



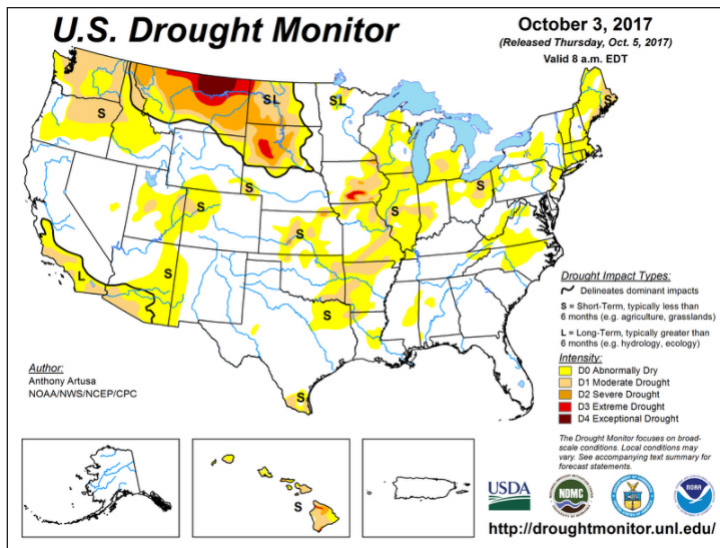
# Drought

June 2018

## What Is Drought?

Drought is a deficiency in precipitation over an extended period. It is a normal, recurrent feature of climate that occurs in virtually all climate zones. The duration of droughts varies widely. There are cases when drought develops relatively quickly and lasts a very short period of time, exacerbated by extreme heat and/or wind, and there are other cases when drought spans multiple years, or even decades. Studying the paleoclimate record is often helpful in identifying when long-lasting droughts have occurred.

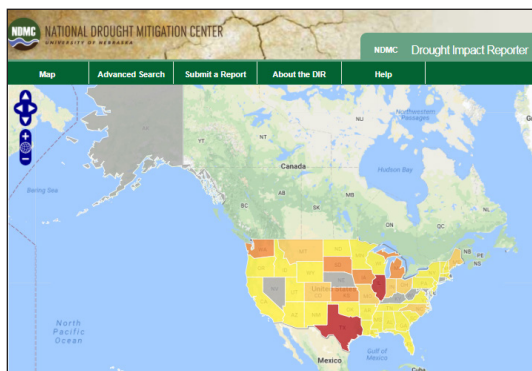
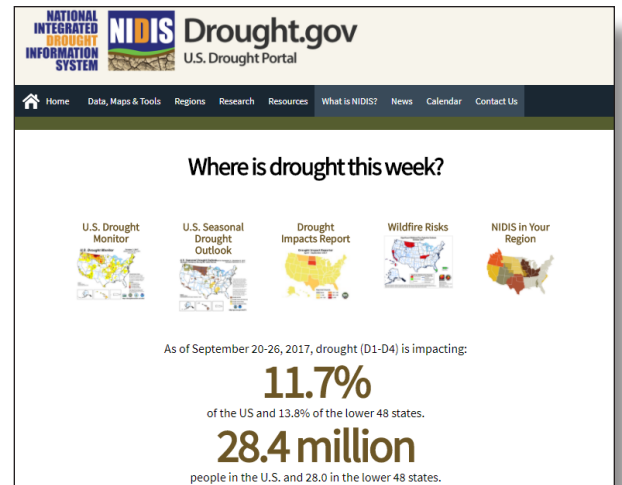
## How Is Drought Monitored And Assessed?



[www.drought.gov](http://www.drought.gov)

The U.S. Drought Monitor (USDM) is a weekly product that provides a general summary of current drought conditions. Multiple drought indicators, including various indices, outlooks, field reports, and news accounts are reviewed and synthesized. In addition, numerous experts from agencies and offices across the country are consulted. The result is the consensus assessment presented on the USDM map.  
<http://droughtmonitor.unl.edu> <http://drought.unl.edu>

The USDM is an integral monitoring component in the National Integrated Drought Information System (NIDIS), which was established by Congressional Act in 2006 to implement an integrated drought monitoring and forecasting system at federal, state, and local levels. NIDIS includes drought monitoring, forecasting, response, research, and education components as part of its early warning system. These components are featured within the U.S. Drought Portal.



[droughtreporter.unl.edu](http://droughtreporter.unl.edu)

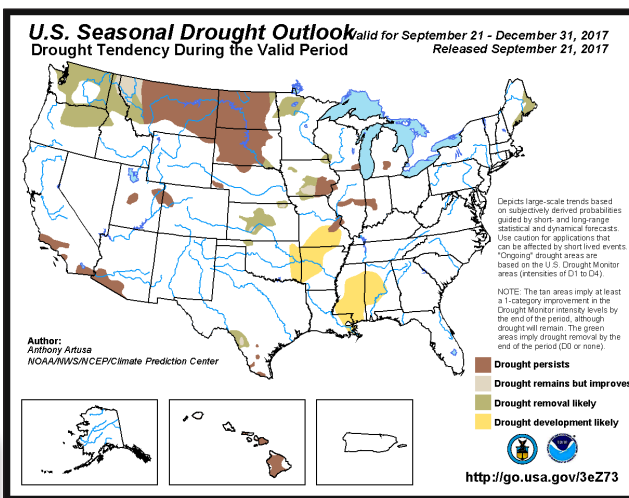
**Drought Impact Reporter:** The goal of the National Drought Mitigation Center's Drought Impact Reporter is to collect, quantify, and map reported drought impacts for the United States and provide access to the reports through interactive search tools. Users can submit their own drought impact reports through the tool's easy web interface.

FOR DROUGHT MONITORING, FORECASTING, AND INFORMATION GO TO:

[www.drought.gov](http://www.drought.gov)

The U.S. Monthly and Seasonal Drought Outlooks (MDO, SDO) show predicted trends for areas experiencing drought depicted in the U.S. Drought Monitor, as well as indicating areas where new droughts may develop. The NOAA Climate Prediction Center issues this monthly product in conjunction with their long-lead temperature and precipitation outlooks on the third Thursday (SDO) and last day (MDO) of each month. The general large-scale trends depicted are based upon numerous indicators, including short and long-range forecasts. A discussion detailing the atmospheric, hydrologic, and climatic conditions affecting the drought trends is included.

**Human factors, such as water demand and water management, can exacerbate the impact that drought has on a region. Because of the interplay between a natural drought event and various human factors, drought means different things to different people. In practice, drought is defined in a number of ways that reflect various perspectives and interests.**



[www.cpc.ncep.noaa.gov/products/expert\\_assessment/seasonal\\_drought.html](http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html)

## Why is Drought Important?

The United States is vulnerable to the social, economic, and environmental impacts of drought. More than 100 years of U.S. weather records indicate that there have been three or four major drought events during that period. Two of these, the 1930s Dust Bowl drought and the 1950s drought, each lasted five to seven years and covered large areas of the continental United States.

Droughts are among the most costly weather related events. According to the National Centers for Environmental Information (NCEI), the United States has sustained 212 weather and climate disasters since 1980 where overall damages/costs reached or exceeded \$1 billion (including Consumer Price Index (CPI) adjustment to 2017). The total cost of these 212 events exceeds \$1.2 trillion.

The distribution of damage from U.S. billion-dollar disaster events from 1980 to present (as of July 7, 2017) is dominated by tropical cyclone losses. Tropical cyclones have caused the most damage (\$580.7 billion, CPI-adjusted) and also have the highest average event cost (\$16.6 billion per event, CPI-adjusted). Drought (\$232.5 billion, CPI-adjusted), severe storms (\$200.0 billion, CPI-adjusted) and inland flooding (\$118.7

billion, CPI-adjusted) have also caused considerable damage based on the list of billion-dollar events. Severe storms have caused the highest number of billion-dollar disaster events (89), while the average event cost is the lowest (\$2.2 billion, CPI-adjusted). Tropical cyclones and flooding represent the second and third most frequent event types (35 and 28), respectively. Tropical cyclones are responsible for the highest number of deaths (3,210), followed by drought/heatwave events (2,993) and severe storms (1,578).

## Common Types of Drought

### Meteorological Drought

Meteorological Drought is based on the degree of dryness (rainfall deficit) and the length of the dry period.

### Hydrological Drought

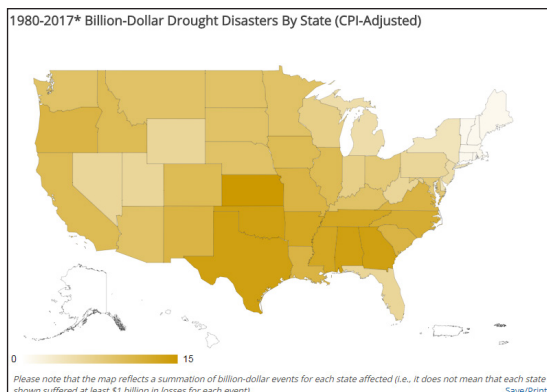
Hydrological Drought is based on the impact of rainfall deficits on the water supply such as stream flow, reservoir and lake levels, and ground water table decline.

### Agricultural Drought

Agricultural Drought is based on the impacts to agriculture by factors such as rainfall deficits, soil water deficits, reduced ground water, or reservoir levels needed for irrigation.

### Socioeconomic Drought

Socioeconomic drought is based on the impact of drought conditions (meteorological, agricultural, or hydrological drought) on supply and demand of some economic goods. Socioeconomic drought occurs when the demand for an economic good exceeds supply as a result of a weather-related deficit in water supply.



<https://www.ncdc.noaa.gov/billions>

Additional information can be found at:  
[www.drought.unl.edu/DroughtBasics/TypesofDrought.aspx](http://www.drought.unl.edu/DroughtBasics/TypesofDrought.aspx)