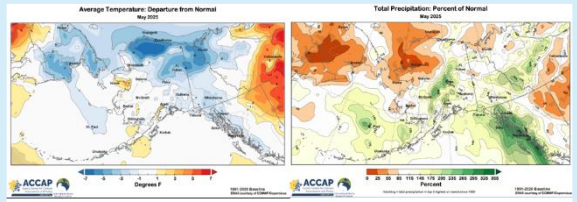
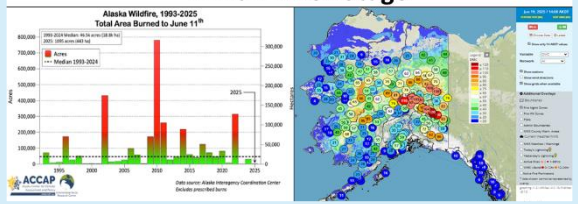
Alaska's 2025 Fire Potential Outlook

Updated: 6/19/2025

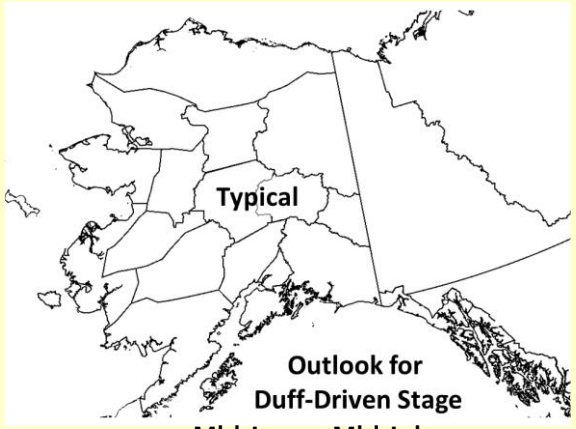


Wind-Driven Stage

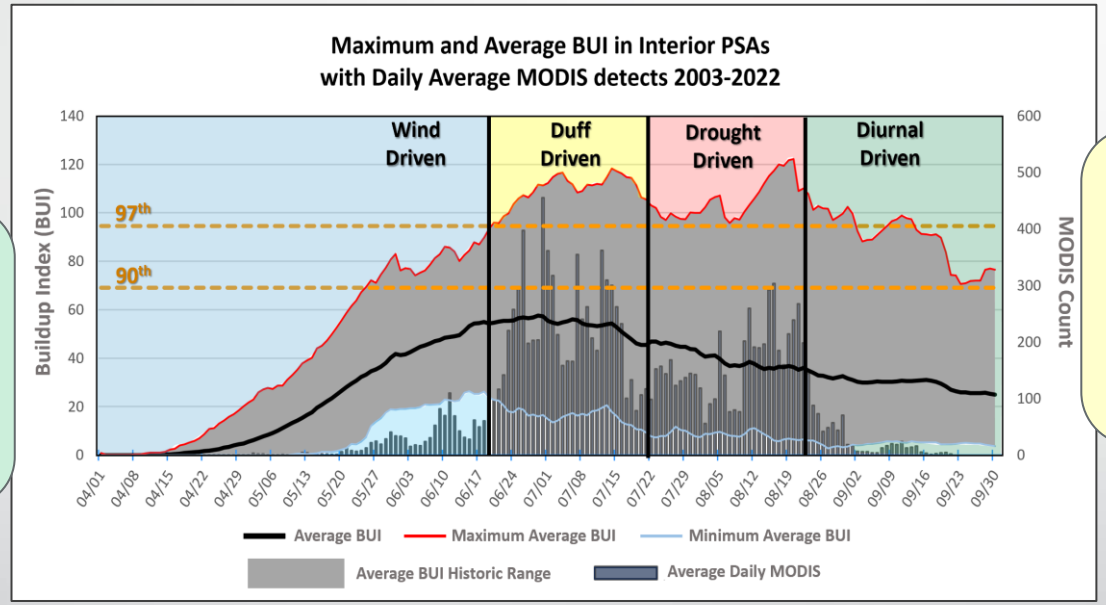


Snowmelt – Mid June

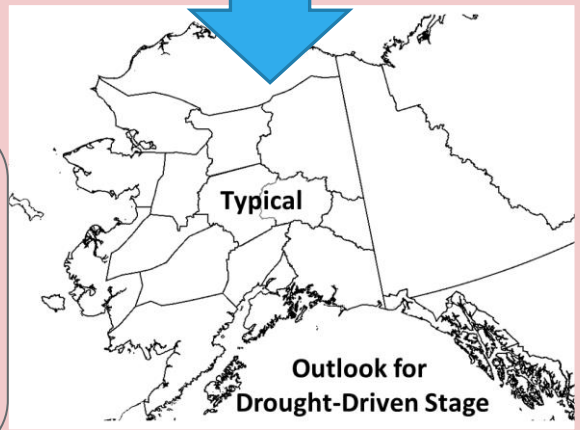
Despite a below normal snowpack in the south, a cool, damp spring kept mellow conditions for most of the state into early June. The second week of June finally saw a rapid warm up with low humidities, and the season now feels as if it's progressing as normal. Click for details.



Mid June – Mid July



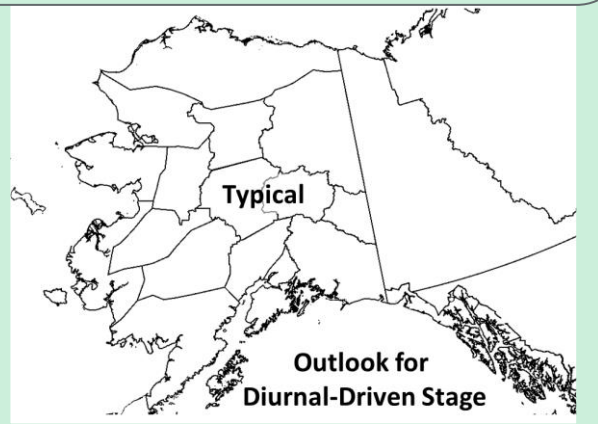
As we move towards solstice, fuels seem to be on a typical arc of cumulative drying, while lightning activity is on the rise. Resistance to control is increasing and we are already seeing very busy periods driven by lightning, low humidity, and wind events. Click for details.



Mid July – Early August

As mid-summer sets in, expect most areas to have dry deep-duff layers, leading to the stage where fires become more difficult to manage. If fires from the duff stage are uncontrolled, they will exhibit higher resistance to extinguishment and increase acreage during hot, dry periods. Click for details.

With the likelihood of end-of-season rains arriving on time, mid to late August fires will no longer be supported by deeper fuel layers. Existing fires will show some activity during the day, but resistance will be minimal. Click for details.



Early August – Snowfall

Wind-Driven Season

Snowmelt - Mid June

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- Summary: Despite anticipation of a busy early season, a very cool and wet spring kept surface fuels damp into early June. A drastic pattern change led to a rapid warmup the second week of June, and Alaska began fire season in earnest about a week later, rapidly moving into the duff-driven stage.
- Weather: Cool and damp weather in March, April, and May prevented fuels from beginning a cumulative drying trend until a week into June. Northern Alaska stayed one to seven degrees colder than normal through May, while the Interior and South Central had many areas with more than double the normal amount of rainfall. One week into June, the weather drastically changed, with temperatures soaring into the 80s and RHs dropping into the teens. This pattern has held with the approach of solstice as Alaska moves into the next stage of the fire season.
- Fuel Conditions: Though fine fuels quickly moved into the Very High and Extreme categories in mid-June with a few days of dry heat, it has taken a bit longer for the upper and mid duff layers to become burnable. The area of earliest concern has been the Tanana Valley, particularly the area from Manley to Salcha, where DMC and BUI both show those duff layers will support larger fire behavior. Other parts of the state are slower to follow but are now moving into the burnable phase as well. AKFF has the latest fire weather indices.

Duff-Driven Season

Mid June - Mid July

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- Outlook Summary: As we move through the longest days of the year, fire activity is picking up and feeling like a normal Duff-Driven season. It is expected that Alaska will continue to see a lot of fire activity, with some new ignitions and plenty of fire on the ground to keep resources busy, even through a few periods of wetter weather.
- Weather and Climate: The forecast for the next few weeks will remain warm and mostly dry, with the chance for thunderstorms across a wide swath of the Interior on most days. This will make a spotty pattern of dry and damp areas which will slow some fires while keeping others moving and allow for new ignitions. Small changes in precipitation amounts can greatly affect the dryness of surface and upper duff layers. Daylight hours are long, and the sun angle is high, so solar heating is at a maximum during this time.
- Fuel Conditions: DMC and BUI both indicate that the Tanana Valley has entered the duff-driven phase, while the rest of the Interior is seeing pockets that are becoming more supportive of large fire behavior, too. The forecast will lend to increasing fuel dryness in the duff for the next few weeks.

Cumulative Drought Season

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Mid July – Mid August

- Outlook Summary: Even a few weeks out, there are no known indicators to inform the severity of fire season this far into the summer. Activity continues to depend on the convergence of dry fuels, preceding and current weather, and ignition sources (both human and lightning). Currently, the forecast is for typical conditions in July and August.
- Weather and Climate: In late July, heating and drying of forest and grass fuels can still be critical, though daylight hours and sun angle are decreasing. In a classic Alaskan summer, this period is the crux of the driest fuel conditions. Its duration is highly variable: if stratiform rainfall events occur in mid to late July, the season will quickly wind down and the drought-driven season ends, almost as soon as it begins. In other years, if no significant rains come until mid to late August, drought conditions extend into the deeper layers and largest fuels, leading to an extended Cumulative Drought Season.
- Fuel Conditions: During the drought-driven season, drying has reached the point that all fuels, regardless of depth or size, will become engaged in a fire. Resistance to control has become very high, and resistance to extinguishment is also a large concern.

Diurnal-Driven Season

Mid August - September

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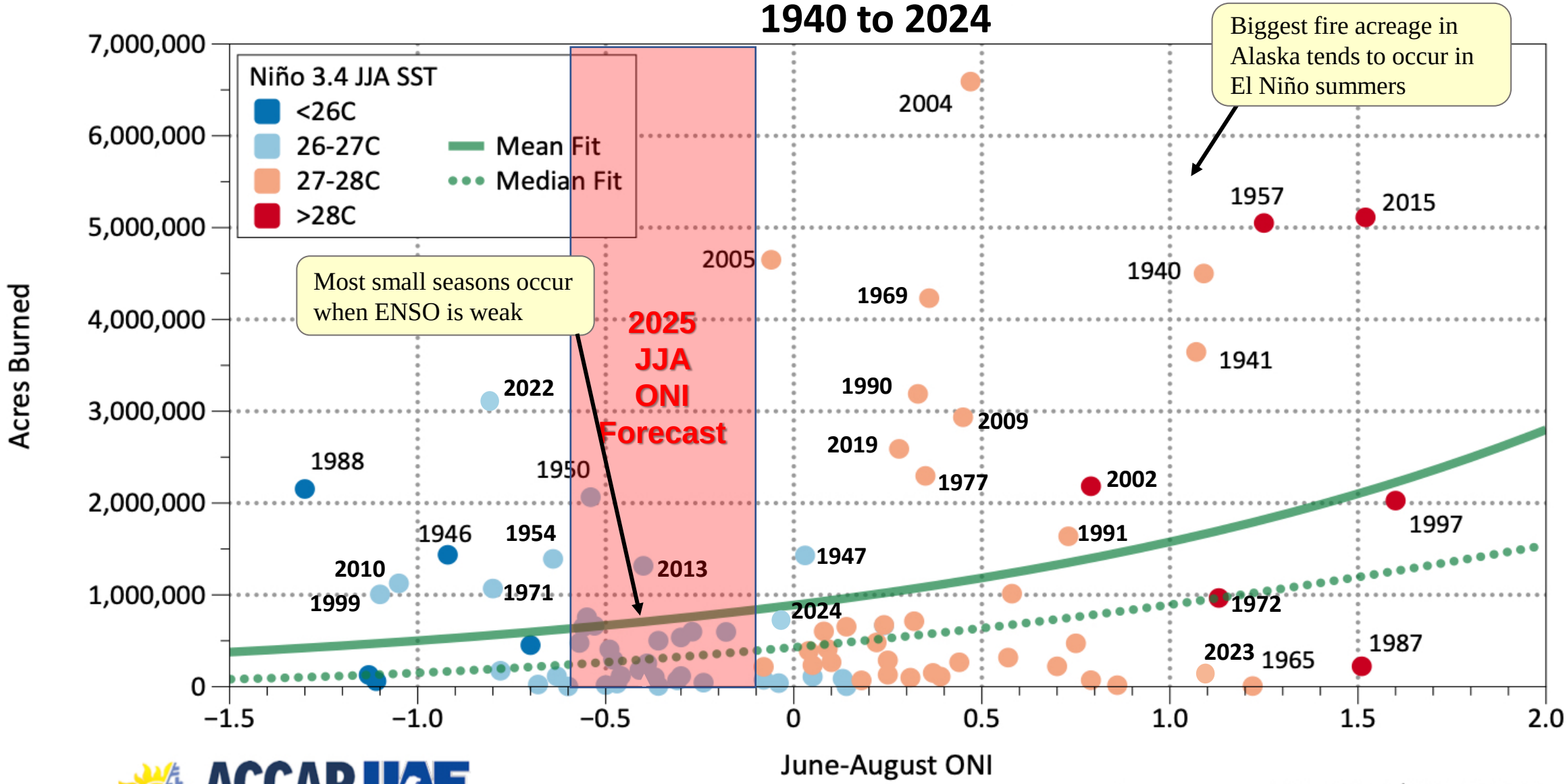
- Outlook Summary: There are no early season indicators to inform the severity of fire season so late in the summer. Activity continues to depend on the convergence of dry fuels, preceding and current weather, and ignition sources (both human and lightning). Currently, the forecast is for typical conditions into September.
- Weather and Climate: The effective end to fire season comes when end-of-season rains arrive. Though this can happen as early as the end of July, it usually occurs closer to mid-August. At the same time, the amount of solar heating falls off drastically, reducing the potential for surface fuels to dry out after a significant rainfall.
- Fuel Conditions: Though the deepest layers will likely remain dry, rain events bring enough precipitation to wet down the upper and mid fuel layers. This makes ignition difficult, so new fires are limited. Resistance to control is no longer an issue, and fires are easily caught and extinguished. Freezing temperatures and snowfall in September draw the final line for fire season's end.

Alaska Seasonal Wildfire Acreage vs. JJA ONI Index
1940 to 2024



ACCAP Alaska Center for Climate Assessment and Policy — A NOAA RISA TEAM
UAF University of Alaska Fairbanks

Data sources: AICC, NOAA/CPC, ERSSTv5

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