

Alaska Statewide Climate Summary

March 2015

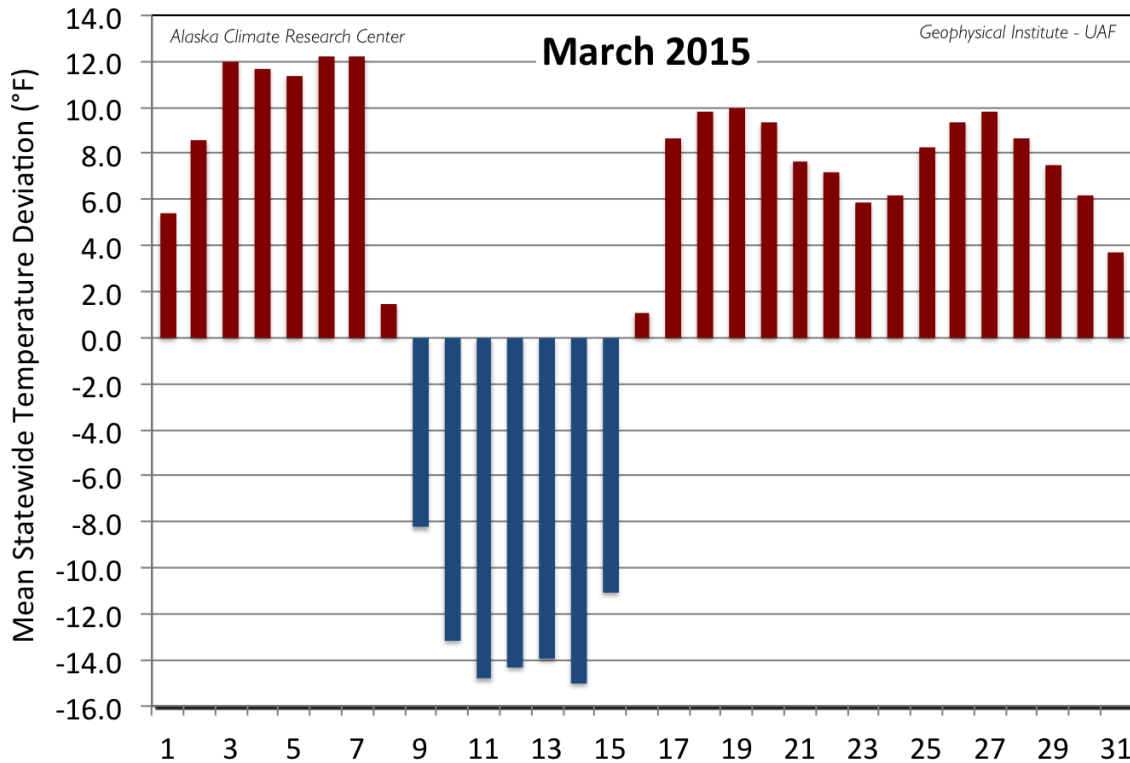
Temperature

The warm temperatures from the end of February continued into March 2015 with temperatures that were above normal for the first week followed by colder than normal temperatures for the next week. Thereafter, the last half of the month experienced above normal temperatures. Overall, it was a warmer than normal in March with 17 of the 19 of the First Order Stations reporting positive deviations. Calculating the mean daily temperatures of the First Order Stations (see Figure), 24 days of the month were above the 30-year normal. The peak warm deviation, a high 12.2°F, occurred on the 6th and 7th of the month, while the coldest deviation was -15.0°F on the 14th. The monthly mean temperature of all First Order Stations was 22.5°F, 3.0°F above the normal of 19.5°F. This is 1.3°F above the March 2014 mean of 21.2°F. Homer held the greatest positive deviation from normal for March at a significant 6.8°F above its long-term mean of 29.9°F. Stations following Homer with positive deviations equal to or exceeding 5°F were: King Salmon (6.3°F), McGrath (6.0°F), Delta Junction (5.8°F), and Bethel (5.3°F). Nome (-3.8°F) and Kotzebue (-3.4°F) were the only stations with a lower than normal monthly mean temperature.

The warmest temperature for the First Order Stations was 56°F reported at Annette on the 22nd and 27th. Annette also reported the highest mean temperature for the month at 43.9°F. The coldest temperature was -43°F at Bettles on the 14th. Barrow reported the lowest March mean temperature at -11.0°F.

Station	Temperature		
	Observed (°F)	Normal (°F)	Delta (°F)
Anchorage	29.7	26.6	3.1
Annette	43.9	39.7	4.2
Barrow	-11.0	-12.7	1.7
Bethel	20.5	15.2	5.3
Bettles	6.3	4.4	1.9
Cold Bay	34.3	30.1	4.2
Delta Junction	19.9	14.1	5.8

Fairbanks	15.5	11.4	4.1
Gulkana	18.5	15.6	2.9
Homer	36.7	29.9	6.8
Juneau	37.1	33.8	3.3
King Salmon	30.4	24.1	6.3
Kodiak	36.6	32.8	3.8
Kotzebue	-2.3	1.1	-3.4
McGrath	17.6	11.6	6.0
Nome	6.5	10.3	-3.8
St. Paul Island	26.8	24.8	2.0
Talkeetna	26.4	24.9	1.5
Yakutat	35.0	32.0	3.0



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

As has been the case throughout this winter, a fair number of daily record temperature events were reported for March, and also like in the previous three months, all were new record highs, with no new lows noted. Most were reported during the warm spell in the second half of the month that set off a string of new highs across the state. Homer had five events set or tied. Anchorage, Bethel, King Salmon all experienced four events.

Date	Temperature Records				
	Station	Element	New Record	Old Record	Year of old Record
03/01/15	Haines Airport	High Temperature	48	43	2010
03/01/15	Yakutat	High Temperature	46	46	1963
03/02/15	Annette	High Temperature	53	50	2003
03/02/15	Bethel	High Temperature	42	41	2003

03/02/15	Homer	High Temperature	49	49	2003
03/02/15	St. Paul	High Temperature	40	40	1996
03/04/15	St. Paul	High Temperature	41	40	1980
03/05/15	Homer	High Temperature	48	45	1984
03/05/15	Kodiak	High Temperature	47	46	1996
03/05/15	Yakutat	High Temperature	45	45	2008
03/06/15	Homer	High Temperature	46	46	2013
03/06/15	St. Paul	High Temperature	42	41	1980
03/07/15	Kodiak	High Temperature	47	47	1984
03/17/15	Anchorage	High Temperature	49	49	1970
03/17/15	Homer	High Temperature	50	50	1944
03/17/15	King Salmon	High Temperature	49	49	2005
03/18/15	Homer	High Temperature	54	47	1981
03/19/15	King Salmon	High Temperature	51	50	1983
03/20/15	Bethel	High Temperature	46	44	1998
03/23/15	King Salmon	High Temperature	51	50	1941
03/24/15	Anchorage	High Temperature	48	47	1974
03/24/15	Bethel	High Temperature	47	46	1974
03/24/15	Port Alexander	High Temperature	51	50	2005
03/24/15	Skagway Airport	High Temperature	52	51	2006
03/25/15	Yakutat	High Temperature	53	51	1981
03/26/15	Fairbanks	High Temperature	52	48	1970

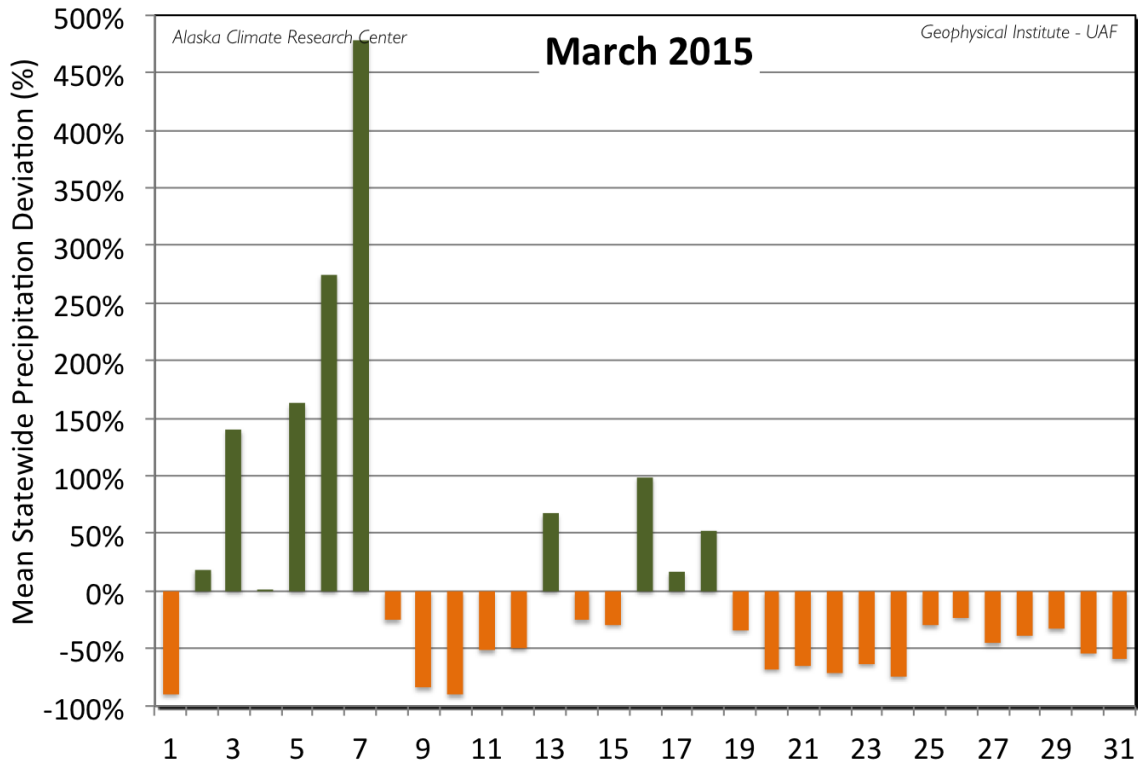
03/26/15	McGrath	High Temperature	47	46	1990
03/27/15	Anchorage	High Temperature	48	48	1996
03/27/15	Bethel	High Temperature	50	47	1954
03/28/15	Bettles	High Temperature	42	39	2010
03/29/15	Annette	High Temperature	53	51	1996
03/29/15	Bettles	High Temperature	42	40	1994
03/29/15	King Salmon	High Temperature	53	51	1996
03/30/15	Anchorage	High Temperature	49	49	1995

Precipitation

Breaking the dry trend from January, and February, March was wetter than normal, 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. Twelve of the First Order Stations and nine days of the month reported above normal values. This is relatively wetter than March in 2014 that had just 69% of normal. The greatest daily deviation of 479% occurred on the 7th, when a storm passed over the Southcentral and Interior portions of the state. On a monthly basis, Barrow had the greatest positive deviation from normal, with a total of 0.28", or 311% above the expected amount of 0.09". Other stations with precipitation greater than 130% of normal were: Fairbanks (196%), King Salmon (136%), Kodiak (136%) and Bettles (134%). Also, like January and February, the leading station with a lower than normal precipitation amount was McGrath with just 17% of normal. Other stations with less than 70% of their normal precipitation were: Delta Junction (61%), St Paul (64%), and Gulkana (67%).

Station	Precipitation				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)
Anchorage	0.77	0.60	0.17	28%	128%
Annette	10.08	8.05	2.03	25%	125%
Barrow	0.28	0.09	0.19	211%	311%
Bethel	0.50	0.71	-0.21	-30%	70%

Bettles	0.78	0.58	0.20	34%	134%
Cold Bay	3.15	2.70	0.45	17%	117%
Delta Junction	0.11	0.18	-0.07	-39%	61%
Fairbanks	0.49	0.25	0.24	96%	196%
Gulkana	0.20	0.30	-0.10	-33%	67%
Homer	1.42	1.65	-0.23	-14%	86%
Juneau	4.52	3.78	0.74	20%	120%
King Salmon	0.95	0.70	0.25	36%	136%
Kodiak	7.53	5.53	2.00	36%	136%
Kotzebue	0.53	0.44	0.09	20%	120%
McGrath	0.14	0.81	-0.67	-83%	17%
Nome	0.70	0.65	0.05	8%	108%
St. Paul Island	0.68	1.07	-0.39	-36%	64%
Talkeetna	1.22	1.05	0.17	16%	116%
Yakutat	10.42	11.04	-0.62	-6%	94%



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 Stations was 10.42" at Yakutat; Annette reported the highest daily total of 2.23" on the 13th. The highest one-day snowfall occurred at Yakutat on the 12th with 9.2". Yakutat also reported the highest monthly snowfall of 27.5". Bettles reported the highest snow depth of 31" on the 7th.

There were a fair number of precipitation record events and almost all were set during the wetter, first third of the month. The precipitation record in Nome on the 6th broke the old record that had been in place since 1926.

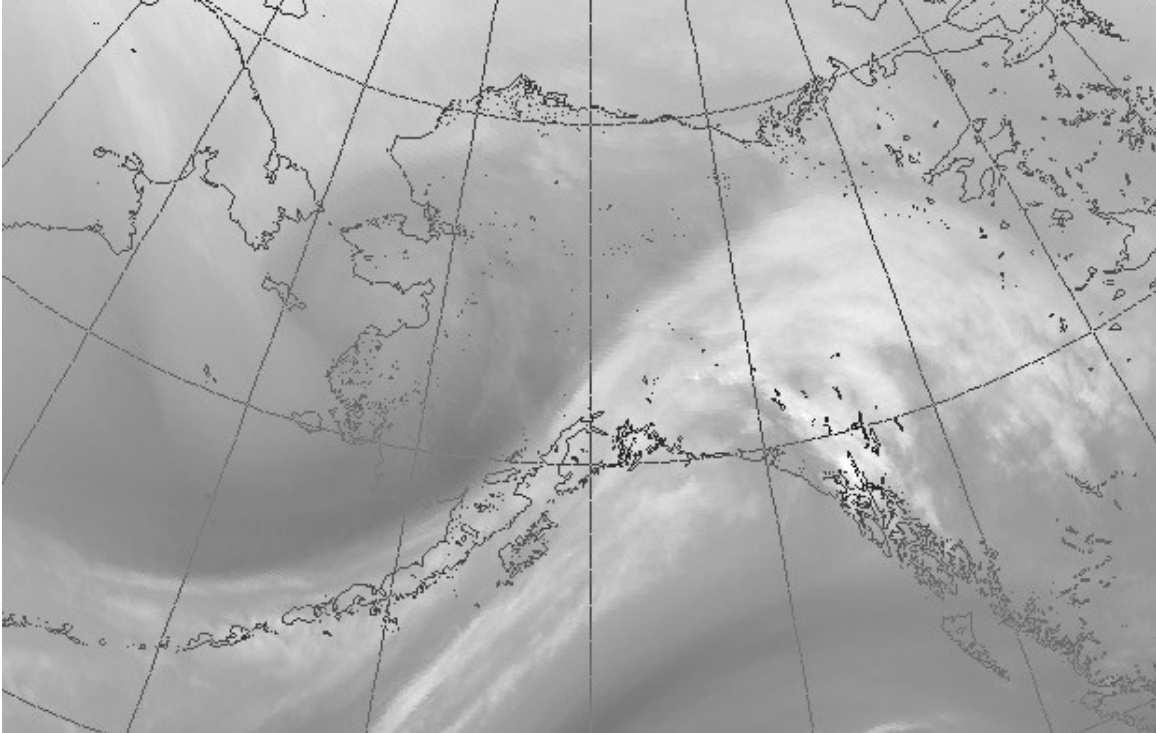
Date	Precipitation Records				
	Station	Element	New Record	Old Record	Year of old Record
03/02/15	Kodiak	Precipitation	1.68	0.88	1968
03/03/15	Barrow	Precipitation	0.10	0.08	1967

03/05/15	Juneau	Precipitation	0.70	0.63	2010
03/06/15	Bettles	Snowfall	3.60	3.50	1955
03/06/15	Kotzebue	Precipitation	0.18	0.15	1976
03/06/15	Kotzebue	Snowfall	1.70	1.50	1976
03/06/15	Nome	Snowfall	5.50	2.20	1954
03/06/15	Nome	Precipitation	0.45	0.24	1921
03/07/15	Anchorage	Precipitation	0.51	0.39	2006
03/07/15	Bettles	Snowfall	6.80	4.70	1991
03/07/15	Fairbanks	Snowfall	4.30	2.70	2012
03/07/15	Fairbanks	Precipitation	0.28	0.17	2012
03/08/15	Annex Creek	Precipitation	1.54	1.47	2012
03/08/15	Auke Bay	Precipitation	1.16	0.92	1982
03/14/15	Cold Bay	Snowfall	3.00	3.00	1964
03/16/15	Homer	Precipitation	0.72	0.50	1981

Snowfall was unsurprisingly light again in March, with eleven of the First Order Stations that measure snowfall reporting below normal amounts. Based on the mean of the deviations from all 15 stations, the overall deviation from the normals was just 80% of the expected amount. Annette reported no snowfall; normal amount for March is 6.9". Bettles had the highest deviation at 173% of its expected amount with a total of 16.1". Mean snow depth was about 34% under the normal. The greater than normal amount of precipitation, but deficiency in snowfall and resulting snow cover is, of course, due to the warmer weather, resulting in a higher percentage of the precipitation falling as rain instead of snow. Anchorage is on track to have the least snowiest winter season on record with just 29.4" of snow. The current record is 30.4" from 1957-58. This was also the second least snowiest March on record for Anchorage, trailing March 1983 that recorded just a trace of snow.

Station	Snowfall				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)

Anchorage	0.2	9.9	-9.7	-98%	2%
Annette	0.0	6.9	-6.9	-100%	0%
Barrow	3.4	2.1	1.3	62%	162%
Bethel	6.8	8.2	-1.4	-17%	83%
Bettles	16.1	9.3	6.8	73%	173%
Cold Bay	5.6	13.0	-7.4	-57%	43%
Fairbanks	8.1	4.9	3.2	65%	165%
Juneau	9.9	11.6	-1.7	-15%	85%
King Salmon	0.3	6.4	-6.1	-95%	5%
Kodiak	1.5	11.3	-9.8	-87%	13%
Kotzebue	5.5	5.9	-0.4	-7%	93%
McGrath	5.2	11.3	-6.1	-54%	46%
Nome	8.8	8.9	-0.1	-1%	99%
St. Paul Island	9.4	8.0	1.4	18%	118%
Yakutat	27.5	28.4	-0.9	-3%	97%



This water vapor satellite image from the National Weather Service shows a storm pushing into Interior and Southcentral Alaska on March 7th. The storm brought snow and rainfall to the region.

Newsworthy Events

March started off with several schools closed in the Mat-Su borough due to icy roads on the 4th and 5th. On the 5th, winter storm warnings for heavy snow were issued for the Southcentral, Interior and western Alaska areas until the 7th. Chulitna reported 16 " from the storm. Also on the 5th, Hatcher pass was closed to motorized vehicles due to lack of snow. Then after the storm, avalanche warnings were issued for the pass and travel in the area was not advised. The storm resulted in the closure of the Steese Highway at Twelve Mile and Eagle Summits due to blowing snow and high winds.

The ceremonial start of the Iditarod slog dog race was held in Anchorage on the 6th with snow trucked in for the sleds as temperatures hovered around 40°F. The official restart on the 8th was moved to Fairbanks due to the lack of snow in Southcentral at much colder temperatures down in the teens. Colder temperatures returned across the state, and Fairbanks bottomed out at -37°F on the 15th.

Volcanic dust and ash from the 1912 eruption of the Novarupta volcano on the Alaska Peninsula covered Kodiak area on the 12th due to high winds. Some flights were canceled. By mid month several bear sightings had been made in the Juneau area, and residents were warned that bears were stirring early.

Blizzard warnings were issued for portions of the Kenai Peninsula on the 15th. This storm dumped up to two feet in the Turnagain Pass area and generated dangerous avalanche conditions. A number of human triggered

avalanches were reported. Unsafe driving conditions were reported on the Dalton Highway on the 16th due to up to 8" of slush from an overflow of water from the Sagavanirktok River around mile 400. An ice dam was constructed to attempt to alleviate the situation and the problem persisted for the rest of the month when an ice jam broke on the 23rd, flooding the roadway again. Also around mid-month the winter moose hunt in Southwest Alaska was extended due to the warm winter. Temperature's soared in the Interior from bone-chilling cold during the second week of the month to near record warmth for the last half of the month. Cold nights and extra warm days resulted in difficult road conditions and increase in road accidents. Winter advisories were issued for Northwestern Alaska on the 20th.

Eaglecrest ski area near Juneau closed early for the season on the 22nd. The warm, dry weather combined with gusty winds prompted fire warnings for the Mat-Su valley area on the 24th, earlier than normal. These warnings were repeated on the 25th. Also on the 24th, snow removal began from the Park Road in Denali National Park. The clearing went quickly and the road was opened on the 31st. Record and near record warm temperatures were recorded for the southern portions of the state starting the week of the 23rd. By the end of the week, the exceptionally warm weather had created a bumper crop of Birch seeds in the Interior areas. The abundance of seeds has been attracting high numbers of birds that feed on them. Two pickup trucks and a bulldozer that tried to assist the trucks that went through the ice on the Kwethluck River on the 30th.

The month ended with blizzard conditions closing the northern portion of the Dalton Highway. This is in addition to the closure of the road near mile 400 as the overflow water from the Sagavanirktok River continued to be a problem.

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.