

# Alaska Statewide Climate Summary

May 2015

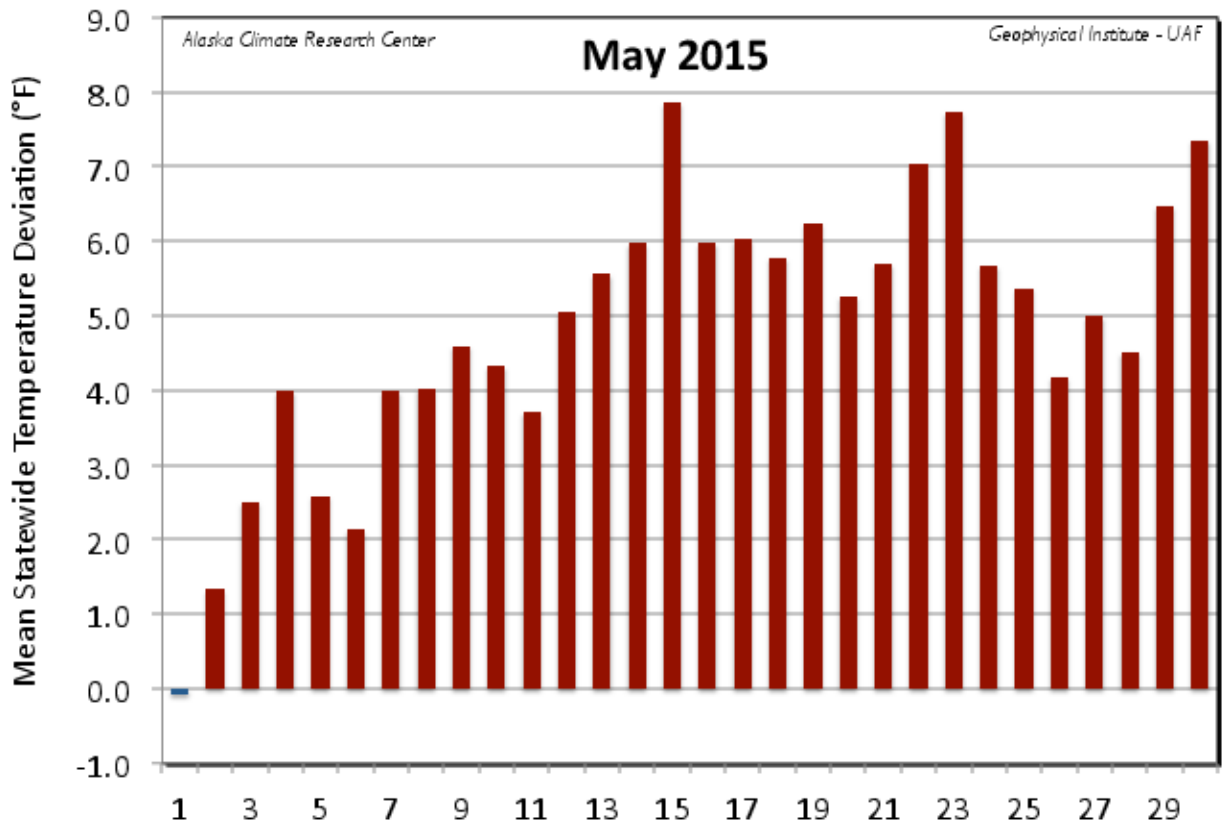
## Temperature

The warmer than normal temperatures that have existed throughout most of the winter continued into May 2015 with temperatures that were above normal for all 19 First Order Stations. Calculating the mean daily temperatures of the First Order Stations (see Figure), 30 days of the month were above the 30-year normal. The only day with a negative deviation was the first. The peak warm deviation, a high of 7.9°F, occurred on the 15<sup>th</sup> of the month. The monthly mean temperature of all First Order Stations was 47.8°F, a significant 5.0°F above the normal of 42.8°F. This is 2.0°F above the May 2014 mean of 45.8°F. On a monthly basis, statewide temperatures have been above normal since July 2014. Kotzebue held the greatest positive deviation from normal at a significant 8.4°F above its long-term mean of 31.9°F. Stations following Kotzebue with positive deviations equal to or exceeding 6°F were: Delta Junction (7.7°F), Bettles (7.2°F), Bettles (7.2°F), and Gulkana (6.0°F).

The warmest temperature of the First Order Stations was 86°F reported at Fairbanks on the 23<sup>rd</sup>. Fairbanks and Delta Junction tied for the highest mean temperature for the month at 55.3°F. The coldest temperature was 4°F at Barrow on the 1<sup>st</sup>, and Barrow reported the lowest May mean temperature at 28.0°F.

Station	Temperature		
	Observed (°F)	Normal (°F)	Delta (°F)
Anchorage	49.9	47.8	2.1
Annette	55.1	50.2	4.9
Barrow	28.0	21.1	6.9
Bethel	46.7	41.9	4.8
Bettles	51.6	44.4	7.2
Cold Bay	43.6	40.3	3.3
Delta Junction	55.3	47.6	7.7

Fairbanks	<b>55.3</b>	<b>49.4</b>	<b>5.9</b>
Gulkana	<b>51.2</b>	<b>45.2</b>	<b>6.0</b>
Homer	<b>49.7</b>	<b>44.5</b>	<b>5.2</b>
Juneau	<b>54.1</b>	<b>48.6</b>	<b>5.5</b>
King Salmon	<b>47.9</b>	<b>44.2</b>	<b>3.7</b>
Kodiak	<b>47.0</b>	<b>44.3</b>	<b>2.7</b>
Kotzebue	<b>40.3</b>	<b>31.9</b>	<b>8.4</b>
McGrath	<b>52.1</b>	<b>46.7</b>	<b>5.4</b>
Nome	<b>41.1</b>	<b>36.8</b>	<b>4.3</b>
St. Paul Island	<b>40.0</b>	<b>36.2</b>	<b>3.8</b>
Talkeetna	<b>50.9</b>	<b>47.8</b>	<b>3.1</b>
Yakutat	<b>47.5</b>	<b>44.7</b>	<b>2.8</b>



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

As has often been the case throughout this last winter, the daily record temperature events for May were all high events, with no record low events reported. Most of these were reported during the extended warm period experienced throughout the second half of the month.

Date	Temperature Records				
	Station	Element	New Record	Old Record	Year of old Record
05/01/15	St. Paul	High Temperature	44	43	1967
05/03/15	Cold Bay	High Temperature	52	51	2014
05/06/15	Cold Bay	High Temperature	51	51	2002
05/06/15	St. Paul	High Temperature	47	45	1996
05/08/15	Annette	High Temperature	72	72	1957

05/13/15	Hollis	High Temperature	70	70	1993
05/13/15	Skagway Airport	High Temperature	73	78	2014
05/15/15	Delta Junction	High Temperature	73	70	2004
05/17/15	Annette	High Temperature	75	74	1968
05/17/15	Barrow	High Temperature	38	38	1923
05/17/15	Bettles	High Temperature	73	70	1994
05/17/15	Fairbanks	High Temperature	77	76	1923
05/18/15	Barrow	High Temperature	41	39	1963
05/18/15	Bettles	High Temperature	73	69	1990
05/18/15	Delta Junction	High Temperature	75	75	1993
05/18/15	Haines Airport	High Temperature	73	72	2005
05/19/15	Barrow	High Temperature	46	38	2009
05/19/15	Delta Junction	High Temperature	74	72	2002
05/20/15	Bettles	High Temperature	74	74	2002
05/20/15	St. Paul	High Temperature	46	46	2003
05/21/15	Barrow	High Temperature	47	41	2011
05/21/15	Hollis	High Temperature	72	72	1990
05/23/15	Bettles	High Temperature	82	82	1960
05/23/15	Delta Junction	High Temperature	82	82	1960
05/23/15	Eielson AFB	High Temperature	85	82	1960
05/23/15	Fairbanks	High Temperature	86	80	2002
05/23/15	North Pole	High Temperature	86	83	2002

05/23/15	Northway	High Temperature	84	83	1960
05/23/15	UAF College Obs.	High Temperature	84	83	1963
05/30/15	Hollis	High Temperature	75	74	1957
05/30/15	Juneau	High Temperature	77	75	1964
05/30/15	Port Alexander	High Temperature	72	70	1990
05/30/15	Skagway Airport	High Temperature	72	68	2010
05/30/15	Talkeetna	High Temperature	79	79	1958
05/31/15	Kotzebue	High Temperature	66	64	1961

On top of the large number of daily records, there were a number of monthly record highs set. See the following table. Barrow tied the old record of 28.0" from 1991 while Haines tied the record set way back in 1915 at 55.0°F. It was also the second warmest May on record for Annette, Fairbanks and Homer. The third warmest for Sitka, Bethel, McGrath, Talkeetna and Denali National Park. The fourth warmest for Cold Bay, King Salmon and St Paul. Anchorage and Yakutat both came in at their fifth warmest on record.

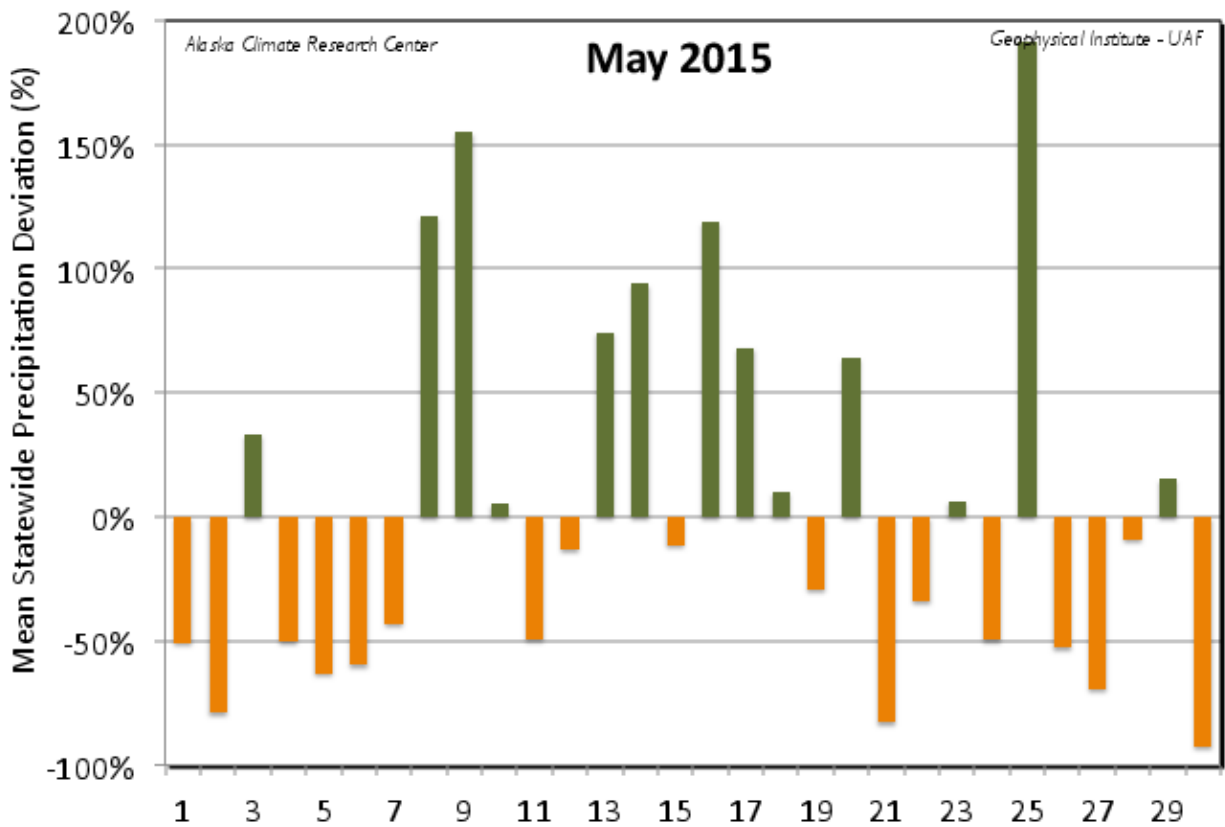
Station	Monthly High Temperature Records			
	New Record	Old Record	Difference	Year of old Record
Bettles	51.6	51.0	0.6	1981
Delta Junction	55.3	54.2	1.1	1981
Gulkana	51.2	50.5	0.7	2004
Juneau	54.1	52.7	1.4	2005
Ketchikan	55.0	53.5	1.5	1993
Kotzebue	40.3	39.4	0.9	2004
Skagway Airport	55.1	52.9	2.2	2014

## Precipitation

May was just slightly wetter than normal, with the overall precipitation calculated as 3% above normal; this calculation was based on the mean of the deviations in percentage of the First Order Stations. Eight of the First Order Stations and 13 days of the month reported above normal values. This is just slightly, relatively, wetter than May in 2014, which had the normal precipitation total. The greatest daily deviation of 191% occurred on the 25<sup>th</sup>, driven by record-breaking precipitation at Barrow. On a monthly basis, Barrow had the greatest positive deviation from normal, with a total of 0.65", or 361% of the expected amount of 0.18". Other stations with precipitation greater than 200% of normal were King Salmon (266%), and Cold Bay (201%). The leading station with a lower than normal precipitation amount was Delta Junction with just 4% of normal. Other stations with less than 20% of their normal precipitation were Annette (9%), and Juneau (15%).

Station	Precipitation				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)
Anchorage	0.46	0.72	-0.26	-36%	64%
Annette	0.50	5.56	-5.06	-91%	9%
Barrow	0.65	0.18	0.47	261%	361%
Bethel	1.80	1.14	0.66	58%	158%
Bettles	0.35	0.88	-0.53	-60%	40%
Cold Bay	5.23	2.60	2.63	101%	201%
Delta Junction	0.04	0.90	-0.86	-96%	4%
Fairbanks	0.29	0.60	-0.31	-52%	48%
Gulkana	0.16	0.65	-0.49	-75%	25%
Homer	0.33	0.82	-0.49	-60%	40%
Juneau	0.52	3.40	-2.88	-85%	15%
King Salmon	3.32	1.25	2.07	166%	266%
Kodiak	6.03	5.62	0.41	7%	107%

Kotzebue	<b>0.58</b>	<b>0.41</b>	<b>0.17</b>	<b>41%</b>	<b>141%</b>
McGrath	<b>0.38</b>	<b>1.09</b>	<b>-0.71</b>	<b>-65%</b>	<b>35%</b>
Nome	<b>1.49</b>	<b>0.86</b>	<b>0.63</b>	<b>73%</b>	<b>173%</b>
St. Paul Island	<b>2.03</b>	<b>1.13</b>	<b>0.90</b>	<b>80%</b>	<b>180%</b>
Talkeetna	<b>1.11</b>	<b>1.62</b>	<b>-0.51</b>	<b>-31%</b>	<b>69%</b>
Yakutat	<b>1.62</b>	<b>8.21</b>	<b>-6.59</b>	<b>-80%</b>	<b>20%</b>



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

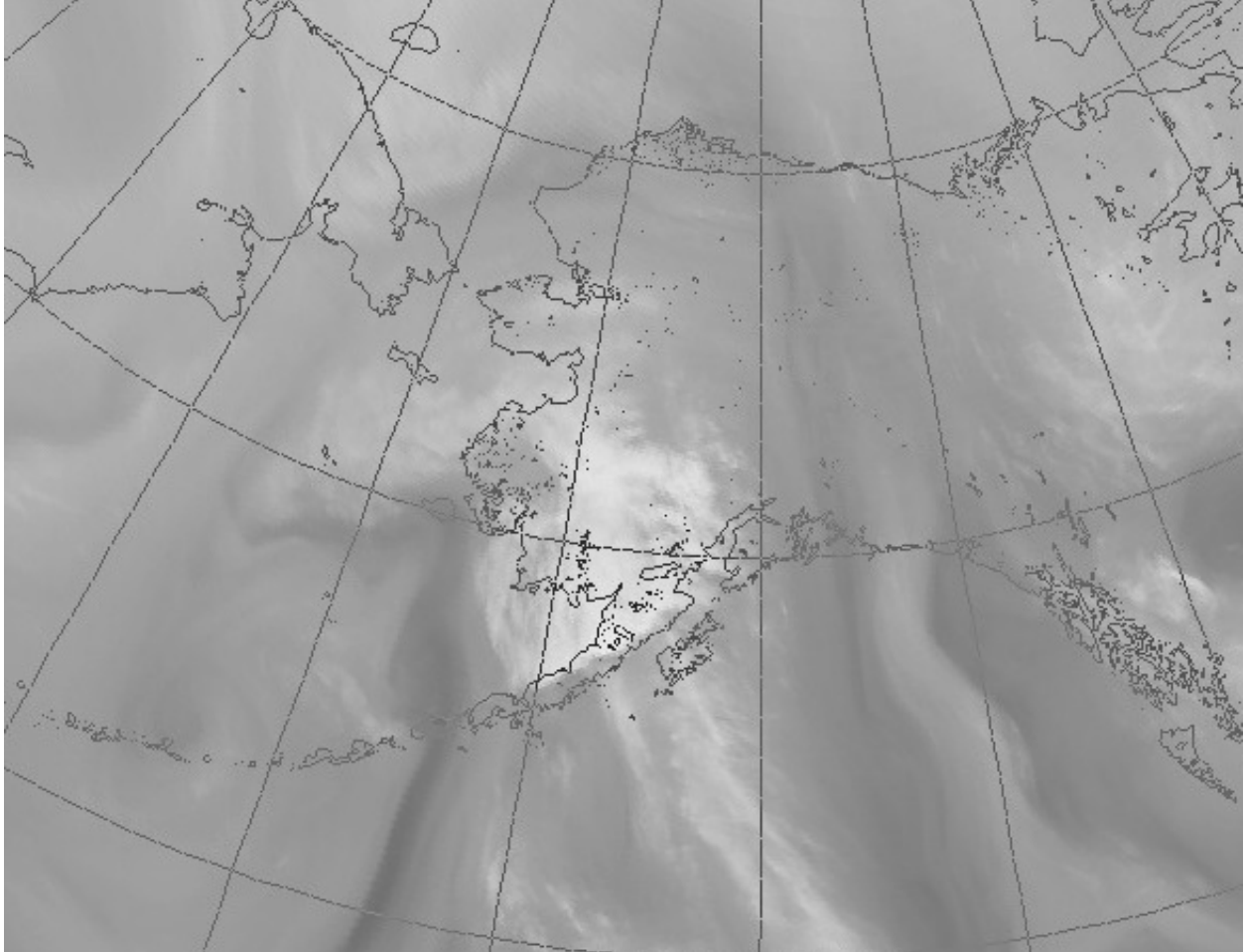
The maximum monthly precipitation total reported for a First Order Station was 6.03" at Kodiak, and Kodiak also reported the highest daily total of 1.48" on the 14<sup>th</sup>, a new record for this specific day. The snow cover has melted for most of Alaska; however, Barrow, in Northern Alaska reported, a one-day snowfall on the 6<sup>th</sup> with 0.3". Barrow also reported the highest monthly snowfall of 1.2", and the highest snow depth of 8" on the 7<sup>th</sup> and 8<sup>th</sup>.

There were a limited number of daily precipitation records. Two of the six events were set in Barrow, and two more in King Salmon. For the month, King Salmon totaled 3.32" and broke the 1941 record of 3.20". This May was the third wettest on record for Barrow. The daily precipitation record of 0.34" on the 25<sup>th</sup> is the wettest day for any day in May for Barrow. The old record of 0.30" was previously set on both May 15<sup>th</sup>, 2014 and May 28<sup>th</sup> 2010.

Date	Precipitation Records				
	Station	Element	New Record	Old Record	Year of old Record
05/03/15	King Salmon	Precipitation	0.61	0.45	1947
05/10/15	Cold Bay	Precipitation	0.50	0.39	1993
05/14/15	King Salmon	Precipitation	0.55	0.46	1989
05/14/15	Kodiak	Precipitation	1.47	1.14	1965
05/15/15	Barrow	Precipitation	0.09	0.04	1963
05/25/15	Barrow	Precipitation	0.34	0.06	1967

On the other side of the spectrum, the very nice May in Southeast Alaska generated a number of record low monthly precipitation records. Ketchikan smashed the 2010 recorded of 2.12" with a low 0.68". Annette broke the 1946 record of 1.34" with 0.50"; this is just 9% of normal. The meager 0.34" for Sitka was almost half the 0.72" record low from just last year. Juneau received a total of 0.52", 0.32" below the 2004 record low. Finally, Yakutat totaled 1.62", almost an inch below the 2009 record of 2.58". In addition, it was the second driest May for Skagway, and the third driest May for Haines, Cold Bay and Delta Junction.





*This water vapor satellite image from the National Weather Service for the 16<sup>th</sup> of May shows the typical weather pattern the resulted in record low precipitation across the Southeast and record high precipitation in King Salmon.*

### **Newsworthy Events**

The ongoing saga with the Sagavanirktok River on the North Slope spilled over from March and April into May. Flooding watches were set on the 15<sup>th</sup>. Actual flooding returned on the 18<sup>th</sup> with over two feet of water across the Dalton Highway at the Sagavanirktok River, closing the road. Over the next few days, the flooding extended over some 40 miles of the roadway. Some structures were also flooded as the water encroached on Deadhorse. The flooding ended extending up to 80 miles. The Governor declared a second disaster declaration for the North Slope as Kuparuk and Colville Rivers also flooded. Repairs on the Dalton Highway could not start until around the 25<sup>th</sup>, when water levels dropped enough due to water flowing back into the mail channel of the Sagavanirktok. The road was still closed to traffic at the end of the month.

The month started out with dense fog warnings for the Kotzebue area on the 1<sup>st</sup>. The break up season had caused difficult travel along the Elliott Highway, and advisories were issued on the 6<sup>th</sup>. A human caused wildfire tore through winter-dried grass near Anchor Point and consumed about five acres

before being extinguished on the 7<sup>th</sup>. The 7<sup>th</sup> also saw the high at Annette hit 72°F, breaking the 70°F barrier for the first time this year for the Southeast. The next day, Barrow finally broke 32°F, with a high of 34°F, for the first time since November 14<sup>th</sup>. The last sunset till August 2<sup>nd</sup> happened at Barrow on the 11<sup>th</sup>. Fairbanks hit its first 70°F day with a high of 71°F on the 13<sup>th</sup>, about a week early. The Denali Highway was opened for seasonal traffic on the 15<sup>th</sup>. The break up for the Yukon and Kuskokwim Rivers was non-eventful this spring as the rivers experienced a 'mushout' of melting in place. Flood warnings were issued for Fort Yukon on the 19<sup>th</sup> from the Porcupine River, rising due to rapid snowmelt from the high temperatures. No significant problems were reported. Flood watches were issued for the Noatak River on the 20<sup>th</sup>, as well as for all rivers that drain into the Beaufort Sea on the 21<sup>st</sup>.

Two small, probably related, human caused wildfires were contained in North Pole on the 14<sup>th</sup>. Wildfire (Red Flag) warnings were issued over much of the Interior. These Red Flag warnings persisted throughout most of the rest of the month for areas between the Alaska and Brooks Ranges. In some areas, Red Flag warnings were issued alongside flood warnings. Such as one issued for Porcupine River on the 16<sup>th</sup>. The Bolgen Creek fire, detected on the 16<sup>th</sup>, near Central had reached 500 acres by the 18<sup>th</sup>. It was aggressively fought. Another fire was contained to about 15 acres near Delta Junction also on the 16<sup>th</sup>. Three fires were report in the Healy area on the 19<sup>th</sup>. On the 20<sup>th</sup> a fire 80 miles from Tok had jumped the Alaska Highway. It had reached 300 acres by the 21<sup>st</sup>. Fire fighting planes from Montana and Washington were brought up to have on hand as temperatures reached unseasonable levels. Fire crews were fighting a 1,500-acre wildfire near Eagle on the 25<sup>th</sup>. Another wildfire was suppressed in North Pole on the 26<sup>th</sup>.

The Southcentral region also saw fire warnings issued on the 22<sup>nd</sup>, and these continued to the end of the month. The Point Thompson airfield on the North Slope reported up to 4" of snow on the 30<sup>th</sup>, as a cold front moved south from the Arctic. High winds in the Interior regenerated fire warnings on the 31<sup>st</sup> and thunderstorm notices were issued for the Kuskokwim Delta.

*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.*