



\*Significant Fire Potential per Predictive Service Area (PSA)

## November 2024 - February 2025 North Ops Highlights

- The Jet Stream is expected to be active during November and provide cool-moist events which will aid in lowland herbaceous green-up as well as provide periods of snow cover across the higher terrain.
- Periods of dry-gusty winds are likely to occur prior to significant green-up across the lowlands and provide some brief elevated fire danger conditions.
- During the course of the next 2-3 months the ratio of green vs dead herbaceous fuels will tilt towards the green side therefore lowering significant fire potential during dry-gusty periods.
- **Significant Fire Potential is projected to be normal from November through February and historically coincides with a period of minimal large fire activity.**



## Weather Discussion

Warmer and drier ridging was the dominant weather pattern during the earlier half of September. The pattern began to change during the latter half of the month due to progressive, cooler and more moist trough passages. Large areas of northern California received wetting precipitation from the 15<sup>th</sup> to 17<sup>th</sup> and 27<sup>th</sup> to 28<sup>th</sup>. Most of the region received below to well below normal amounts of precipitation (**Fig 1**) although an area of near to above normal occurred across the northeast. Average temperatures (**Fig 2**) were generally near to above normal. A widespread frost/freeze event was observed across most of the mountain areas during the 18<sup>th</sup>. A little under 250 lightning strikes were recorded thus falling short of the 2012-2022 October average of a little over 600 strikes. There was one dry-gusty onshore wind event during the month and required National Weather Service Red Flag Warnings across the east. A few dry-gusty northerly and easterly wind events occurred with the strongest found between the 17<sup>th</sup> to 19<sup>th</sup> and invoked Red Flag Warning and High Risk issuances.

The cool and moist side of the Jet Stream is expected to be more active over northern CA during November versus December based on the latest guidance. With that being said, there are a lot of uncertainties going forward due to all of the significant teleconnections in play, plus there are very few good analog years to choose from. Temperatures during the next 4 months should end up being near to above normal although November has the potential of being cooler. Alternating northerly and onshore wind events should also continue the next few months.

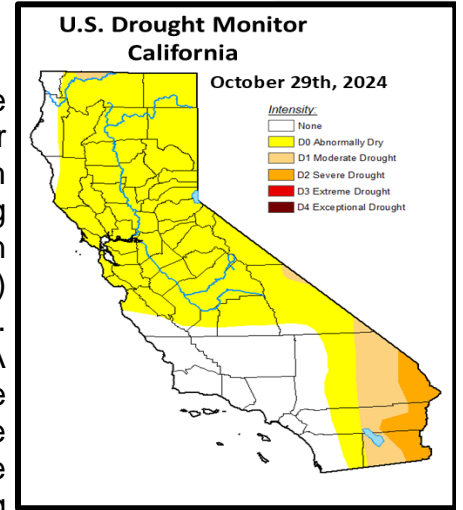


Fig 3 – Drought Monitor

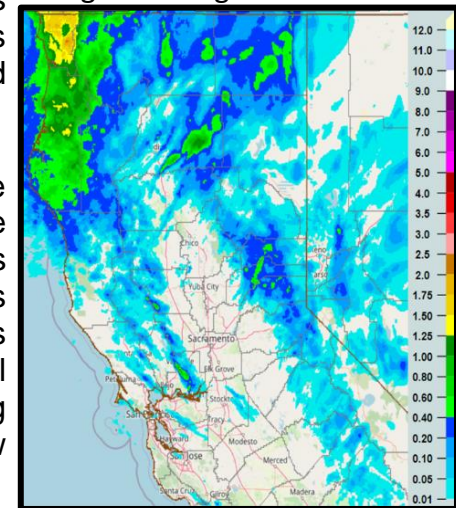


Fig 4 Precip. Oct 26th to 29th

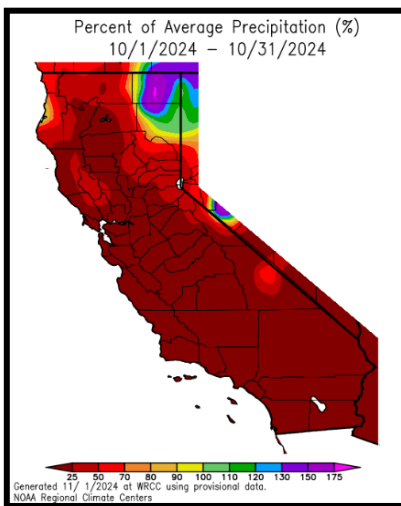


Fig 1 – Precip in October (% of avg.)

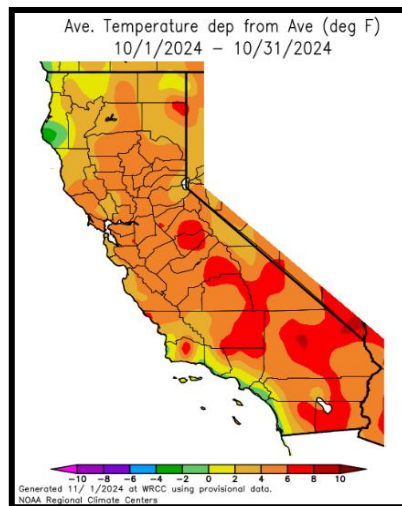


Fig 2 – Temp in October (dep of avg.)

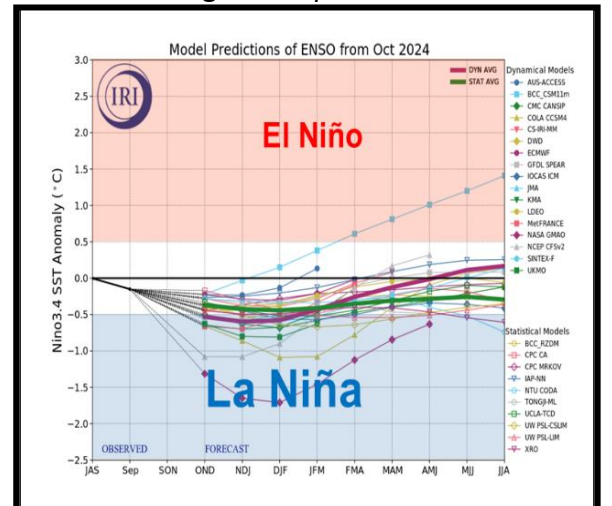


Fig 5 – Current ENSO state and outlook



## Fuels Discussion

Dead fuels were critically flammable through October 10th and this aligned with flammable to critically flammable live woody fuels and an abundant-cured herbaceous fuel bed. The weather pattern began to change during the latter half of the month and lead to less flammability.

The blue line found on the North Ops 1000-hour dead fuel moisture chart (Fig 6) illustrates the historically low values found during the beginning of October then a sharp increase after the 10th to near average towards the end of the month. The grey line is the historical average based on 23 years of data. The dashed lines represent various flammable percentile thresholds from the 40th to the 3rd.

Live woody fuels reached their minimum moisture values for the year and were flammable to critically flammable during October. Figure 9 shows PG&E live moisture averages based on numerous samples for Chamise and Manzanita. Values were near to below seasonal levels and quite flammable. A widespread frost/freeze event was observed across most of the mountain areas during the 18th and jumped started dormancy across the mid and upper elevations. Fig 6 shows the leaf color change using 2 sets of webcams across the north from September 30th to October 29th. Herbaceous fuels were mostly cured although some new germination and green-up occurred across portions of western and central lowland areas during the latter half of the month. The amount of moderate drought (Fig 3) shrunk between late September to late October and was relegated to the far north. The late October 2-month EDDI graphic (Fig 7) illustrates likely vegetation stresses due to the unusually dry, warm & windier atmosphere, especially across the Greater Bay Area & N. Sierra.

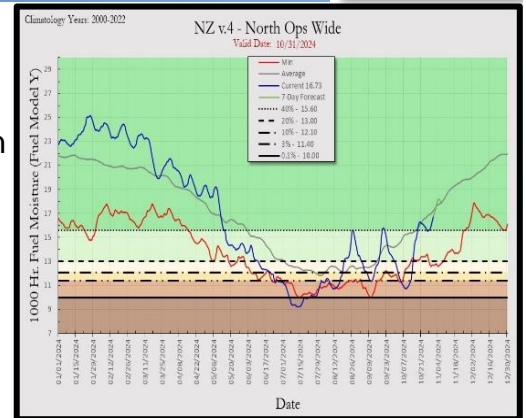


Fig 6 – North Ops 1000-hr Fuel Moisture - October 31st

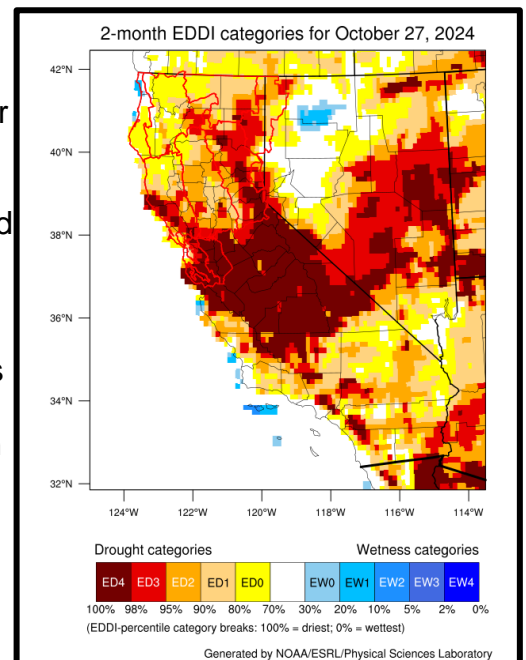


Fig 7 two-month EDDI Oct 27th

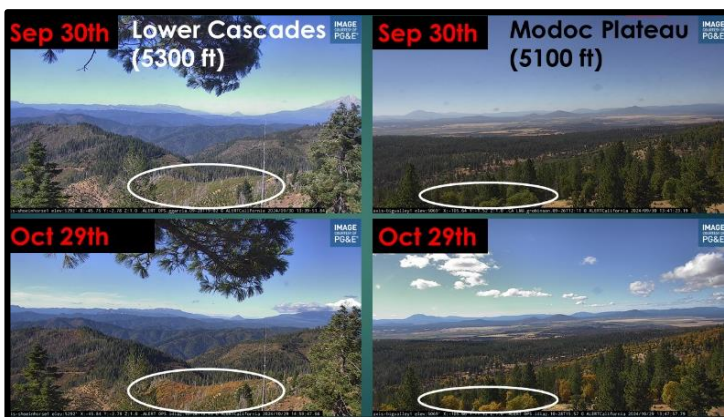


Fig 8 Leaf color change Sep 30th to Oct 29th

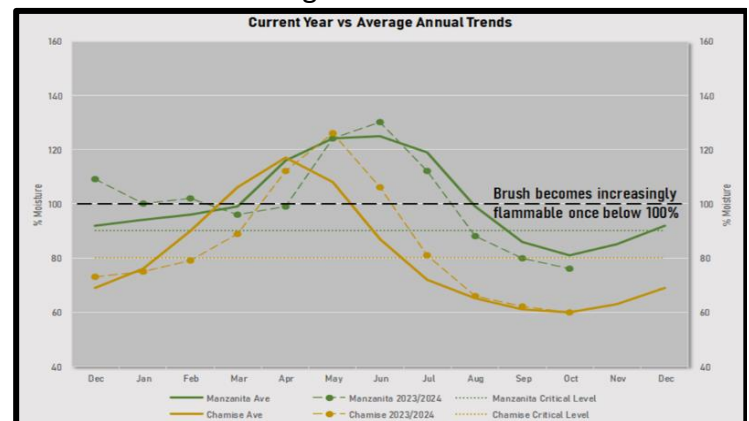


Fig 9 Woody Live Fuel Moisture courtesy of PG&E



## NORTH OPS FIRE BUSINESS & TRENDS

Fire business was steady during October with a mix of both wildfire and prescribed burns. The average number of fires reported per day was 10 which was down slightly from 13 during September. A total of 4 large fires were reported during the first three weeks of the month. The most notable was the Shoe fire located northeast of Redding in timber and brush. The Shoe fire required a complex incident management team to help manage the suppression efforts. Larger prescribed burn projects increased during the latter half of the month due to less critically flammable fuel alignments brought on by the moisture intrusions.

Based on the current fuel state and future weather predictions normal large fire potential is projected for the entire area from November through February. Historically this is a period with minimal large fire occurrence. Wetting moisture intrusions due to more active jet stream periods will aid in lowland herbaceous green-up plus add some snow cover across the upper elevations. The long nighttime hours and low sun angles will also help to keep fuel conditions from becoming critically flammable for any great length of time. The main growth potential during the near term will be found across the lower and middle Sacramento Valley and Greater Bay Area when gusty-dry winds are present prior to significant green-up. Once low elevation green-up is established, the main focus would shift to the middle elevations, generally 3000 to 5000 ft, depending on any extended unusually dry periods plus snow cover trends. Conditions are likely to support larger prescribed burn projects during the next 1-2 months although fuels across northern areas could be too wet at times.

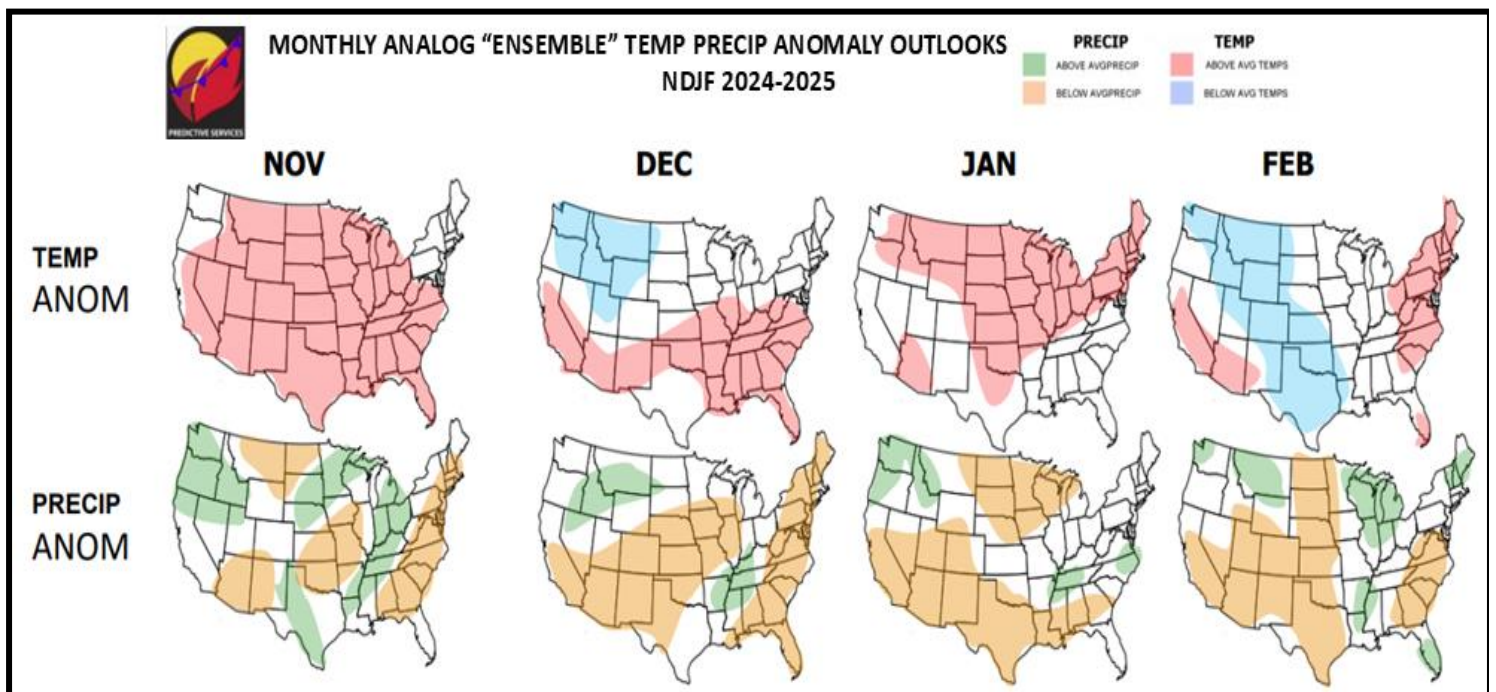
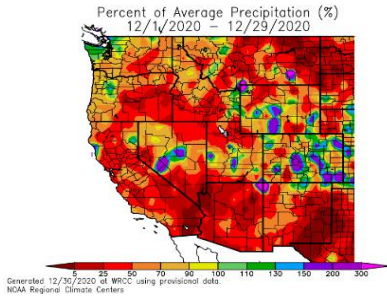


Fig 10 – Predictive Services 4-month Temperature and Precipitation Outlook



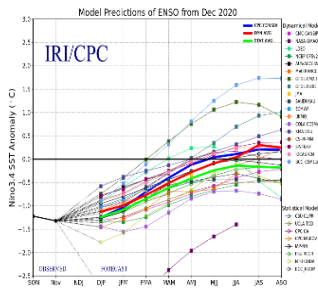
## Select Links Used in this Outlook



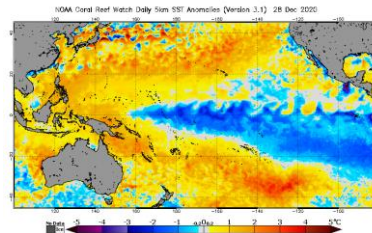
Western Region Climate Center Temperature and Precipitation Anomalies



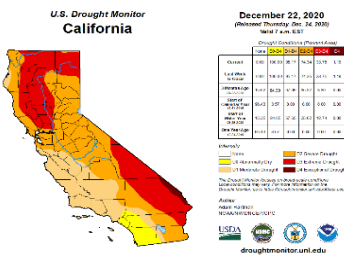
California Daily Snowpack Map



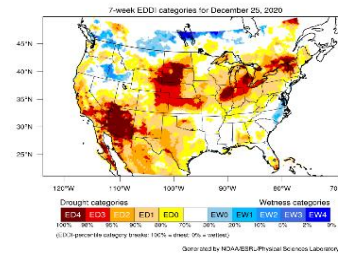
Monthly El Niño Southern Oscillation Analysis and Outlook



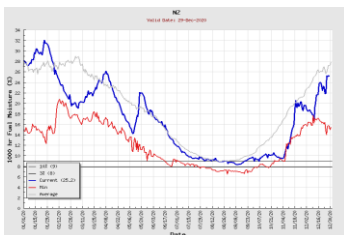
Sea Surface Temperature Anomaly Maps



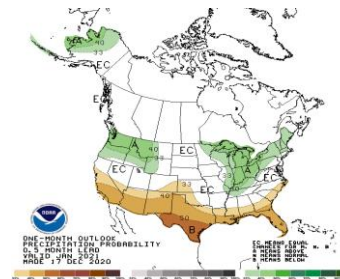
Drought Monitor Product for California



Evaporative Demand Drought Index



Daily Fuels Indices Charts



NOAA/NWS Climate Prediction Center