

***Monthly Images will only be shown when there are changes**

September - December 2021 South Ops Highlights

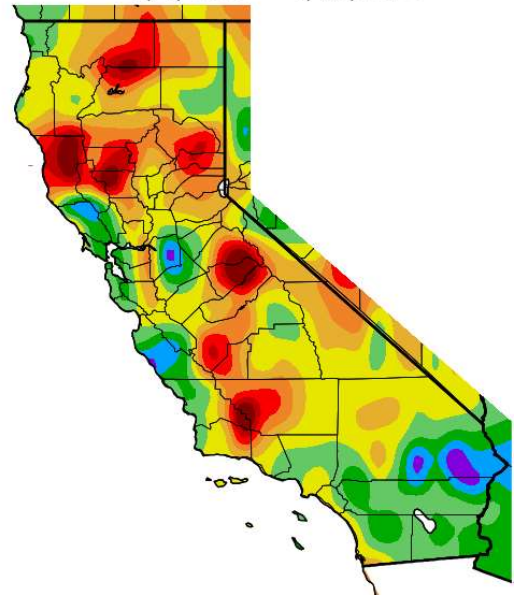
- Temperatures will be above normal through December.
- Rainfall will be below normal through December.
- There will be a near normal amount of Santa Ana wind events through December.



Weather Discussion

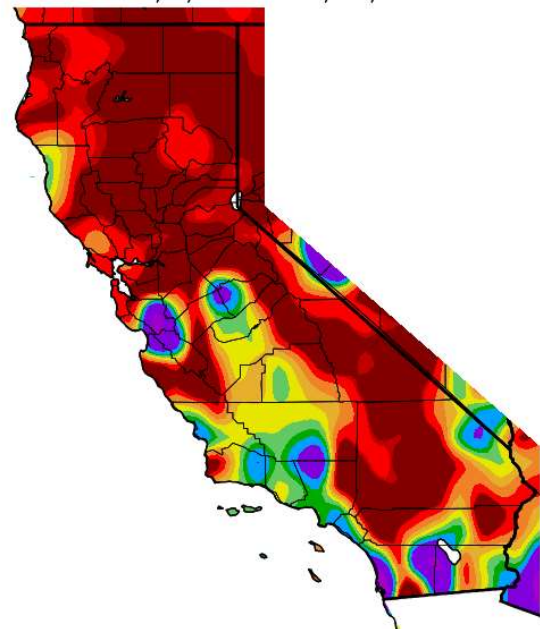
A ridge of high pressure over the southwestern United States continued to bring above normal temperatures to most of Central and Southern California in August. A few abnormally strong Pacific troughs brought periods of much cooler temperatures, but overall temperatures were within a couple degrees of normal (**Fig 1**). Most of the area received near normal rainfall for the month (**Fig 2**). However, thunderstorm activity was less in August compared to what was observed across the region in July. Storms were more isolated to widely scattered in nature over the mountains and deserts due to breaks in the monsoon flow and available moisture. The marine layer remained fairly deep at times and helped generate light rainfall west of the coastal mountain slopes. Outside of the strong gusty westerly winds that surfaced with the stronger troughs, surface winds remained primarily out of the south and west the entire month.

Av. Max. Temperature dep from Ave (deg F)
8/1/2021 – 8/24/2021



**Fig 1: August 1st - August 24th
Temperature (% of Ave.)**

Percent of Average Precipitation (%)
8/1/2021 – 8/24/2021



**Fig 2: August 1st - August 24th
Precipitation (% of Ave.)**



Fuels Discussion

Extreme to exceptional drought continued to expand across most of Central and Northern California in August, while moderate to severe drought persisted across Southern California south and east of Los Angeles County (Fig 3). A significant cool and more humid period in mid-August increased 1000-hr and 100-hr dead fuel moisture values to above normal over most of the region (Fig 4). The only exception exists across the Sierra, where the 1000-hr dead fuel moisture is between the 10th and 3rd percentile and the 100-hr dead fuel moisture is between normal and the 10th percentile (Fig 5). The live fuel moisture slowly dropped to between 50 and 70 percent, with some old growth fuel moisture dipping down near 40 percent (Fig 6).

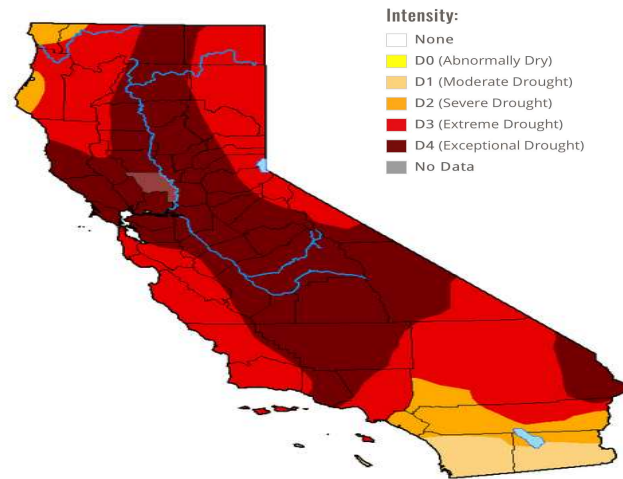


Fig 3: Drought Monitor August 26th, 2021

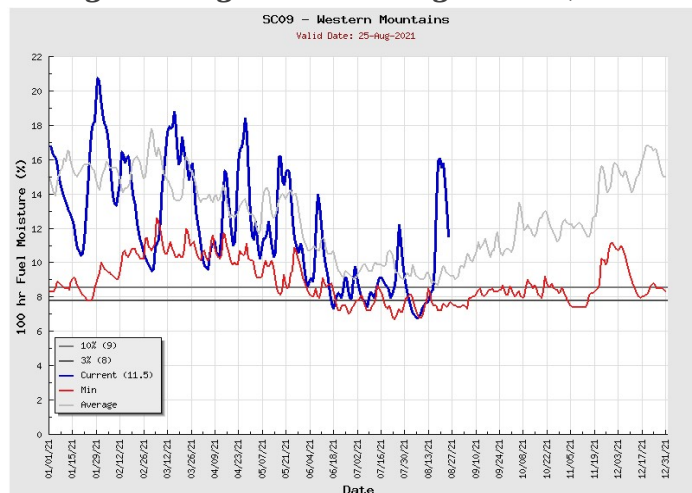


Fig 4: Western Mountains 100 hr Dead fuel moisture August 25th

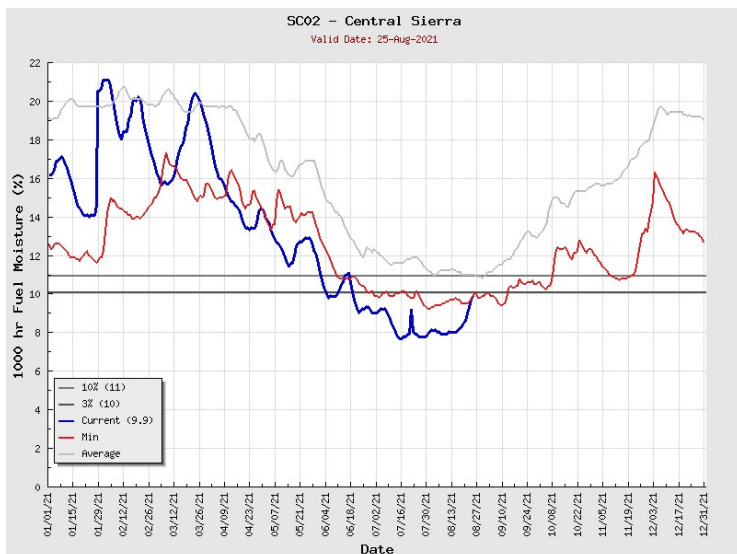


Fig 5: Central Sierra 1000 hr Dead fuel moisture August 25th

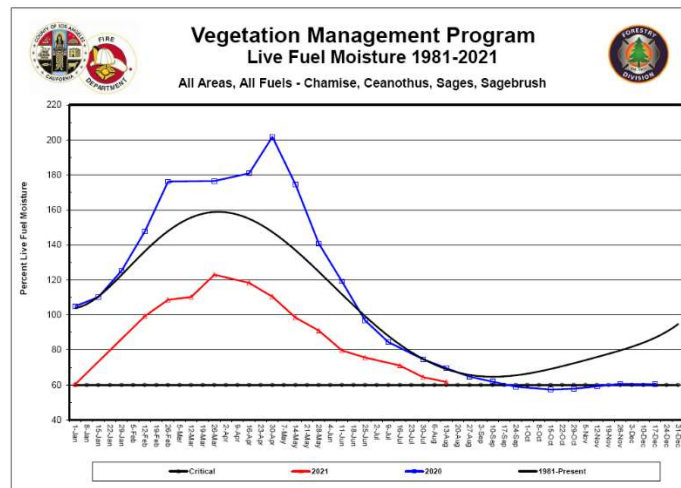


Fig 6: LA County Live Fuel Moisture August 15th

SOUTH OPS OUTLOOK

Sea surface temperatures warmed to above normal off the West Coast and remain above normal over the Gulf of Alaska (**Fig 7**). Sea surface temperatures for the Equatorial Pacific Ocean are near normal across the entire basin, with climate models continuing to indicate little change in temperatures through December (**Fig 8**). The warmer sea surface temperatures (warm pool) across the Gulf of Alaska and portions of the northern Pacific Ocean will eventually allow an area of high pressure to persist along the West Coast in September, and then become the dominant feature through the fall months as the ridge shifts further inland. The Eastern Pacific ridge of high pressure will allow temperatures to trend above normal across most of the region September through December. The cooler marine layer influence that has been in place across the coastal areas will be less prevalent during the fall months due to the warmer temperatures in the marine environment. Rainfall is expected to be below normal through December as the majority of low-pressure systems are expected to ride up and over the ridge of high pressure into the Pacific Northwest during the fall, instead of swinging inland over the West Coast into the Desert Southwest. This pattern also suggests that a normal amount of Santa Ana wind events will impact Southern California as more storms track over the Pacific Northwest into the Northern Rockies instead of dropping quickly south through the Great Basin. The above normal large fire potential that was predicted for Central and Southern California for the summer months has not materialized. So far, the region has seen well below normal fire activity. The diminished potential can be contributed to the above normal monsoon precipitation in July and August across the mountains and deserts, and the lack of fine fuels and substantial new growth across the lower elevations due to well below normal precipitation since October 2020. The potential for a large fire, or increased fire activity across the Central and Eastern Sierra will be less September through December as the amount of daylight hours will steadily drop and temperatures become colder. Monsoon moisture may persist across the Southern Sierra and Upper Deserts into mid-September, with lightning (new starts) and gusty outflow winds from thunderstorms contributing to short-term elevated fire potential in these areas. The lack of fine fuels (new growth and continuity) will also help mitigate large fire growth from any fires fanned by Santa Ana winds across Southern California. Even though warmer and drier than normal conditions are anticipated in September and into the fall months, expect near normal large fire potential for all areas September through December.

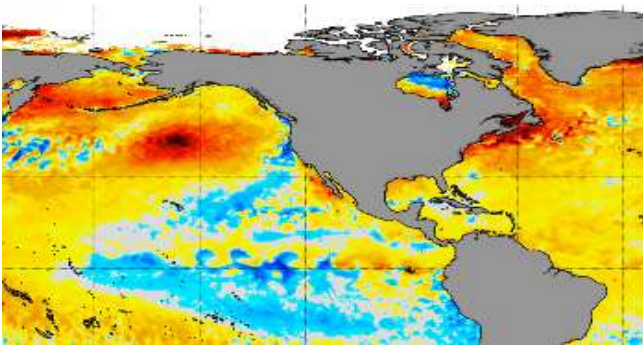


Fig 7: Sea Surface Temperature Anomaly, August 25th, 2021

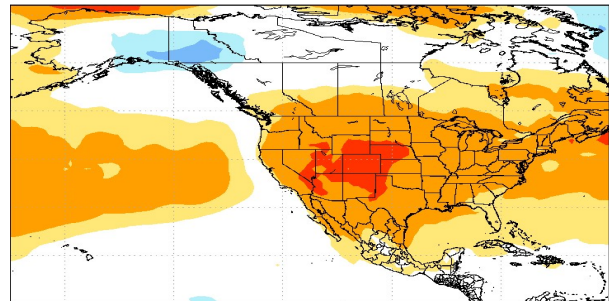
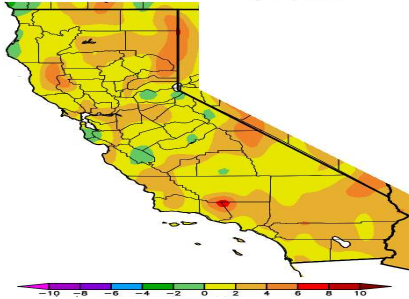


Fig 8: Forecast Temperature Anomalies for September through December, August 25th, 2021



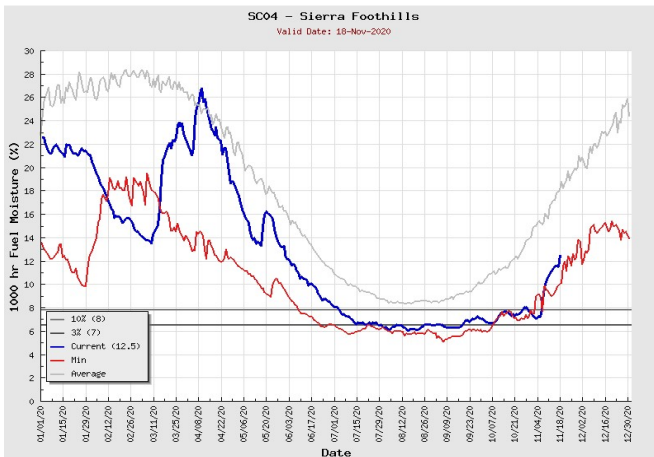
Select Intel Links used in the forecast

Av. Max. Temperature dep from Ave (deg F)
11/1/2020 - 11/19/2020



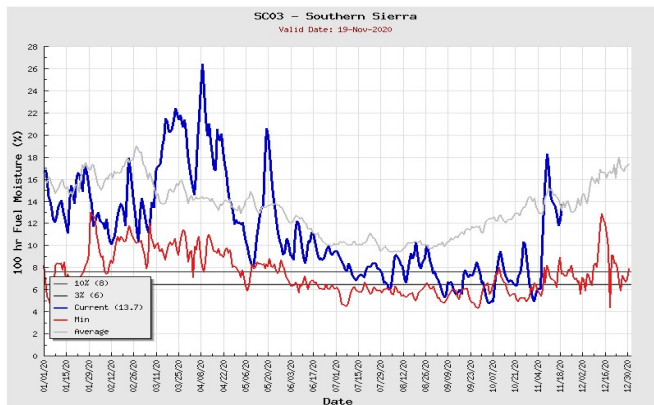
Climate

- <https://calclim.dri.edu/pages/anommaps.html>



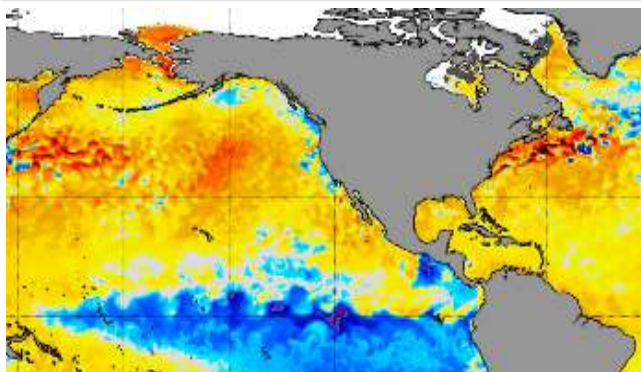
1000 hr dead fuel moisture

- https://gacc.nifc.gov/oscc/fuelsFireDanger_Thousand.php



100 hr dead fuel moisture

- https://gacc.nifc.gov/oscc/fuelsFireDanger_Hundred.php



Current sea surface temperatures

- <https://www.ospo.noaa.gov/Products/ocean/sst/anomaly/>