

# Alaska Statewide Climate Summary

June 2015

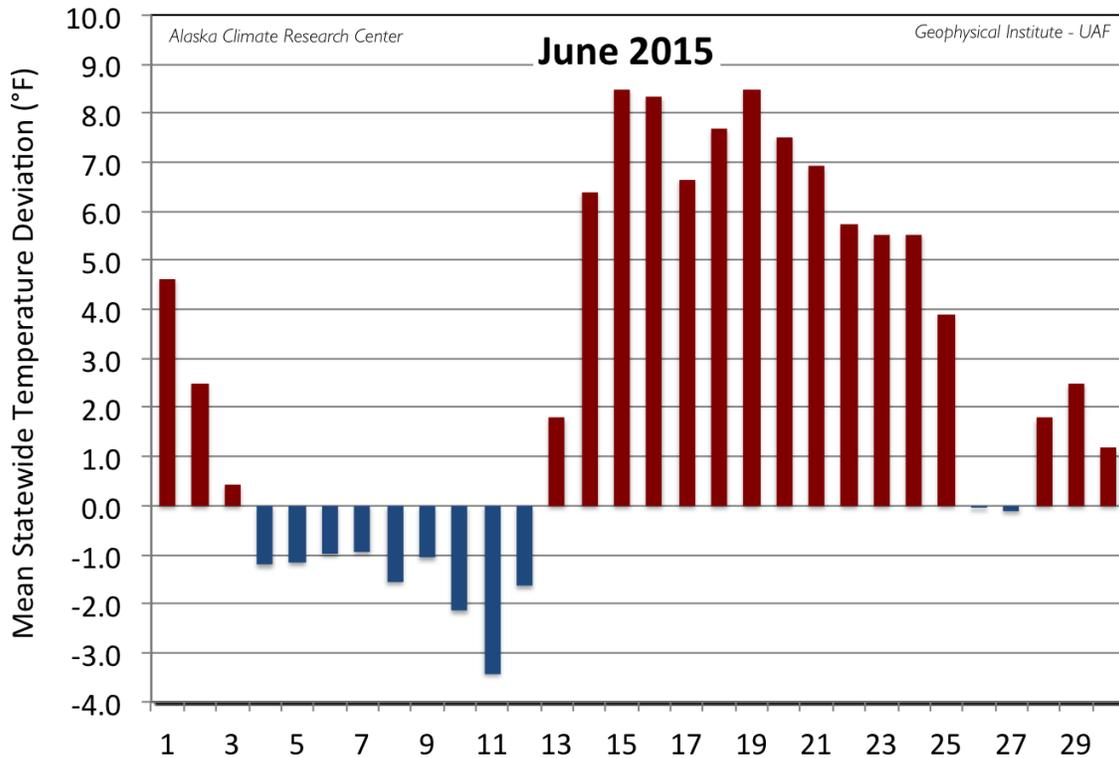
## Temperature

The warmer than normal temperatures that have existed throughout most of the winter and spring continued into June 2015 with temperatures that were above normal for 16 of the 19 First Order Stations. Calculating the mean daily temperatures of the First Order Stations (see Figure), 19 days of the month were above the 30-year normal. Colder than normal temperatures existed from the 4<sup>th</sup> to the 12<sup>th</sup>, and a second short cool spell occurred on the 26<sup>th</sup> and 27<sup>th</sup>, while the rest of the month was warmer than normal. The peak warm deviation, a high of 8.5°F, occurred on the 15<sup>th</sup> and 19<sup>th</sup> of the month, while the coldest deviation of -3.4°F occurred on the 11<sup>th</sup>. The monthly mean temperature of all First Order Stations was 54.6°F, 2.9°F above the normal of 51.7°F. This is 4.1°F above the June 2014 mean of 50.5°F. On a monthly basis, statewide temperatures have been above normal since July 2014. Homer held the greatest positive deviation from normal at a significant 7.2°F above its long-term mean of 50.6°F. Stations following Homer with positive deviations equal to or exceeding 5°F were Kotzebue (5.6°F), King Salmon (4.9°F), Kodiak (4.7°F), Bethel (4.6°F), Barrow (4.5°F) and Anchorage (4.3°F).

The highest temperature of the First Order Stations was 89°F reported at Talkeetna on the 15<sup>th</sup>. Fairbanks held for the highest mean temperature for the month at 59.8°F despite being slightly colder than normal. The coldest temperature was 25°F at Barrow on the 1<sup>st</sup> and 4<sup>th</sup>, while Barrow also reported the lowest June mean temperature at 40.1°F.

Station	Temperature		
	Observed (°F)	Normal (°F)	Delta (°F)
Anchorage	59.5	55.2	4.3
Annette	58.6	55.1	3.5
Barrow	40.1	35.6	4.5
Bethel	57.1	52.5	4.6
Bettles	57.5	58.5	-1.0

Cold Bay	<b>49.3</b>	<b>46.3</b>	<b>3.0</b>
Delta Junction	<b>58.2</b>	<b>57.6</b>	<b>0.6</b>
Fairbanks	<b>59.8</b>	<b>60.4</b>	<b>-0.6</b>
Gulkana	<b>56.8</b>	<b>54.4</b>	<b>2.4</b>
Homer	<b>57.8</b>	<b>50.6</b>	<b>7.2</b>
Juneau	<b>57.0</b>	<b>54.6</b>	<b>2.4</b>
King Salmon	<b>56.4</b>	<b>51.5</b>	<b>4.9</b>
Kodiak	<b>54.4</b>	<b>49.7</b>	<b>4.7</b>
Kotzebue	<b>51.3</b>	<b>45.7</b>	<b>5.6</b>
McGrath	<b>59.3</b>	<b>57.4</b>	<b>1.9</b>
Nome	<b>47.4</b>	<b>47.8</b>	<b>-0.4</b>
St. Paul Island	<b>44.1</b>	<b>42.4</b>	<b>1.7</b>
Talkeetna	<b>58.9</b>	<b>57.0</b>	<b>1.9</b>
Yakutat	<b>53.6</b>	<b>50.8</b>	<b>2.8</b>



Daily mean temperature deviation from the normal temperature for the mean of the first order stations for June 2015.

As has often been the case throughout this last winter and spring, the daily record temperature events for June were nearly all high events, with two record low events reported in Bettles during the cold spell on the 11th and 12th. Most of the high events were reported during the extended warm period experienced throughout the second half of the month. King Salmon had six high events while Cold Bay had four high events. The 82°F reached at Deadhorse Airport on the 21<sup>st</sup> tied the all time high for that location set on August 5<sup>th</sup>, 1999.

Date	Temperature Records				
	Station	Element	New Record	Old Record	Year of old Record
06/07/15	Barrow	High Temperature	53	52	1992
06/11/15	Bettles	Low Temperature	34	37	1989
06/12/15	Bettles	Low Temperature	32	32	1955

06/13/15	Cold Bay	High Temperature	66	59	2013
06/13/15	Homer	High Temperature	78	67	1959
06/13/15	Kodiak	High Temperature	70	68	2003
06/14/15	King Salmon	High Temperature	82	80	1969
06/14/15	Sitka	High Temperature	77	74	1956
06/14/15	Yakutat	High Temperature	80	75	1986
06/15/15	Anchorage	High Temperature	83	82	1969
06/15/15	Homer	High Temperature	83	74	1936
06/15/15	King Salmon	High Temperature	86	83	1936
06/15/15	Sitka	High Temperature	77	71	1950
06/15/15	Yakutat	High Temperature	82	82	1936
06/16/15	Anchorage	High Temperature	83	79	2013
06/16/15	Cold Bay	High Temperature	66	66	2002
06/16/15	King Salmon	High Temperature	86	84	1936
06/16/15	Kodiak	High Temperature	80	78	1939
06/17/15	King Salmon	High Temperature	85	82	1962
06/18/15	Kodiak	High Temperature	80	79	2013
06/18/15	St. Paul	High Temperature	59	59	1988
06/19/15	Barrow	High Temperature	67	66	1991
06/19/15	Cold Bay	High Temperature	68	65	1962
06/19/15	Homer	High Temperature	70	69	1961
06/19/15	King Salmon	High Temperature	77	76	2007

06/19/15	McGrath	High Temperature	87	86	1962
06/19/15	St. Paul	High Temperature	56	54	2014
06/21/15	Bethel	High Temperature	54	54	1944
06/21/15	Bettles	High Temperature	83	80	1926
06/23/15	King Salmon	High Temperature	75	75	1997
06/24/15	Bethel	High Temperature	80	80	2000
06/24/15	Bettles	High Temperature	80	80	2000
06/24/15	Yakutat	High Temperature	74	72	1997
06/30/15	Cold Bay	High Temperature	62	62	1998

On top of the large number of daily records, there were a number of monthly record highs set. It was the warmest June on record for Barrow with the average 1.1°F above the old record of 39.0° from just two years ago. It was also the warmest June on record for Anchorage, just 0.1°F above the old record of 59.5 from two years ago. Homer broke the old record set way back in 1936 of 56.1°F by 1.7°F. King Salmon's six high events helped drive a new monthly record of 56.4°F, 1.1°F above the old record of 55.3°F, set just two years ago. It was the third warmest June for Kodiak, Kenai, and Dutch Harbor and the fourth warmest for Cold Bay, Bethel and Kotzebue.

With Barrow tying the record high for May, this means that May and June 2015 are the warmest combined May and June on record for Barrow. It is also the warmest May/June for Anchorage, Homer, Kodiak, King Salmon, Bethel, and Juneau while it was the second warmest May/June for Delta Junction, Gulkana, Kotzebue, Sitka and Annette.

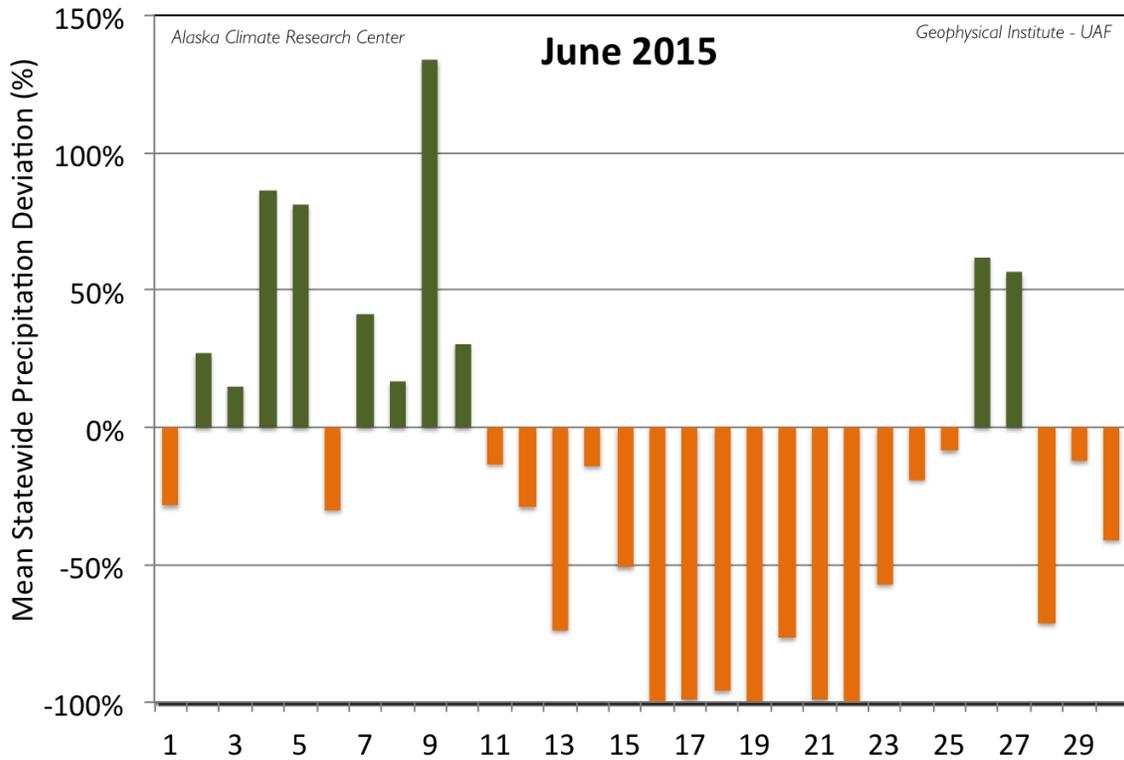
## Precipitation

June was notably drier than normal, with the overall precipitation calculated as 21% below normal; this calculation was based on the mean of the deviations in percentage of the First Order Stations. Sixteen of the First Order Stations and 20 days of the month reported below normal values. This is appreciably drier than June in 2014, which had a precipitation total 74% above normal. The greatest daily deviation of 134% occurred on the 9<sup>th</sup>, driven by near record-breaking precipitation at Barrow. Three days of the month had no measureable precipitation at any of the 19 first order stations. On a monthly basis, like last month, Barrow had the greatest positive deviation from normal, with a total of 0.84", or 263% of the expected amount of 0.32". The only other two stations with precipitation greater than normal were Juneau (144%), and Cold Bay (135%). The leading station with a lower than normal precipitation

amount was Bethel with just 16% of normal. Other stations with less than half of their normal precipitation were Kotzebue (36%), Cold Bay (41%) and Bettles (46%).

Station	Precipitation				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)
Anchorage	<b>0.93</b>	<b>0.97</b>	<b>-0.04</b>	<b>-4%</b>	<b>96%</b>
Annette	<b>3.99</b>	<b>4.88</b>	<b>-0.89</b>	<b>-18%</b>	<b>82%</b>
Barrow	<b>0.84</b>	<b>0.32</b>	<b>0.52</b>	<b>163%</b>	<b>263%</b>
Bethel	<b>0.28</b>	<b>1.72</b>	<b>-1.44</b>	<b>-84%</b>	<b>16%</b>
Bettles	<b>0.64</b>	<b>1.40</b>	<b>-0.76</b>	<b>-54%</b>	<b>46%</b>
Cold Bay	<b>1.11</b>	<b>2.72</b>	<b>-1.61</b>	<b>-59%</b>	<b>41%</b>
Delta Junction	<b>1.43</b>	<b>2.31</b>	<b>-0.88</b>	<b>-38%</b>	<b>62%</b>
Fairbanks	<b>1.03</b>	<b>1.37</b>	<b>-0.34</b>	<b>-25%</b>	<b>75%</b>
Gulkana	<b>0.72</b>	<b>1.40</b>	<b>-0.68</b>	<b>-49%</b>	<b>51%</b>
Homer	<b>0.54</b>	<b>0.82</b>	<b>-0.28</b>	<b>-34%</b>	<b>66%</b>
Juneau	<b>4.66</b>	<b>3.24</b>	<b>1.42</b>	<b>44%</b>	<b>144%</b>
King Salmon	<b>0.84</b>	<b>1.65</b>	<b>-0.81</b>	<b>-49%</b>	<b>51%</b>
Kodiak	<b>3.08</b>	<b>5.91</b>	<b>-2.83</b>	<b>-48%</b>	<b>52%</b>
Kotzebue	<b>0.21</b>	<b>0.58</b>	<b>-0.37</b>	<b>-64%</b>	<b>36%</b>
McGrath	<b>1.08</b>	<b>1.52</b>	<b>-0.44</b>	<b>-29%</b>	<b>71%</b>
Nome	<b>0.66</b>	<b>0.98</b>	<b>-0.32</b>	<b>-33%</b>	<b>67%</b>
St. Paul Island	<b>0.92</b>	<b>1.35</b>	<b>-0.43</b>	<b>-32%</b>	<b>68%</b>

Talkeetna	1.48	1.92	-0.44	-23%	77%
Yakutat	8.65	6.39	2.26	35%	135%



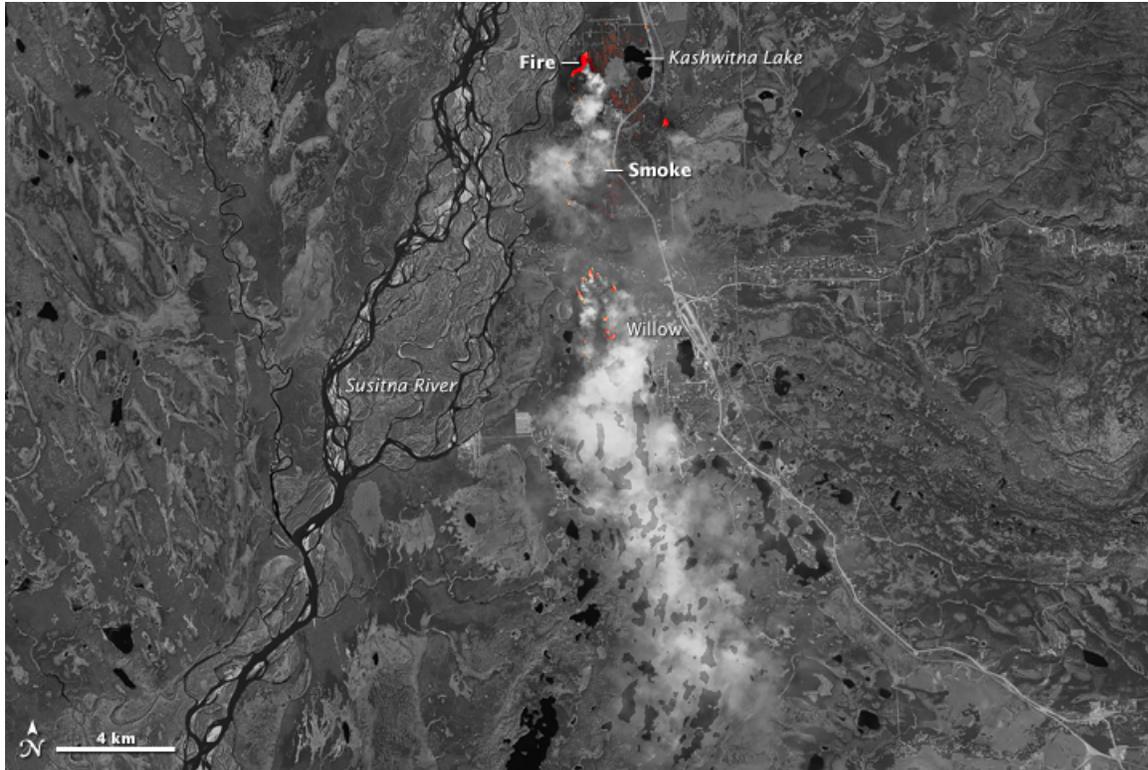
Daily mean precipitation deviation from the normal for the first order stations for June 2015.

The maximum monthly precipitation total reported for a First Order Station was 8.64" at Yakutat, and Yakutat also reported the highest daily total of 2.10" on the 4<sup>th</sup>, a new record for this specific day.

As might be expected, there were a limited number of daily precipitation records, and most were set in the wetter first half of the month in the Southeast. This June was the third driest on record for Bethel.

Date	Precipitation Records				
	Station	Element	New Record	Old Record	Year of old Record
06/02/15	Anchorage	Precipitation	0.40	0.38	2013
06/04/15	Haines Airport	Precipitation	1.20	0.57	2005
06/04/15	Petersburg	Precipitation	1.13	0.95	1984
06/04/15	Yakutat	Precipitation	2.10	1.72	2008
06/05/15	Barrow	Snowfall	0.90	0.30	1969
06/07/15	Annette	Precipitation	1.10	0.81	1962
06/14/15	Barrow	Precipitation	0.16	0.14	1969
06/27/15	McGrath	Precipitation	0.38	0.31	1949





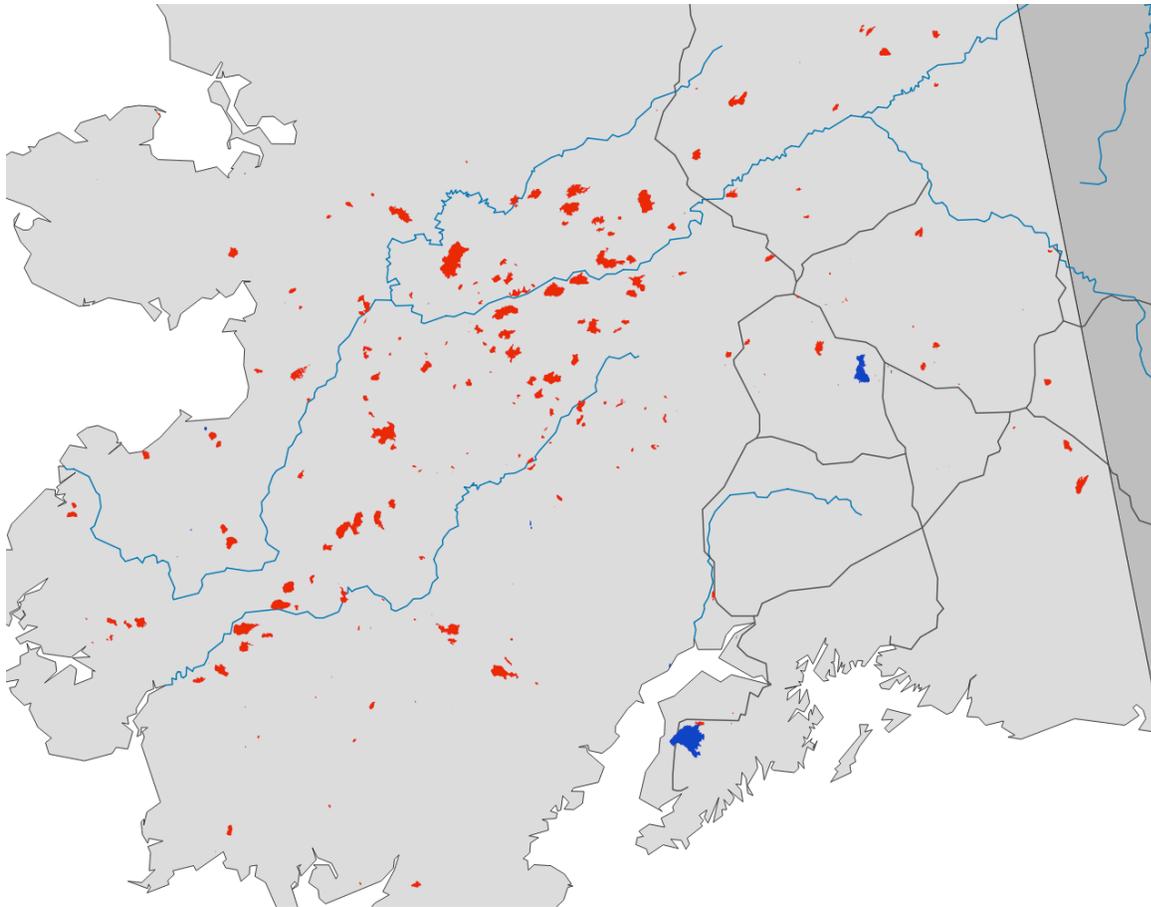
*This combination of natural color (top) and false color (bottom) satellite images by Landsat 8 from June 15<sup>th</sup> shows the Sockeye fire near Willow Alaska. The fire started on the 14<sup>th</sup>, and dry and windy conditions allowed the fire to explode to more than 6,000 acres the next day. Images courtesy of the [Earth Observatory](#).*

## **Newsworthy Events**

The month started off with warning of a cold front moving into the Interior. About an inch of snow was recorded in Salcha and Delta Junction. Snow laden trees and high winds brought down power lines south of Salcha. Frost level temperatures persisted until the 2<sup>nd</sup>. Circle Hot Springs recorded a low of 24°F. The front also brought red flag warnings for the Interior, Western and Northern areas due to high winds. Gusts over to 50 mph on the Dalton Highway generated travel advisories. The winds knocked down power lines in Stevens Village. The 2<sup>nd</sup> also saw warnings for heavy rain and winds in the coastal Southcentral areas. Snow was forecasted in parts of Denali National Park on the 10<sup>th</sup>. Snowfall was also expected north in the Brooks Range. Hail was recorded near Anchorage on the 16<sup>th</sup>.

Smokey weather was predicted for the Solstice weekend in Anchorage. The air quality declined in the Fairbanks area the next day due to smoke, and was an issue for much of the rest of the month. Some

outdoor events were canceled. Flash flood warnings were issued for the eastern Interior on the 27<sup>th</sup> due to heavy rains. Heavy rains were also forecasted at the end of the month for near Fairbanks.



*This map of Alaska shows the wildfire perimeters near the end of June 2015 (in red) and the total wildfire perimeters from all of 2014 (in blue). Data courtesy of the [Alaska Interagency Coordination Center](#).*

The biggest news events of the month centered on the numerous wildfires that sprung up across the state during the month. This summary is a just highlight of some of the events. The red flag and wildfire warnings that were set across most of the interior of Alaska on the 9<sup>th</sup> persisted through much of the month for varying areas of the Interior.

The Cummings Road Fire, one of six to start on the 1<sup>st</sup>, was reported east of Delta Junction near the Alaska Highway. Crews were sent to fight it. The Chisana fire in Wrangle-St Elias National Park grew to 9,000 acres by the 12<sup>th</sup>, then 30,000 by the 21<sup>st</sup>. On the 14<sup>th</sup>, the Sockeye Fire, near Willow on the Parks Highway was reported. It exploded to 6,500 areas the next day. Evacuations of 1,700 residents structures were ordered, and the fire jumped the highway forcing its closure for a time. In total, it destroyed 55 homes and cabins, plus many other structures. A large number of fire fighters were sent

to contain the blaze. Evacuations ended on the 22<sup>nd</sup>, and some crews were reassigned to other more pressing fires even though the fire continued to burn.

The Card Street fire, burning along the Sterling Highway near milepost 77 was reported at 75 acres on the 15<sup>th</sup>. The fire grew by 1,200 acres in just eight hours. Crews were sent to fight the fires, and evacuations were ordered for residents and nearby campgrounds. It destroyed eleven homes before moving east into the Kenai National Wildlife Refuge. Crews were shifted north to fight the Rex complex fire south of Nenana by the 22<sup>nd</sup>. The Governor issued a disaster declaration for the Card Street fire on the 19<sup>th</sup>.

The Rex complex fires near Anderson started on the 19<sup>th</sup>, and it was listed at 3,600 acres on the 21<sup>st</sup>. Evacuations were issued for nearby residents. Some structures were burned and it threatened 20 more, hence the fire was aggressively fought. It was the top priority by the 30<sup>th</sup>, having jumped to nearly 20,000 acres on the 23<sup>rd</sup>. More than 400 firefighters were assigned to the fires at one point.

A rapidly spreading fire called Healy Lake near Delta Junction was reported on the 18<sup>th</sup>. It threatened remote cabins and tried to jump the Tanana River. A fire located on an island in the Tanana River near Dot Lake was partially contained also on the 18<sup>th</sup>. Drivers were asked not to stop on the Alaska Highway in the vicinity of the fire. The next day a fast moving fire was reported near Northway started at the village dump was fought with aircraft and small crew.

Trails and cabins were closed in the Chena River State Recreation area on the 22<sup>nd</sup> due to the Anaconda Creek Fire north of the Chena Hot Springs Road. Lower 48 crews were sent to fight it. It was joined by the West Fork Fire in threatening cabins in the area on the 26<sup>th</sup>. Evacuations were called for the Himalaya Subdivision north of Fairbanks due to the Hayes fire 10 miles west of the Elliott Highway. The Aggie Creek fire hit more than 13,000 acres, and then jumped the highway. Lightning in Denali National Park on the 23<sup>rd</sup> started five new wildfires. Some evacuations were issued for Eureka also on the 23<sup>rd</sup>. Firefighters were able to keep a fire out of the village of Nulato, but more than 100 residents were evacuated. Older and vulnerable people of Tanana was evacuated due to the Tozitna fire that grew to more than 25,000 acres, one of several fires burning in the Middle Yukon area. More evacuations occurred on the 25<sup>th</sup> in the villages of Chuathbakuk and Aniak. McGrath airport was closed due to lack of visibility. Fires threatened the village of Crow.

Solstice weekend saw about 200 new fires started across the state. Fireworks and open fires were banned across much of Alaska for the second half of the month in the wake of the high fire danger. The State did lift its fireworks ban statewide, except for the Southwest, on the 30<sup>th</sup>, but local bans remained in place. In addition, the Fairbanks North Star Borough has suspended all woodcutting on borough land. By the end of the month, the season had racked up 610 fires that had burned 1,600,000 acres, a greater total by the end of June than the record setting fire year of 2004. All the activity fully tasked the ability of local fire crews and equipment. More of each had to be sent up from the lower 48. Crews totaled more than 2,000 during the month. Wetter weather at the end of the month help settled a number of the fires down.

*This information consists of preliminary climatological data compiled by the Alaska Climate Research Center, Geophysical Institute, University of Alaska Fairbanks. For more information on weather and climatology, contact the center at 907-474-7885 or visit the center web site at <http://akclimate.org>. Please report any errors to [webmaster@akclimate.org](mailto:webmaster@akclimate.org). This summary is based on the 19 first order stations in Alaska operated by the National Weather Service. Extreme events of other stations are also mentioned.*