April - July 2021 North Ops Highlights

- Drier than normal rainy season. Half of the region at less than 50% of average.
- New green grass crop has come in at lower elevations (≤ 3000 ft).
- Increased Initial Attack expected during dry breezy weather once a week or more passes without precipitation. Middle elevations most vulnerable until greenup.
- Although some cool wet stretches expected, overall outlook is for drier and warmer than average April-July.
- **Significant Fire Potential is Normal for all areas from April through June.**
- Weak snow pack to melt off early leaving middle and upper elevations available for fire spread in July.
- **Significant Fire Potential Above Normal mid/upper elevations in July, Normal elsewhere.**
Weather Discussion

Precipitation was below normal across the North Ops region in March (Fig 1). Although weather systems moved through the region, they did not produce the usual amounts of precipitation and with the typical frequency that we usually see. The rain year, which began on October 1st, remains drier than average statewide (Fig 2). A large portion of the North Ops region has received less than half of the normal precipitation. March was colder than normal in California, however, as cold dry weather systems with an over-land trajectory repeatedly brushed the state on the east side (Fig 3). The high elevation snow pack in the north is now at 66% of normal as April begins (Fig 4), which is the climatological average date of peak snow water content. A La Niña pattern, cooler than normal sea surface temperatures in the eastern tropical Pacific Ocean, is expected to fade late in the spring (Fig 5). Although not automatic, this pattern can correlate to a drier than average rainy season in California, and this has been the case this season.

April appears to be starting on a dry note, but some light precipitation events are still expected. Some longer-range models show wetter conditions in late April. Occasional dry N-NE/Offshore wind events are expected, and this weather pattern will possibly lead to increasing Initial Attack as the long-term precipitation deficit allows dry fuels to spread fires. The longer-term outlook calls for drier and warmer than average weather overall through July 2021. Summer lightning is expected to be near or below normal.
Fuels Discussion

The dry rainy season has led to widespread drought conditions throughout California (Fig 6). Most of the North Ops region is in the Severe or Extreme Drought category. The dry outlook will allow these conditions to increase. The Evaporative Demand Drought Index, which quantifies the “thirst of the atmosphere” over a specified period, shows that the somewhat wetter weather since January has led to shorter-term benefits in northeast California, versus the very dry conditions shown since the rainy season began (Fig 7).

The 1000-hour dead fuel moisture averaged across the North Ops region shows lower than average heavy dead fuel moisture (Fig 8), but still well above record dry levels for this time of year. During dry stretches lighter fuels will dry to the point where initial attack increases, but there will be a very low risk of large fires due to heavy dead fuel moisture, green grass at lower elevations and the snow pack at upper elevations. Dead and dormant fuels at middle elevations where there is no snow pack or a new green grass crop will continue to be the most vulnerable during dry breezy conditions once a week or more passes without precipitation, until greenup is finally reached. The weak snow pack is expected to melt off earlier than usual, and live fuel moisture values will peak earlier and at lower values than usual. This will leave middle and upper elevations available for fire spread a few weeks earlier than usual - in early to mid July.

Fig 6 – Drought Monitor for CA - March 30, 2021
Fig 7 – EDDI - 3-month vs 6-month March 27, 2021
Fig 8 – 1000-hr Fuel Moisture – North Ops Composite
NORTH OPS OUTLOOK

The official Predictive Services 4-month outlook for the North Ops region calls for overall drier and warmer than average weather through July, with brief exceptions (Fig 9). Although April is shown as being cooler and wetter than average, current near- and mid-range forecast models are now showing drier and warmer than average weather, at least through the middle of April. There are some longer-range products showing wetter weather in late April. The new winter green grass crop at lower elevations will eliminate the threat of large costly fires in those areas until curing takes place late in the spring. Wet weather in late April, if it develops, would contribute to more grass and brush growth at lower elevations. Dry windy weather will pose a local threat of new large fires at elevations from 3000-6000 ft until greenup occurs. This potential threat is on a local-scale and more easily picked up in shorter-range products. Therefore, Significant Fire Potential for the North Ops region is Normal in all areas through June. Due to the expected early melt off of the snow pack and the expected weak live fuel moisture greenup, elevations above 3000 ft have Above Normal Significant Fire Potential in July, while the remainder of the region remains in the Normal category.

Through May Normal Significant Fire Potential is defined as less than one large fire per Predictive Service Area (PSA) per month. In June Normal is 2-2.5 large fires in the Sacramento Valley/Foothills and Far Eastside PSAs and up to 1.2 large fires elsewhere. In July Normal is defined as 1 large fire or less in coastal areas and 1.5-3 large fires inland.

Fig 9 – Predictive Services 4-month Temperature and Precipitation Outlook