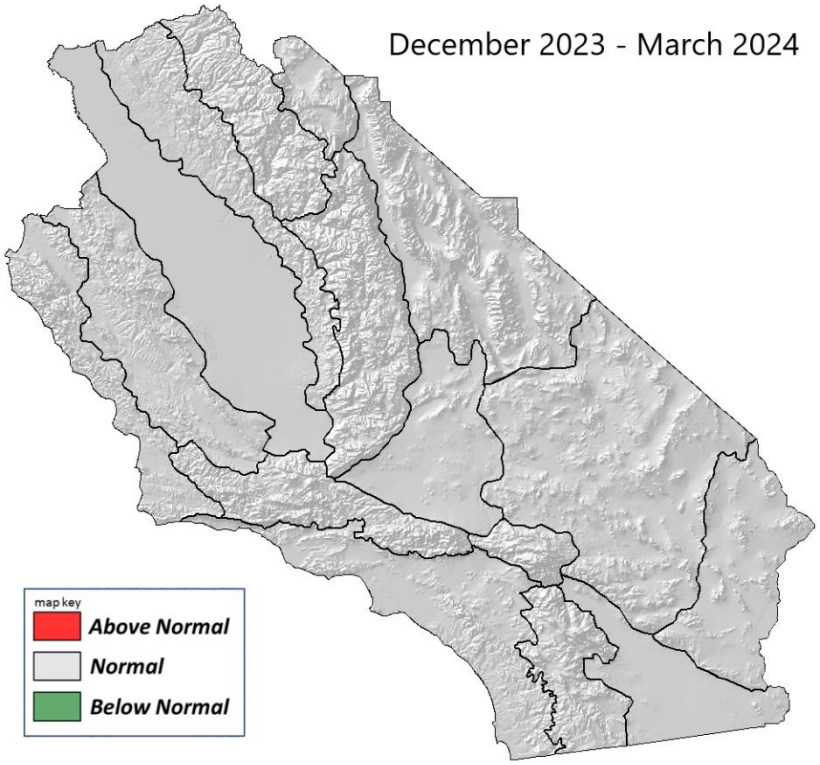
MONTHLY/SEASONAL OUTLOOKS

ISSUED NOVEMBER 30, 2023 VALID DECEMBER 2023 – MARCH 2024



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

December 2023 – March 2024 South Ops Highlights

- The odds show a slight to moderate tilt in favor of a cooler and wetter December 2023 – March 2024 forecast period.
- The odds tilt towards above normal dead fuel moisture to occur for the majority of the forecast period.
- The odds tilt strongly towards El Niño conditions to persist for the entirety of the forecast period.

Weather Discussion

November 2023 was warmer and drier for most of the region **(Figures 1 and 2)**. This was primarily attributed to persistent low pressure off the California coast with high pressure over the Great Basin. This overall synoptic pattern favors offshore winds as wind blows from high pressure to low pressure.

Latest sea surface temperature (SST) anomalies show El Niño conditions across the equatorial Pacific. The latest SST anomaly pattern represents a traditional East Pacific El Niño as the warmest SST anomalies remain in the eastern Equatorial Pacific. However, there are indications of this traditional East Pacific El Niño starting to transition into a Central Pacific El Niño Modoki as SST anomalies have increased in Niño 3.4 Region (central equatorial Pacific) **(Figure 3)** while SST anomalies are remaining steady to slightly falling in Niño 1+2 Region (eastern equatorial Pacific) **(Figure 4)**.

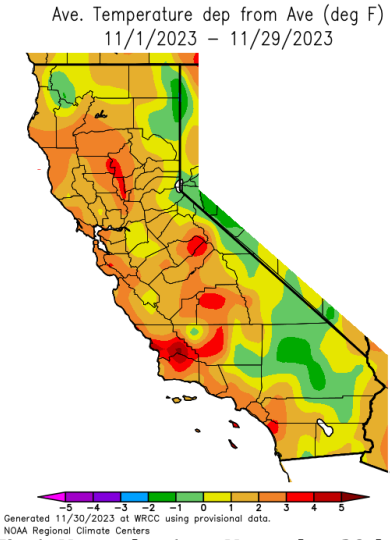


***Fig 1*: November1st – November 29th Temperature Departure from Average**

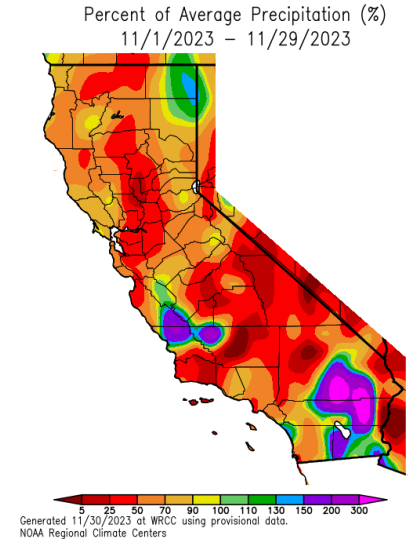


Fig 2*: November *1st – November 29th Precipitation (% of Ave.)

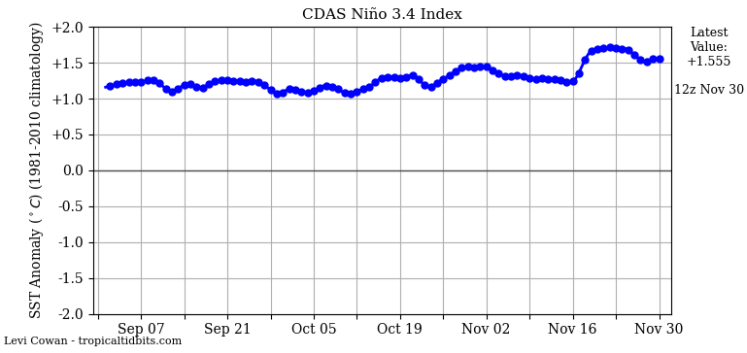


Fig 3*: *Niño 3.4 Region SST Anomaly

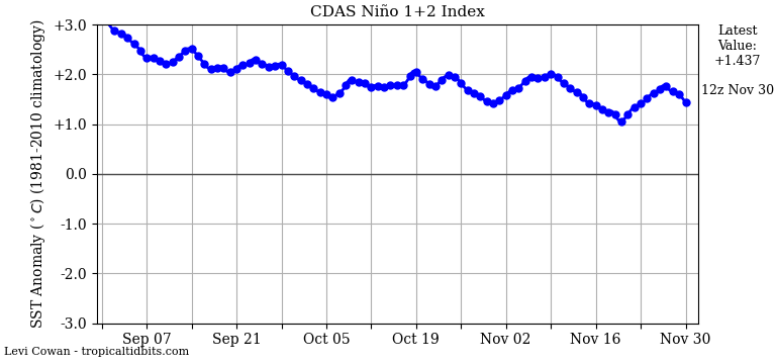


Fig 4*: *Niño 1+2 Region SST Anomaly

Fuels Discussion

Latest U.S. drought monitor shows zero areas currently in drought status currently across Southern California **(Figure 5)**. The only thing to note here is the Eastern Deserts are abnormally dry (D0), however this is not yet drought status. Live Fuel Moistures remain above normal for this time of the year **(Figure 6)**. 1000-hour dead fuel moisture shows a variance ranging from below normal moisture across most of the northern Predictive Services Areas (PSAs) and either near or above normal for most of the southern PSAs **(Figure 7)**.

However, the odds show a moderate tilt towards a wetter than normal December 2023 – March 2024 4-month period which supports wetter than normal dead fuels for the majority of this 4-month period.

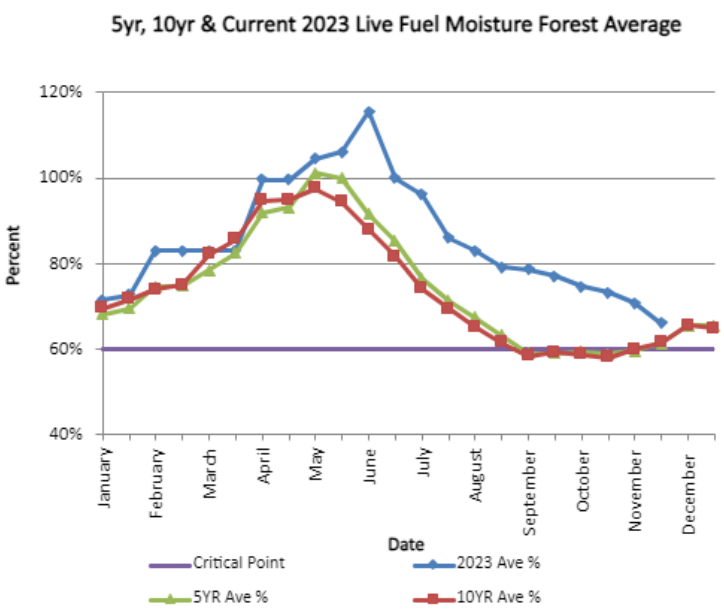


Fig 6: LPF Live Fuel Moisture November 15th

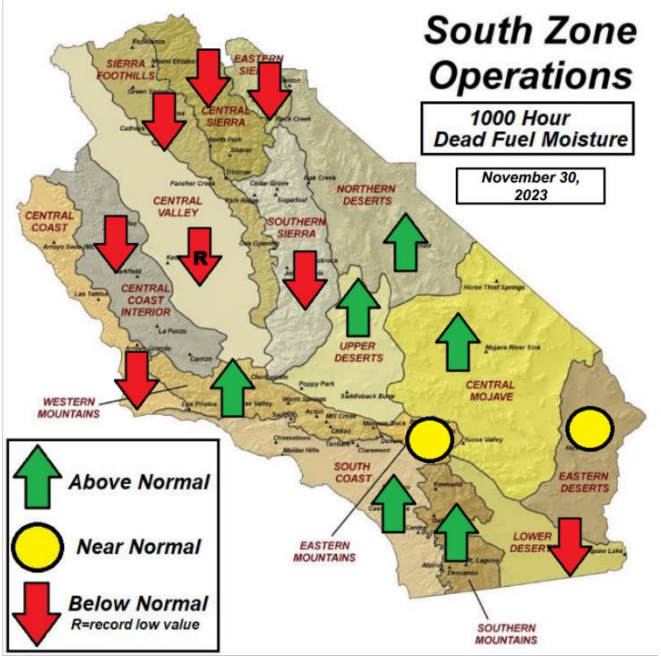
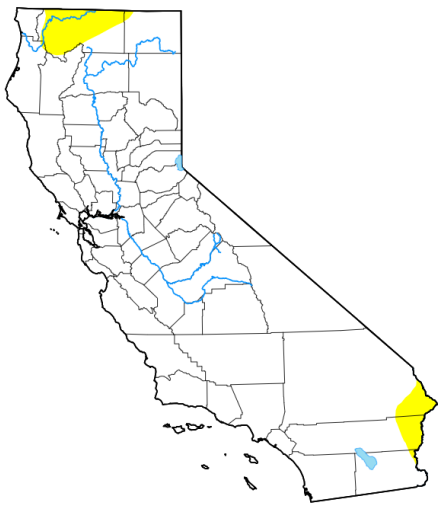


Fig 7: 1000hr Dead Fuel Moisture by PSA Map



Map released: Thurs. November 30, 2023
Data valid: November 28, 2023 at 7 a.m. EST

Intensity
- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

Authors

United States and Puerto Rico Author(s):
David Simeral, Western Regional Climate Center

Pacific Islands and Virgin Islands Author(s):
Richard Heim, NOAA/NCEI

Fig 5: USDA Drought Monitor November 30th

SOUTH OPS OUTLOOK

East Pacific El Niño conditions continue as we enter December 2023 **(Figure 8)**. Climate models suggest a gradual transition from a traditional East Pacific El Niño to a Central Pacific El Niño Modoki during the 4-month DJFM period. This means the core of the warm SST anomalies in the equatorial Pacific will move from the East Pacific to the Central Pacific. Comparing the current pattern to various analog years, the odds show a slight to moderate tilt towards above normal precipitation for Southern California. Climate models support this solution **(Figure 9)** as all but one member of the North American Multi-Model Ensemble (NMME) shows a moderate tilt in the odds towards a wetter than normal December – March period. CFSv2 forecast monthly Mean Sea Level Pressure (MSLP) anomalies suggest the best chance for intermittent dry spells to be in the first half of the 4-month period as this solution shows a greater chance for high pressure over the Northern Rockies in December and January than in February and March.

In conclusion, the odds tilt in favor of large-fire potential to remain near normal for all 16 PSAs with the climatological normal for large fires being zero across all 16 PSAs for this time of the year. The combination of above normal fuel moisture for larger dead fuels and live fuels coupled with the El Niño pattern and absence of drought support this tilt in the odds for the December 2023 – March 2024 4-month period.

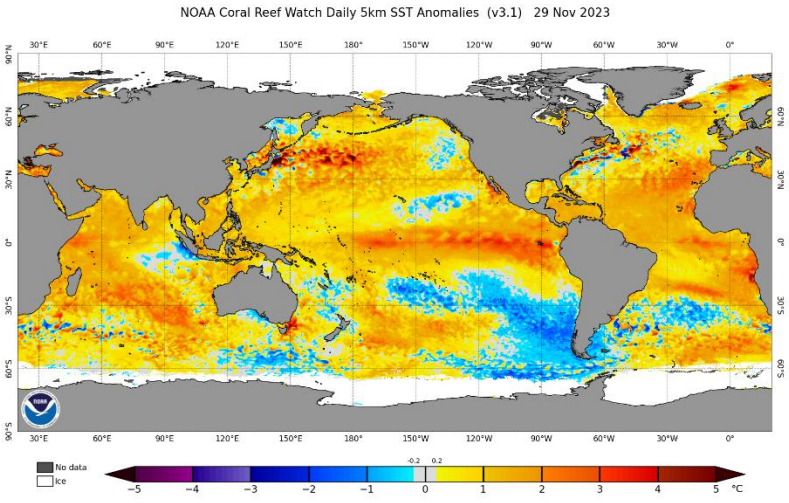


Fig 8: Sea Surface Temperature Anomaly, November 29th, 2023

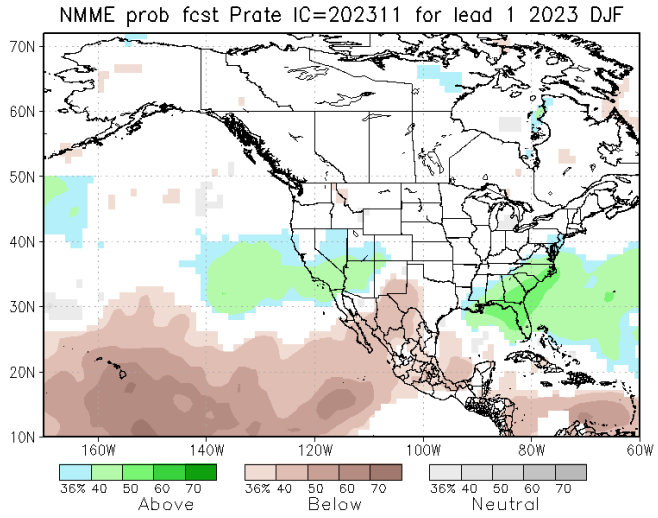
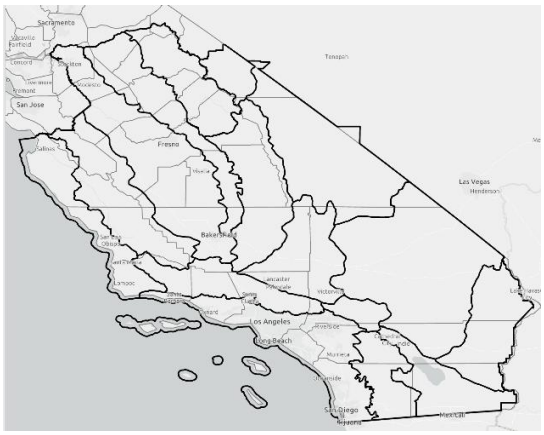
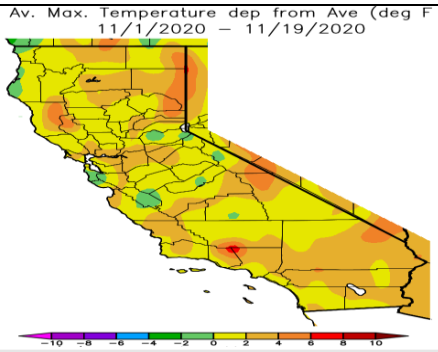


Fig 9: NMME December 2023 – February 2024 3-month Precipitation Anomaly Forecast

Maps with Counties and Select Intel Links used in the forecast

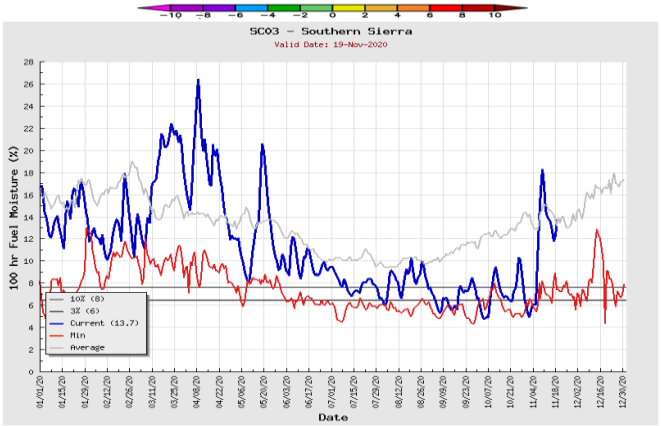


December 2023 – March 2024



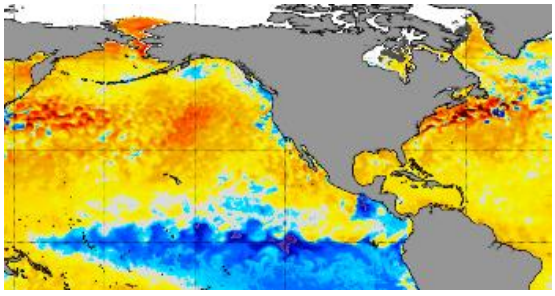
Climate

- https://calclim.dri.edu/pages/anommaps.html
- https://droughtmonitor.unl.edu/



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/
- https://www.tropicaltidbits.com