

Alaska Statewide Climate Summary

October 2015

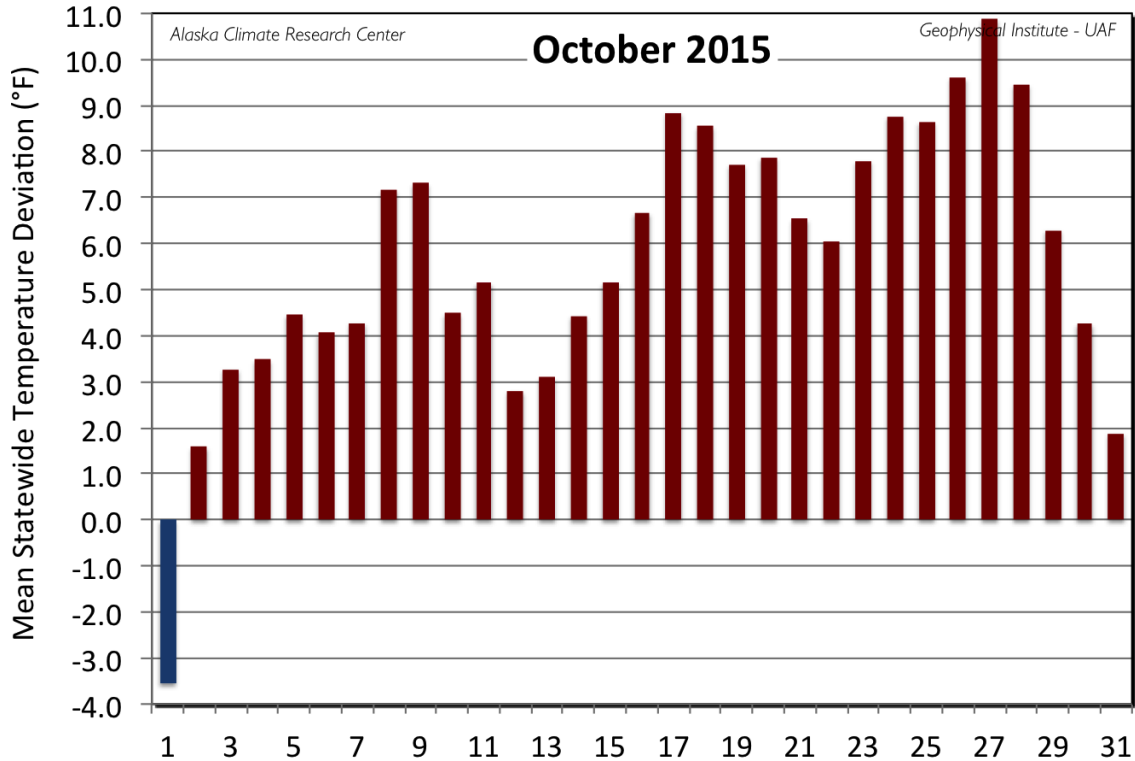
Temperature

Temperatures were decidedly above normal this October across the state and through almost all of the month. The monthly mean temperature of all First Order Stations was 37.5°F, a significant 5.5°F above the normal of 32.0°F. This is 5.2°F above the October 2014 mean of 32.3°F. Temperatures were above normal for all 19 First Order Stations. Calculating the mean daily temperatures of the First Order Stations (see Figure), only one day of the month (the 1st) was below the 30-year normal. The peak warm deviation, an extreme 10.9°F, occurred on the 27th, while the coldest deviation of -3.6°F occurred on the 1st. King Salmon held the greatest positive deviation from normal with an extreme value of 9.3°F above its long-term mean of 33.5°F. Stations following King Salmon with deviations exceeding 7.0°F were McGrath (8.7°F), Delta Junction (7.8°F), Fairbanks (7.6°F), Bethel (7.2°F). The last four stations are along the mid-section of Alaska.

Station	Temperature		
	Observed (°F)	Normal (°F)	Delta (°F)
Anchorage	40.5	34.8	5.7
Annette	51.3	46.7	4.6
Barrow	20.6	17.2	3.4
Bethel	37.5	30.3	7.2
Bettles	25.2	18.9	6.3
Cold Bay	42.5	40.4	2.1
Delta Junction	31.9	24.1	7.8
Fairbanks	31.8	24.2	7.6

Gulkana	32.4	26.6	5.8
Homer	42.9	38.1	4.8
Juneau	44.6	42.4	2.2
King Salmon	42.8	33.5	9.3
Kodiak	45.5	40.5	5.0
Kotzebue	30.5	24.3	6.2
McGrath	33.8	25.1	8.7
Nome	34.3	28.7	5.6
St. Paul Island	41.6	38.6	3.0
Talkeetna	39.6	33.2	6.4
Yakutat	44.0	41.0	3.0

The highest temperature of the First Order Stations was 66°F reported at Annette on the 16th of the month, a new record for that day. Annette also held the spot for the highest mean temperature for the month at 51.3°F. The coldest temperature was -10°F at Bettles on the 31st, while Barrow reported the lowest October mean temperature at 20.6°F.



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

There were a large number of temperature record events in October, and all events were high events, with no low events noted. King Salmon had six events, with half of them new records. These events helped King Salmon have the second warmest October on record after 2013 (43.0°F). The daily high temperature of 30°F on the 29th at Fairbanks is the first time this season the daily high did not break 32°F. Only two other years (1938 and 1911) have reported later dates. The average date for this mark is around October 10th. This resulted in 206 consecutive days with maxima above the freezing point. It is the second longest streak of consecutive days above freezing after the 207 days set both in 1993 and 1990.

Date	Temperature Records				
	Station	Element	New Record	Old Record	Year of old Record
10/03/15	St. Paul	High Temperature	51	50	2014
10/05/15	King Salmon	High Temperature	57	57	1957

10/07/15	Sitka	High Temperature	62	61	1993
10/07/15	Skagway Power	High Temperature	59	59	2012
10/08/15	Homer	High Temperature	59	58	2009
10/08/15	King Salmon	High Temperature	61	58	2009
10/08/15	Sitka	High Temperature	62	61	1993
10/08/15	Skagway Airport	High Temperature	58	57	1988
10/09/15	King Salmon	High Temperature	58	58	2006
10/10/15	Annette	High Temperature	67	63	1969
10/10/15	Ketchikan	High Temperature	62	59	1954
10/14/15	St. Paul	High Temperature	48	48	2002
10/16/15	Annette	High Temperature	68	63	1969
10/16/15	Craig	High Temperature	66	58	1936
10/16/15	Juneau	High Temperature	54	52	2006
10/16/15	Petersburg	High Temperature	67	62	1941
10/16/15	Sitka	High Temperature	64	60	1969
10/17/15	Juneau	High Temperature	54	54	2014
10/18/15	Kodiak	High Temperature	54	54	1978
10/19/15	Annette	High Temperature	58	58	2002
10/25/15	King Salmon	High Temperature	51	51	2013
10/26/15	King Salmon	High Temperature	53	50	2013
10/26/15	Skagway Airport	High Temperature	55	52	2013
10/26/15	St. Paul	High Temperature	47	45	2007

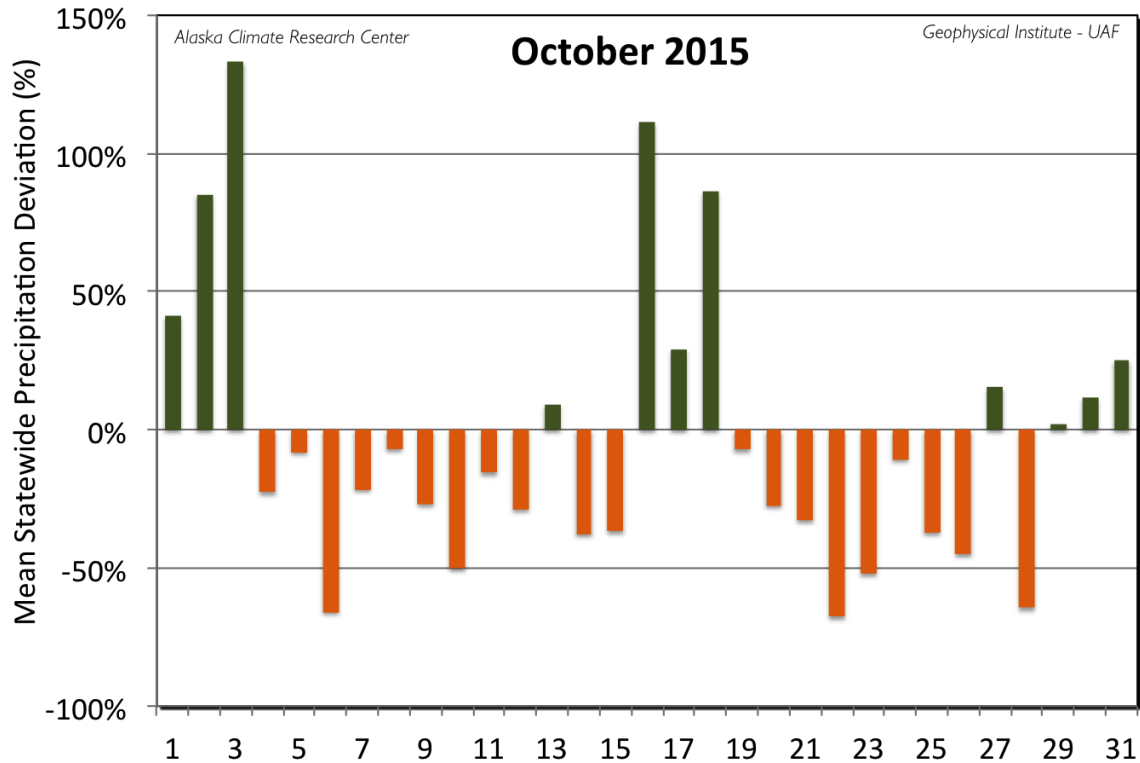
10/27/15	Annette	High Temperature	61	58	1969
10/27/15	King Salmon	High Temperature	55	52	2013

Precipitation

October was slightly dryer than normal, with the overall precipitation calculated as 4% below normal; this calculation was based on the mean of the deviations in percentage of the First Order Stations. Ten of the First Order Stations and 21 days of the month reported below normal values. One station, Fairbanks, hit its normal value with 0.83" of water equivalent. There were no days during the month without any measureable precipitation at all of the 19 First Order Stations. This is also wetter than October 2014, which had a precipitation total 25% below normal. The greatest daily deviation of just 113% occurred on the 3rd, driven by heavy rain in the Southcentral and Western areas. On a monthly basis, Kodiak had the greatest positive deviation from normal, with a total of 13.80", or 67% above the expected amount of 8.26". This is the fifth wettest October for Kodiak. The only other station with precipitation greater than 50% above normal was Nome (53%). The leading station with a lower than normal precipitation amount was Delta Junction with just 20% of normal. The only other station with less than half its normal precipitation was Bethel (35%).

Station	Precipitation				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)
Anchorage	1.97	2.03	-0.06	-3%	97%
Annette	15.41	13.92	1.49	11%	111%
Barrow	0.27	0.41	-0.14	-34%	66%
Bethel	0.58	1.65	-1.07	-65%	35%
Bettles	1.11	1.04	0.07	7%	107%
Cold Bay	4.72	4.76	-0.04	-1%	99%
Delta Junction	0.16	0.80	-0.64	-80%	20%
Fairbanks	0.83	0.83	0.00	0%	100%

Gulkana	0.71	1.01	-0.30	-30%	70%
Homer	3.01	2.57	0.44	17%	117%
Juneau	7.21	8.63	-1.42	-16%	84%
King Salmon	1.57	2.08	-0.51	-25%	75%
Kodiak	13.80	8.26	5.54	67%	167%
Kotzebue	1.03	1.01	0.02	2%	102%
McGrath	1.93	1.44	0.49	34%	134%
Nome	2.46	1.61	0.85	53%	153%
St. Paul Island	3.88	3.11	0.77	25%	125%
Talkeetna	2.73	2.90	-0.17	-6%	94%
Yakutat	15.55	21.98	-6.43	-29%	71%



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

The maximum monthly precipitation total reported for a First Order Station was 15.55" at Yakutat, while Kodiak reported the highest daily total of 3.10" on the 27th, a new record for that specific day. Bettles reported the highest total snowfall at 8.1". Anchorage reported the highest one-day snowfall at 3.1" on the 30th. Fairbanks reported the highest snow depth at 9", also on the 1st, a result of the record snowfall at the end of September. It should be noted that October is early in the winter season, and most stations have little, if any, snowfall, and seldom have established a snowpack.

There were a very limited number of daily precipitation records this October, and Ketchikan set half of them for the ninth wettest October on record. Juneau reported below normal precipitation for October, which along with May are the only two months this year with less than normal precipitation. For the year, Juneau has total 70.52", 4.32" above the previous record for this time span set in 1991. The normal for this time period is 45.09". Juneau also had 19 days in a row this October (6th to 25th) with at least a trace of precipitation.

Date	Precipitation Records				
	Station	Element	New Record	Old Record	Year of old Record
10/01/15	Cold Bay	Precipitation	0.66	0.66	1976
10/01/15	Nome	Precipitation	0.84	0.56	1922
10/08/15	Ketchikan	Precipitation	7.21	6.49	1974
10/10/15	Ketchikan	Precipitation	3.66	3.36	2001
10/20/15	Ketchikan	Precipitation	5.38	4.52	1958
10/27/15	Kodiak	Precipitation	3.10	1.30	1925

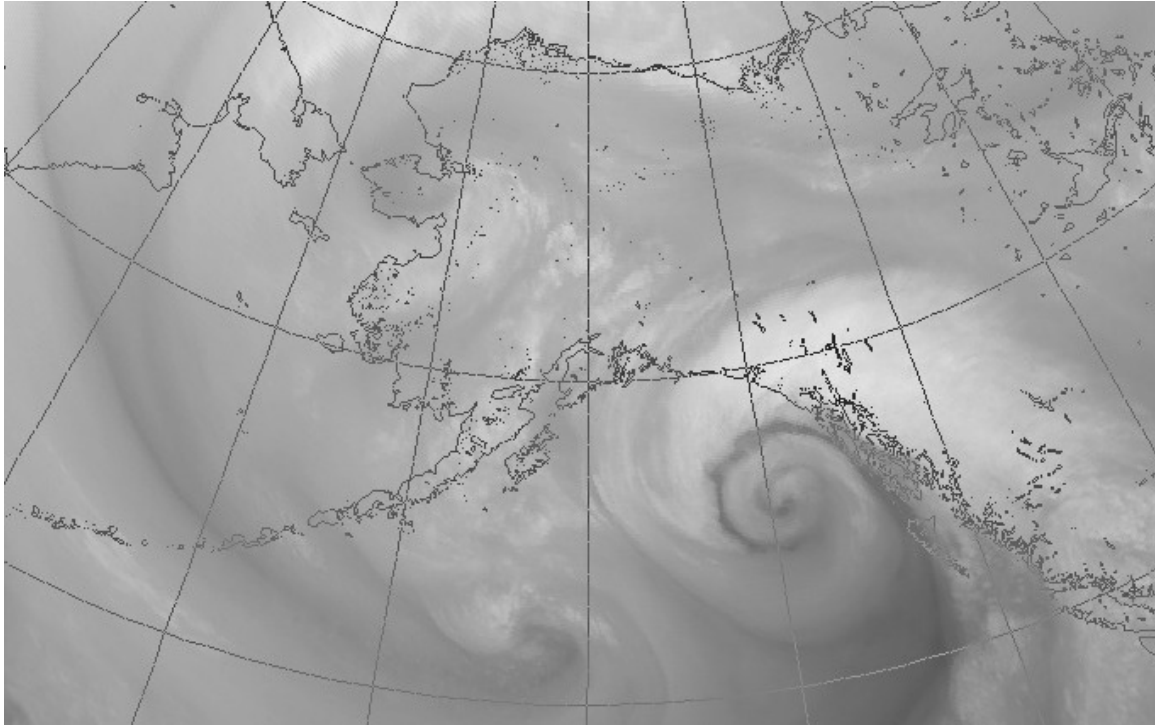
Newsworthy Events

The effects of the record setting snowfall from the end of September in the Interior carried over to October with several thousand people in the Fairbanks area still without power on the 1st. Power was not fully reported until the 5th with help from linemen up from Anchorage to assist. School busses also used alternate routes on the 1st due to warming temperatures and possible freezing rain. A storm front from the Bering Sea hit the western portion of Alaska on the 1st, with record setting precipitation in Nome, wind gusts up to 67 mph at Wales and 101 mph at St. George Island. The strong winds led to a warning of possible flooding at the airport at Deering. The storm eroded the shoreline 10 feet closer the airport at Kivalina.

High winds and drifting snow closed the Steese highway on the 2nd, while the Dalton Highway was deemed impassible between miles 290 and 298 also due to high winds and drifting snow. Dense fog advisories were issued for the middle Tanana Valley area on the 4th, while the same was forecasted for Anchorage the next day.

Tropical storm Oho took an unusual turn on the 8th to head north to Southeast Alaska with landfall on the 9th. The Jetstream was expected to strengthen the storm before making landfall. This is the first tropical storm to make the trip to Alaska since 1975. Storm and gale level warnings of high winds and moderate to heavy rainfall were issued for the area. Limited damage and record rainfall was reported in Ketchikan.

Wind advisories were issued for areas in the northern Interior on the 9th, while storm and gale warnings were issued for the western and northern coasts. In addition, more storm and gale warnings were issued for the Southeast. Gusts up to 81 mph were measured at Edna Bay and 60 mph at Hydaburg. A beach home in Angoon collapsed from the wind and rain.



This water vapor satellite image from the National Weather Service for the 11th of October shows the well developed low pressure weather pattern the resulted some heavy rain in Southeast.

Dense fog warnings were forecasted for the Matanuska Valley on the 12th. Freezing rain advisories were issued for Fairbanks on the 17th, with winter weather forecasted for east of Fairbanks. Dense fog warnings followed the next day for the Interior and the icy road conditions persisted in the Fairbanks area. More fog and freezing rain hit the region again the next day.

Freezing rain was forecasted in the Interior and Southwest areas on the 24th. Dense fog advisories were issued for the southern panhandle on the 25th. The record setting rains in Kodiak on the 27th resulted in flooding near Bells Flats. The 29th had heavy snow and winter warnings forecasted for the western portion of Alaska. Wet, slushy snow impacted the Susitna Valley and western Kenai Peninsula on the 30th. The 30th also saw Anchorage get its first snow in a month, leaving slippery roads in its wake. Snow also returned to the Fairbanks area on the 29th.

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.