

Alaska Statewide Climate Summary

March 2016

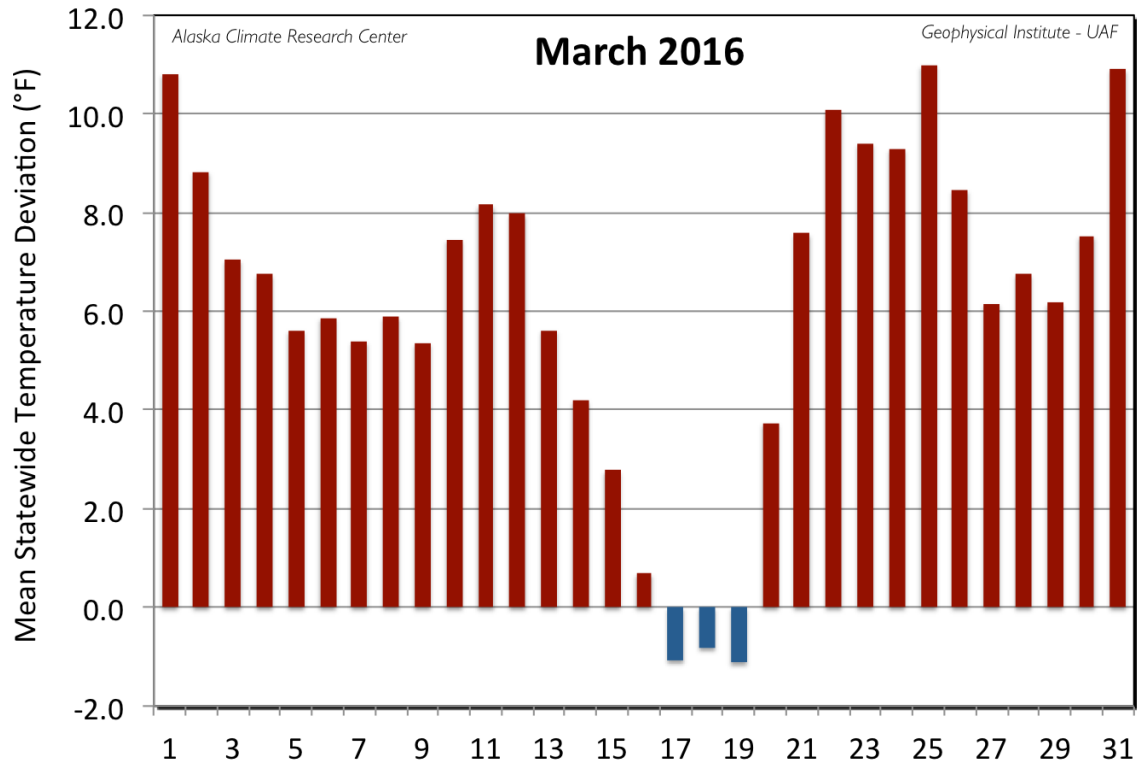
Temperature

March 2016 is the sixth month in a row where temperatures were above normal. The monthly mean temperature of all First Order Stations was 25.4°F, 5.9°F above the normal of 19.5°F. This is 2.9°F above the March 2015 mean of 22.5°F. Monthly mean temperatures were above normal for all 19 First Order Stations. Calculating the mean daily temperatures of the First Order Stations (see Figure), 28 days of the month were above the 30-year normal. The peak positive deviation for the month, an extreme 11.0°F, occurred on the 25th, while the greatest negative deviation occurred on both the 17th and 19th at -1.1°F. On a monthly basis, Delta Junction held the greatest positive deviation from normal with a significant value of 9.8°F above its long-term mean of 14.1°F. Stations following Delta Junction with deviations exceeding 7.0°F were King Salmon (8.8°F), Fairbanks (8.4°F), Gulkana (8.3°F), Bettles (7.4°F) and Homer (7.3°F).

Station	Temperature		
	Observed (°F)	Normal (°F)	Delta (°F)
Anchorage	33.4	26.6	6.8
Annette	42.5	39.7	2.8
Barrow	-7.2	-12.7	5.5
Bethel	21.1	15.2	5.9
Bettles	11.8	4.4	7.4
Cold Bay	32.8	30.1	2.7
Delta Junction	23.9	14.1	9.8
Fairbanks	19.8	11.4	8.4
Gulkana	23.9	15.6	8.3
Homer	37.2	29.9	7.3

Juneau	39.9	33.8	6.1
King Salmon	32.9	24.1	8.8
Kodiak	39.3	32.8	6.5
Kotzebue	3.3	1.1	2.2
McGrath	17.2	11.6	5.6
Nome	11.6	10.3	1.3
St. Paul Island	28.5	24.8	3.7
Talkeetna	31.2	24.9	6.3
Yakutat	39.0	32.0	7.0

The highest daily maximum temperature of the First Order Stations for March was 60°F reported at Annette on the 31st of the month. Annette also held the spot for the highest mean temperature for the month at 42.5°F. The lowest temperature was -28°F at Barrow on the 17th, and Barrow also reported the lowest March mean temperature at -7.2°F.



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

There were quite a number of daily temperature record events once again in March, and like December, January and February, all were high events; either new records or tied events. The winter of 2015-16 is only the second one on record for Fairbanks where the temperatures did not drop below -30°F by the end of March. The only other winter on record where Fairbanks did not reach -30°F is 1976-1977. The daily high in Anchorage of 53°F on the 31st was a daily record, and also the highest temperature for any March day in Anchorage. Sitka set of tied its daily high eleven times in March, which is itself quite a feat. Yakutat had eight record high events, while Juneau and Haines each had six.

A very nice March in Southeast was reflected in a number of new high monthly average temperatures. March was the warmest on record for Juneau at 39.9°F, 0.3°F above the previous record from 1984, for Ketchikan at 43.8°F (43.5°F from 1915), Sitka with 45.1°F (42.5°F from 1984), and Haines at 39.6°F (39.1°F from 1915).

It was the second warmest March on record in Kodiak with 39.3°F after the record of 40.4°F set in 1983. Homer also had its second warmest March (36.8°F) after the 38.0°F observed in 1977. It was the fourth warmest March for Cordova and Bettles, while it was the fifth warmest for Anchorage.

Date	Temperature Records				
	Station	Element	New Record	Old Record	Year of old Record
03/01/16	Sitka	High Temperature	51	50	2015
03/02/16	St. Paul	High Temperature	41	40	2015
03/03/16	Sitka	High Temperature	49	49	1945
03/03/16	St. Paul	High Temperature	35	35	1996
03/03/16	Yakutat	High Temperature	47	47	1957
03/04/16	Sitka	High Temperature	50	50	1957
03/05/16	Juneau	High Temperature	46	46	2005
03/05/16	Sitka	High Temperature	51	49	2008
03/05/16	Yakutat	High Temperature	49	48	1939
03/06/16	Haines Airport	High Temperature	46	45	2015
03/06/16	Juneau	High Temperature	48	46	1941
03/06/16	Yakutat	High Temperature	50	46	1984
03/07/16	Haines Airport	High Temperature	46	45	2005
03/07/16	Sitka	High Temperature	50	49	2005
03/07/16	Yakutat	High Temperature	51	47	1983
03/10/16	Juneau	High Temperature	46	46	1996
03/11/16	Sitka	High Temperature	68	55	1965
03/12/16	Anchorage	High Temperature	46	46	2005

03/12/16	Juneau	High Temperature	50	48	1981
03/12/16	Yakutat	High Temperature	51	49	1983
03/13/16	Anchorage	High Temperature	44	44	1981
03/13/16	Juneau	High Temperature	49	48	2005
03/13/16	King Salmon	High Temperature	49	47	1996
03/14/16	Sitka	High Temperature	70	52	1979
03/15/16	Sitka	High Temperature	64	54	2003
03/20/16	Sitka	High Temperature	57	55	1998
03/21/16	Yakutat	High Temperature	53	53	2004
03/22/16	Anchorage	High Temperature	49	48	1965
03/22/16	Haines Airport	High Temperature	52	51	2006
03/23/16	Anchorage	High Temperature	50	46	2015
03/23/16	Juneau	High Temperature	51	50	2006
03/23/16	Kenai	High Temperature	50	46	1900
03/23/16	Sitka	High Temperature	53	53	1990
03/23/16	Yakutat	High Temperature	53	50	1990
03/23/16	Yakutat	High Temperature	53	50	1990
03/24/16	Anchorage	High Temperature	51	48	2015
03/24/16	Delta Junction	High Temperature	48	48	1998
03/24/16	Haines Airport	High Temperature	53	49	1979
03/24/16	Haines Airport	High Temperature	53	52	1915
03/24/16	Kenai	High Temperature	51	50	1905

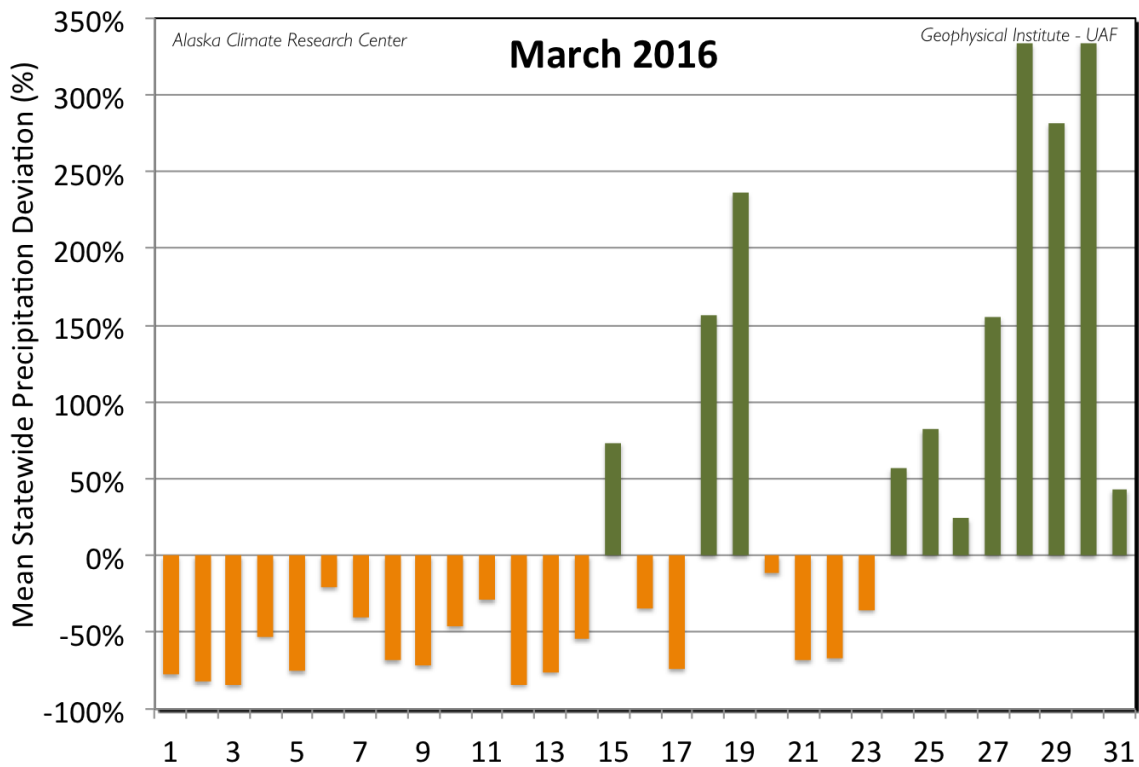
03/25/16	Delta Junction	High Temperature	48	45	1999
03/25/16	Fairbanks	High Temperature	51	50	1999
03/27/16	Cold Bay	High Temperature	47	46	2015
03/29/16	Northway	High Temperature	52	50	1966
03/30/16	Homer	High Temperature	51	49	2015
03/30/16	Northway	High Temperature	49	46	2015
03/31/16	Haines Airport	High Temperature	63	57	1926
03/31/16	Juneau	High Temperature	58	52	1981
03/31/16	Sitka	High Temperature	59	54	1994
03/02/06	Ketchikan	High Temperature	50	50	1970
03/18/06	Ketchikan	High Temperature	53	53	1966
03/30/06	Anchorage	High Temperature	50	49	2015
03/30/06	Annette	High Temperature	58	58	1942
03/31/06	Anchorage	High Temperature	53	50	1993
03/31/06	Cold Bay	High Temperature	49	49	1996
03/31/06	Delta Junction	High Temperature	56	48	1993
03/31/06	Ketchikan	High Temperature	65	60	1942
03/31/06	King Salmon	High Temperature	52	50	1983
03/31/06	Yakutat	High Temperature	57	52	1994

Precipitation

March precipitation was higher than expected, with the overall precipitation calculated as 17% 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 eleven days of the month reported above normal values. There were no days during the month without any measureable precipitation at all of the 19 First Order Stations. It was also the same as March 2015, which had a precipitation total of 17% above normal too. The greatest daily deviation of 334% occurred on the 28th. Nome had the greatest negative deviation from normal, with a total of 0.04", or just 6% of the expected amount of 0.65". The leading station with a greater than normal precipitation amount was King Salmon with 179% above normal. Talkeetna had 172% above normal, while Gulkana observed 147% above normal.

Station	Precipitation				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)
Anchorage	1.23	0.60	0.63	105%	205%
Annette	6.37	8.05	-1.68	-21%	79%
Barrow	0.04	0.09	-0.05	-56%	44%
Bethel	0.75	0.71	0.04	6%	106%
Bettles	0.45	0.58	-0.13	-22%	78%
Cold Bay	1.19	2.70	-1.51	-56%	44%
Delta Junction	0.08	0.18	-0.10	-56%	44%
Fairbanks	0.53	0.25	0.28	112%	212%
Gulkana	0.74	0.30	0.44	147%	247%
Homer	1.09	1.65	-0.56	-34%	66%
Juneau	2.17	3.78	-1.61	-43%	57%
King Salmon	1.95	0.70	1.25	179%	279%
Kodiak	7.34	5.53	1.81	33%	133%
Kotzebue	0.14	0.44	-0.30	-68%	32%
McGrath	1.02	0.81	0.21	26%	126%

Nome	0.04	0.65	-0.61	-94%	6%
St. Paul Island	1.11	1.07	0.04	4%	104%
Talkeetna	2.86	1.05	1.81	172%	272%
Yakutat	9.63	11.04	-1.41	-13%	87%



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

The maximum monthly precipitation total reported for a First Order Station was 9.63" at Yakutat, and Yakutat also reported the highest daily total of 3.07" on the 28th. There were two new daily precipitation records set in Anchorage: The total of 0.23" on the 28th topped the 0.20" from 2005. Then on the 30th the total of 0.10" broke the old record of 0.80" from 2005. Fairbanks received 0.30" water equivalent precipitation on the 29th, breaking the old 1965 record of 0.18".

Snowfall

Snowfall was again unsurprisingly light in March, with 11 of the 15 First Order Stations that measure snowfall reporting below normal amounts. Barrow, McGrath and St. Paul were the only stations reporting above normal amounts. Bettles hit is normal of 9.3". Based on the mean of the deviations from all 15 stations, the overall deviation from the normals was 48% below the expected amount. Like January, and February, Yakutat reported the highest negative deviation in snowfall amount at -27.7" with an actual total of just 0.7". Snowpack averaged about 45% of normal.

Station	Snowfall				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)
Anchorage	10.7	9.9	0.8	8%	108%
Annette	0.0	6.9	-6.9	-100%	0%
Barrow	1.0	2.1	-1.1	-52%	48%
Bethel	2.5	8.2	-5.7	-70%	30%
Bettles	9.3	9.3	0.0	0%	100%
Cold Bay	7.5	13.0	-5.5	-42%	58%
Fairbanks	3.7	4.9	-1.2	-24%	76%
Juneau	0.0	11.6	-11.6	-100%	0%
King Salmon	4.0	6.4	-2.4	-38%	63%
Kodiak	3.6	11.3	-7.7	-68%	32%
Kotzebue	3.7	5.9	-2.2	-37%	63%
McGrath	13.3	11.3	2.0	18%	118%
Nome	0.5	8.9	-8.4	-94%	6%
St. Paul Island	10.9	8.0	2.9	36%	136%
Yakutat	0.7	28.4	-27.7	-98%	2%

McGrath reported the highest total snowfall for any first order station at 13.3", and McGrath also reported the highest one-day snowfall at 6.9" on the 30th. The deepest snowpack was recorded at Kotzebue at 35" during the last week of the month. There were two new daily snowfall records, with one set in St. Paul on the 6th with a total of 3.8", breaking the 190 record of 2.4". On the 19th, Anchorage observed 6.4", breaking the 1979 record of 5.2".

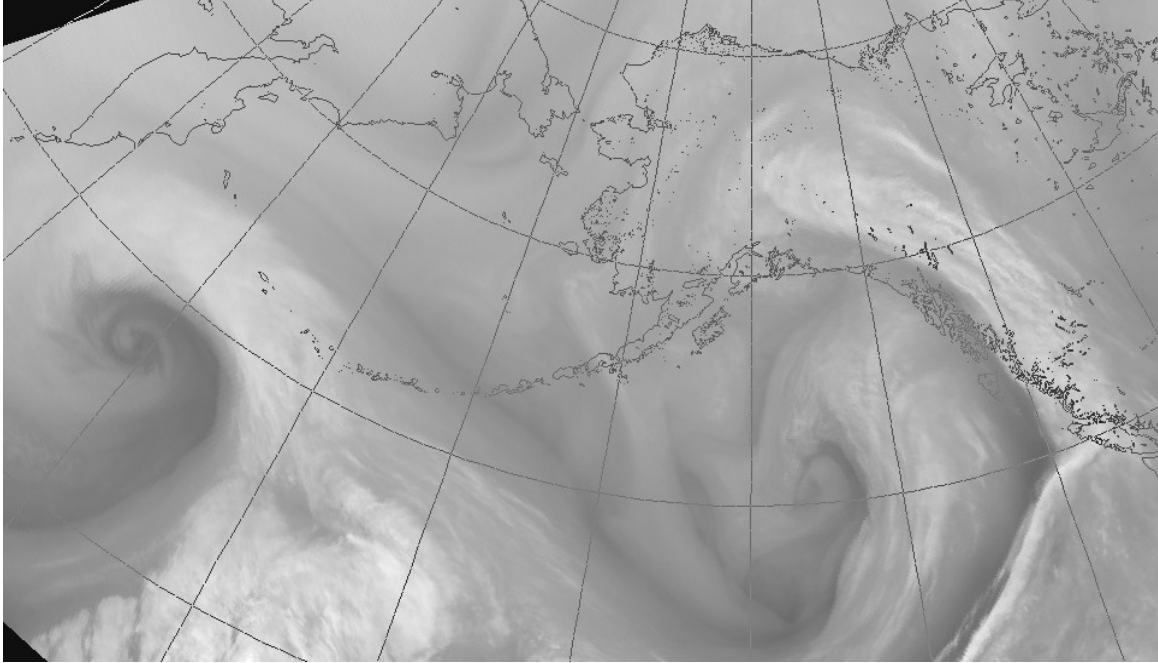
Newsworthy Events

March started out with the second wildfire of the year reported in Mat-Su on the 1st.

Zero visibility and winds up to 35 mph were reported on the Dalton Highway on the 3rd as a blizzard impacted the area. Avalanche reduction efforts were done along the Klondike highway also on the 3rd, while downtown Juneau experienced winds up to 40 mph. With Anchorage having nearly no snow on the ground, the Iditarod Sled Dog Race planned a shortened ceremonial start in Anchorage, while Alaska Railroad was tapped to haul up to 350 cubic yards of snow from Fairbanks for the race start. Snow was finally reported in the Southcentral region on the 4th with the highest snowfall totals of 4" for Seldovia, and 3" for upper Potter Valley. The slush generated treacherous roads that caused more than 50 vehicle accidents in Anchorage on the 4th.

More blizzard conditions on the North Slope on the 7th impaired travel with winds up 40 mph and drifting snow for zero visibility. Travel was not advised along north portions of the Dalton highway, and work slowed on controlling the overflow along the Sag River. Hydaburg reported a wind gust of 61 mph on the 8th. The Eaglecrest ski area canceled its annual its Slush Cup event scheduled for the 10th, and planned to close on the 13th, however it ended up staying open one extra weekend. Avalanche reduction efforts were used on the Dalton Highway on the 13th between mileposts 235 and 250. A winter weather advisory was issued for areas of the Mat-Su for the 16th. Snowfalls totaled up 5" for the areas of Trapper Creek and Moose Creek, while Palmer observer 4". Fairbanks received a 1.8" of snow in the 15th, first snowfall over 1" since November 26th, 2015.

More snowfall on the 19th in Anchorage brought more vehicle accidents, with more than 50 reported. The Eagle River area received totals up to 11" and 6.4" was reported at the Anchorage International Airport. More snowfall in Southcentral area on the 28th resulted in totals of over 4" in Valdez and bringing the snowpack to 30". Avalanche control was performed along the Richardson Highway in Thompson Pass as well as the Parks Highway between mileposts 194 to 321 on the 29th. Mild weather in Southeast allowed the early opening of Montana Creek Road in Juneau on the 30th. The road is normally opened on May 1st. The Salcha wood cutting ice road was closed on the 31st due to deteriorating conditions due to the warmer than normal weather. Klawock, in Southeast reported a high of 71°F on the 31st. This is, preliminarily, the highest temperature ever recorded in Alaska in March, beating the 69°F from Ketchikan set on March 28th, 1915.



This water vapor satellite image from the National Weather Service for the 26th of March shows the weather pattern generated storm warnings for the Aleutian Islands areas.

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.