

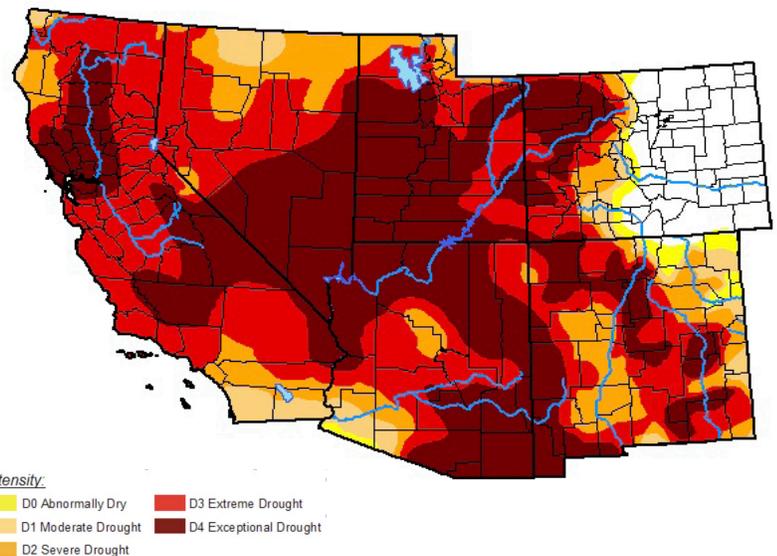
SOUTHWEST AND CALIFORNIA DROUGHT STATUS UPDATE

JUNE 24, 2021

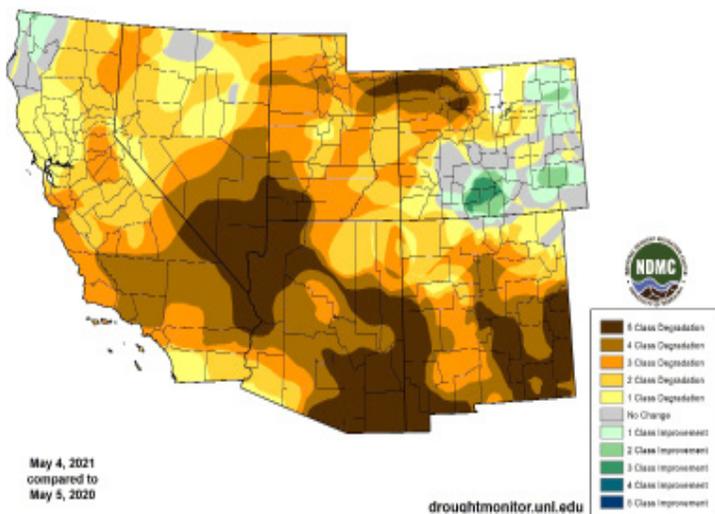


Long-Term Drought in the Southwest Threatens Water Supplies and Increases Wildfire Risk

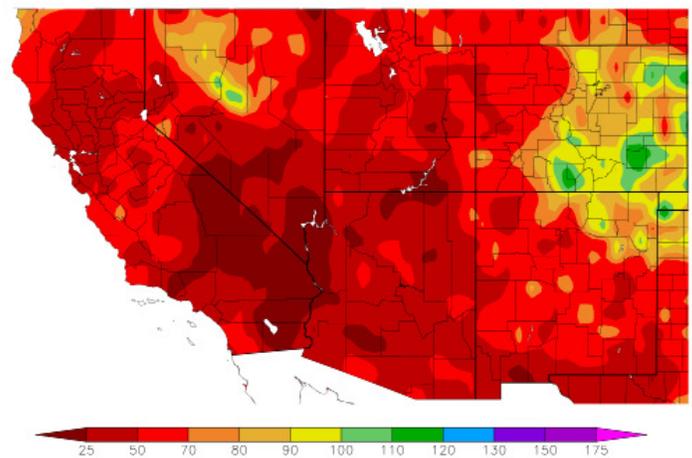
- 90% of the Southwest and California is in drought
- 40% is in Exceptional (D4) Drought, the highest level
- Much of the West was drought free just over 12 months ago, but drought conditions began developing around May 2020.
- High temperatures and very low rainfall totals through spring and summer of 2020 set new records across the Southwest.
- The combination of extremely low soil moisture leading into winter and snow drought through winter meant that runoff this spring was very low.



▲ **Fig 1.** June 22, 2021 U.S. Drought Monitor. Source: National Drought Mitigation Center



▲ **Fig 2.** U.S. Drought Monitor Change Map showing the degradation of conditions starting in May 2020. Source: National Drought Mitigation Center



▲ **Fig 3.** Percent of normal precipitation in the last year as of June 23, 2021. Source: High Plains Regional Climate Center

RESERVOIR LEVELS AND FORECASTS ARE ALARMING

Most reservoir levels in California and Southwest are below or much below normal, in many cases from long-term drought. Water supply volume forecasts don't show conditions improving. Lake Powell and Lake Mead are both currently at 35% of capacity. The June 3 NWS Colorado Basin River Forecast Center's water supply forecast for the Upper Colorado River Basin ranges between 15-80% of the 1981-2010 historical April-July average. Great Basin water supply forecasts are 5-50% of average. Many of the volume forecasts in these basins fall in the bottom (driest) five on record. In California, current (June 22) reservoir storage is just as grim. Lake Shasta is at 40% of capacity and Lake Oroville is at just 34% of capacity. With little to no snow left in the Sierra Nevada due to rapid snowmelt this spring and dry soils, those numbers will not increase.

CURRENT RESERVOIR LEVELS

Lake Mead (AZ/NV):

35%
of capacity

Lake Powell (AZ/UT):

35%
of capacity

Lake Shasta (CA):

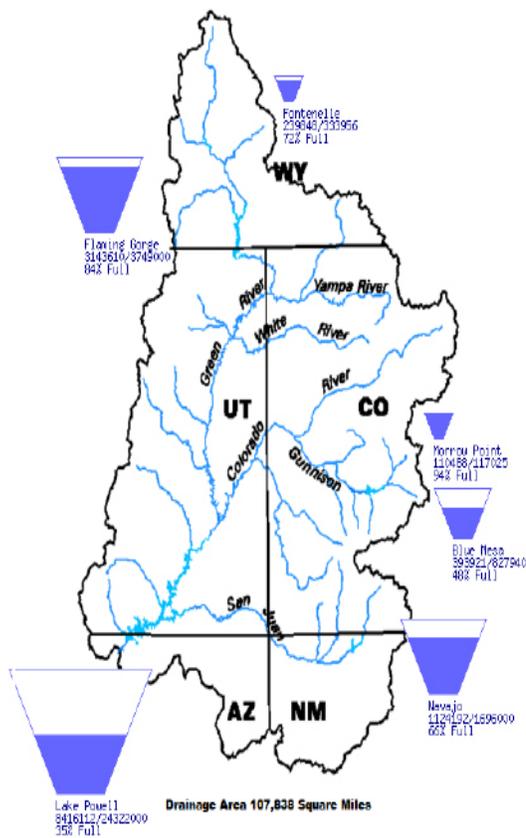
40%
of capacity

Lake Oroville (CA):

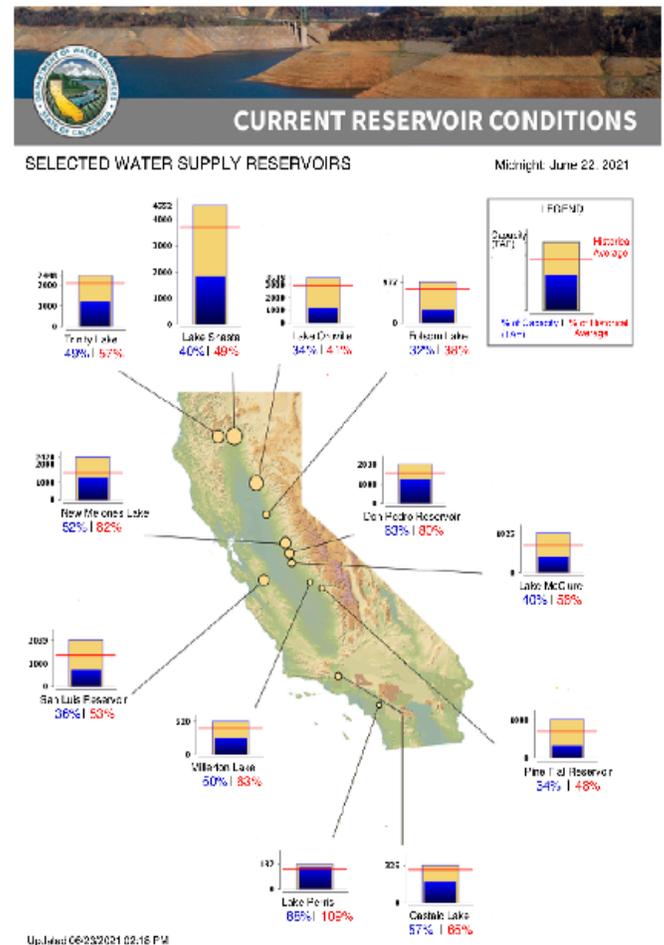
34%
of capacity

Data Current as of:
6/22/2021

Upper Colorado River Drainage Basin



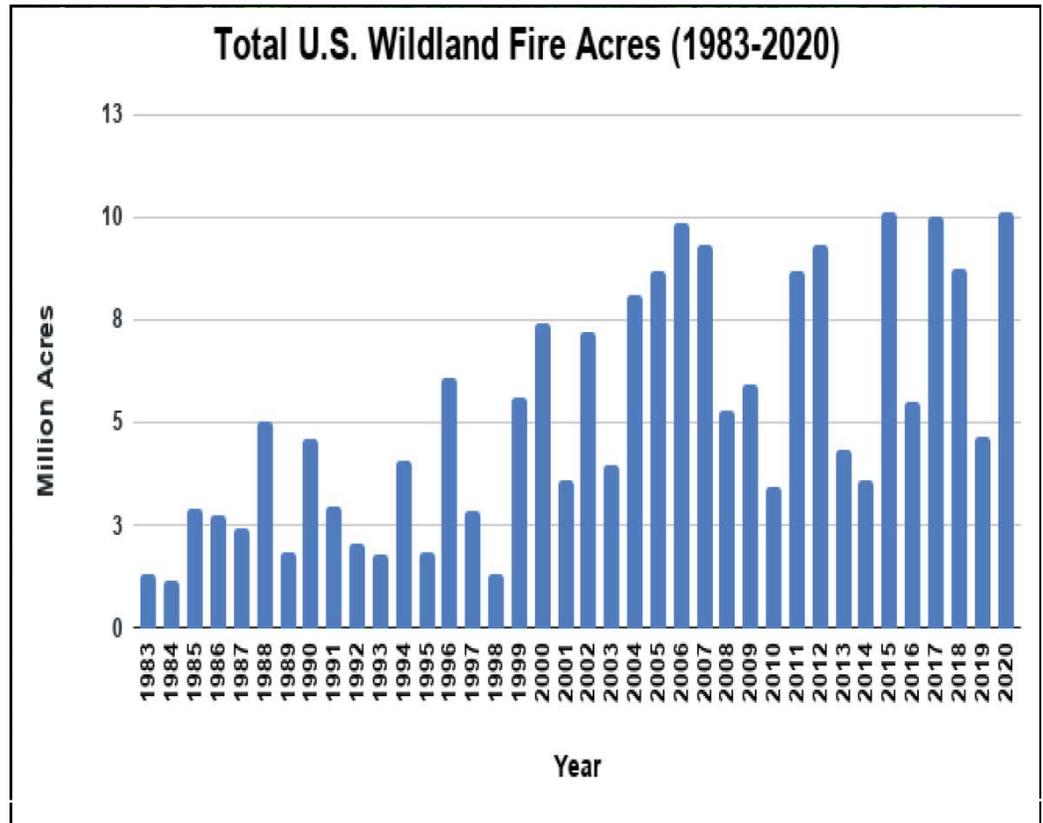
▲ **Fig 4.** Upper Colorado River Drainage Basin as of 6/22/21 showing level of fill in reservoirs, ratio of the volume of water currently in the reservoir compared to the volume of water in the reservoir when it is full, and the percent full. Source: Bureau of Reclamation



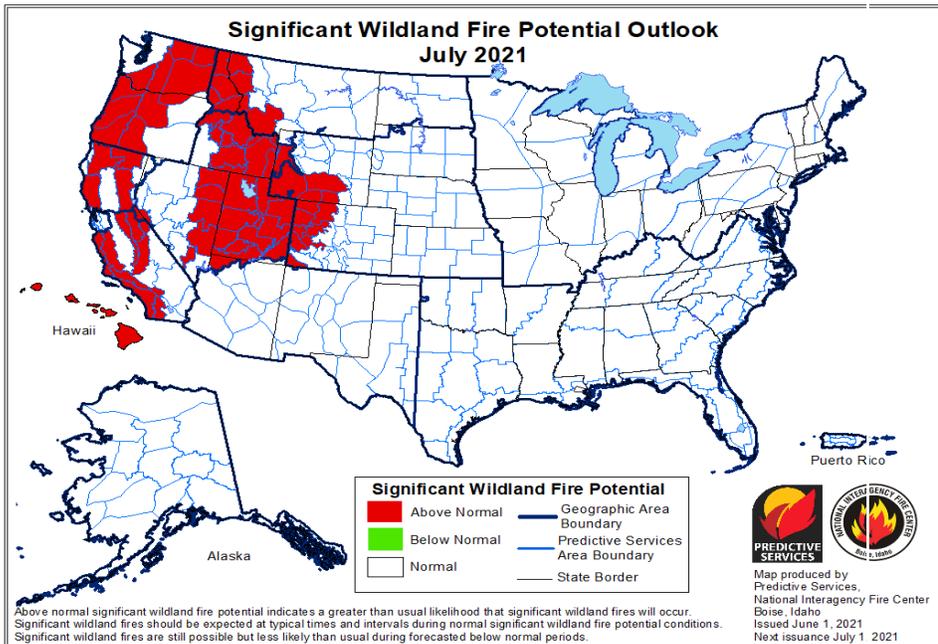
▲ **Fig 5.** Conditions for major California reservoirs as of June 22, 2021. The blue bars show the storage level for the date, the gold bar total reservoir capacity, and the red line historic level for date. Below the diagrams are % of capacity in blue and % of historic capacity in red. Source: California Department of Water Resources

2020 WAS A DEVASTATING WILDFIRE YEAR, 2021 COULD BE WORSE

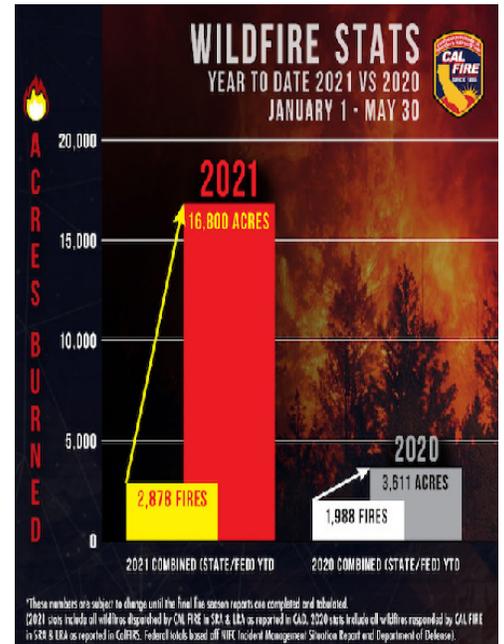
- For all of 2020, there were 58,258 fires covering a record-setting 10,274,679 acres. The number of acres burned was much above the average of 6,789,149.
- California has already experienced a significant increase in the number of wildfires and acres burned compared to this time last year.
- Vegetation is already showing stress and summer temperatures are forecasted by the NWS to be above normal again.
- The National Interagency Fire Center (NIFC) went to National Preparedness Level 4 (PL4) on June 22. Since 1990, this is the second earliest they have increased to PL4, behind 2012.



▲ Fig 6. Total U.S. Wildland Fire Acres from 1983 - 2020. Data from National Interagency Fire Center. 2004 fires and acres do not include state lands for North Carolina



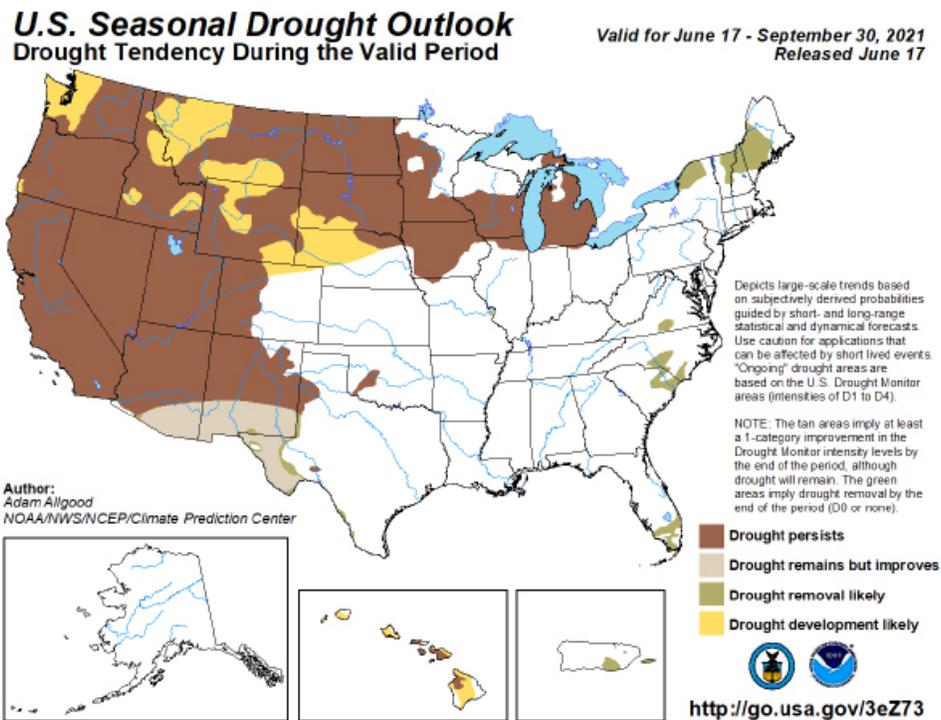
▲ Fig 7. Significant Wildland Fire Potential Outlook for July 2021. Source: National Interagency Fire Center



▲ Fig 8. Number of acres burned so far in California in 2021 as of May 30, compared to the same time period in 2020. Source: Cal Fire

OUTLOOK SHOWS DROUGHT CONDITIONS CONTINUING

- NOAA's National Weather Service Climate Prediction Center sees drought persisting in California where the climatology is relatively dry throughout much of the outlook period that runs to the end of September.
- The Southwest is also in a dry time of year until monsoon rainfall normally begins later in July. However, drought persistence is forecasted for the Southwest through the end of August even if monsoon rainfall comes as expected.



▲ Fig 9. Seasonal Drought Outlook from June 17 through September 2021. Source: NWS CPC

NIDIS AND PARTNERS ARE RESPONDING TO THE SOUTHWEST DROUGHT

Throughout the 2020-21 drought, NIDIS has been working with federal, state, and tribal partners, plus organizations including the the Western States Water Council and the American Water Works Association, to ensure that stakeholders have the drought information they need. NIDIS' efforts include posting the latest drought information on the new drought.gov and social media, regular drought status updates, webinars, and regional coordination meetings. Additionally, NIDIS has a number of ongoing initiatives to address current drought and future droughts and related impacts. For example, the [NIDIS Drought and Wildland Fire Nexus \(NDAWN\) Strategy](#) defines the needs and challenges of fire managers to effectively utilize drought information and to establish a robust drought and wildland fire decision-support information network. All of these efforts involve bringing together the most knowledgeable national and regional drought experts and helping to disseminate their knowledge in easy to understand language. On drought.gov, NIDIS has created interactive maps, tools, and other resources that don't exist anywhere else, building on data from a vast network of partners to provide easily accessible drought information all in one place. These outreach efforts also share over a decade's worth of NIDIS-funded research and tools on preparing for, predicting, monitoring, and assessing drought.

NIDIS will continue to provide useful and accurate information for as long as the current drought persists. Furthermore, NIDIS is already thinking ahead to the next drought by developing drought impact assessments, integrating lessons learned, and filling gaps and needs. Our ongoing activities and coordination efforts aim to build resilience and provide value to stakeholders across the region who are trying to manage through these exceptional drought conditions.