

*Significant Fire Potential per Predictive Service Area (PSA)

March - June 2024 North Ops Highlights

- Atmosphere will be in a state of complex flux next 4 months with some uncertainties in the pattern anomalies but there is the possibility for a cooler spring.
- Moisture found within the snowpack is expected to be near normal on April 1st, when readings are usually at their highest.
- Growing season starting up normally with more noticeable herbaceous curing likely latter half of May into June across the lowlands.
- **Significant Fire Potential is normal for March through June which means very little if any activity from March through May and generally 1-2 per PSA during June.**

Weather Discussion

The Jet Stream remained extremely active over N. CA during February with precipitation being reported on all but 7 days. Atmospheric River events occurred during 3 separate periods. **Fig 4** shows the precipitation results from an impactful 7 day period. Precipitation (**Fig 1**) was generally above to well above normal although there were small pockets of below normal across the far N and E. Average temperatures (**Fig 2**) were generally near to above normal. A little over 1600 lightning strikes were observed. The 2012-2022 February lightning strike average is a little under 250. Three very weak drier northerly and/or easterly wind events occurred. There were several gusty to strong southerly wind events but were generally accompanied with higher humidity.

There will be several complex oceanic-atmospheric teleconnection states in play during the next 4 months that will impact the Jet Stream strength and track. This includes a weakening and transitioning El Nino (**Fig 5**), -PDO, a likely final warming Polar Vortex event plus fluctuations in the Madden Julian Oscillation (MJO). The complexities have led to fluctuations in the forecast with continued uncertainties. Mixed precipitation signals show up for March although the pattern has trended more moist so expect near normal results with some pockets of both below and above. March temperatures should be near to below normal. Near normal precipitation is expected for April through June which suggests at the very least timely moisture intrusions. The temperature forecast is a bit more uncertain with conflicting guidance between above normal and near to below normal. Northerly wind event activity should be near to below normal.

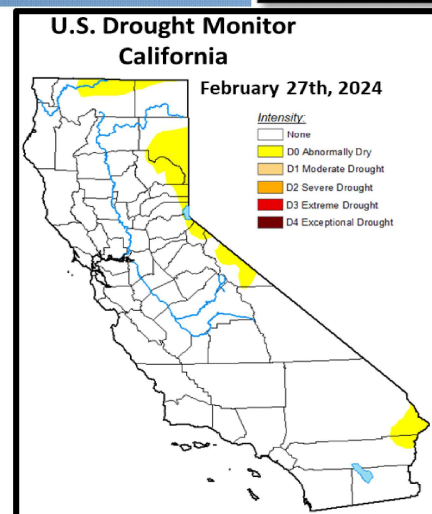
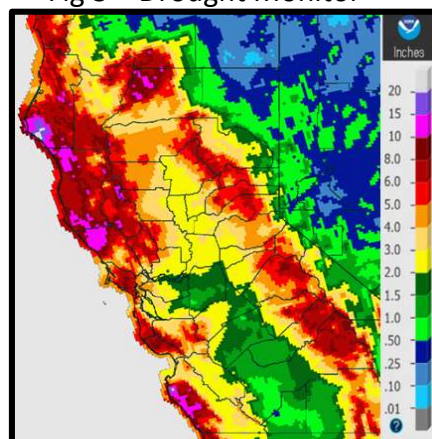
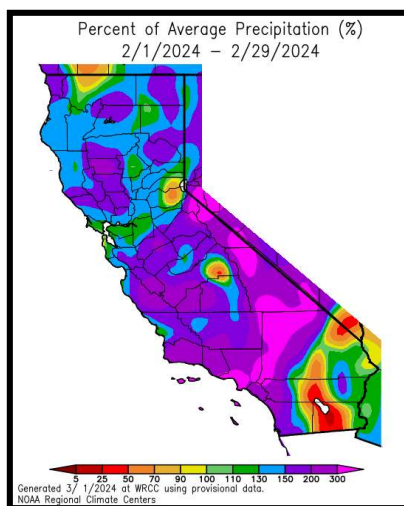
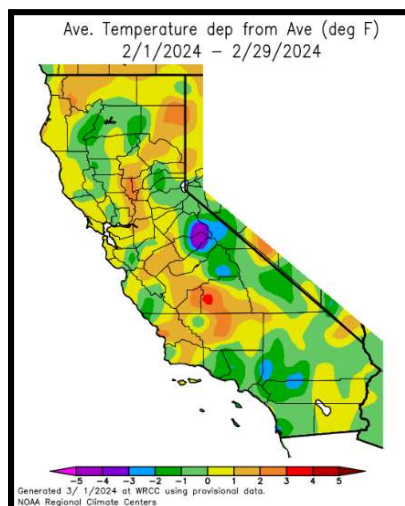
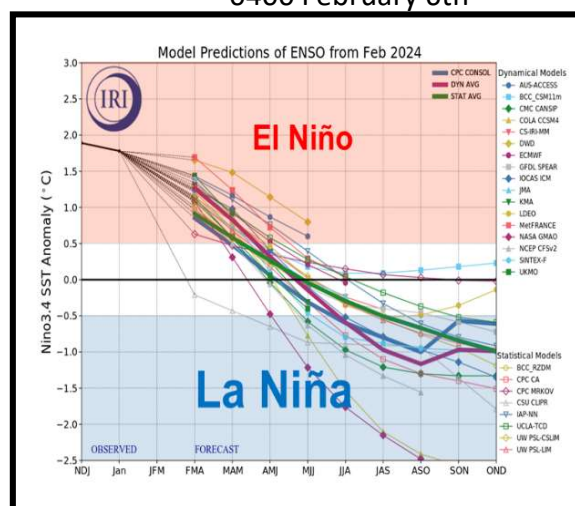


Fig 3 – Drought Monitor

Fig 4 Seven day precip.
accumulation graphic ending
0400 February 6thFig 1 – Precip in February
(% of avg.)Fig 2 – Temp in February
(dep of avg.)Fig 5 – Current ENSO state and
outlook

Fuels Discussion

Dead fuel moistures were generally moist and less flammable during February with near to above normal values most areas and time frames. Some shrub and canopy species started the initial green-up stage across the lowest elevations while dormancy remained across most of the area. Herbaceous fuels were in a green-up state, generally below 3500 feet, during most of the month with dormancy found across the mid-upper elevations.

The blue line found on the North Ops 1000-hour dead fuel moisture chart (**Fig 6**) shows subtle fluctuations with above normal values during all of February. The grey line is the historical average based on 23 years of data. The red line is the record minimum. The dashed lines represent various flammable percentile thresholds from the 40th to the 3rd therefore the heavier fuels weren't very flammable most areas with the exception of some drier pockets across the far north & east.

Shrub and canopy fuels experienced some initial green-up across the lowest elevations during the latter half of February but dormancy remained evident across most of the area. Herbaceous fuels were in various stages of green-up, generally below 3500 ft, while dormant grasses were found across mid/upper elevations. **Fig 8** illustrates the green-up state at 4 locations while **Fig 9** shows a yearly comparison state. Much of the standing dead going into winter season has been altered thus lessening the spread risk.

Moisture found within the snowpack continued to improve during February with a jump from near 60% at the beginning to 80-90% at the end (**Fig 7**). The more consistent snowpack by the end of the month was generally found above 4500-5500 ft although noticeably lower elevations were observed on March 1st due to a significant Pacific Trough passage.

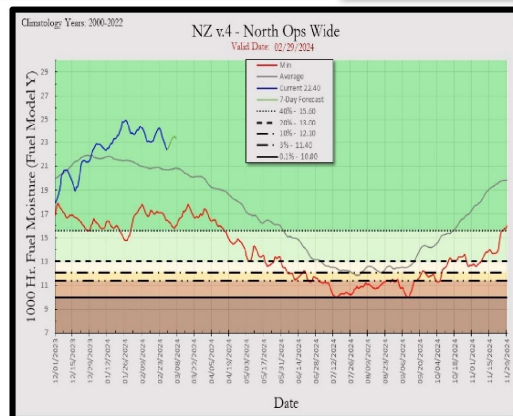


Fig 6 – North Ops 1000-hr Fuel Moisture - February 29th

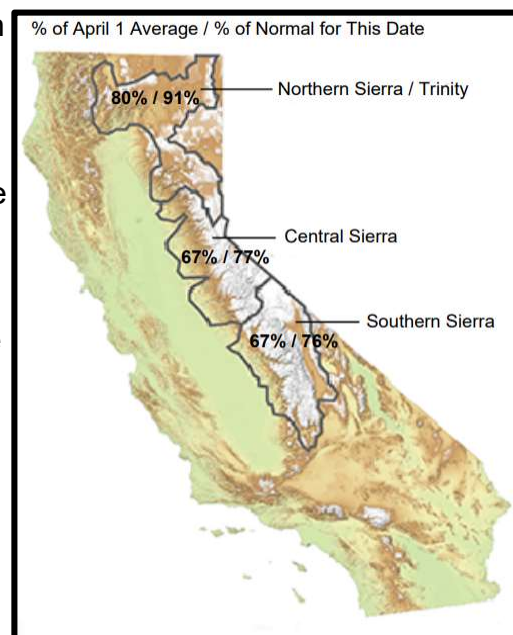


Fig 7 Snow water equivalent on February 29th

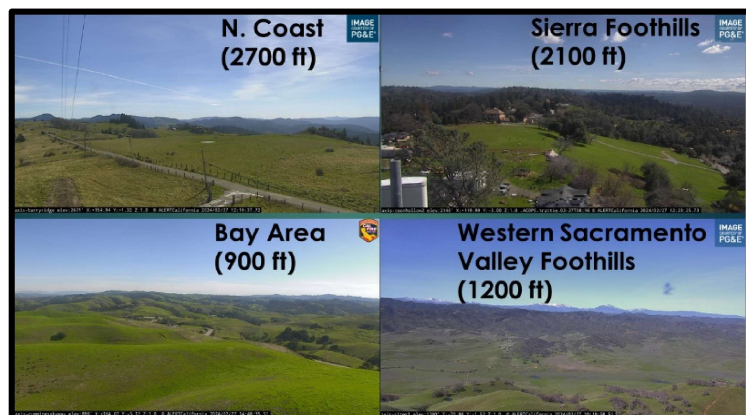


Fig 8 Green-up illustration Feb 27th 2024

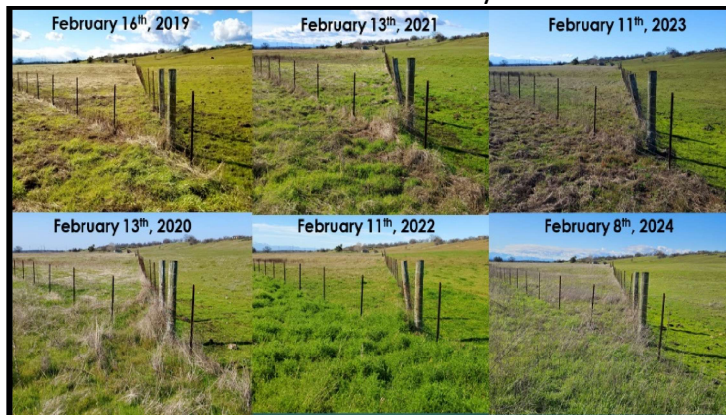


Fig 9 Redding Area herbaceous comparison mid Feb

NORTH OPS FIRE BUSINESS & TRENDS

Fire business was minimal during February. There were no lightning ignitions and the daily initial attack average was less than 1. All of the ignitions were less than 1 acre. Pile burning was the main project activity and slowed during the 3rd week of the month due to heavy precipitation and access issues.

Very little if any critical flammable alignments are expected during the next 4 months due to several factors. Timely to abundant moisture intrusion events are in the forecast for the spring to early summer period plus there is the lack of a foreseeable heat signal. The low elevations will be in various phases of green-up through early May with transitional curing expected most of May into June, below 2000-3000 feet. This transitional curing will likely lead to an increase in initial attack numbers but probably not unusual amounts of significant fire due to the lack of foreseeable extended dry periods and frequent dry wind events. Extended periods of heavier snow cover will impact the sheltered upper elevations, generally above 5500-6000 feet, thus creating a fire spread barrier during large portions of the outlook period. The middle elevations will experience transitional green-up during the late spring to early summer and live fuel moistures are not expected to be in a drought stressed state. Some pockets of dryness may occur along the northern periphery but this outcome is looking less clear now. The current outlook suggests normal numbers of large fire ignitions which is less than 1 per month from March to May and 1-2 per PSA during June. If the forecast trend for near to below normal temperature anomalies remains consistent for the spring due to a rapid ENSO transition then below normal large fire potential may need to be added for some PSAs in future outlooks. Favorable prescribed burn windows are expected this spring into the early summer.

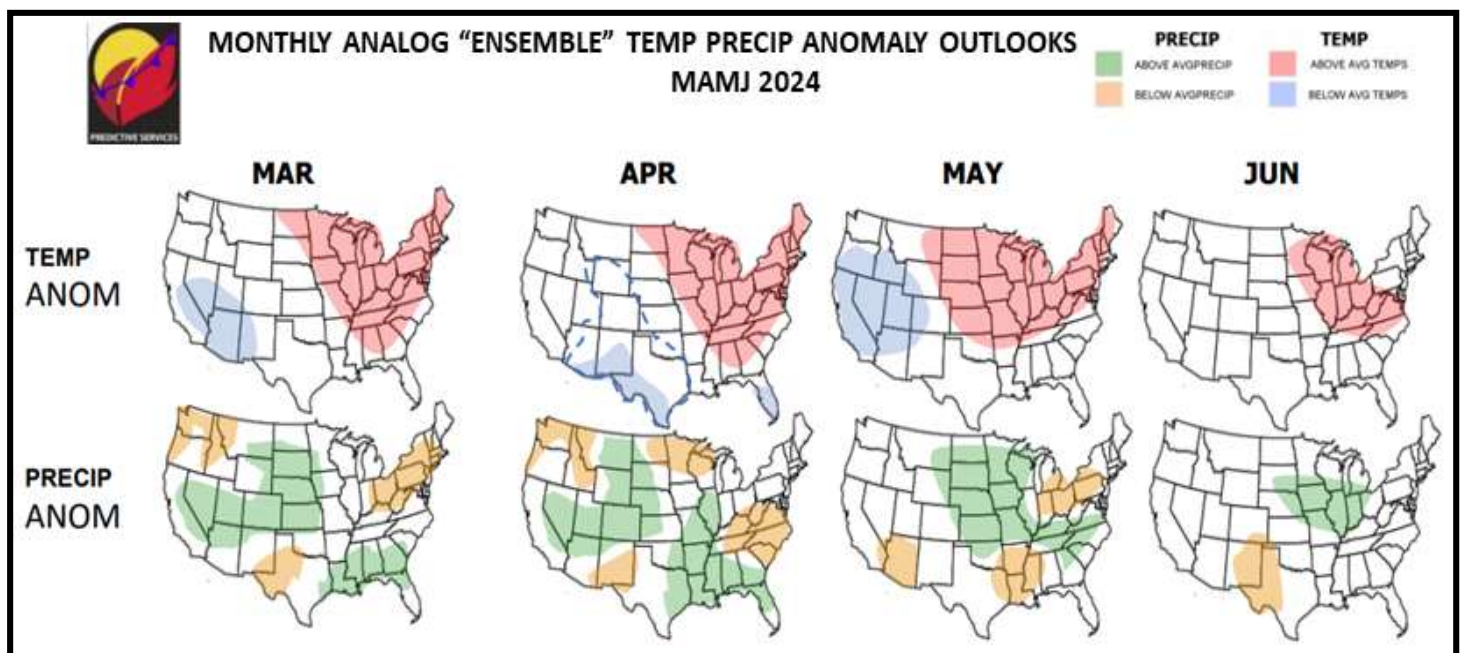


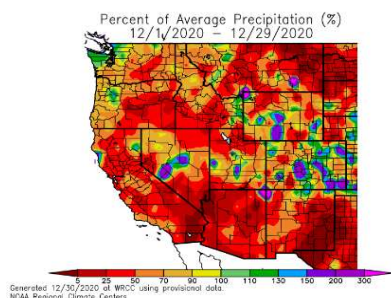
Fig 7 – Predictive Services 4-month Temperature and Precipitation Outlook

Northern Operations MONTHLY/SEASONAL OUTLOOKS

ISSUED March 1, 2024 VALID March - June 2024



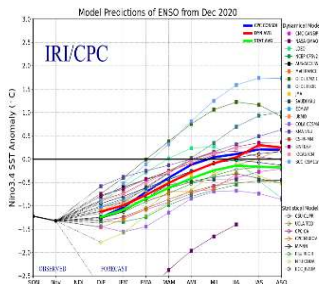
Select Links Used in this Outlook



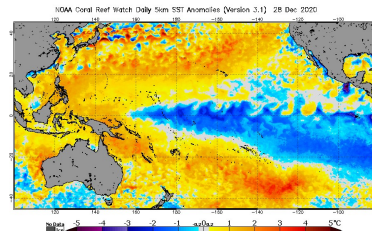
Western Region
Climate Center
Temperature and
Precipitation
Anomalies



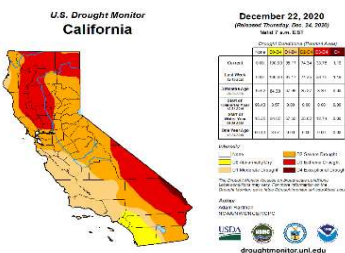
California
Daily
Snowpack Map



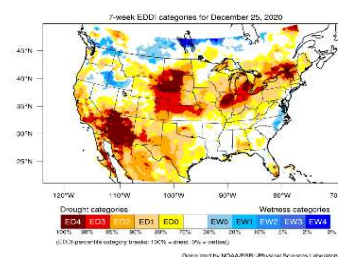
Monthly El
Niño Southern
Oscillation
Analysis and
Outlook



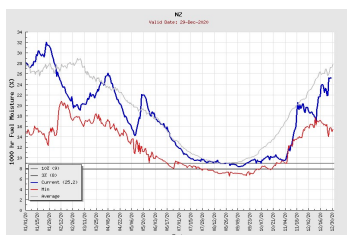
Sea Surface
Temperature
Anomaly Maps



Drought
Monitor
Product for
California



Evaporative
Demand
Drought Index



Daily
Fuels
Indices
Charts

