

Alaska Statewide Climate Summary

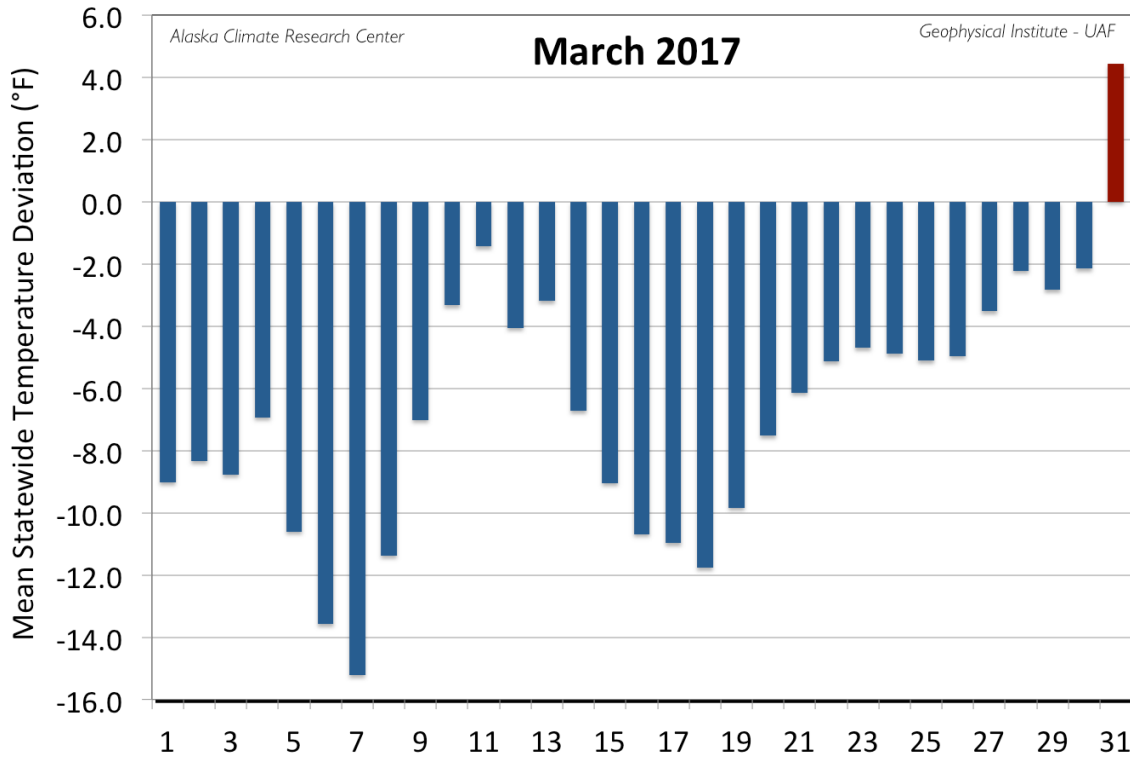
March 2017

Temperature

March 2017 is the just second month (with February 2017) in the last eighteen with mean a statewide temperature below normal. The mean temperature of all First Order Stations was 11.5°F, 7.0°F below the normal of 19.5°F. This is 18.4°F below the March 2016 mean of 25.4°F and 2.2°F colder than February 2017. Calculating the mean daily temperatures of the First Order Stations, 30 days of the month were below the 30-year normal, with one day, the 31st, above normal with a positive deviation of 4.4°F. The greatest negative deviation occurred on the 7th with a significant 15.2°F below normal (see Figure). Monthly mean temperatures (see table) were below normal for 17 of the First Order Stations. As has been the case for the last five months, Barrow held the spot with the greatest positive deviation in March with 5.3°F above its normal of -12.7°F. The only other station with a positive deviation was St. Paul Island with 0.9°F. The station with the greatest negative deviation was Fairbanks with -14.4°F. Other stations with deviations greater than -10°F were: Delta Junction (-14.1°F), King Salmon (-11.7°F) and Bettles (-11.0°F).

Station	Temperature		
	Observed (°F)	Normal (°F)	Delta (°F)
Anchorage	19.2	26.6	-7.4
Annette	38.0	39.7	-1.7
Barrow	-7.4	-12.7	5.3
Bethel	5.8	15.2	-9.4
Bettles	-6.6	4.4	-11.0
Cold Bay	26.2	30.1	-3.9
Delta Junction	0.0	14.1	-14.1
Fairbanks	-3.0	11.4	-14.4
Gulkana	5.9	15.6	-9.7
Homer	24.1	29.9	-5.8
Juneau	27.4	33.8	-6.4
King Salmon	12.4	24.1	-11.7
Kodiak	28.8	32.8	-4.0
Kotzebue	-7.8	1.1	-8.9
McGrath	2.7	11.6	-8.9
Nome	0.6	10.3	-9.7
St. Paul Island	25.7	24.8	0.9
Talkeetna	18.4	24.9	-6.5
Yakutat	26.2	32.0	-5.8

The highest daily maximum temperature of the First Order Stations for March was 52°F reported at Annette on the 29th. Annette also held the spot for the highest mean temperature for the month at 38.0°F. The lowest temperature of -44°F was observed at Bettles on the 7th. Kotzebue reported the lowest March mean monthly temperature with a value of -7.8°F. Ketchikan set a new daily low on the 10th with 7°F, breaking the 2003 record of 9°F.

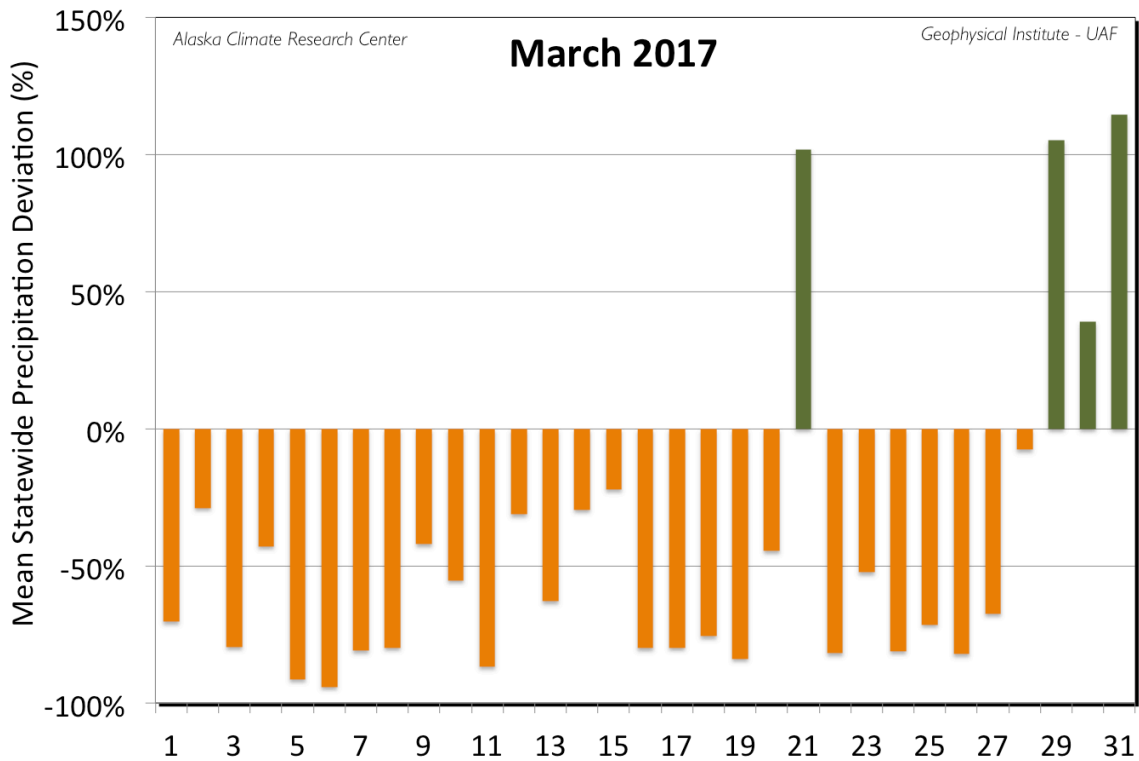


Daily mean temperature deviation from the normal temperature for the mean of the First Order Stations for March 2017.

Precipitation

Breaking the trend of above normal precipitation since December 2016, March's precipitation was decidedly below normal, with the overall precipitation calculated as 33% below the average; this calculation was based on the mean of the deviations in percentage of the First Order Stations. Fourteen of the First Order Stations and 27 days of the month reported below normal values. This is notably drier than March 2016, which reported a precipitation deviation of 18% above normal. The greatest daily precipitation amount occurred on the 31st. The leading station with a greater than normal monthly precipitation amount was Barrow with 0.30", or 233% above normal of 0.09". Delta Junction reported the next greatest deviation with 161% above normal. The driest station was McGrath with just a trace amount of precipitation reported. Cold Bay, Homer, King Salmon, Kotzebue, Nome, St. Paul and Talkeetna all reported less than 10% of their normal precipitation amounts.

Station	Precipitation				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)
Anchorage	0.67	0.60	0.07	12%	112%
Annette	12.00	8.05	3.95	49%	149%
Barrow	0.30	0.09	0.21	233%	333%
Bethel	0.30	0.71	-0.41	-58%	42%
Bettles	0.26	0.58	-0.32	-55%	45%
Cold Bay	0.04	2.70	-2.66	-99%	1%
Delta Junction	0.47	0.18	0.29	161%	261%
Fairbanks	0.17	0.25	-0.08	-32%	68%
Gulkana	0.08	0.30	-0.22	-73%	27%
Homer	0.06	1.65	-1.59	-96%	4%
Juneau	4.44	3.78	0.66	17%	117%
King Salmon	0.05	0.70	-0.65	-93%	7%
Kodiak	0.70	5.53	-4.83	-87%	13%
Kotzebue	0.03	0.44	-0.41	-93%	7%
McGrath	0.00	0.81	-0.81	-100%	0%
Nome	0.01	0.65	-0.64	-98%	2%
St. Paul Island	0.10	1.07	-0.97	-91%	9%
Talkeetna	0.09	1.05	-0.96	-91%	9%
Yakutat	7.36	11.04	-3.68	-33%	67%



Daily mean precipitation deviation from the normal for the First Order Stations for March 2017.

March's highest monthly precipitation total reported for a First Order Station was 12.0" at Annett, while Yakutat reported the highest daily total of 2.30" on the 31st, a new daily record, breaking the old record of 1.58" from 1950. There were a fair number of precipitation records as noted in the table below, most set in the Southeastern portion of the State at the end of the month.

Date	Precipitation Records				
	Station	Element	New Record	Old Record	Year of old Record
03/14/17	Ketchikan	Precipitation	1.77	1.60	1966
03/21/17	Delta Junction	Precipitation	0.34	0.13	1967
03/29/17	Anchorage	Precipitation	0.55	0.15	2001
03/31/17	Annex Creek	Precipitation	1.42	1.36	1988
03/31/17	Auke Bay	Precipitation	1.12	0.82	2000
03/31/17	Juneau	Precipitation	1.01	0.80	2000
03/31/17	Ketchikan	Precipitation	1.91	1.48	1992
03/31/17	Sitka	Precipitation	1.37	1.35	1988
03/31/17	Yakutat	Precipitation	2.30	1.58	1950

Snowfall

March was the first month since October 2016 with below average snowfall across the State. Based on the mean of the deviations from all 15 stations, which measure snowfall, the overall deviation from the normals was 17% below the expected amount. This is nearly identical to the snowfall deviation from March 2016, which had an 18% deficit. Ten of the 15 First Order Stations reported below normal snowfall. Annette had the greatest positive deviation at 338% above its expected amount with a total of 30.2". This is the 2nd snowiest March on record for Annette, behind the record setting March 1971, which reported an astonishing 46.9" of snow. Annette reported snowfall equal to or greater than 1" on 12 days of the month. Juneau reported the greatest snowfall amount for the month of 32.2" (8th snowiest March on record). Yakutat reported the highest one-day snowfall at 10.8" on the 15th. The greatest snow depth was 46" and was reported at Kotzebue during the second half of the month. There were a limited number of snowfall records as noted in the table below. Overall snowpack continued to be lower than normal, but just by around 5%.

Station	Snowfall				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)
Anchorage	10.3	9.9	0.4	4%	104%

Annette	30.2	6.9	23.3	338%	438%
Barrow	2.4	2.1	0.3	14%	114%
Bethel	3.0	8.2	-5.2	-63%	37%
Bettles	4.7	9.3	-4.6	-49%	51%
Cold Bay	0.4	13.0	-12.6	-97%	3%
Fairbanks	3.5	4.9	-1.4	-29%	71%
Juneau	32.2	11.6	20.6	178%	278%
King Salmon	0.2	6.4	-6.2	-97%	3%
Kodiak	1.5	11.3	-9.8	-87%	13%
Kotzebue	0.7	5.9	-5.2	-88%	12%
McGrath	0.0	11.3	-11.3	-100%	0%
Nome	0.9	8.9	-8.0	-90%	10%
St. Paul Island	0.4	8.0	-7.6	-95%	5%
Yakutat	31.7	28.4	3.3	12%	112%

Date	Snowfall Records				
	Station	Element	New Record	Old Record	Year of old Record
03/01/17	Annex Creek	Snowfall	24.4	14.0	1918
03/01/17	Hollis	Snowfall	8.0	0.5	2012
03/12/17	Juneau	Snowfall	7.5	6.3	2010
03/14/17	Juneau	Snowfall	7.2	4.2	1969
03/29/17	Anchorage	Snowfall	8.4	3.4	2001

Newsworthy Events

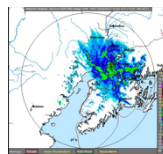
On the 1st of March avalanche reduction efforts were conducted in Atigun Pass on the Dalton Highway. At the same time, work was begun to clear the avalanches that hit the area on February 27th. Those avalanches had hit four semi-trucks. The road was finally opened the next day, but hazardous driving conditions were noted through the Atigun Pass area for the next several days, and avalanche reduction efforts continued in Atigun Pass on the 10th and 11th. Heavy snowfalls were recorded along the Southeastern area of the State on the 1st with Annex Creek reporting over two feet of snow, while Pelican reported a foot. Heavy snowfalls continued the next three days with Hyder reporting 10" of snow on the 2nd, Thorne Bay reporting 6" on the 3rd, and 9.5" on the 4th, while Hollis reported 10" of snow. Debris from multiple avalanches closed the Klondike Highway on the 3rd. Wind gusts up to 79 mph were reported in Thompson Pass on the 2nd, while winds up to 67 mph were creating blizzard conditions at Kaktovik the next day. Winds up to 71 mph were reported at Eldred Rock and 86 mph at Cross Sound on the 6th.

Temperatures plunged in the Interior region on the 6th with Salcha River dropping to -50°F, -47°F was reported at Jim River on the Dalton Highway, -43°F at Smith Lake near Fairbanks,

-42°F at Livingood and Tok and -38°F at Fairbanks Airport. The cold weather greeted the restart of the Iditarod sled dog race, which had moved the race restart from Wasilla to Fairbanks due to poor trail conditions in the Southcentral area. The cold weather continued the next day with the Fairbanks' Airport reporting -38°F again, and that matched the record low for the day set in 1972. Other temperatures occurring around the Interior: -44°F at Bettles and Northway, -41°F at Livingood and Goldstream Creek. The Fairbank's Airport reported -39°F on the 8th, and that was the third latest day for that temperature on record. Other cold temperatures on the 8th: -44°F at Northway, -42°F at Goldstream Creek and -40°F at Bettles. The cold extended across the State with temperatures in the single digits reported down in the Southeast.

More heavy snow impacted the Southeast on the 13th, with more than a foot falling at Juneau, resulting in late school bus service in the area. Other snowfall totals from the storm: 13.5" at Hyder, 9.2" at Pelican, 8" at Haines and 6" at Auke Bay. Snow depth at the Juneau Airport reached 20" on the 15th, and Juneau area boat owners were warned to check their boats due to the heavy snowfalls. The heavy snow also delayed the planned construction on Franklin Street in Juneau. Hazardous driving conditions were reported along portions of the Elliott Highway on the 15th.

On the 17th, twelve hours of daylight was reached at across the State. Anchorage Airport finally hit 32°F on the 20th, third latest date on record to reach freezing. Cold temperatures returned to the Interior on the 24th with -28°F reported at Jim River on the Dalton Highway and Smith Lake near Fairbanks, -27°F at Goldstream Creek, -26°F at Bettles and Fort Yukon, -22°F at Eielson AFB and Fort Wainwright and -20°F at Fairbanks Airport. The continued cold weather at Fairbanks allowed the Ice Park to stay open till April 2nd. The Dalton highway saw more avalanche reduction efforts on the 28th.



This Radar image from March 29th shows the heavy snowfall impacting the Anchorage bowl area. Image courtesy of the Nation Weather Service.

Heavy, record setting, snow fell in the Anchorage area on the 28th and 29th. The storm dropped up to a foot of snow in the Anchorage bowl area. Schools were closed, and numerous vehicle accidents were reported. The heavy snow resulted in avalanche warning for areas of the Southcentral, and avalanche reduction work was performed along the Richardson Highway on the 30th. Heavy rainfall hit the Panhandle on the 31st, and a number of rainfall records were set from Yakutat to Ketchikan.

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.