

Key Points:

- Mild drought conditions emerged in the southeastern portion of New York State, as well as the eastern portion of the Northeast, starting in December of last year.
- We are now in the preliminary stages of releasing a *beta* (e.g., under development) version of drought forecasts to evaluate potential forecast skill for this region.
- Our new product suggests drought conditions may persist through the early spring/late winter months.
- The US season outlook does not highlight the Northeast as a region facing critical drought conditions during January, February, March

Our 4-km (~2.5 Mi) resolution drought atlas shows the progression of drought conditions through the fall (**Fig 1.**). It suggests mild drought conditions have emerged across much of the eastern portion of the domain. Most of New York State, by contrast, saw anomalously wet conditions in the fall. The quantitative data in our drought atlas agree well with the more qualitative picture presented in the US drought monitor (**Fig. 2**). For instance, the US drought monitor reports that 21% of the Northeast is currently experiencing “abnormally dry” (D0) conditions, with most of the deficit located in eastern Pennsylvania and southeastern New York. Likewise, abnormally dry conditions and droughts are currently being seen across much of the US (**Fig. 2**).

We have begun adding *experimental* forecasts to our drought atlas (not shown in this newsletter). These predictions are computed from state-of-the-art seasonal prediction models, organized as part of the North American Multi-Model (NMME) ensemble efforts by NOAA (<http://www.cpc.ncep.noaa.gov/products/NMME/>). Our atlas suggests that drought conditions currently being seen in the eastern portion of the region will likely diminish in the coming months. The US drought outlook (**Fig. 3**), which shows no areas of persistent drought, supports this interpretation.

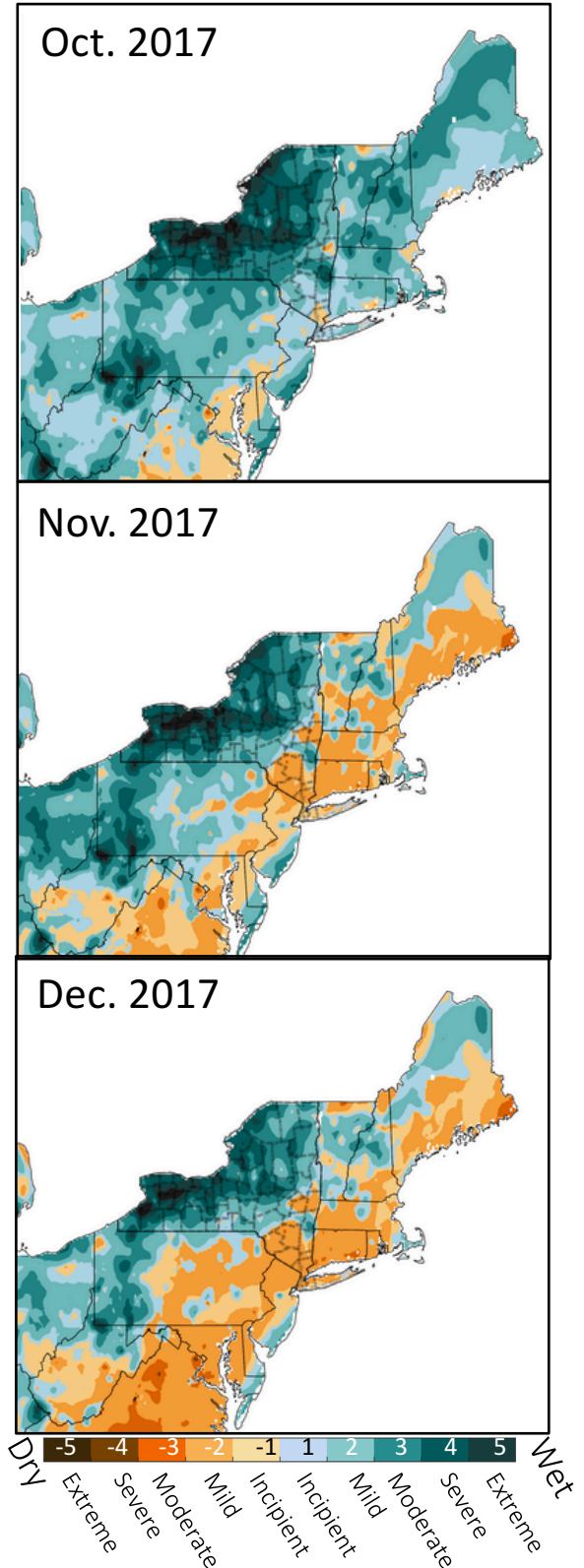


Figure 1. NYS/NE Drought atlas maps from the last three months of 2017.

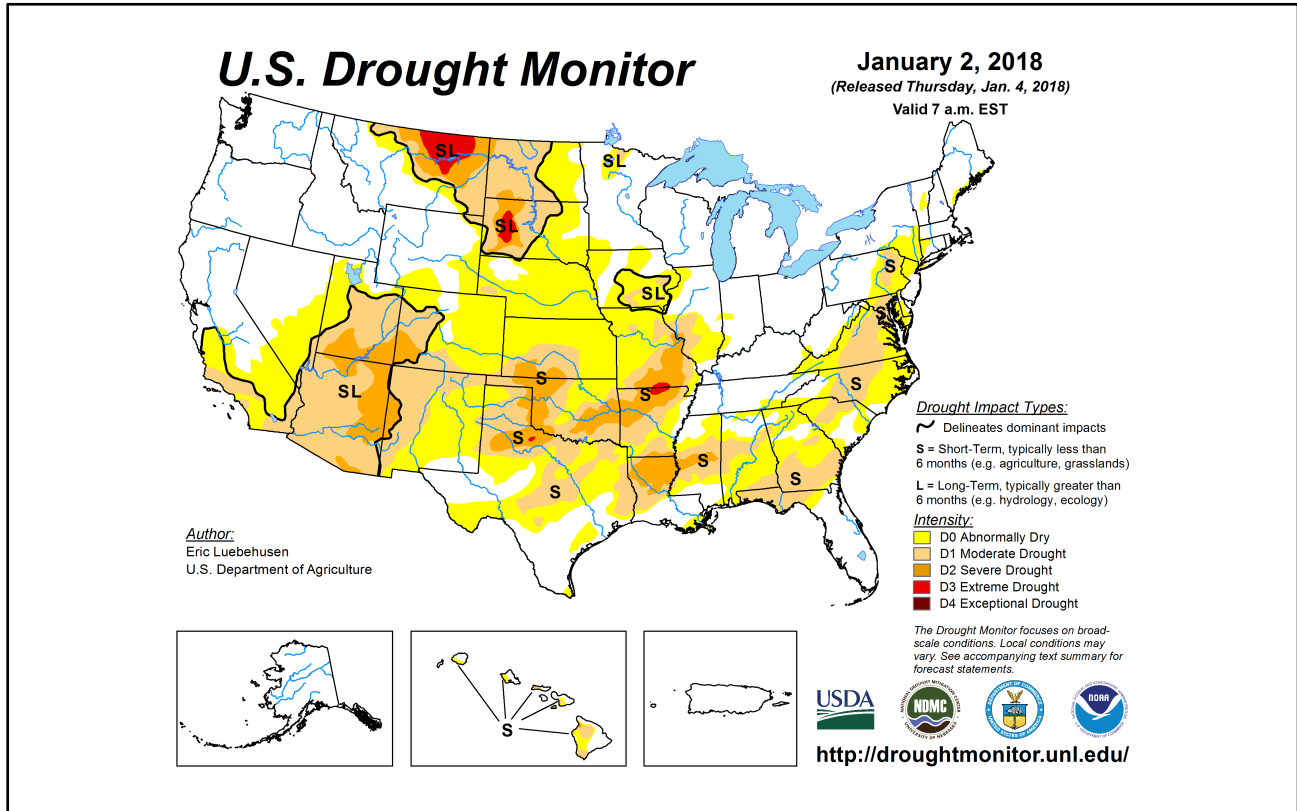


Figure 2. US Drought monitor map for the entire US (<http://droughtmonitor.unl.edu/>).

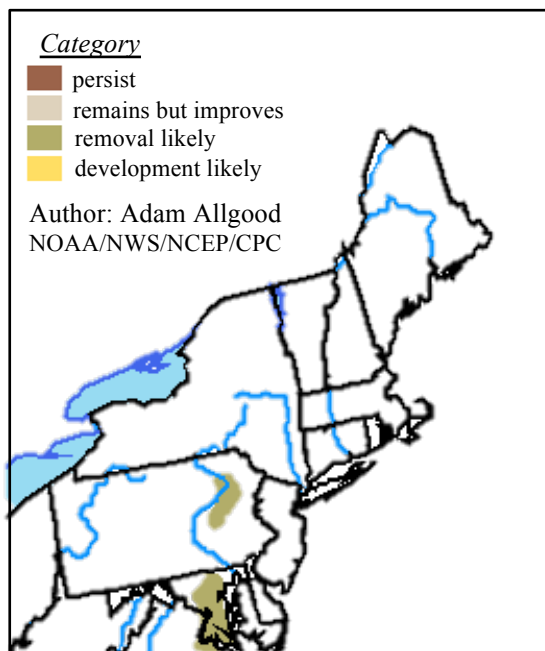


Figure 3. Seasonal drought outlook from the National Weather Service's Climate Prediction Center.

More broadly, drought conditions in the southwestern US and in eastern Montana and the western Dakotas are present, and they are expected to persist¹. Moreover, the NOAA climate prediction center reports that La Niña conditions are present and expected to persist throughout the spring (greater than 80% probability)². Such conditions have historically been linked to droughts in the Southwest and Southeast³, though it does not necessarily impact the Northeast. Nevertheless, agriculture in those regions could be affected, which in turn might have indirect (positive or negative) economic impacts on this region.

References cited

- [1]http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.php
- [2]<http://www.cpc.ncep.noaa.gov/products/precip/CWlink/MJO/enso.shtml>
- [3]http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/ensocycle/el_ninosfc.shtml

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