

Alaska Statewide Climate Summary

August 2015

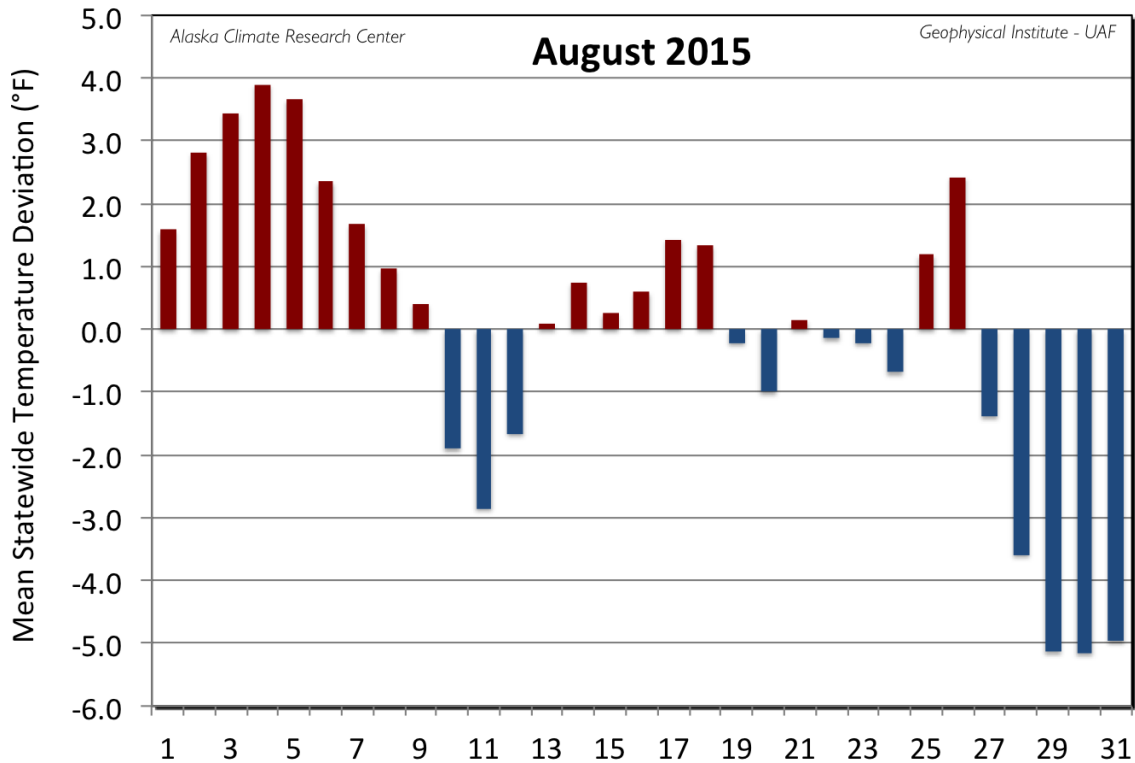
Temperature

August just barely continued the trend where, on a monthly basis, statewide temperatures have been above normal since July 2014, with a slightly above average month: The monthly mean temperature of all First Order Stations was 53.4°F, just topping the normal of 53.3°F. This is 2.2°F below the August 2014 mean of 55.6 °F. Temperatures were above normal for nine of the 19 First Order Stations. Calculating the mean daily temperatures of the First Order Stations (see Figure), 18 days of the month were above the 30-year normal. Temperatures started the month warmer than normal until the 10th, when mixed temperatures persisted until the 26th, then the month ended with five colder than normal days. The peak warm deviation, a high of 3.9°F, occurred on the 4th, while the coldest deviation of -5.2°F occurred on the 30th. Kodiak held the greatest positive deviation from normal at 3.5°F above its long-term mean of 55.2°F. Stations following Kodiak with positive deviations equal to or exceeding 2.0°F were Anchorage (2.2°F) and St. Paul (2.0°F). Delta Junction had the greatest negative deviation at -2.5°F. Other stations with deviations exceeding -1.0°F were Nome (-1.6°F), Fairbanks (-1.5°F), Bettles (-1.4°F) and Gulkana (-1.3°F).

Station	Temperature		
	Observed (°F)	Normal (°F)	Delta (°F)
Anchorage	58.9	56.7	2.2
Annette	59.3	58.9	0.4
Barrow	38.1	39.0	-0.9
Bethel	52.7	53.5	-0.8
Bettles	51.1	52.5	-1.4
Cold Bay	52.5	52.1	0.4
Delta Junction	52.3	54.8	-2.5
Fairbanks	54.6	56.1	-1.5

Gulkana	52.2	53.5	-1.3
Homer	55.3	53.9	1.4
Juneau	56.7	55.9	0.8
King Salmon	55.3	54.6	0.7
Kodiak	58.7	55.2	3.5
Kotzebue	51.1	51.7	-0.6
McGrath	54.4	54.6	-0.2
Nome	48.5	50.1	-1.6
St. Paul Island	50.8	48.8	2.0
Talkeetna	56.2	56.7	-0.5
Yakutat	55.0	53.8	1.2

The highest temperature of the First Order Stations was 84°F reported at McGrath on the 4th of the month, a new record for that day. Annette held the spot for the highest mean temperature for the month at 59.3°F. The coldest temperature was 22°F at Bettles on the 31st, while Barrow reported the lowest August mean temperature at 38.1°F.



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

As has often been the case throughout this last winter and spring, the daily record temperature events for August were mostly all high events, with just two record low events reported at Cold Bay. Most of the limited number of high events reported were experienced during the warm period during the first week of the month.

Date	Temperature Records				
	Station	Element	New Record	Old Record	Year of old Record
08/01/15	Homer	High Temperature	71	71	1998
08/03/15	Anchorage	High Temperature	79	76	1999
08/03/15	Juneau	High Temperature	80	78	1976
08/03/15	King Salmon	High Temperature	81	78	2002

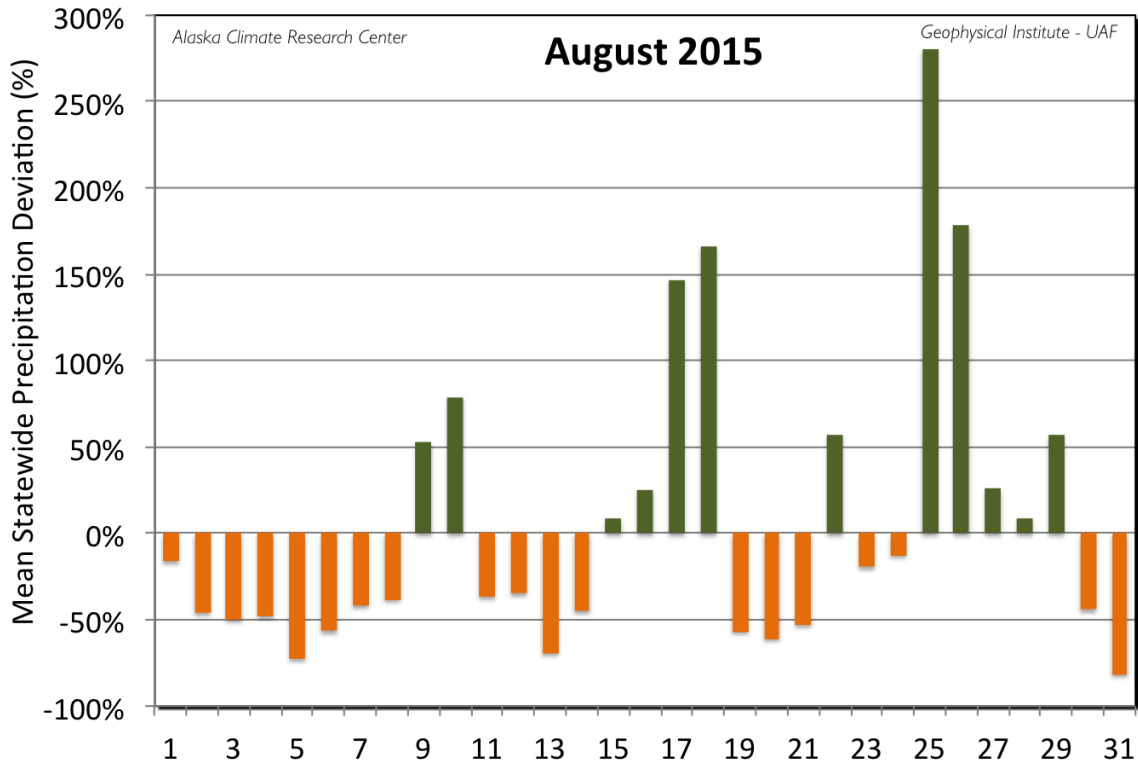
08/04/15	Anchorage	High Temperature	78	74	1997
08/04/15	McGrath	High Temperature	84	83	2002
08/06/15	Kodiak	High Temperature	73	73	2001
08/08/15	Cold Bay	High Temperature	64	63	2010
08/20/15	Cold Bay	Low Temperature	38	39	1988
08/26/15	Cold Bay	High Temperature	70	69	1962
08/31/15	Cold Bay	Low Temperature	39	39	1970

Precipitation

August was just slightly wetter than normal, with the overall precipitation calculated as 7% above normal; this calculation was based on the mean of the deviations in percentage of the First Order Stations. Nine of the First Order Stations and twelve days of the month reported above normal values. This is somewhat wetter than August in 2014, which had a precipitation total 2% below normal. The greatest daily deviation of 280% occurred on the 25th, driven by rain and snow experienced across much of the state. There were no days during the month with no measureable precipitation at all of the 19 first order stations. On a monthly basis, Gulkana had the greatest positive deviation from normal, with a total of 3.82", or 112% above the expected amount of 1.80". The only other stations with precipitation greater than 50% above normal were Kotzebue (83%), Barrow (61%), Bettles (61%) and Juneau (56%). The leading station with a lower than normal precipitation amount was Anchorage with just 30% of normal. The only other stations with less than half of their normal precipitation are Talkeetna (39%), Cold Bay (44%), Kodiak (44%) and Homer (47%).

Station	Precipitation				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)
Anchorage	0.97	3.25	-2.28	-70%	30%
Annette	9.61	6.96	2.65	38%	138%
Barrow	1.69	1.05	0.64	61%	161%

Bethel	3.04	3.25	-0.21	-6%	94%
Bettles	4.24	2.64	1.60	61%	161%
Cold Bay	1.63	3.68	-2.05	-56%	44%
Delta Junction	2.68	1.89	0.79	42%	142%
Fairbanks	2.58	1.88	0.70	37%	137%
Gulkana	3.82	1.80	2.02	112%	212%
Homer	1.11	2.34	-1.23	-53%	47%
Juneau	8.92	5.73	3.19	56%	156%
King Salmon	1.76	2.95	-1.19	-40%	60%
Kodiak	2.01	4.56	-2.55	-56%	44%
Kotzebue	3.99	2.18	1.81	83%	183%
McGrath	2.74	2.80	-0.06	-2%	98%
Nome	3.70	3.22	0.48	15%	115%
St. Paul Island	2.43	3.07	-0.64	-21%	79%
Talkeetna	2.00	5.11	-3.11	-61%	39%
Yakutat	13.91	14.07	-0.16	-1%	99%



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

The maximum monthly precipitation total reported for a First Order Station was 13.91" at Yakutat, while Yakutat also reported the highest daily total of 4.39" on the 17th, a new record for this specific day.

There were a typical number of daily precipitation records, and they were set during the wetter second half of the month. For Juneau, all months this year, with the exception of May, have had above normal precipitation amounts. This makes 2015 the wettest stretch from January to August with 51.80", 3.49" above the 48.31" record from 1992 for this time period. The normal for this period is just 33.17". It was the second wettest August on record for Haines with 7.73"; the record is 13.69" from 1956.

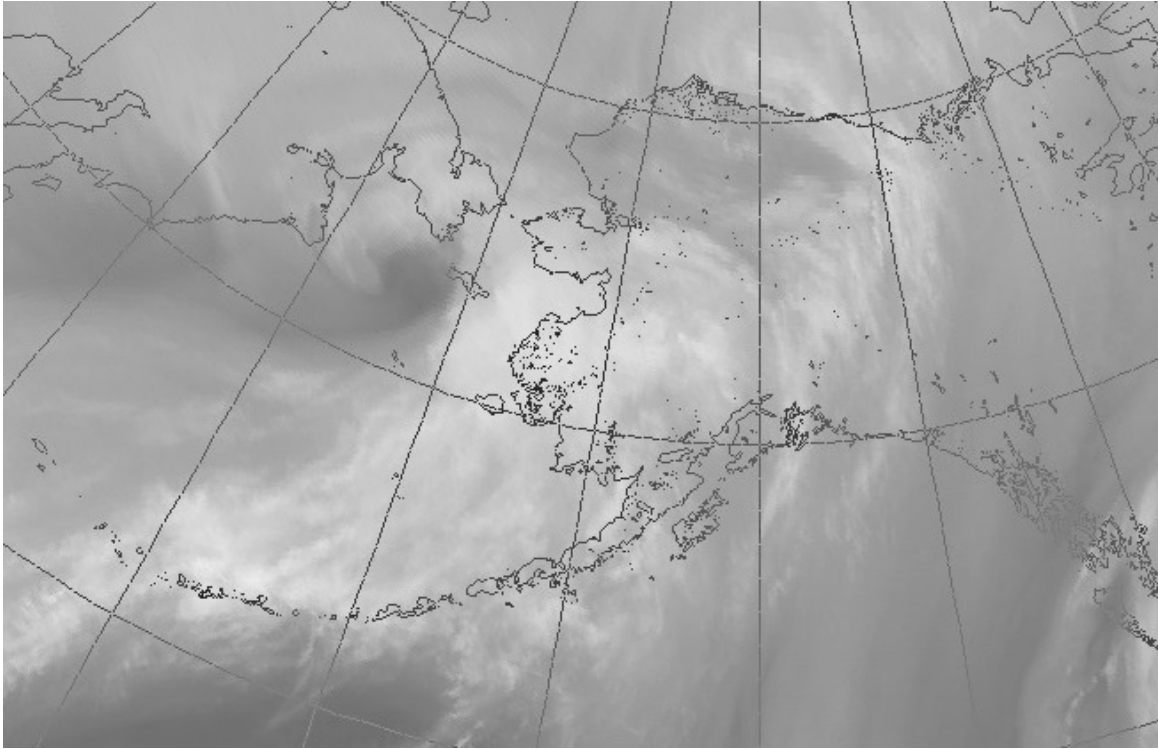
Date	Precipitation Records				
	Station	Element	New Record	Old Record	Year of old Record

08/17/15	Yakutat	Precipitation	4.39	2.86	1993
08/18/15	Bettles	Precipitation	0.71	0.43	2000
08/18/15	Northway	Precipitation	0.73	0.28	2010
08/18/15	Northway	Precipitation	0.73	0.28	2010
08/18/15	Sitka	Precipitation	2.66	2.33	1983
08/18/15	Tanana Airport	Precipitation	1.30	1.13	1959
08/22/15	Haines Airport	Precipitation	2.02	1.47	2008
08/25/15	Barrow	Precipitation	0.55	0.45	1966
08/25/15	Kotzebue	Precipitation	1.26	0.77	1975
08/29/15	St. Paul	Precipitation	1.32	0.83	2006
08/30/15	Haines Airport	Precipitation	1.09	0.70	1944

Newsworthy Events

Wildfire related news led the month with a plane forced down, by smoke, onto the Dalton Highway on then 1st. Warm weather dominated the Southcentral area for the first week of the month, and some new records were set. Red flag warnings for high winds and thunderstorms were issued for the northern slopes of the Brooks Range on the 5th. The Fairbanks area experienced heavy downpours and lightning also on the 5th; no damage was reported, while Eielson AFB reported a total of 0.43" from the series of thunderstorms. A dense smoke advisory was issued for upper and lower Koyukuk Valley and Central Tanana Valley on the 8th. Then on the 10th up to 5" of snow was forecasted for higher elevations in the Brooks Range. High wind gusts on the morning of the 10th led to several power outages in the Fairbanks area. The first frost warnings of the season were issued for the low-lying areas of the Interior on the 15th. Heavy rains were forecasted for the Southcentral region on the starting on the 16th.

Heavy rains impacted the Southeast on the 18th and generated a landslide in Sitka that killed three people. Hail was reported near Valdez on the 19th, and warnings of possible rapidly rising water in Keystone Canyon were issued. Strong thunderstorms were reported in the Gulf of Alaska on the 21st. An uncommon lightning strike in Kenai knocked out power at businesses on the 22nd. Tanacross reported an unusual 1.50" of rain on the 23rd.



This water vapor satellite image from the National Weather Service for the 25th of August shows the weather pattern the resulted in heavy rainfall, high winds, snowfall and coastal flooding across most of Alaska.

More early season snow, of up to 5", was forecasted for the Brooks Range east of Howard Pass on the 24th. In addition, cold storm warnings were issued for most of the Interior for heavy rain, substantial rapid, water level risings and the lowering of the snow level to passes in the eastern Alaska Range with snow accumulation and mixed snow and rain possible. The next day saw flood warnings for the northwestern Brooks Range, as well as flood watches for the Seward Peninsula. The storm generated high surf warnings for the Arctic Coast. Norton Sound had high surf warnings as well as flood warnings issued. The storm continued into the 26th, and winter storm warnings were once again released for areas of the Brooks Range with up to 7" of snow possible, snow at Denali National Park and high winds for the middle Tanana Valley. The Moose Creek Dam on the Chena River was activated on the morning of the 26th, and stayed activated for about a week. Gale coastal flooding warnings for the Arctic Coast were published with winds reported at Barrow over 50 mph and limited flooding due to the high surf. The heavy rain resulted in more flood advisories for the Chena River above the Moose Creek Dam as well as the Kuskokwim River. High winds were forecasted for the Interior areas, Seward, Whittier and Thompson Pass the following day as the storm moved south on the 27th. A power outage for about 2,000 customers was reported in Anchorage while gusts up to 35 mph blew small trees over. Winds up to 45 mph were recorded at Tanacross. High winds up to 60 mph picked up ash from the Katmai Volcano on the Alaska Peninsula and blew it across the Shelikof Strait into the Kodiak area.

More winter storm warnings were issued for northeastern area of the Brooks Range on the 28th for up to 6" of snow and higher elevations near Denali National Park. A sailing of the ferry Chenega was canceled

also on the 28th due to high seas in Chatham Strait and Lynn Canal. The high seas also resulted in cancellation of the sailing of the ferry Fairweather from Whittier to Cordova.

An unusual and quick moving wildfire near the small community of Chiniak near Kodiak on the 28th resulted in some evacuations and buildings burned. The fire was believed to be caused by high winds bringing down power lines onto trees. Another late season wildfire erupted in the Mat-Su Borough on the 29th, and jumped to 20 acres quickly before being suppressed. In spite of these small events, most wildfire efforts had been curtailed around the state after the middle of the month due to increased rainfall, and some crews had been sent south to help with fires in the lower 48 states. Widespread frost warnings were issued for the interior on the 30th.

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. 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.