November 2023 - February 2024 North Ops Highlights

- The significant portion of the fire season should diminish during November & December due to seasonality (sun angle/lessening daylight hours) and episodic wetting moisture events that should induce sufficient widespread green-up across the lowlands.

- Expecting highly changeable weather patterns during the next 4 months due to widely varying and significant oceanic-atmospheric teleconnection patterns with changeable precipitation anomalies but temperatures should generally be near to above normal.

- Significant Fire Potential is normal for November through February.
The weather pattern during October was geared more towards drier and warmer ridging with some Pacific trough and Jet intrusions sprinkled in. Most of the precipitation events were focused during the middle of the month with a notable wetting event during the 9th to 11th (Fig 4). Precipitation anomalies (Fig 1) were generally near to below normal. Average temperatures were generally near to above normal (Fig 2). A little over 250 lightning strikes occurred during 4 separate days of October with the lions share coming on the 22nd. The October lightning average based on a 2012-2022 dataset is around 600 strikes. Dry northerly & easterly wind events of varying strength occurred throughout the month with a moderate to strong event happening on the 28th and 29th thus prompting High Risk and Red Flag Warning issuances.

Widely varying weather patterns are expected to impact the region during the next 4 months due to several moderate to strong oceanic-atmospheric teleconnections that will impact the Jet Stream. This set-up creates larger uncertainties in the monthly trends & forecasts. It is plausible that extended atmospheric blocking periods will occur during the earlier portion of the outlook period creating a "feast or famine" effect on weather anomalies starting with November. Timely or episodic moisture events are projected for November and December with a better chance for more frequent wetting events during January. A near west Coast blocking ridge pattern or two will likely occur and lead to some noticeable dry gusty offshore wind events but not expecting an unusual number.
Fuels Discussion

Dead fuel moisture conditions were variable during October due to the mix between warm-dry and cool-moist periods. This resulted in near to slightly above normal values as a monthly average with no critically dry values observed for any PSA. Shrub fuels tended towards dormancy and were generally pretty flammable across most elevations and aspects. Herbaceous fuels were in a mixed state with a light flush observed across some low elevation areas due to the precipitation events during the past 1.5 months while most of the grasses were cured.

The blue line found on the North Ops 1000-hour dead fuel moisture chart (Fig 6) shows near to above normal values during October. 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 percentile thresholds from the 40th to the 3rd. Most of the live fuel moisture samples were near to above normal but fairly flammable and this is represented in the PG&E manzanita and chamise shrub moisture graphic (Fig 9). Freezing and frost events became more widespread during October and further prompted woody fuels towards dormancy although portions of the Sacramento Valley & Bay Area haven’t received a frost or freeze yet.

Herbaceous fuels were in mixed phase with a light flush of green-up found across portions of the lower elevations, mainly the near Coastal areas from the Mid Coast to the North Coast (Fig 8) as well as pockets within the Sacramento Valley and NW mountains. Most grass fuels were cured, especially across the mid and upper elevations.
NORTH OPS FIRE BUSINESS & TRENDS

Wildfire business lowered during October compared to September. No lightning ignitions were reported, and the average daily ignition count was 7. Growth on the existing large fires such as the Six Rivers and Smith River Complexes ended by the 10th. Despite the lower wildfire business numbers, fuel conditions were just right for numerous broadcast or understory burn projects with active burning implemented during the entire month.

The outlook suggests normal numbers of large fire ignitions which is less than 1 per month from November to February. The combination of timely moisture events, seasonality and eventual snow cover across the higher elevations will keep fuel conditions from becoming critically dry for an extended period of time. Drought (Fig 3) should not be a factor as that designation was removed from northern Del Norte county during the middle of October. The 2-month Evaporative Demand Drought Index (EDDI/Fig 7) ending in late October doesn't indicate imminent drought conditions either.

A more widespread flush of green-up is needed across most of the lower elevations including portions of the Sacramento Valley-Foothills and Greater Bay Area to reduce the large fire threat when dry-gusty winds occur. That mitigating impact should occur sometime during November and December, generally below 1500-2000 ft. The near to above normal cured carryover herbaceous crop should also experience some flattening or "melting" during the next 4 months although the standing dead should be a carrier for small fires during dry-semi breezy periods. An extended dry late fall or winter period is likely to occur (~3 weeks) and this would open up some of the timbered mid-slope areas for some moderate fire growth potential when gusty-dry winds become present.
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