

Alaska Statewide Climate Summary

August 2013

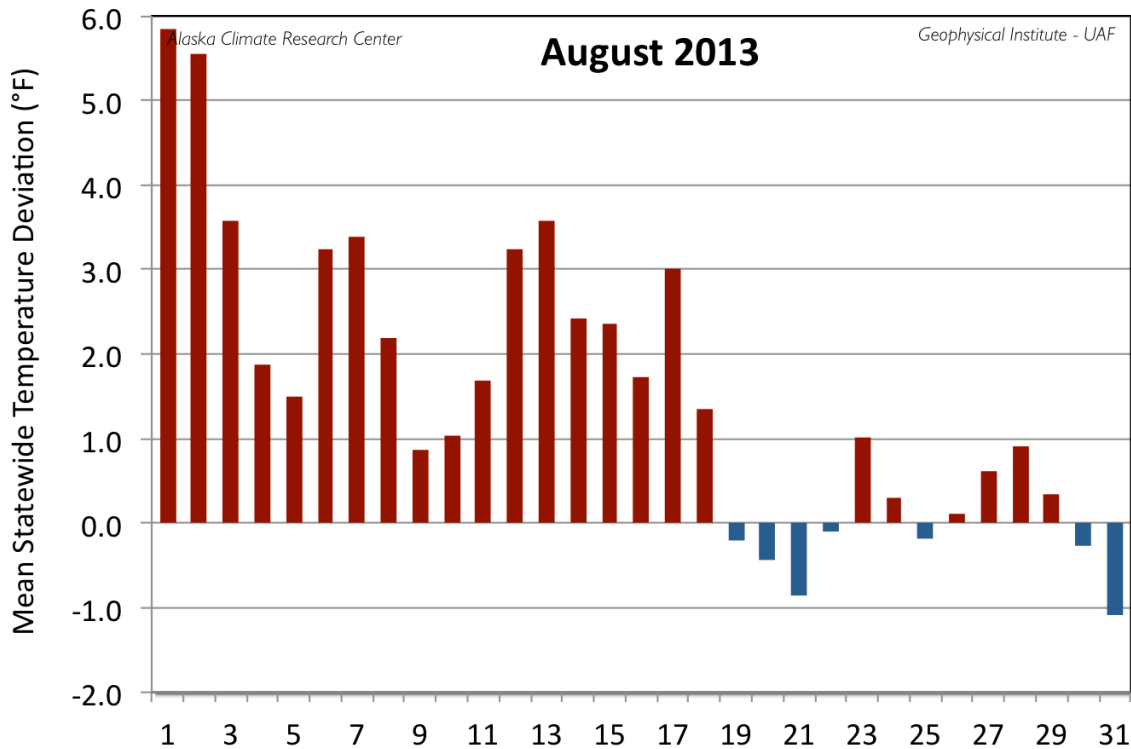
Temperature

Temperatures started off the month continuing the warm trend from July. The first of the month had the greatest positive deviation, and then temperatures trended to cool from that point until the first negative deviation was recorded on the 19th. Temperatures were mixed from that point on to the end of the month. The mean temperature of all first order stations for August was 54.9°F, 1.6°F above the long-term mean of 53.3°F. All 20 First Order Stations reported positive deviations, with Fairbanks topping the list with the positive deviation of 3.3°F. Following Fairbanks were: Delta Junction (3.1°F), Nome (2.9°F), and Homer (2.8°F).

Anchorage had a total of two days in August that recorded temperatures of 70°F or higher, bringing the summer total to 41, topping the record of 40 from 2004. In Valdez the 70°F mark was reached three times in August, bringing the summer total to 30. Fairbanks saw six days where the temperature hit at least 80°F, bringing the total to 36 days for the summer, and breaking the record of 30 set in 2004. In addition, Fairbanks had two more days with the max at or above 85°F for a summer total of 14, breaking the old record of ten from 1990 and 1986. Eagle also experienced a nice summer with a total of eleven days at or above 85°F, and 24 days that reached at least 80°F.

Station	Temperature		
	Observed (°F)	Normal (°F)	Delta (°F)
Anchorage	57.4	56.7	0.7
Annette	60.0	58.9	1.1
Barrow	39.6	39.0	0.6
Bethel	54.5	53.5	1.0
Bettles	52.9	52.5	0.4
Cold Bay	53.9	52.1	1.8
Delta Junction	57.9	54.8	3.1

Fairbanks	59.4	56.1	3.3
Gulkana	55.7	53.5	2.2
Homer	56.7	53.9	2.8
Juneau	57.9	55.9	2.0
King Salmon	55.8	54.6	1.2
Kodiak	56.1	55.2	0.9
Kotzebue	54.0	51.7	2.3
McGrath	56.6	54.6	2.0
Nome	53.0	50.1	2.9
St. Paul Island	48.9	48.8	0.1
Talkeetna	57.1	56.7	0.4
Valdez	55.2	53.7	1.5
Yakutat	56.1	53.8	2.3



Daily mean temperature deviation from the normal temperature for the mean of the 20 first order stations for August 2013.

August brought a few new daily record temperature events that reflected the overall trend for the month, with only four new record highs reported; all during the first week of the month. Record low temperatures also numbered just four. Bettles set one new high at the beginning of the month, and then went on to set two new low records at the end of the month. The new daily record low of 15°F on the 31st is also a new monthly low for Bettles for August, breaking the old record of 22°F from 1974.

Date	Temperature Records				
	Station	Element	New Record	Old Record	Year of old Record
08/01/13	Petersburg	High Temperature	83	76	1971
08/05/13	St. Paul	High Temperature	57	57	1982
08/07/13	Bettles	High Temperature	83	82	1966

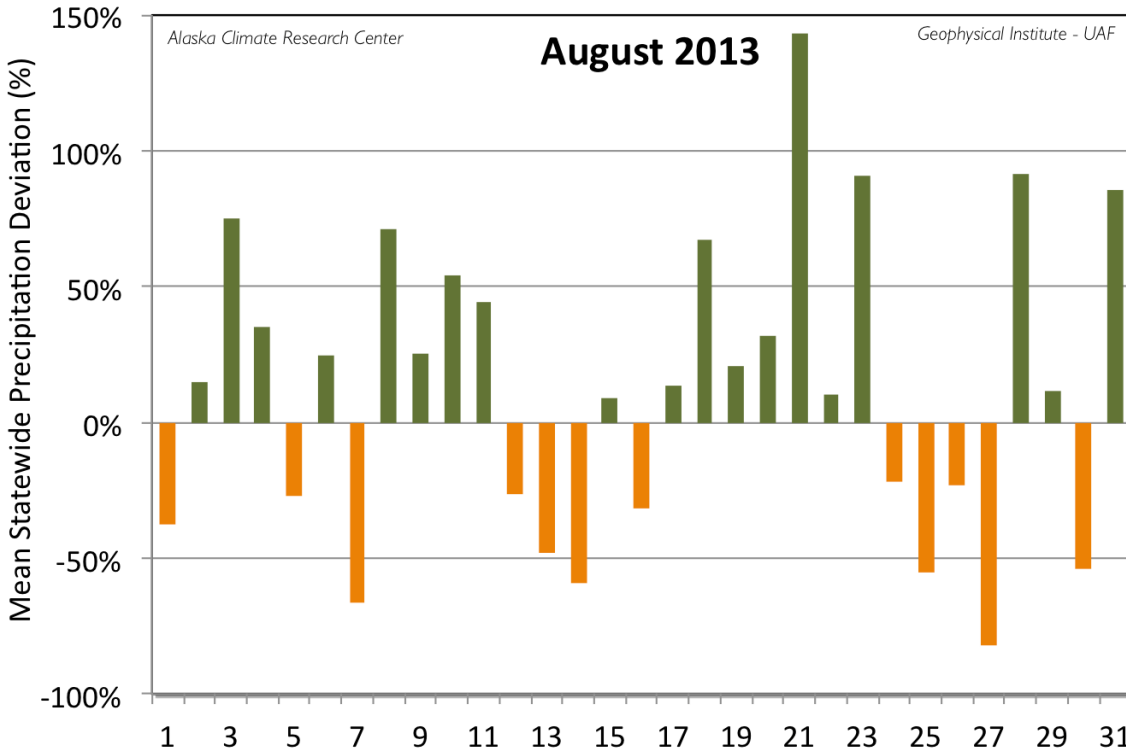
08/07/13	Fairbanks	High Temperature	85	83	1968
08/08/13	Kodiak	Low Temperature	40	41	1974
08/25/13	Delta Junction	Low Temperature	30	31	1993
08/26/13	Bettles	Low Temperature	28	29	1996
08/31/13	Bettles	Low Temperature	15	23	1968

Precipitation

August precipitation was mixed, both temporally and spatially, with twelve of the 20 stations reporting above average totals. The mean value of all 20 stations was calculated to 12% above normal. August is the only month this summer with a positive precipitation deviation. Kodiak reported the greatest positive deviation with 104% above of the expected value. Rounding out the stations with greater than normal totals were King Salmon (82%), Cold Bay (76%), and Anchorage (67%). The two the stations with lowest precipitation below normal were Kotzebue with 31% of normal, and Bettles (39%). Barrow was the only station reporting snowfall in August with a total of 1.1", 0.2" above normal. Precipitation details are presented in the following table.

Station	Precipitation				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)
Anchorage	5.42	3.25	2.17	67%	167%
Annette	4.71	6.96	-2.25	-32%	68%
Barrow	1.35	1.05	0.30	29%	129%
Bethel	3.28	3.25	0.03	1%	101%
Bettles	1.03	2.64	-1.61	-61%	39%
Cold Bay	6.49	3.68	2.81	76%	176%
Delta Junction	1.48	1.89	-0.41	-22%	78%
Fairbanks	2.02	1.88	0.14	7%	107%

Gulkana	1.89	1.80	0.09	5%	105%
Homer	3.39	2.34	1.05	45%	145%
Juneau	4.90	5.73	-0.83	-14%	86%
King Salmon	5.38	2.95	2.43	82%	182%
Kodiak	9.29	4.56	4.73	104%	204%
Kotzebue	0.67	2.18	-1.51	-69%	31%
McGrath	2.59	2.80	-0.21	-7%	93%
Nome	4.21	3.22	0.99	31%	131%
St. Paul Island	3.68	3.07	0.61	20%	120%
Talkeetna	4.99	5.11	-0.12	-2%	98%
Valdez	8.50	7.30	1.20	16%	116%
Yakutat	9.55	14.07	-4.52	-32%	68%

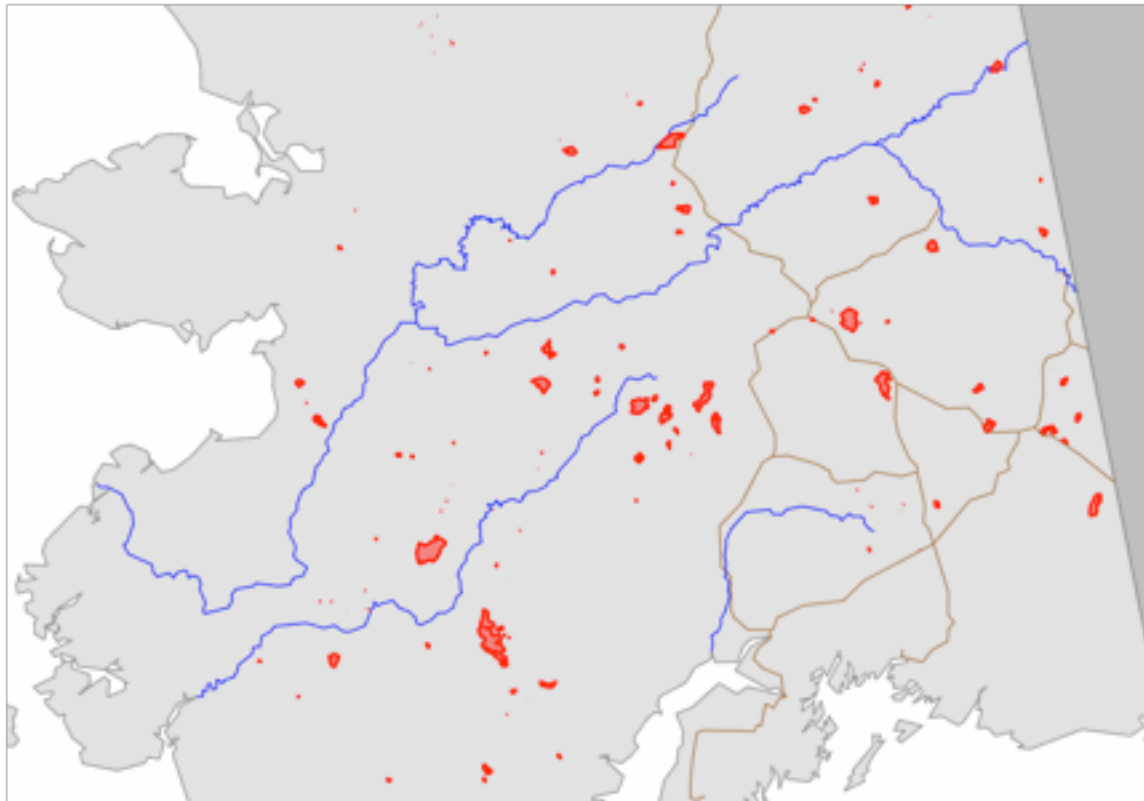


Daily mean precipitation deviation from the normal for the 20 first order stations for August 2013.

Mixed precipitation in August resulted in a few new records that were scattered throughout the month, and concentrated in southern coastal stations, with the exception of Fairbanks. Details are presented in the following table.

Date	Precipitation Records				
	Station	Element	New Record	Old Record	Year of old Record
08/03/13	Valdez	Precipitation	0.89	0.63	2000
08/08/13	King Salmon	Precipitation	0.99	0.54	1974
08/10/13	Valdez	Precipitation	1.98	1.35	1990
08/11/13	Anchorage	Precipitation	1.23	0.82	1991
08/18/13	Juneau	Precipitation	1.18	0.94	1970

08/21/13	King Salmon	Precipitation	0.93	0.67	1973
08/23/13	Fairbanks	Precipitation	0.68	0.50	2003
08/26/13	Cold Bay	Precipitation	1.20	0.86	1981



Map displaying the fire perimeters in Alaska from summer of 2013. Data courtesy of Alaska Interagency Coordination Center (<http://fire.ak.blm.gov/>)

Newsworthy Events

The continuing warm dry weather at the start of the month encouraged the wildfires scattered throughout the state, especially in the Interior. The 3rd saw the historic Gold Dredge No 3 destroyed by fire, as well as a small wildfire start at mile 47 of the Steese Highway, that was quickly contained. Despite the increased danger, firewood cutting was allowed to resume in the Fairbanks area on the 3rd.

The burn ban from July in Anchorage was lifted on the 8th due to the substantial rain during the proceeding week. As the dry conditions continued in the Interior, wildfires were stirred up and smoke was advected into the Fairbanks area during the second week of August. Conditions were so bad that a

warning was issued for extreme fire danger in the Interior on the 9th. The 11th saw a new fire erupt 24 miles east of the Stuart Creek 2 fire near Fairbanks and was fought aggressively. The Tabert Lake fire in the Copper River Basin jumped to 1,200 acres on the 15th and was also fought with firefighters and airplanes to protect private property. By the 20th, cooler, wetter, weather in the Interior had dampened the fire activity, and by the 26th firefighters were moving out of Alaska to the Lower 48 to assist with fighting efforts there. The 20th also saw the fireworks ban lifted in the Fairbanks Borough. It is interesting to note that the fire season was “good” as far as the weather conditions were concerned. The climate conditions had far above normal summer temperatures similar to 2004, however, while in 2004 6.4 million acres burned, this summer season only 1.3 million acres burned, which is still above the long term mean of near 1 million.

Total rainfall of 2.88" on the 9th and 10th in Valdez caused the Lowe river to cover part of the Richardson Highway between miles six and seven. Wet weather prompted flood warnings for small streams in the Anchorage area on the 19th. Then the heavy rains in the Interior on the 20th hit Atigun Pass on the Dalton Highway as a blizzard. The first freezing temperatures were noted in the Fairbanks area on the 25th and 26th, but the Fairbank's Airport only had a low of 34°F on the 25th. The dry summer may have resulted in a bumper berry crop in the Fairbanks area, but negatively impacted hay production. The hay crop was estimated to be about less than half of normal for Fairbanks, Delta Junction and Palmer areas.

This information consists of preliminary climatological data compiled by the Alaska Climate Research Center, Geophysical Institute, University of Alaska Fairbanks. This summary is based on the 20 first order stations in Alaska operated by the National Weather Service. Extreme events of other stations are also mentioned. It should be noted that the new climate normals for the time period of 1981-2010 are applied for the calculations of the deviations, and they can be slightly different from the old normals (1971-2000), which were in use up until end of August 2011.