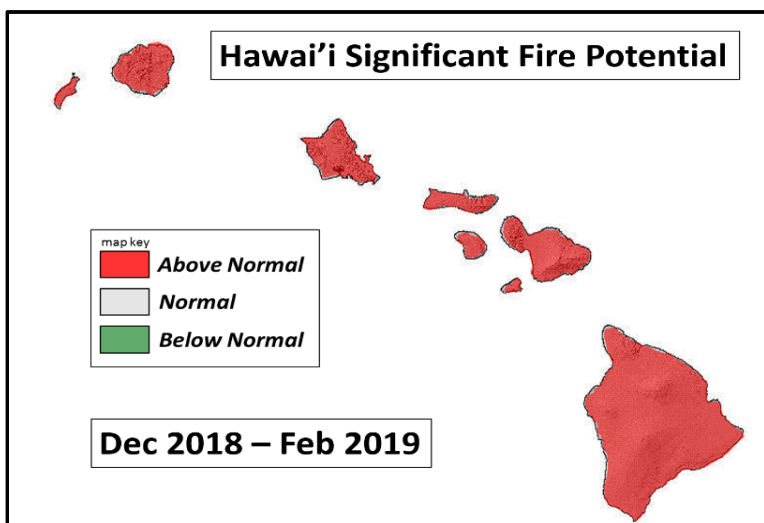
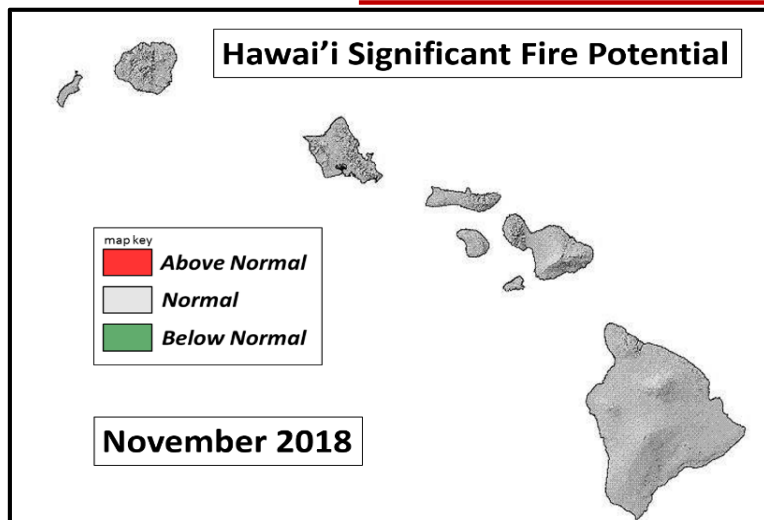


SIGNIFICANT FIRE POTENTIAL



November 2018 - February 2019 HIGHLIGHTS

- *Warmer than normal*
- *Near normal in November then below normal throughout the region December-February*
- *KBDI below normal*
- *El Niño likely late fall and winter months, which correlates to a drier than normal rainy season*
- *Heavy fuel loading led to above normal fire activity during the summer...will be a factor during drier El Niño conditions in late fall and winter*
- ***Normal Significant Fire Potential November***
- ***Above Normal Significant Fire Potential December - February***

SUMMARY

Sea surface temperatures (SSTs) surrounding the Hawai'ian Islands are near to above normal. Average temperatures throughout the region are expected to continue near to slightly above normal through February. Rainfall in October was above normal from the central islands east to the Big Island, and below normal at the west end. The potential of El Niño conditions in the equatorial Pacific beginning this winter is more than 70%, and this pattern tends to produce drier than normal conditions during the Hawai'ian rainy season. The official NOAA/NWS outlook for Hawai'i calls for near normal rainfall in November, then trending to below normal rainfall from December through the winter and spring months. The **Large Fire Potential for Hawai'i is Normal in November**. Fuel loading has been above normal since the spring, and fire activity was above normal during the drier stretches of the summer. Therefore, the **Large Fire Potential for Hawai'i is Above Normal from December 2018 through February 2019** as a drier than normal rainy season evolves, and these conditions are likely for a few months beyond as well.



PAST WEATHER

October rainfall was above normal in the central and eastern portions of Hawai'i and below normal in the west (Fig 1). Tropical cyclones and other weather systems produced record-breaking wet conditions in the central and eastern areas since early August (Fig 2), and there are no more areas considered to be in drought (Fig 3). The Honolulu NWS office describes this past summer as "the 2nd wettest dry season in the past 30 years". Temperatures throughout the region averaged a bit warmer than normal, except the far western islands and portions of the Big Island, which were slightly cooler than normal (Fig 4). These temperature averages correlate well with the Sea Surface Temperature anomalies in the area (Fig 5).

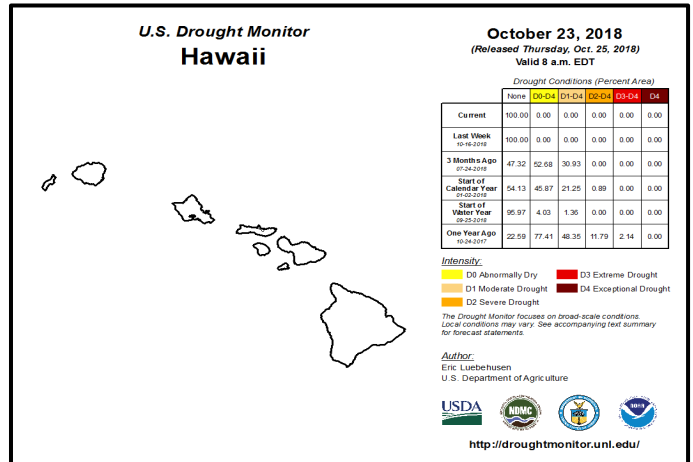


Figure 3: Drought Monitor for Hawai'i

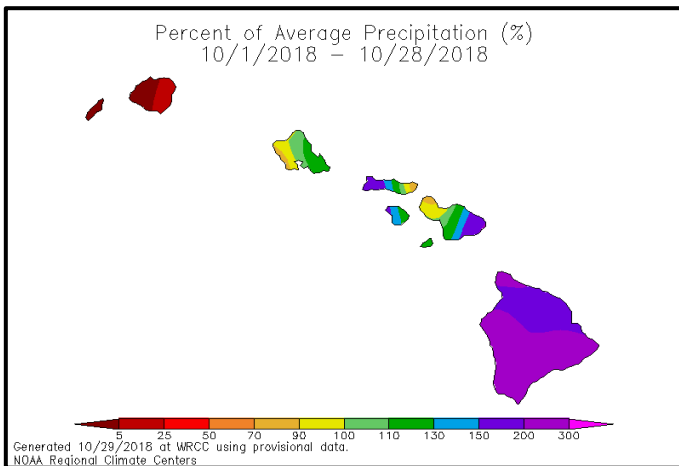


Figure 1: % of Ave Pcpn in October 2018

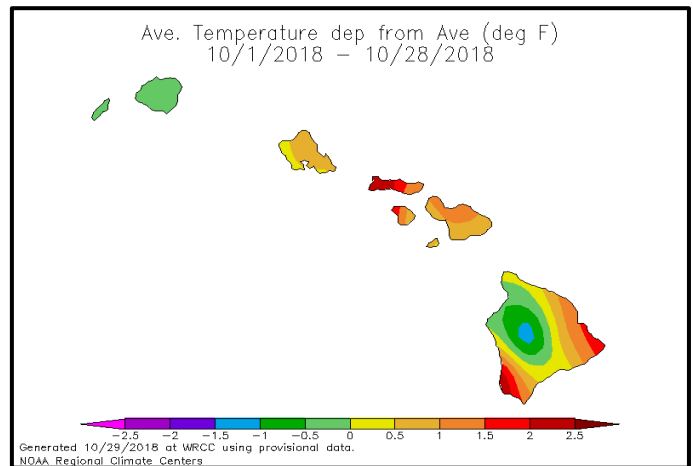


Figure 4: Dept. from normal Temp in Oct '18

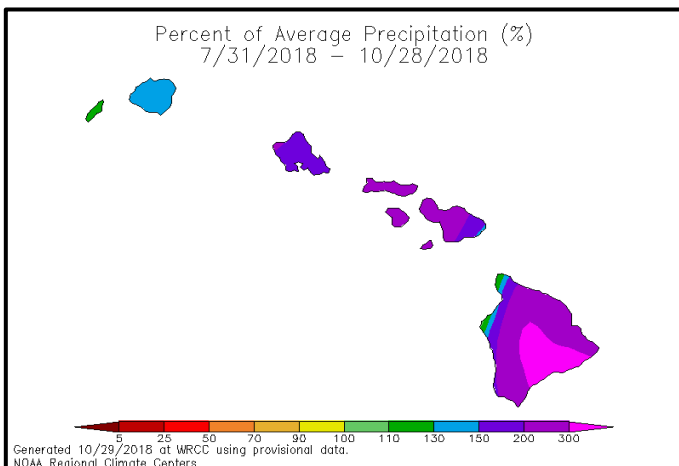


Figure 2: % of Ave Pcpn since early August '18

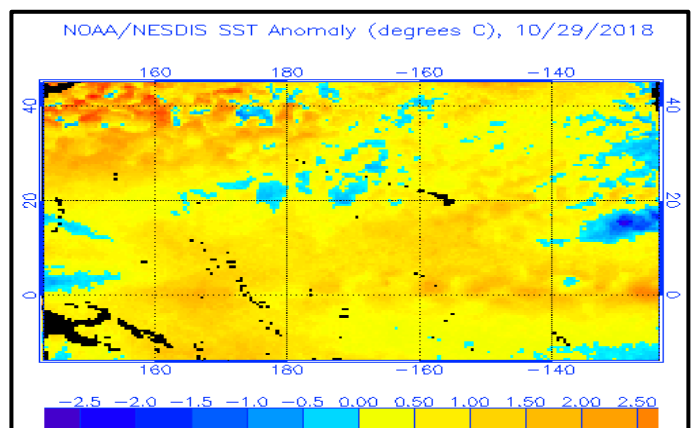


Figure 5: Sea Surface Temperature (SST) anomaly - October 29, 2018



HAWAI'I WEATHER AND FUELS OUTLOOK

The outlook from NOAA and the NWS calls for warmer than normal temperatures through February, mainly due to the expectation of above normal SSTs. Near-term forecasts have wetter than normal weather to start November, but outlooks are calling for precipitation to trend to near normal by the end of the month. There is increasing confidence of an El Niño event late this fall and through the winter and spring months (Fig 6). Climatologists are now giving a 70-75% chance of a weak El Niño event. During a typical El Niño pattern rainfall tends to be below normal throughout the Hawai'ian islands from December through the end of the rainy season in the spring, and current weather outlooks reflect this pattern. The current and near-term upcoming tropical storm track in the eastern tropical Pacific is not favorable for impact on Hawai'i.

The KBDI (blue line, Fig 7) is a measure of soil conditions, and higher values correlate well with increasing fire activity. The KBDI (measured at Honolulu) fell to well below normal in the wet summer weather and remains below normal. Conditions throughout the central and eastern islands are likely similar. Abundant fuel loading led to above normal fire activity and behavior during the drier stretches of the summer, and this fuel loading situation may become a factor again in the dry El Niño pattern.

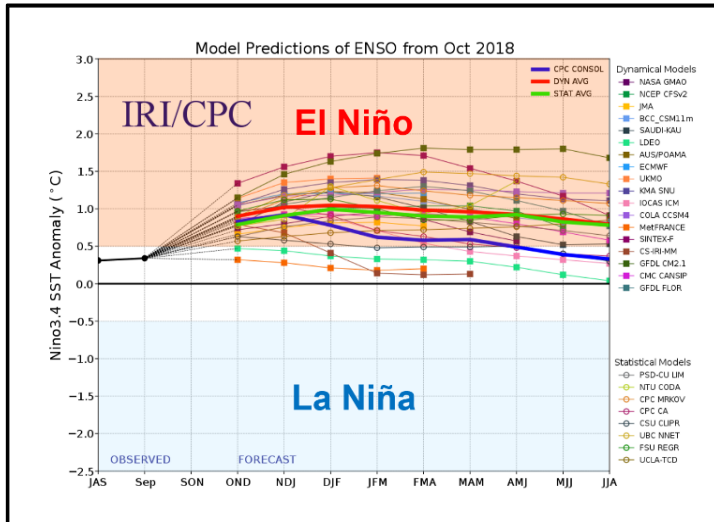


Figure 6: Plume diagram - El Niño pattern expected late fall into the 2019 spring

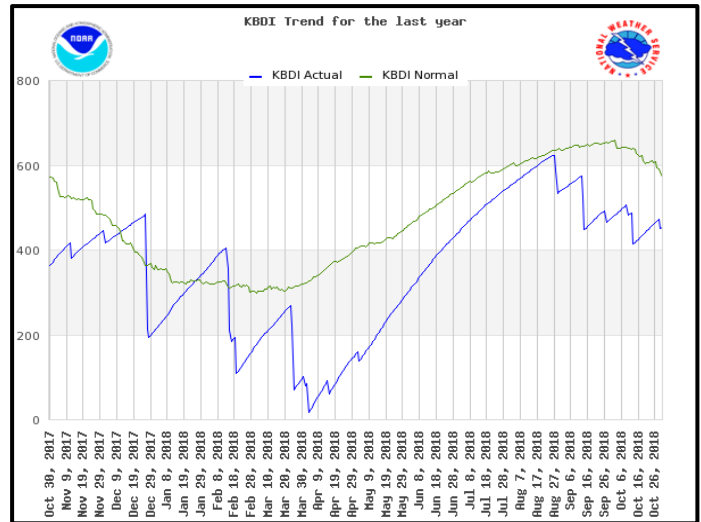


Figure 7: Keetch-Byram Drought Index (KBDI) for October 30, 2018 (blue = 2018 green = average)

HAWAI'I SIGNIFICANT FIRE POTENTIAL OUTLOOK

Considering the trend toward drier than normal conditions, **Hawai'i has Normal Significant Fire Potential in November.** The expected dry El Niño pattern and abundant fuel loading will lead to **Above Normal Significant Fire Potential from December through February**, and likely for several months beyond.