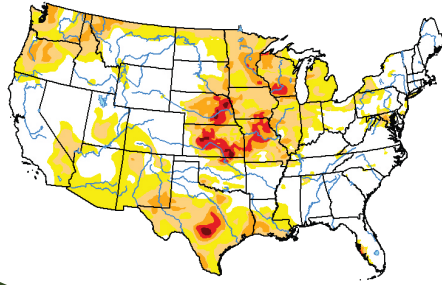


Making the U.S. Drought Monitor



Each week, a trained drought expert from one of the U.S. Drought Monitor (USDM) partner entities — the National Drought Mitigation Center (NDMC) at the University of Nebraska-Lincoln, the National Oceanic and Atmospheric Administration, and the U.S. Department of Agriculture — analyzes the latest data for the drought map’s weekly update. It is a unique process that draws upon the collective knowledge and experience of the authors and a nationwide network of 450-plus local experts. Each step below corresponds to a step in the process used to make the weekly map. A visual representation of how this process works is shown on the back side of this page.

- 1 Begin with the previous week’s map.** At the beginning of their shift, authors download a Geographic Information System (GIS) shapefile containing the drought intensity lines and impact labels from the previous week. They also receive transition notes from the previous author informing them of any issues that arose during their shift, areas to watch, potential changes, etc.
- 2 Download data from multiple sites.** No single website or provider has all the data that authors use when making the USDM, meaning that authors must download data from dozens of sites and data providers multiple times during their shift. Many providers now offer data as percentile rankings and in a GIS format, which is helpful because drought intensity levels directly correspond to percentiles. Processing time means that many products are not available until Monday, with others not available until sometime Tuesday. Note that the data cutoff (the time at which collected data is considered part of analysis) for the USDM is each Tuesday at 8 a.m. EST.
- 3 Weigh the evidence using the convergence of evidence approach.** To determine drought intensity, authors use GIS software to overlay maps of multiple types of data at multiple time scales. This process allows authors to see where data is converging— that is, what drought intensity level do most of the data indicate. Some of these data include precipitation, streamflow, reservoir levels, temperature and evaporative demand, soil moisture, vegetation health, conditions observations, and reports of drought impacts. The author also considers data from site-specific models, combined indicators and satellite indicators.
- 4 Create a draft map.** Drawing on their knowledge and experience and considering the location and season, the author creates a draft map. Normally, three to four drafts will be sent out between Monday morning and Wednesday afternoon.
- 5 Request expert feedback and evaluation.** Authors send each draft map to 450-plus local experts via the USDM listserv. By drawing on the collective and regional expertise of this group to help interpret the data and tie the indicators to local conditions and impacts, this step provides a built-in validation and peer review of the map. Depending on the day and time, authors repeat steps 2–5, over what is at most a three-day period.
- 6 Finish the map.** The author makes their final decisions on drought areas and intensity levels, modifies the impact lines and labels, writes the narrative, and sends everything to the NDMC for processing and uploading to the USDM website. Processing includes producing different regional views, change maps and statistics and takes about 15 hours to complete.

Monday–Wednesday: Drafts, comments and revisions

