

2010 Fire Season Weather Summary

Summary

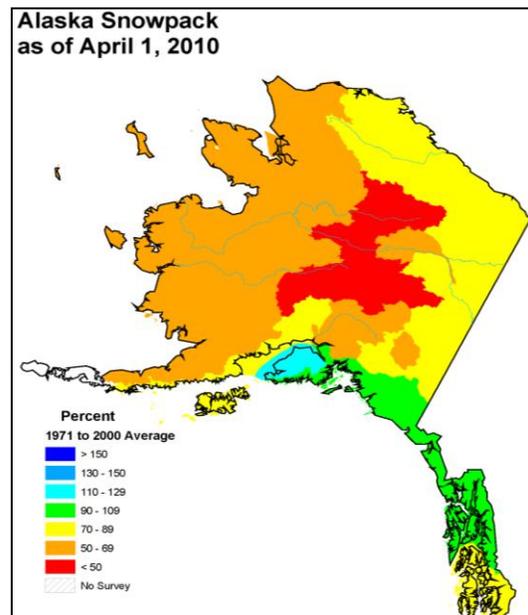
The 2010 fire season was at the mercy of extremely variable weather conditions. April saw the season off to an early start with warm, dry weather, drought conditions from the previous fall, and snowmelt occurring at least a week earlier than normal across much of the Interior. May was hot and dry, with a lightning surge at the end of the month which quickly ramped up fire activity. June cooled off and saw some rain across much of the state, forcing the activity to the north and west by the end of the month. July's widespread rains brought flooding to the eastern Interior and moderated most fires statewide. Fire activity gradually became confined to the Yukon Flats, where big swings in the August weather, and a couple of warm weeks in the middle of September, kept fuels burning sporadically through freeze-up.

Season Forecast

The forecast for the 2010 fire season was to be off to a busy start in the Interior, but settle into a normal pattern during June, leading to an overall "normal" year. The forecast was driven by the subsurface drought conditions and light snowpack, but tempered with the fact that the ENSO phase was to turn to that of La Nina over the summer. Indeed, this is the trend that occurred, and the 1.12 million acres burned falls on the high side of the normal category.

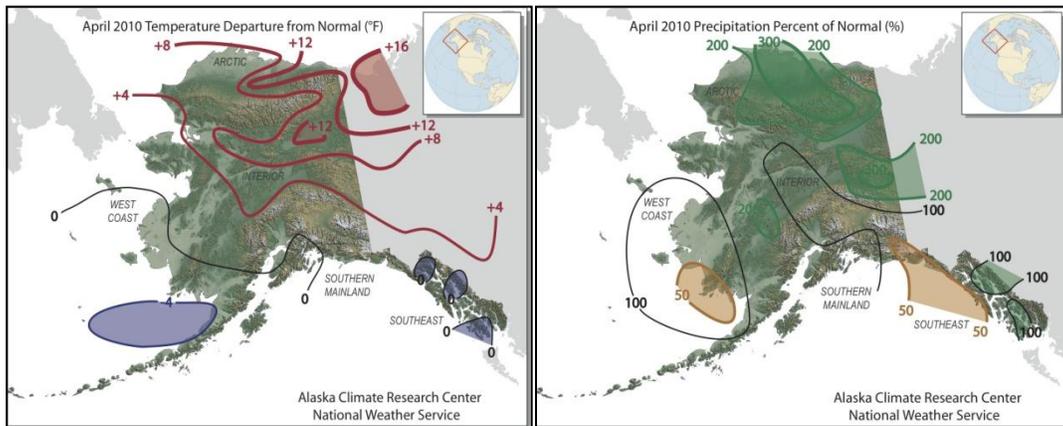
Spring Snowpack

The winter of 2009-2010 was notable for its lack of snow in the Interior. Snow survey sites indicated 50 - 70% of the average snowpack across the western third of the state, 70 - 90 % across the northern and eastern third, and less than 50% in the central Interior. Although winter snowpack is not directly related to the severity of the following fire season, it does affect initial conditions in the spring. The dry winter was followed by a very warm spring, with dry conditions compounding the situation south of the Alaska Range. April's snow melt was at least a week earlier than normal across the state. These factors combined for an early, busy start to fire season in Alaska. Holdover fires particularly on the Tanana Flats and north of Denali National Park showed the high fire potential that was out there.



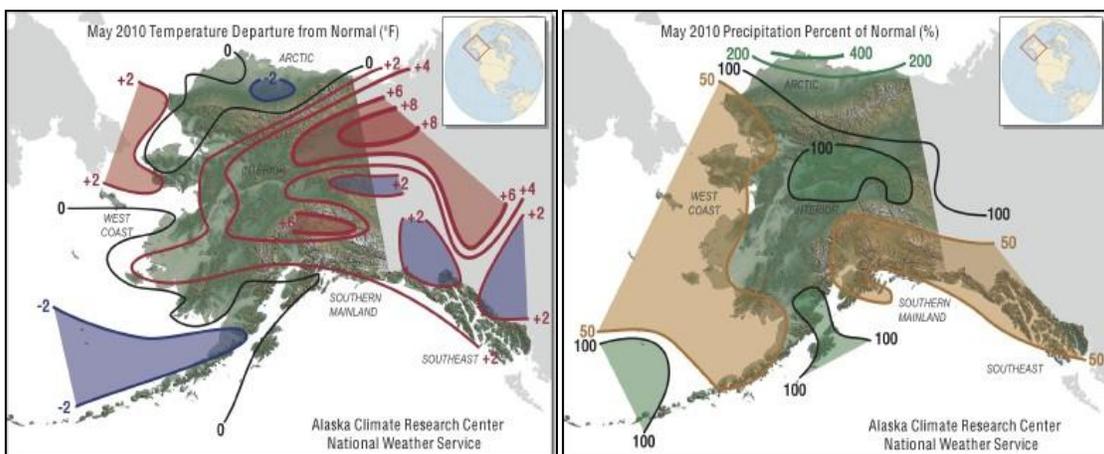
April

April was quite warm, with temperatures in Fairbanks hitting high temperatures nearly 20 degrees above normal for several days mid-month; a record high for April 19th was set at 66F. All of the month's precipitation fell as rain in Fairbanks, leaving the snowpack without a trace of the normal 3.4 inch contribution for that month. Across South Central, conditions were quite different. Though Anchorage temperatures were near normal, the 14 inches of snow more than doubled their expected average snowfall for the month. Temperatures in the Yukon Flats averaged as much as 12 degrees above normal.



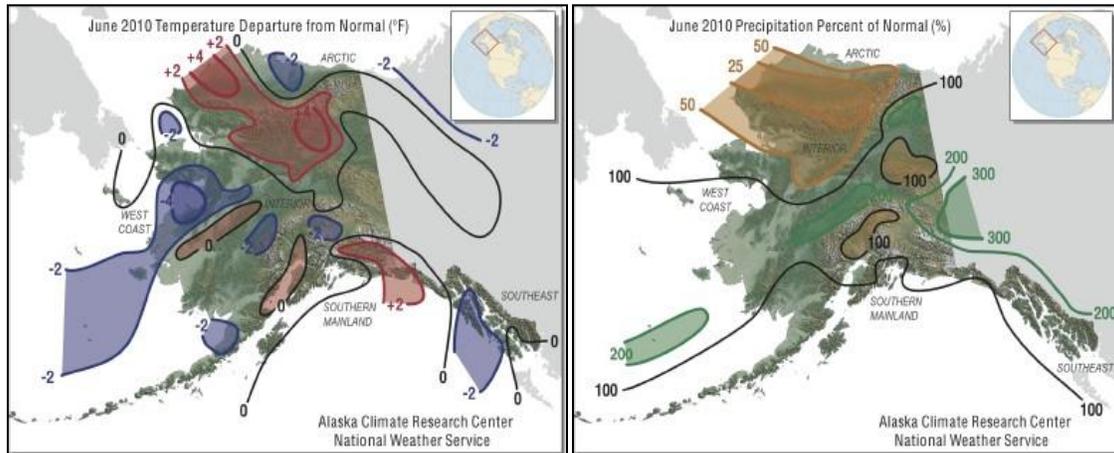
May

May continued unseasonably warm weather in the Interior; Fairbanks had the 3rd warmest May on record. May 26th and 27th in Fairbanks set new high temperature records of 80 and 82F. McGrath set new high temperature records for four consecutive days from May 27th - 30th, all around 80 F. Record highs stretched down to South Central, where Cordova (May 28th) and Anchorage (May 29th) hit record highs of 76 and 75F. Into the Upper Yukon River Valley average temperatures were again warm at 6 to 8 degrees above normal. Simultaneously, precipitation amounts statewide were on the light side, with the largest deficit across South Central and the Panhandle, with less than 50% of May's average rainfall. The last week of May also brought the first widespread lightning activity. Though there was precipitation with the lightning, the ground was dry enough for many new starts over the span of a week, mainly in the northeast McGrath Area and southern Tanana Zone. Some of these fires were short lived, but several lasted into August.



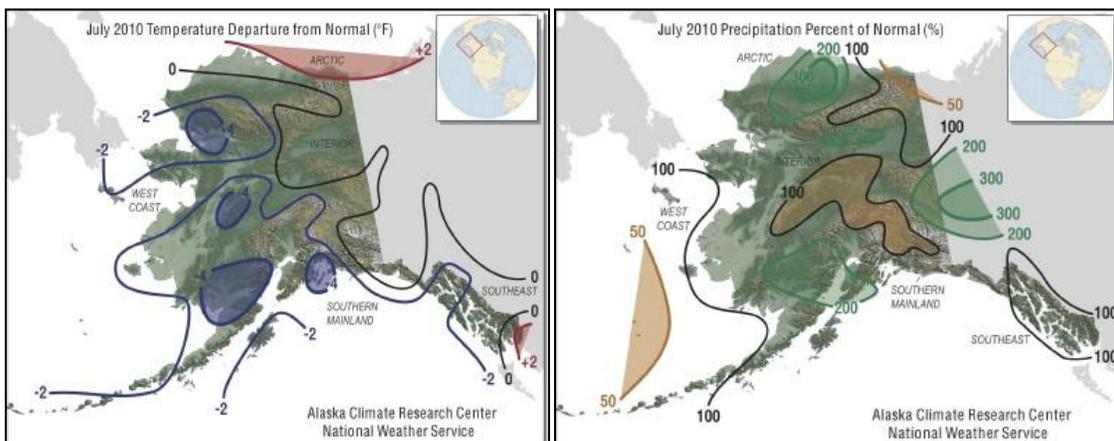
June

June was distinctive as being very near normal through most of the state with temperatures and precipitation fairly close to the long term averages. Around the middle of the month and again at the end, moderate to heavy rains fell across the eastern Interior. Meanwhile, in the northwest, conditions dried out and warmed up, with most of that region receiving less than 50% of its normal precipitation. Nome's daily temperatures averaged about 3 degrees above normal. It was around the 24th of June that lightning activity increased to the west, and fire activity spiked in the Galena zone, and stayed high for the next two weeks. The area around the Noatak and Kobuk Rivers was the focus of most of the activity.



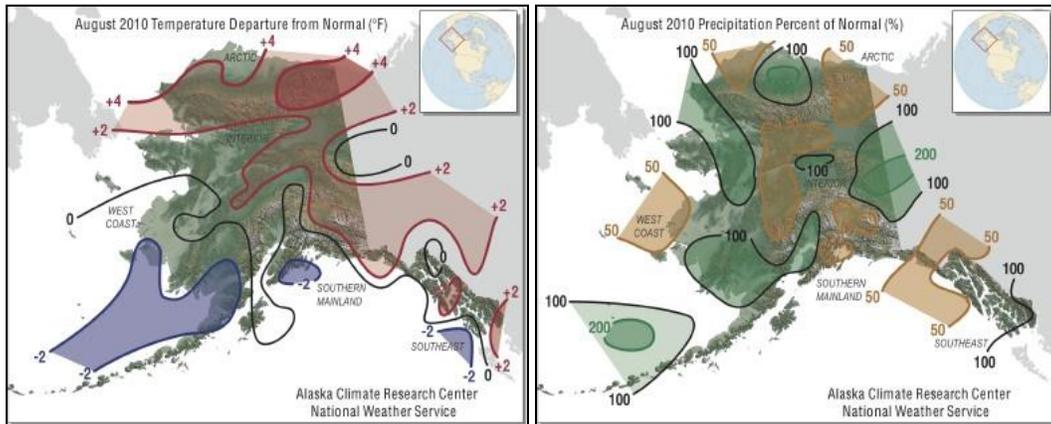
July

July was considerably cooler and wetter in the eastern Interior, where copious amounts of precipitation caused catastrophic washouts along the Taylor Highway around July 12th. This was only the beginning of a long rainy stretch for that area; Eagle received over 4 inches of rain in a 20-day period, more than doubling their normal July precipitation. Even as far west as Fairbanks and Anchorage, rainfall amounts were nearly 180% of normal. In contrast, the northwestern part of the state remained hot and dry, allowing fire activity to continue. Temperatures in the Noatak and Kobuk River Valleys maxed out in the mid 80s about this time.



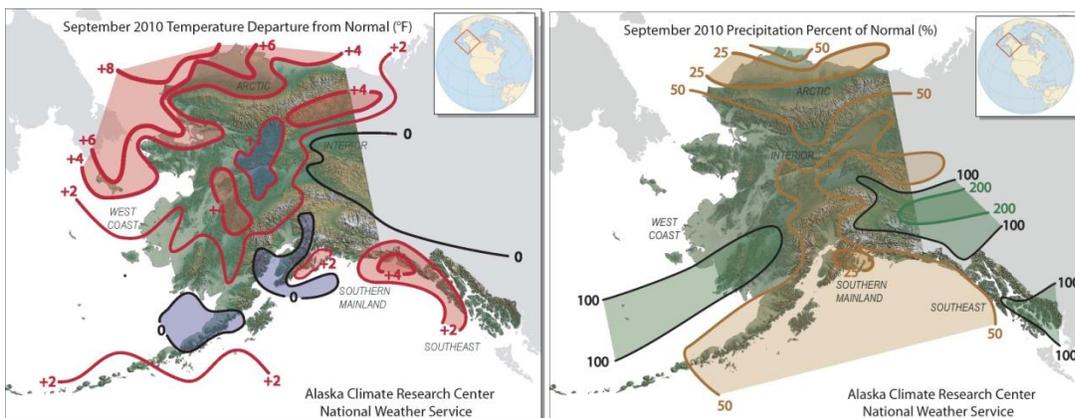
August

Most portions of the state received near normal amounts of precipitation for August, and temperatures averaged out near normal as well. One warm spell set a new high temperature record for August 15th in Fairbanks of 91F, and in Northway of 85F. Meanwhile, in the far eastern Interior, continued periods of heavy precipitation (1.43 inches fell at Eagle on August 6th) kept the Taylor Highway closed.



September

September started off cool, then warmed up from the 9th - 21st. Anchorage set a high temperature record of 66F on September 13th, while Fairbanks hit 70F the same day (not a record). With temperatures hovering near 70F, McGrath set high temperature records for 6 consecutive days, from the 12th - 18th of the month. Precipitation was variable: Anchorage received only 30% of normal rain, McGrath 75%, while Fairbanks was right at normal. More notably, McGrath was the only one of those sites that received any September snowfall. The warm weather enabled fires in the Yukon Flats to flare up, putting up more smoke as seen in this September 15th satellite image.



Yukon Flats

Throughout this variable summer one consistent pattern emerged; the lack of rainfall in the Yukon Flats, from the Dalton Highway to Chalyitsik. This area experienced record to near-record high Drought Codes (DC) for July, August, and September. The following charts show how the season progressed; note that all stations in this area retained extreme drought codes into September. This will likely lay the foundation for another busy fire season in this portion of the Yukon River Valley for 2011.

