/2016



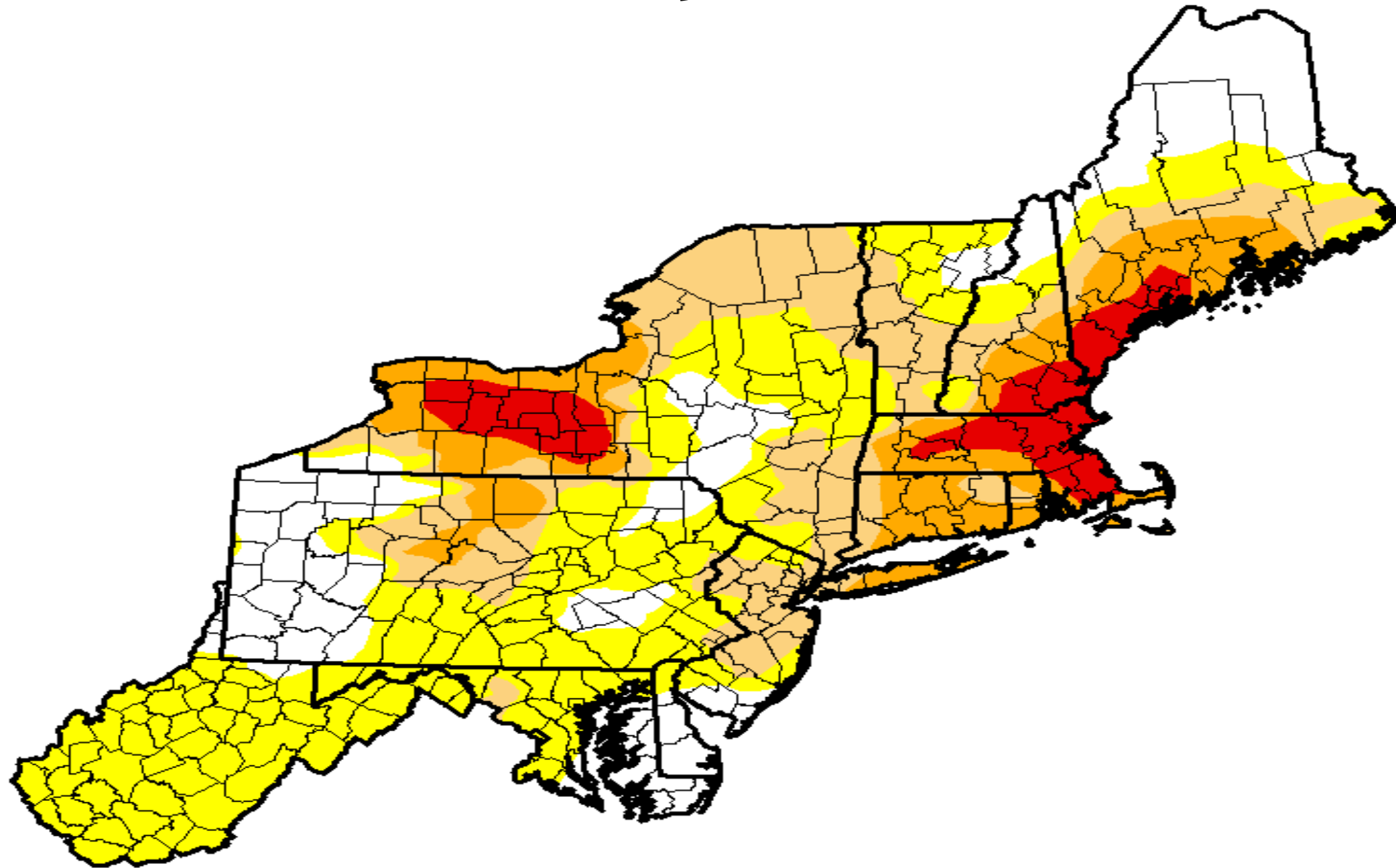
90 Day Percent of Normal

Percent of Normal Precipitation (%)
7/5/2016 – 10/2/2016

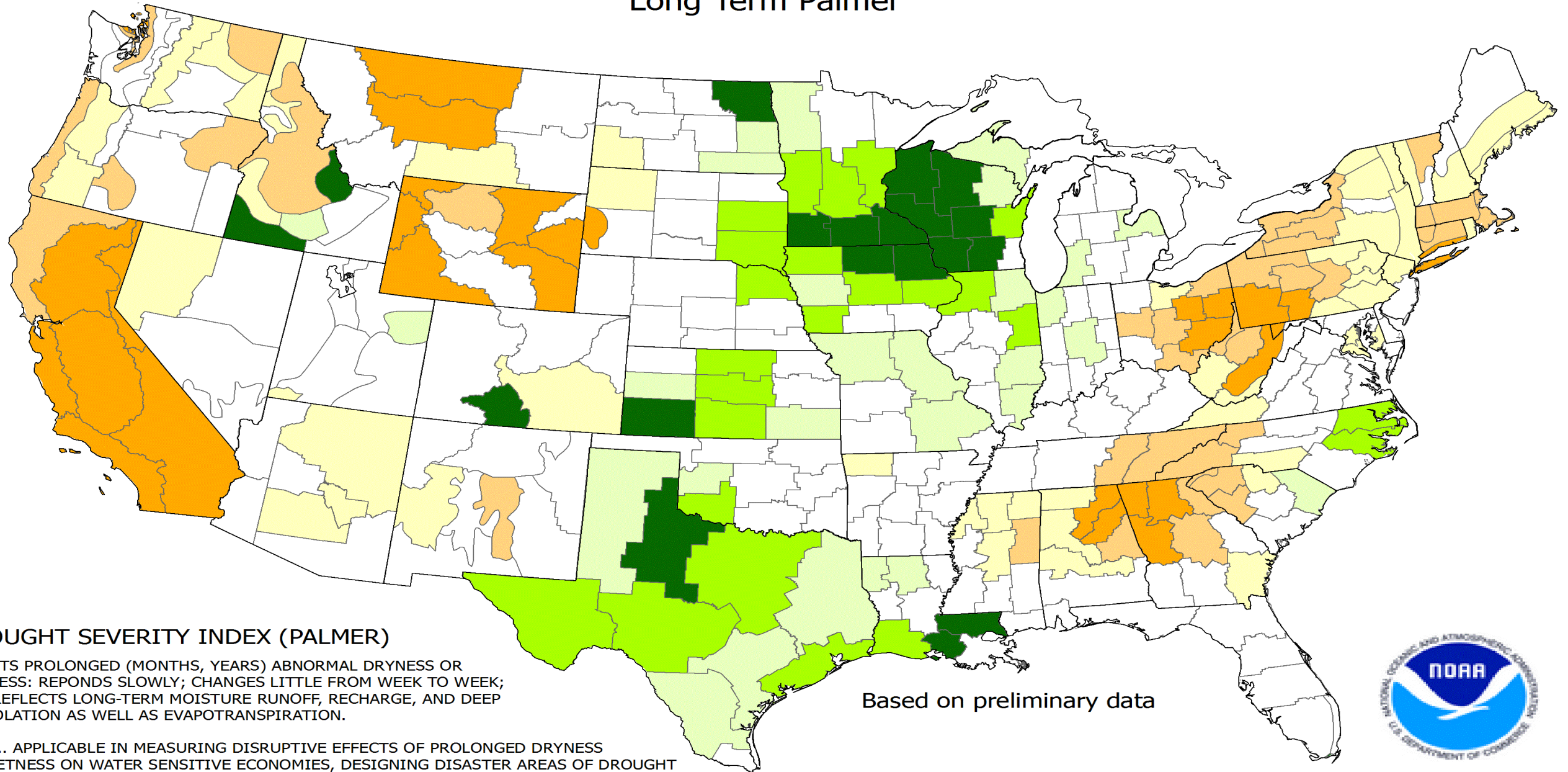


US Drought monitor

09/27/16



Drought Severity Index by Division Weekly Value for Period Ending Sep 24, 2016 Long Term Palmer



Based on preliminary data



DROUGHT SEVERITY INDEX (PALMER)

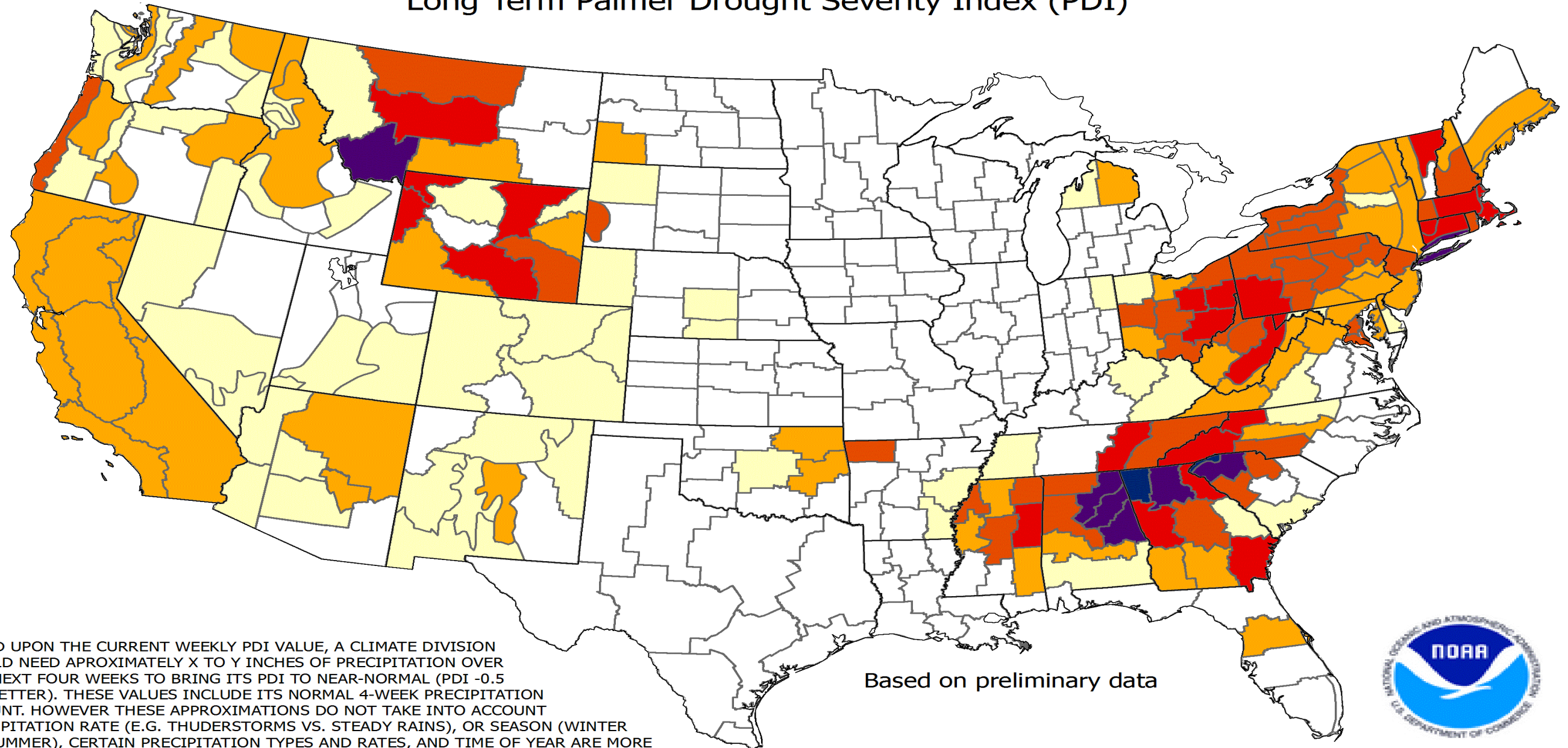
DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS; REponds SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION AS WELL AS EVAPOTRANSPIRATION.

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).

- | | |
|--|---|
| -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) | |

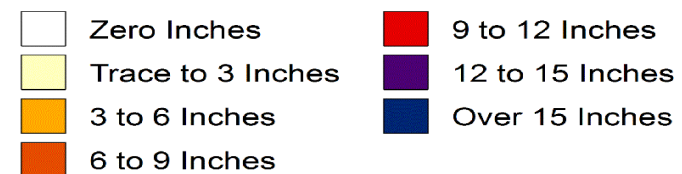
Additional Precip. Needed (In.) to bring PDI to -0.5 Weekly Value for Period Ending Sep 24, 2016 Long Term Palmer Drought Severity Index (PDI)



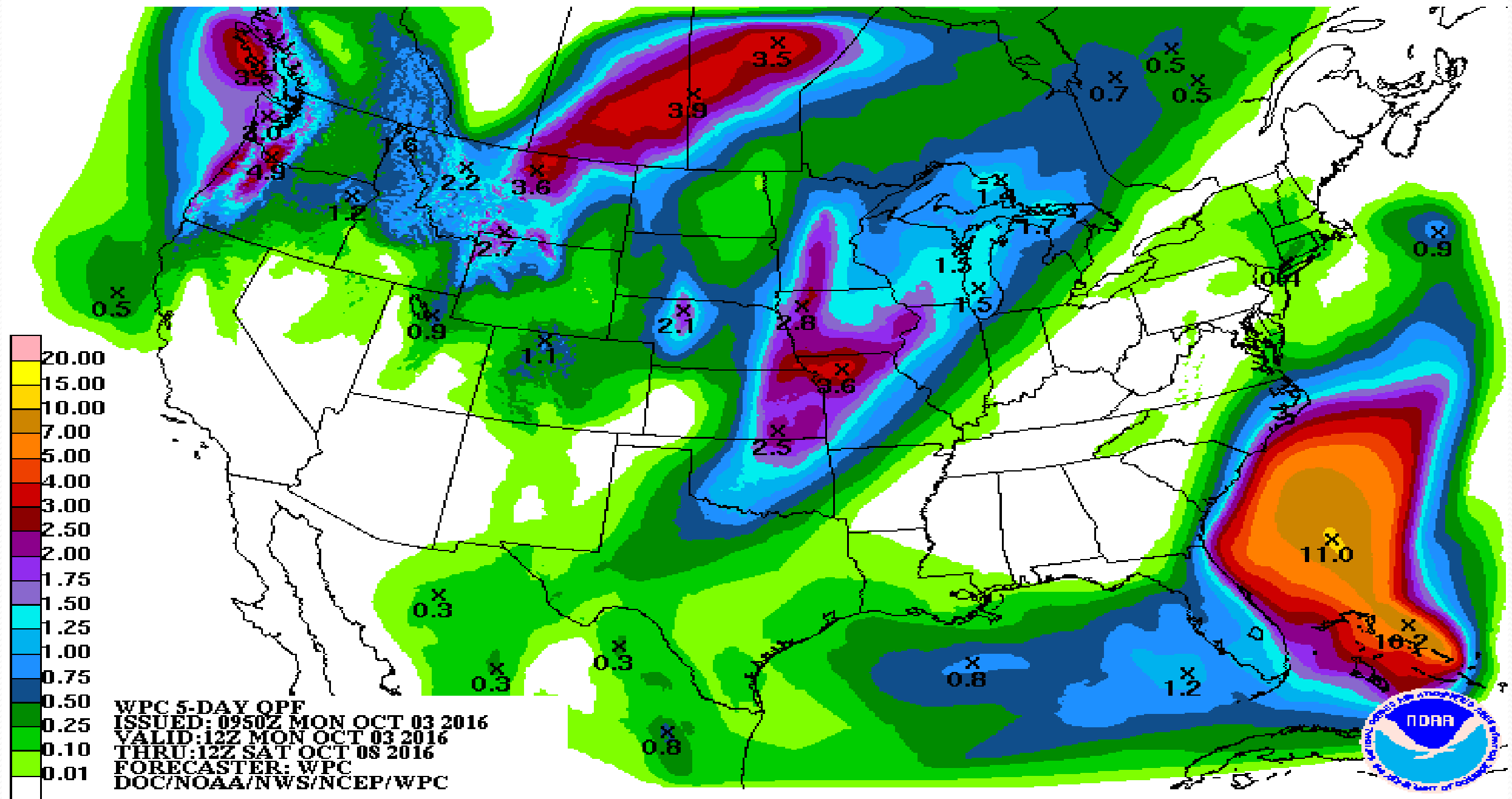
BASED UPON THE CURRENT WEEKLY PDI VALUE, A CLIMATE DIVISION WOULD NEED APPROXIMATELY X TO Y INCHES OF PRECIPITATION OVER THE NEXT FOUR WEEKS TO BRING ITS PDI TO NEAR-NORMAL (PDI -0.5 OR WETTER). THESE VALUES INCLUDE ITS NORMAL 4-WEEK PRECIPITATION AMOUNT. HOWEVER THESE APPROXIMATIONS DO NOT TAKE INTO ACCOUNT PRECIPITATION RATE (E.G. THUNDERSTORMS VS. STEADY RAINS), OR SEASON (WINTER VS. SUMMER), CERTAIN PRECIPITATION TYPES AND RATES, AND TIME OF YEAR ARE MORE CONDUCTIVE FOR AMELIORATING DROUGHT WHILE OTHERS MAY PRODUCE LESS DROUGHT REDUCTION (E.G. RUNOFF OR FROZEN GROUND).

UNCOLORED CLIMATE DIVISIONS ARE CURRENTLY AT NEAR-NORMAL TO MOIST PDI CONDITIONS. (EXAMPLE - IF 4-WEEK NORMAL PRECIPITATION IS 3 INCHES AND PDI DEFICIT TO BRING TO -0.5 IS 4 INCHES, THE VALUE IS 7)

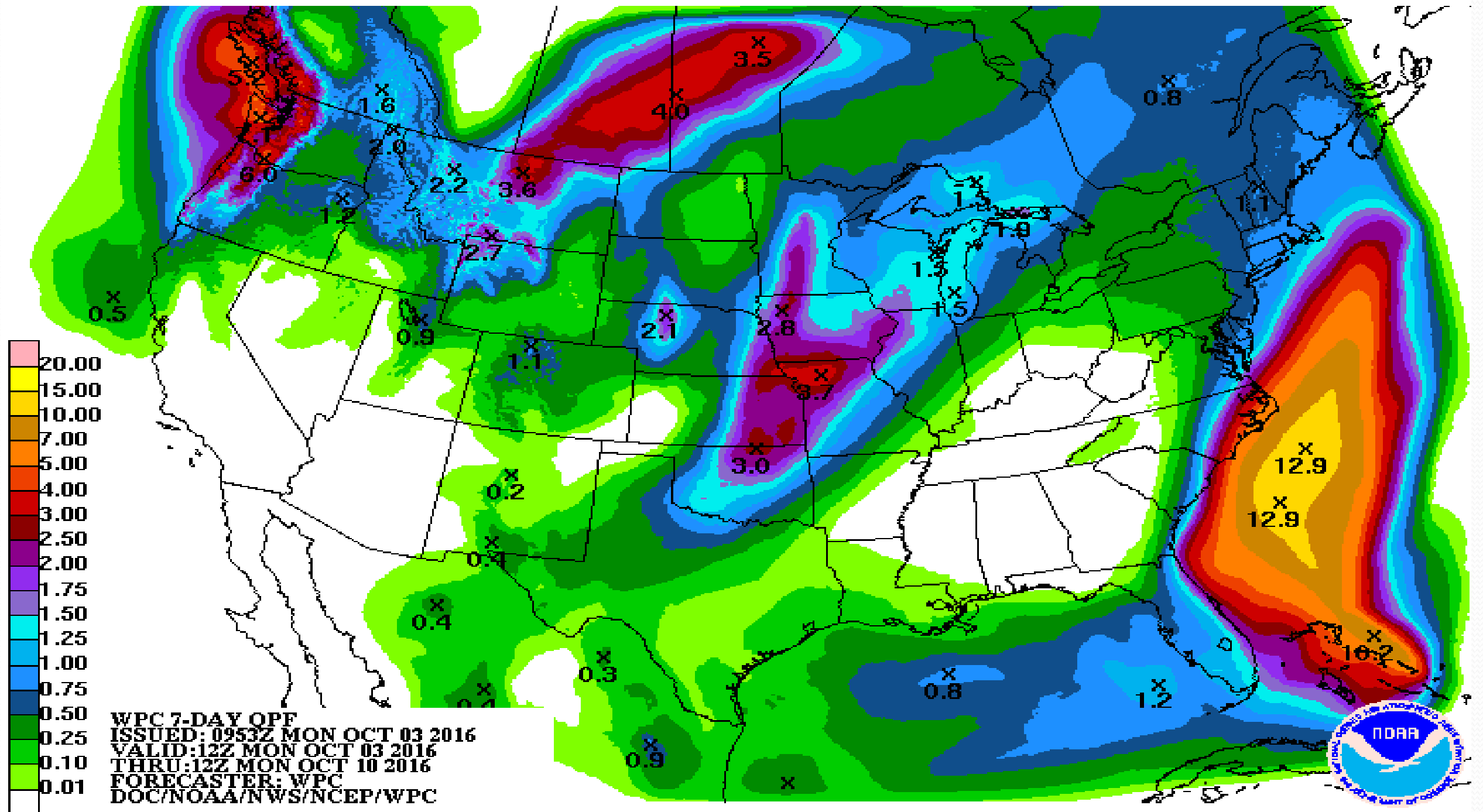
Based on preliminary data



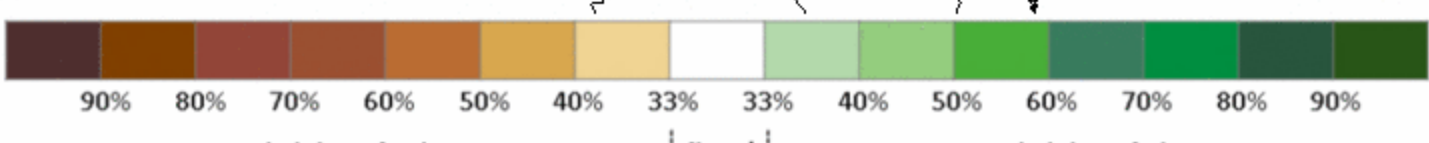
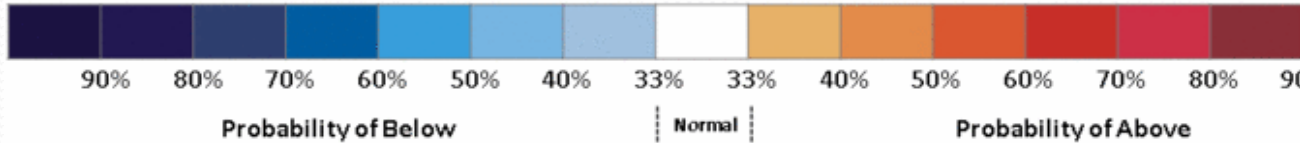
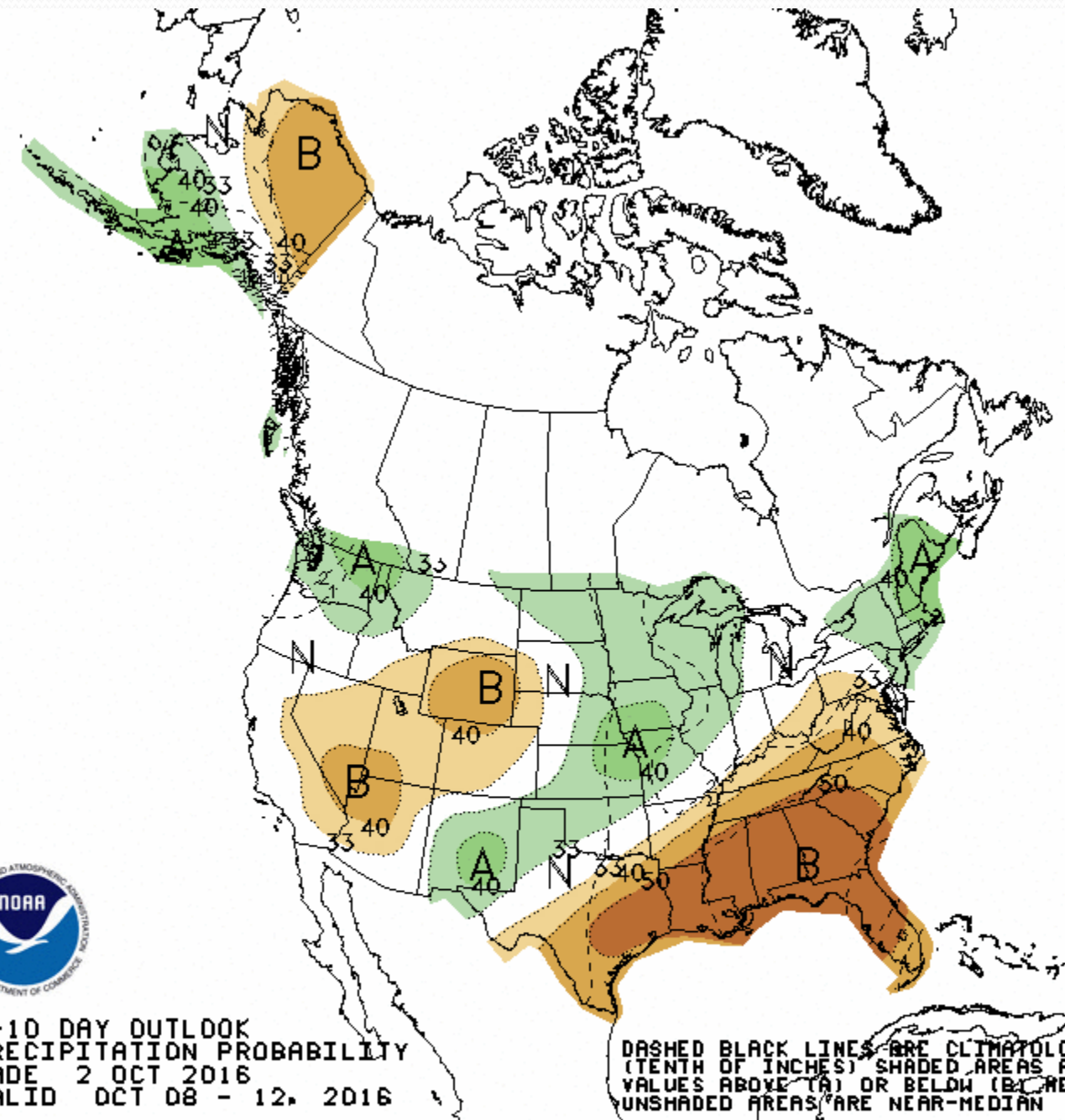
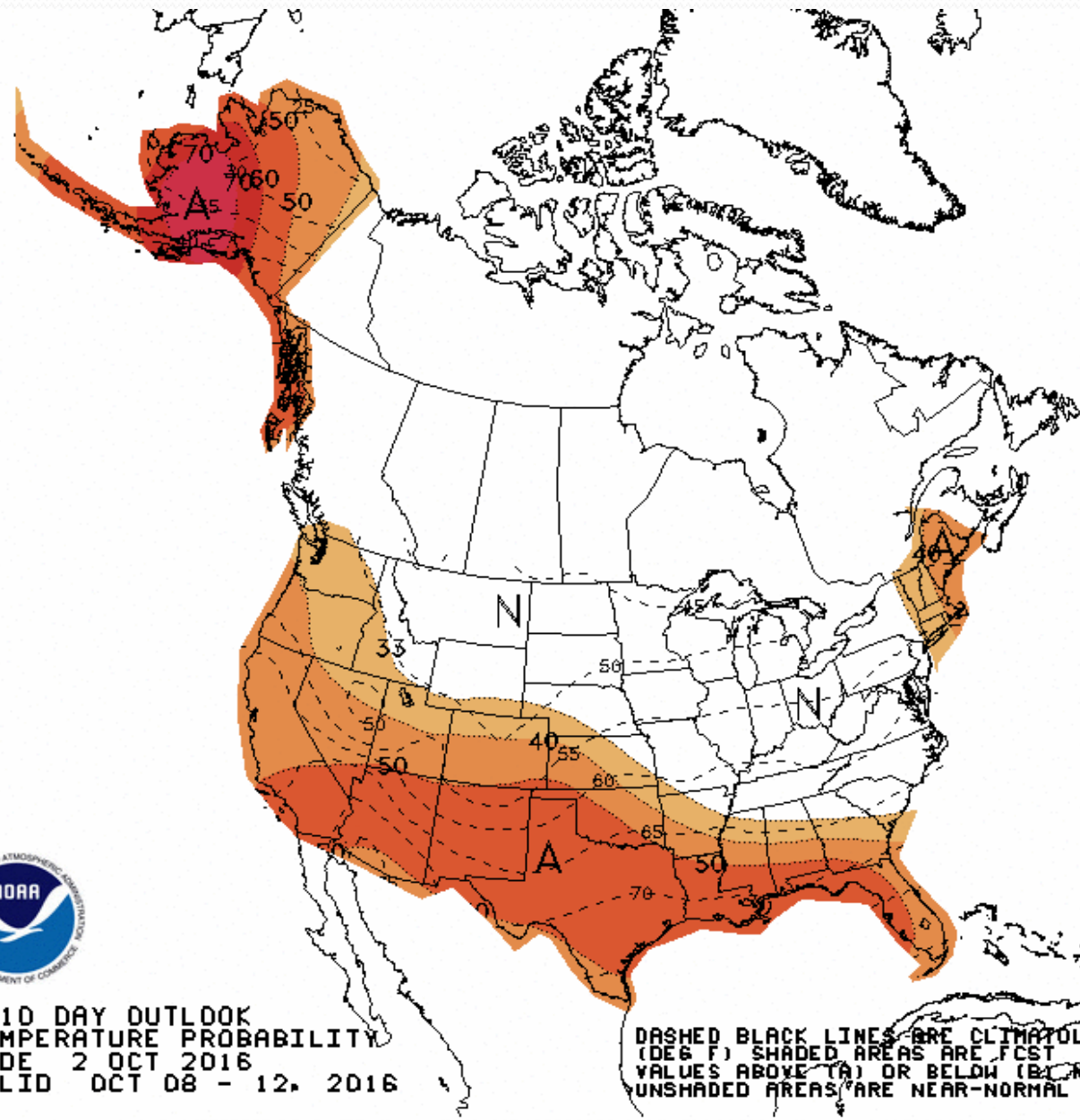
Forecast Precip 10/03-08/16



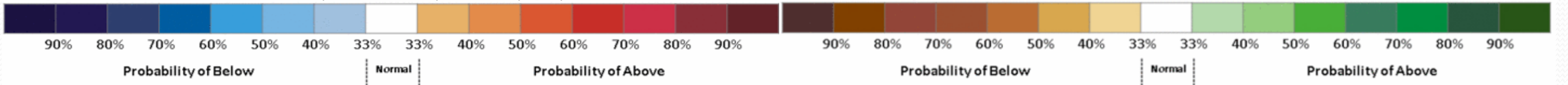
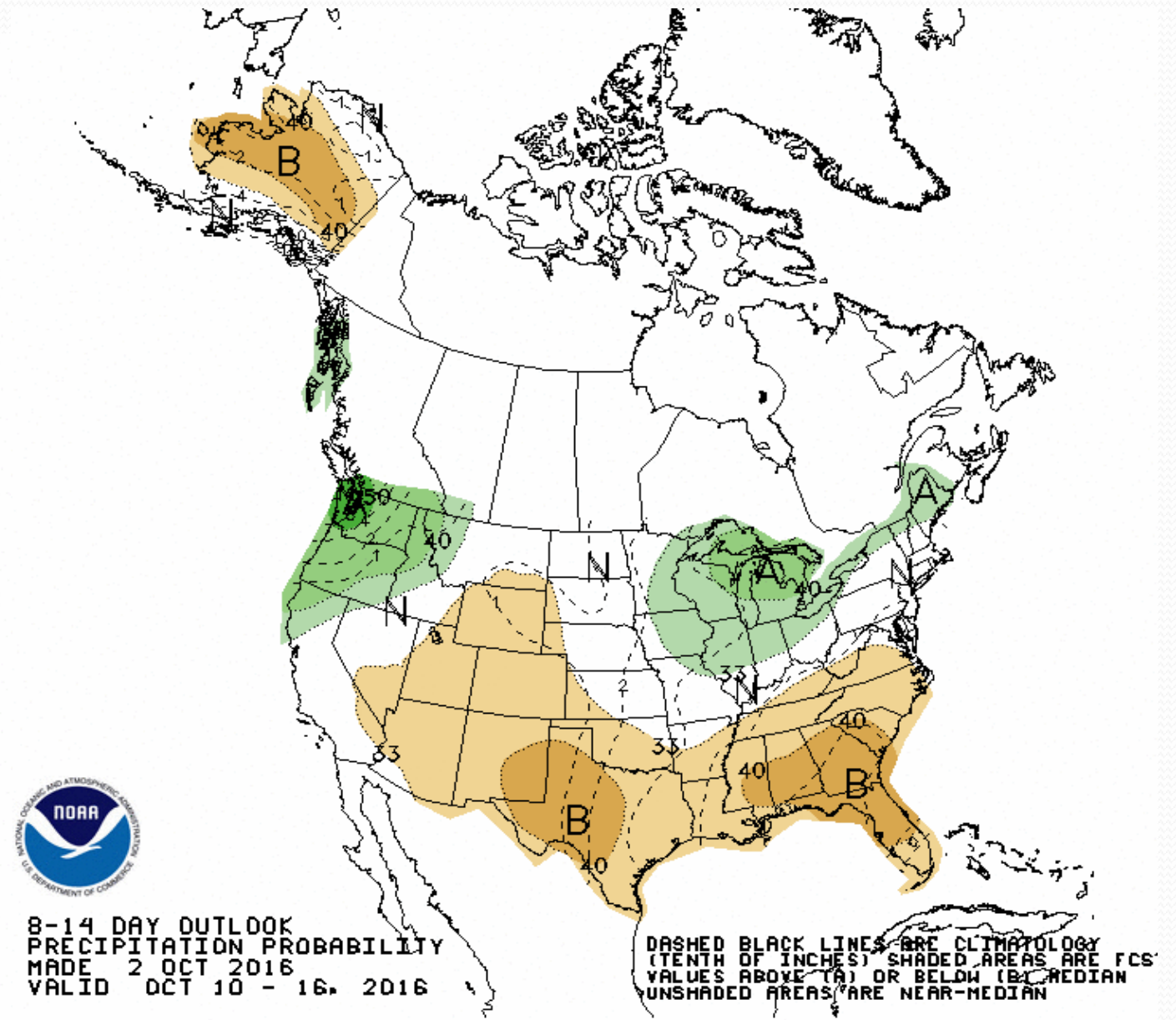
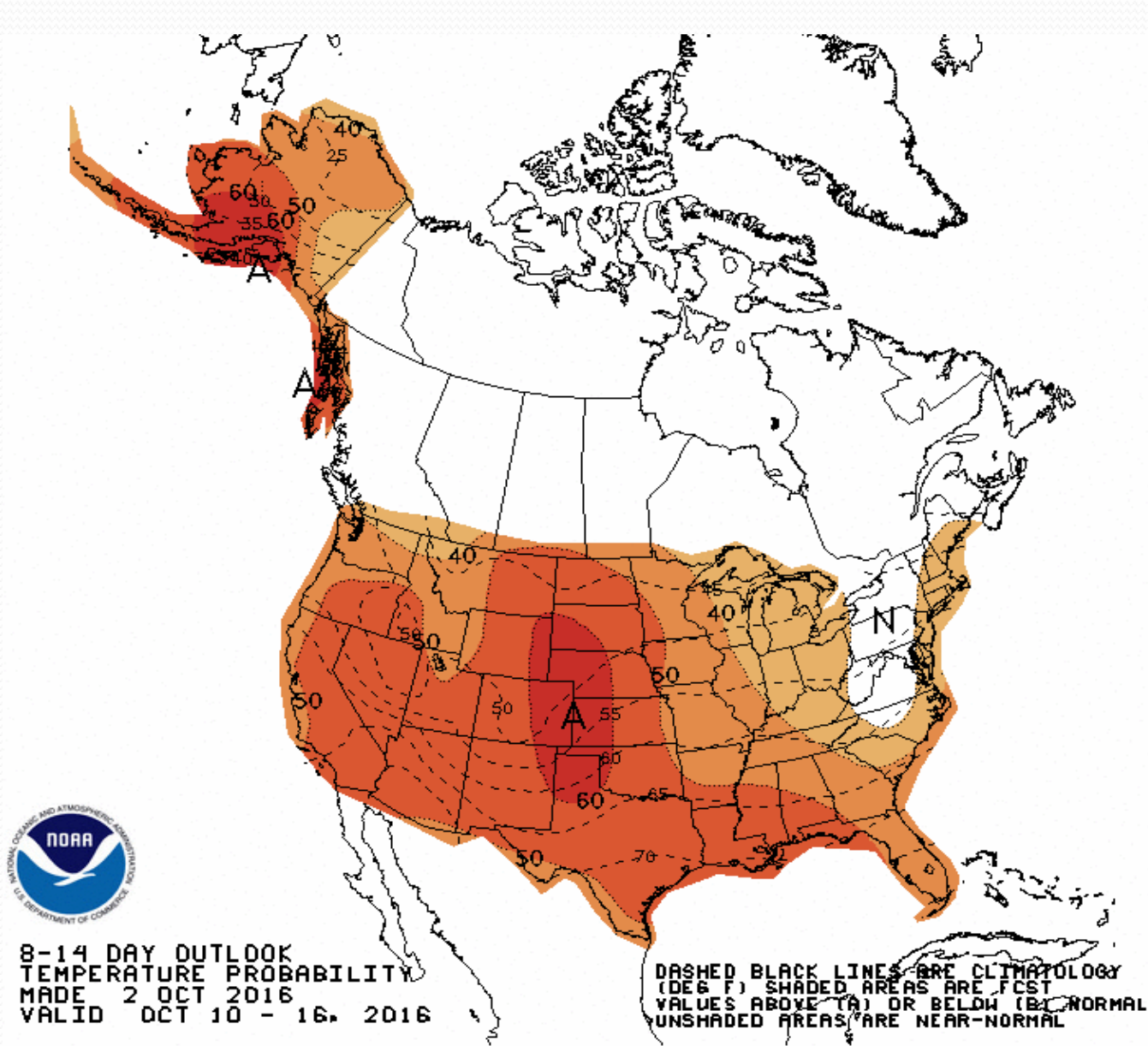
Forecast Precip 10/03-10/16



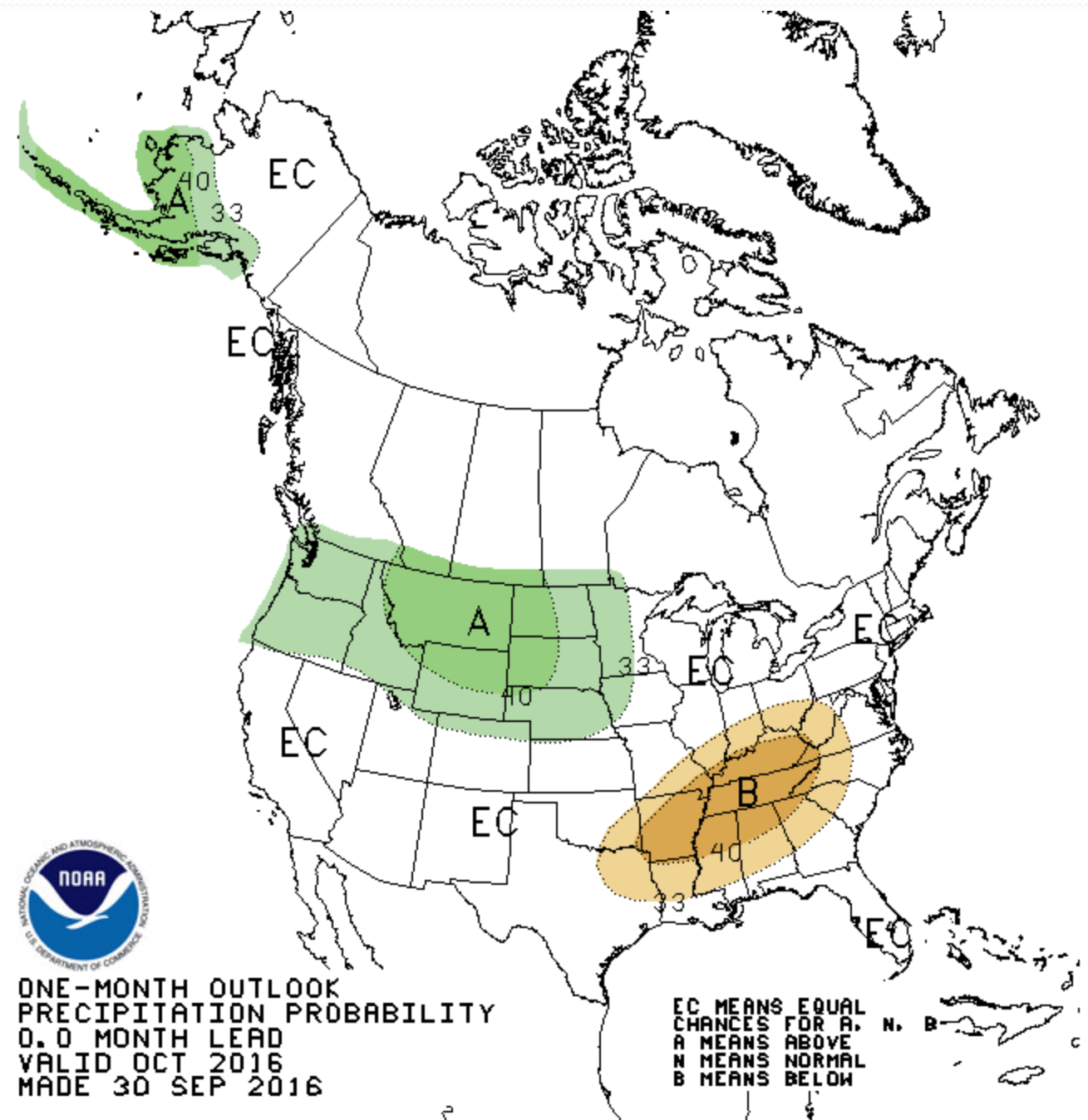
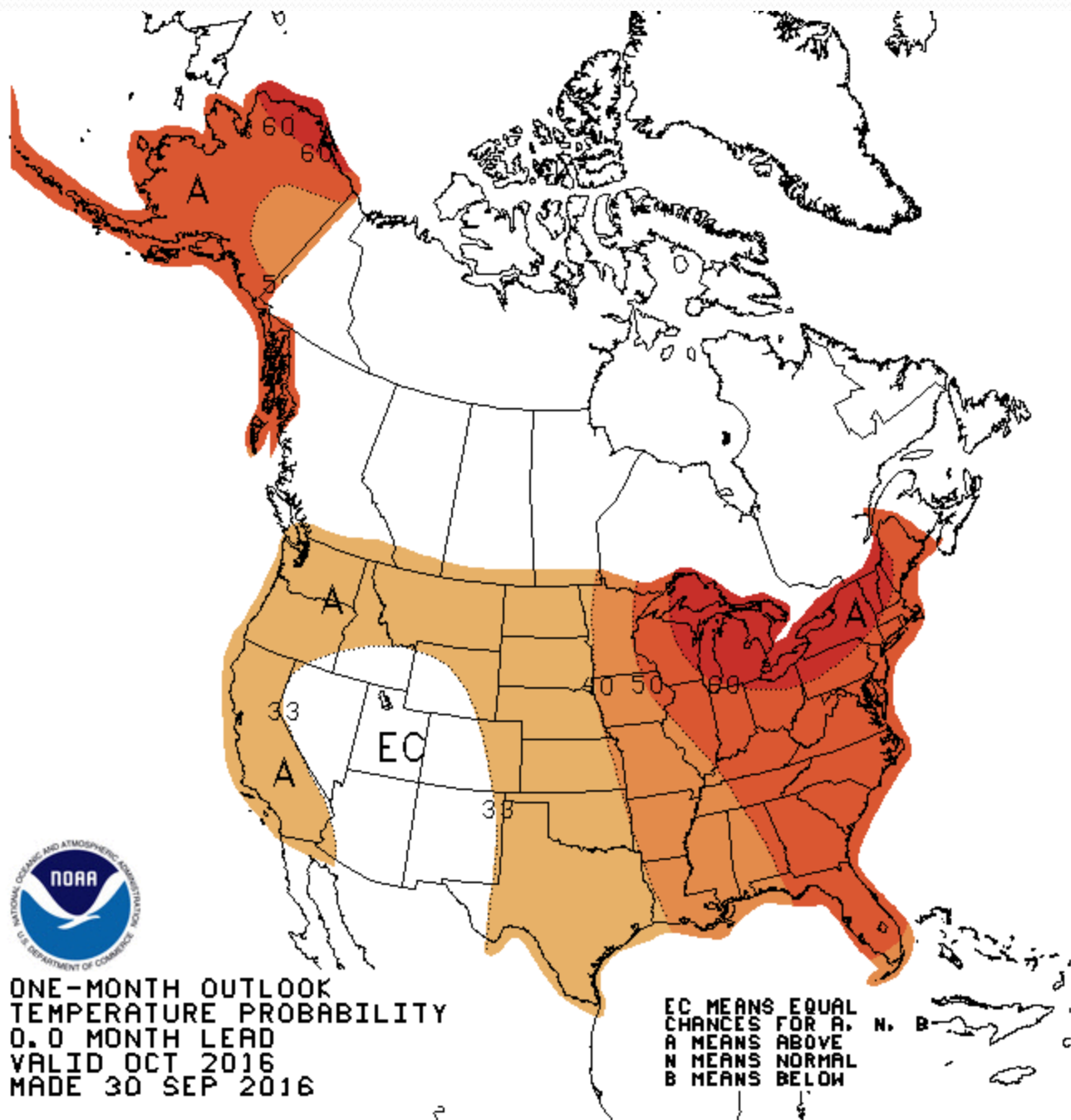
6-10 Day Outlook



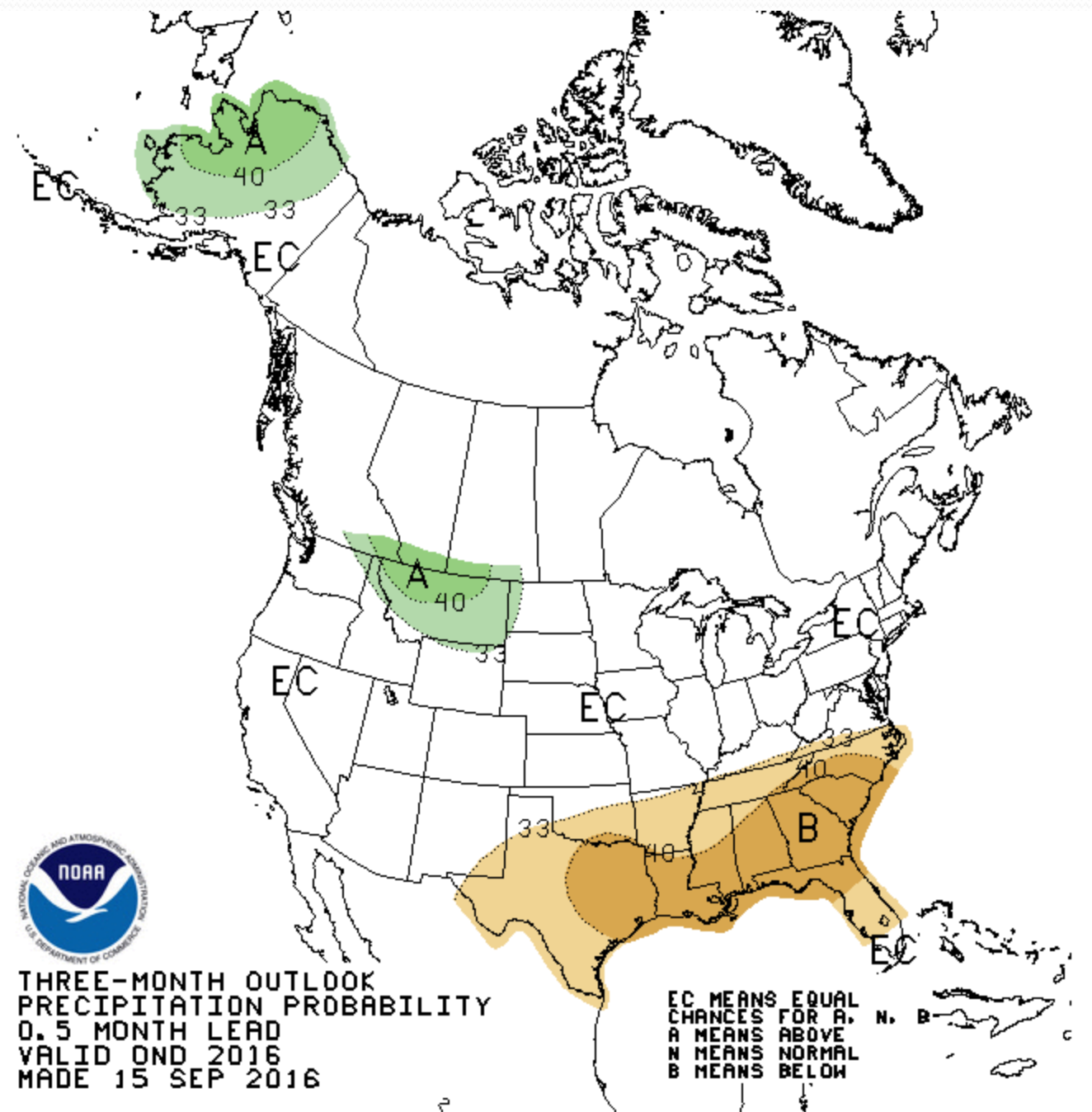
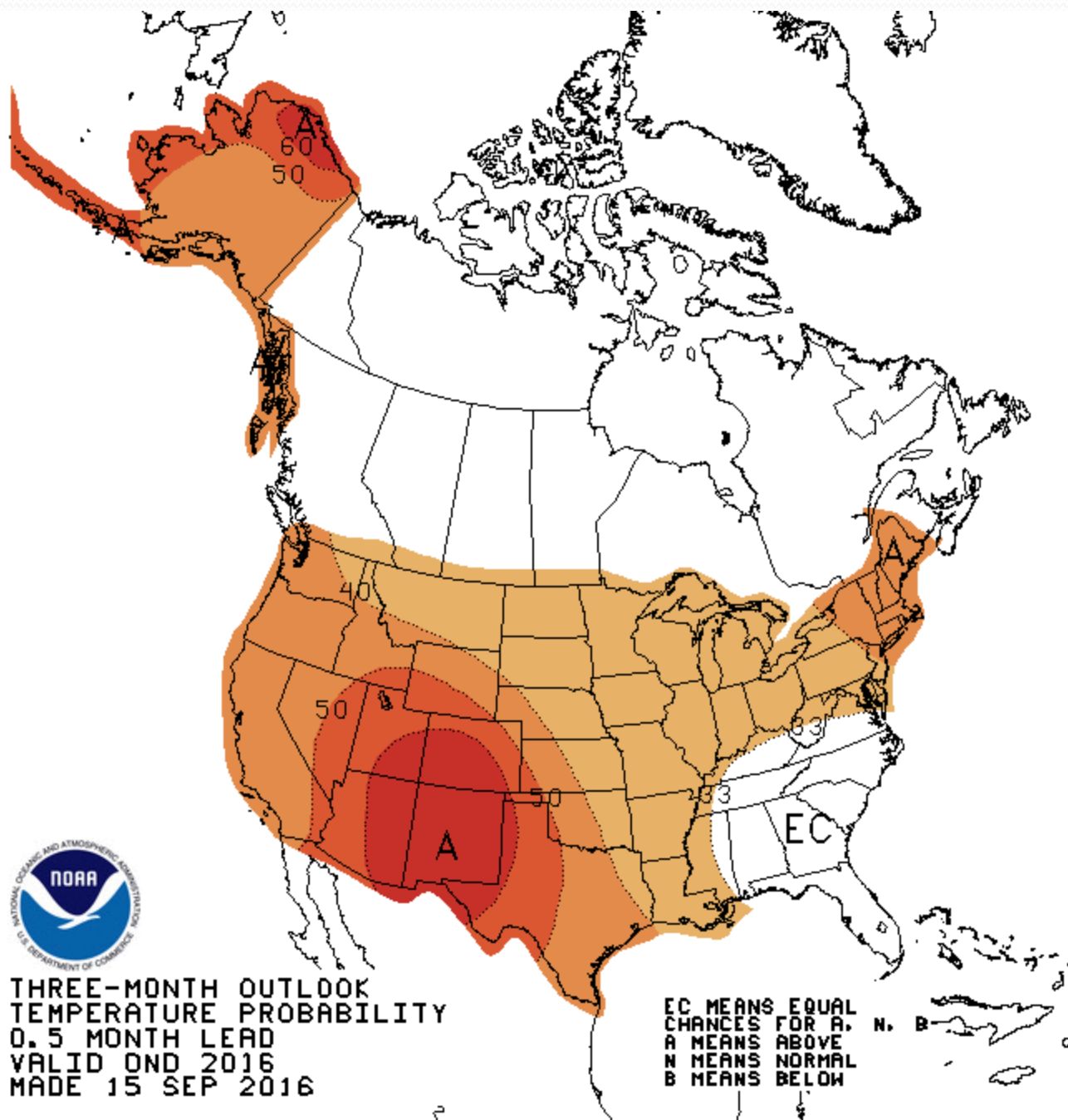
8-14 Day Outlook



Outlook for October



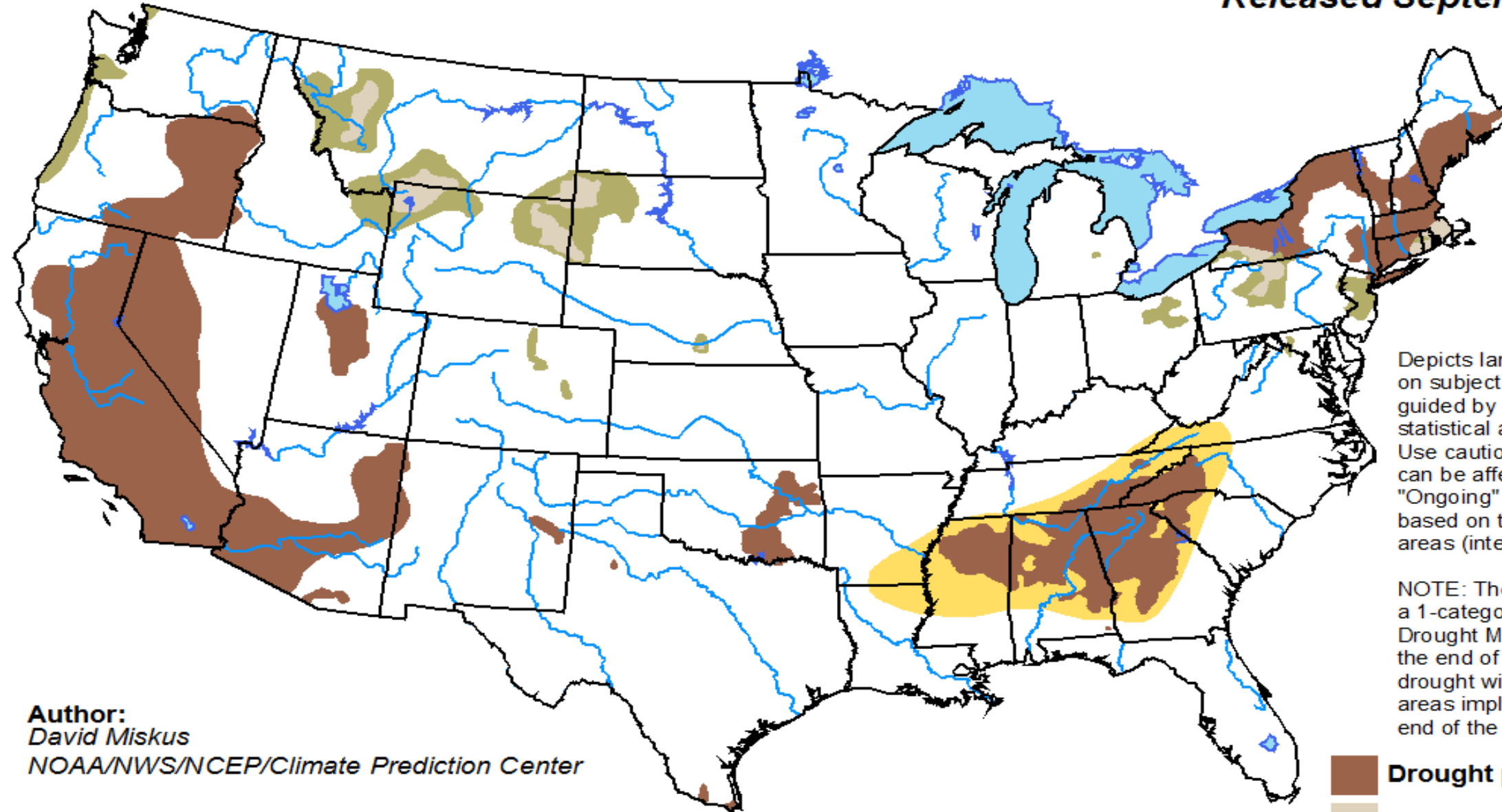
Outlook for Oct-Dec



U.S. Monthly Drought Outlook





Drought Tendency During the Valid Period

Valid for October 2016
Released September 30, 2016

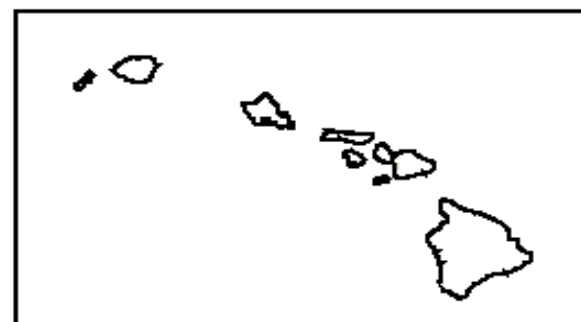
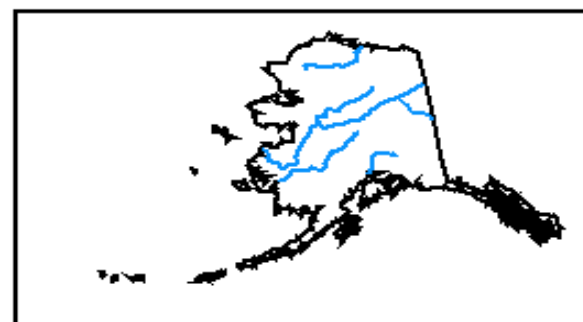


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to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

Author:
David Miskus
NOAA/NWS/NCEP/Climate Prediction Center

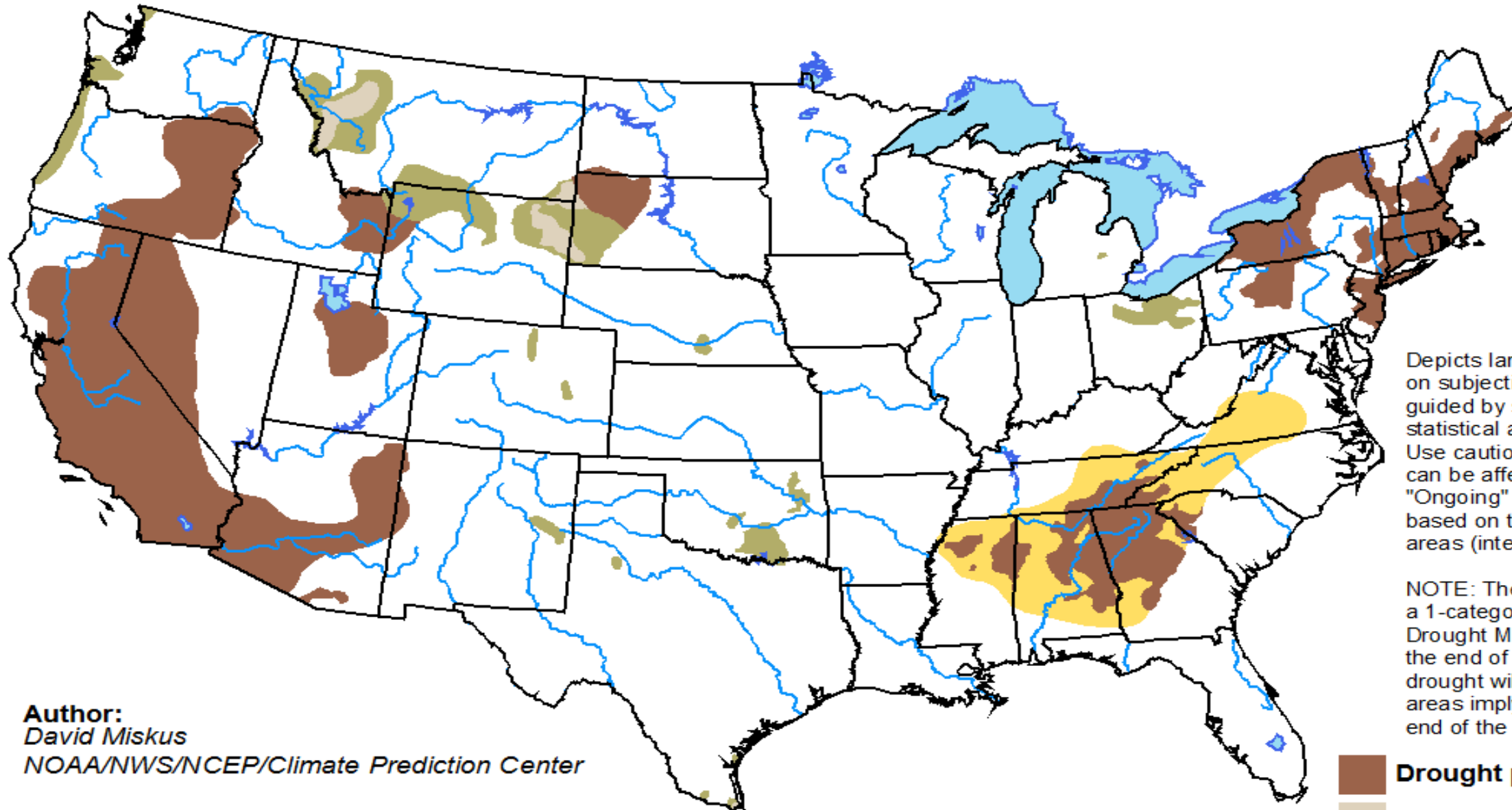


<http://go.usa.gov/3eZGd>

U.S. Seasonal Drought Outlook valid for September 15 - December 31, 2016

Drought Tendency During the Valid Period

Released September 15, 2016

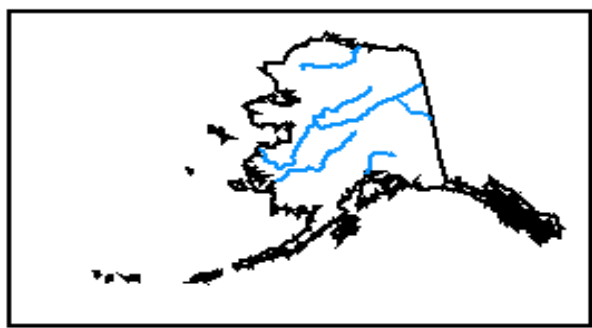


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<http://go.usa.gov/3eZ73>