Alaska’s 2022 Fire Potential Outlook

Despite above normal snowpack and a late melt, warm, dry weather in late May and early June have pushed our mid and upper fuels into an exceptionally dry range for early fire season. In particular, many fires are burning in Southwest due to early season lightning. This sets the heart of fire season to be quite busy. Click for details.

With duff already quite dry and no relief forecast, it is expected that elevated activity will continue in Southwest and expand into the central Interior. Resistance to control is rising, and lightning, low humidity, and wind events will continue to create above normal conditions. Click for details.

With above normal temperatures forecast for mid-summer and many areas already extremely dry, expect elevated potential for July and early August. If fires from the duff stage remain uncontrolled, they’ll have very high resistance to extinguishment, raising acreage during this time. Click for details.

End-of-season rains are expected to arrive on time, so mid to late August fires will no longer be supported by the middle fuel layers. Existing fires will show some activity during the day, but resistance will be minimal. Click for details.
Wind-Driven Season
Snowmelt - Mid June

- **Weather:** A large snowpack and cool spring led to a late start to fire season. The last ten days of May and beginning of June saw a drastic warming and drying trend overtake the Interior and Southwest Alaska, leading to near historic dryness of the upper and mid layers of duff. A series of large lightning events in Southwest led to numerous fire starts and rapid growth in the dried fuels.

- **Fuels:** The U.S. Drought Monitor shows an area of Abnormally Dry for much of Southwest and the central Interior as well as Moderate Drought for the Mat-Su Valleys and the northern Kenai Peninsula. The Canadian Forest Fire Danger Rating System’s Buildup Index shows that mid and upper layers of fuels are at historic values in Southwest and South Central, while the values in the central and eastern Interior are rapidly approaching maximum observed values. In addition, fine surface fuels have been burnable nearly statewide for the first half of June.

- **Fire Activity:** On June 1st, there were 150 fires for 13,335 acres. As of June 15th, there are 253 fires for a total of 835,368 acres, which is well above the typical season total acreage of about 500,000 acres. With dry weather and fuels ripe for ignition, a number of lightning events in Southwest led to these many ignitions and large fire growth. This ease of ignition and rapid growth was indicated by the Canadian Forest Fire Danger Rating System indices found on the Alaska Fire & Fuels website.
Duff-Driven Season
Mid June - Mid July

• **Outlook Summary:** There are numerous fires in the southwestern and central Interior. Though some are burning in Limited Fire Management areas, many are burning in areas with values that need point protection and resource commitments. Many of these fires will need attention until sometime in September when freezing weather returns. With the focus of hottest and driest weather shifting to the eastern half of the state, the next month is expected to be very busy statewide.

• **Weather and Climate:** Warm and dry weather is forecast for the central and eastern Interior for the next few weeks, with the chance for afternoon showers and thunderstorms on most days. Southwest will see some moderation, but several days of rain accumulating to about an inch is needed to stop fires there, and that is not currently in the forecast. In addition, South Central is also quite dry and any emerging fire could be a problem.

• **Fuel Conditions:** Predictive Services Alaska has issued a [Fuels and Fire Behavior Advisory](#) for the Southwest and the central Interior. With the solstice, daylight hours are long and sun angle is high, so solar heating can cause drastic warming and drying of fuels. Fuels are already extremely dry, and the indices representative of deeper fuel layers are near record in parts of the state. This indicates that even the mid and deeper layers are burnable, so fires will burn hotter and more completely, and will endure even moderate rain events. These fuels are very resistant to control efforts.
Cumulative Drought Season
Mid July – Mid August

• **Outlook Summary:** With extremely dry mid and deeper duff fuels in mid-June, and the bulk of the lightning season still ahead, there will be a lot of fire to manage in extremely dry fuels by the time we move into the full-blown Cumulative Drought stage. Expect Southwest and the central Interior to present above normal fire activity. The northeast Interior will also have the potential to see busier than normal activity during this time, and that area is typically one of the busiest during this stage.

• **Weather and Climate:** In a classic Alaskan summer, this period is the crux of the warmest and driest weather. Though some more stratiform rainfall events may occur in parts of the state, drying continues to be the predominant factor. Heating of forest and grass fuels is still strong, though daylight hours and sun angle are decreasing.

• **Fuel Conditions:** With the drought-related indices approaching near-record values in June, it’s likely that mid-summer stage will see explosive fire growth and significant resistance to extinguishment. Extensive resources will continue to be needed in order to provide any measure of control, much less full suppression.
**Diurnal-Driven Season**

**Mid August - September**

- **Outlook Summary:** By this stage, it is expected that the typical end-of-season rains will have impacted the mid and deeper duff, and fires will be more easily managed. Therefore, this part of the season is expected to see normal fire activity.

- **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 a challenge, 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.
Wind-Driven Verification

May 15th Snowpack Map

May 15th Adjective Rating

Smoke Plumes June 10th

June 10th Adjective Rating