

Alaska Statewide Climate Summary

April 2016

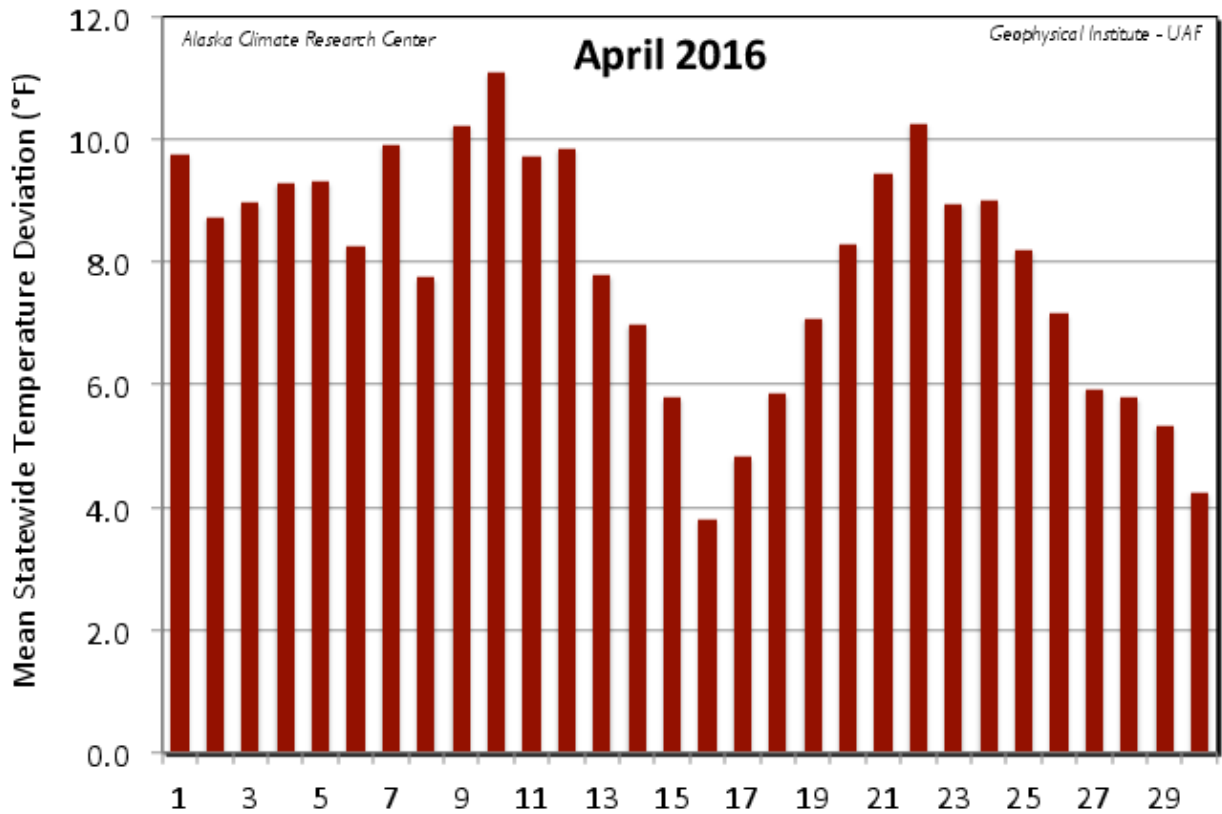
Temperature

April 2016 is the seventh month in a row with temperatures above normal. The monthly mean temperature of all First Order Stations was 38.3°F, a significant 7.8°F above the normal of 30.5°F. This is 4.9°F above the April 2015 mean of 33.4°F. Monthly mean temperatures (see table) were above normal for all 19 First Order Stations. Calculating the mean daily temperatures of the First Order Stations (see Figure), all 30 days of the month were above the 30-year normal. The peak positive deviation for the month, a remarkable 11.1°F, occurred on the 10th. On a monthly basis, Bethel held the greatest positive deviation from normal with an extreme value of 14.6°F above its long-term mean of 14.1°F. Stations following Bethel with deviations exceeding 9.0°F were Nome (13.8°F), Kotzebue (12.2°F), Fairbanks (9.9°F), Delta Junction (9.5°F), King Salmon (9.5°F) and McGrath (9.3°F). Note that the three stations with the highest deviations are located in Alaska's western coastal area.

Station	Temperature		
	Observed (°F)	Normal (°F)	Delta (°F)
Anchorage	43.5	36.8	6.7
Annette	45.6	44.2	1.4
Barrow	10.3	1.8	8.5
Bethel	41.5	26.9	14.6
Bettles	30.5	23.3	7.2
Cold Bay	39.9	34.0	5.9
Delta Junction	41.7	32.2	9.5
Fairbanks	42.4	32.5	9.9
Gulkana	39.2	31.8	7.4

Homer	43.0	37.0	6.0
Juneau	44.9	40.8	4.1
King Salmon	43.2	33.7	9.5
Kodiak	42.2	37.6	4.6
Kotzebue	25.5	13.3	12.2
McGrath	39.0	29.7	9.3
Nome	34.3	20.5	13.8
St. Paul Island	36.1	29.2	6.9
Talkeetna	42.4	35.9	6.5
Yakutat	42.5	37.8	4.7

The highest daily maximum temperature of the First Order Stations for April was 67°F reported at Fairbanks on the 25th of the month. Annette held the spot for the highest mean temperature for the month at 45.6°F. The lowest temperature was -22°F at Barrow on the 1st, and Barrow also reported the lowest April mean monthly temperature at 10.3°F.



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

Once again in April, there were quite a number of daily temperature record events, and like the last four months, all were high events, either new records or tied events. Bethel reported nine new and two tied daily high records in April, which is itself quite an accomplishment. King Salmon and St. Paul each had ten record high events, while Juneau had eight.

Date	Temperature Records				
	Station	Element	New Record	Old Record	Year of old Record
04/01/16	Anchorage	High Temperature	51	51	1995
04/01/16	Delta Junction	High Temperature	52	50	1994

04/01/16	Juneau	High Temperature	58	56	1958
04/01/16	Kenai	High Temperature	52	49	1983
04/01/16	Skagway	High Temperature	60	60	1962
04/02/16	King Salmon	High Temperature	51	50	1935
04/05/16	Delta Junction	High Temperature	51	50	1958
04/06/16	Cold Bay	High Temperature	46	46	1991
04/06/16	McGrath	High Temperature	51	51	2007
04/06/16	Northway	High Temperature	54	59	2012
04/07/16	Anchorage	High Temperature	53	50	2015
04/07/16	Annette	High Temperature	59	59	1990
04/07/16	Homer	High Temperature	52	51	1995
04/07/16	Kenai	High Temperature	51	50	2007
04/07/16	Sitka	High Temperature	56	55	2006
04/08/16	Anchorage	High Temperature	51	51	1990
04/08/16	King Salmon	High Temperature	51	50	1987
04/09/16	Bethel	High Temperature	50	49	2007
04/09/16	King Salmon	High Temperature	54	54	1940
04/09/16	St. Paul	High Temperature	43	41	1981
04/10/16	Delta Junction	High Temperature	54	54	1997
04/10/16	St. Paul	High Temperature	41	41	1981
04/12/16	Anchorage	High Temperature	55	52	1997
04/12/16	Bethel	High Temperature	52	52	1997

04/12/16	Nome	High Temperature	46	43	2004
04/13/16	Anchorage	High Temperature	53	51	2000
04/13/16	Bethel	High Temperature	54	54	1940
04/13/16	King Salmon	High Temperature	59	56	1990
04/14/16	Anchorage	High Temperature	54	51	1965
04/14/16	Bethel	High Temperature	55	53	1940
04/14/16	St. Paul	High Temperature	41	41	2003
04/15/16	King Salmon	High Temperature	58	58	1965
04/16/16	King Salmon	High Temperature	57	53	1996
04/17/16	King Salmon	High Temperature	55	55	1965
04/17/16	St. Paul	High Temperature	41	40	2014
04/18/16	Bethel	High Temperature	51	50	1926
04/18/16	Nome	High Temperature	44	43	2014
04/19/16	St. Paul	High Temperature	43	43	1978
04/20/16	Annette	High Temperature	66	63	2004
04/20/16	Cold Bay	High Temperature	42	42	1983
04/20/16	Kotzebue	High Temperature	42	42	1983
04/20/16	Nome	High Temperature	49	47	2014
04/21/16	Anchorage	High Temperature	58	55	2014
04/21/16	Bethel	High Temperature	58	55	1996
04/21/16	King Salmon	High Temperature	61	57	2014
04/21/16	Nome	High Temperature	50	45	1996

04/21/16	St. Paul	High Temperature	38	35	1967
04/21/16	Yakutat	High Temperature	64	62	1994
04/22/16	Anchorage	High Temperature	56	56	2014
04/22/16	Bethel	High Temperature	57	55	2014
04/22/16	Gustavus	High Temperature	58	56	2014
04/22/16	Homer	High Temperature	53	52	2014
04/22/16	King Salmon	High Temperature	57	56	2008
04/22/16	Sitka	High Temperature	64	62	1979
04/22/16	Sitka Observatory	High Temperature	60	57	2007
04/22/16	Skagway Power	High Temperature	64	64	2008
04/23/16	Bethel	High Temperature	62	60	1996
04/23/16	Fairbanks	High Temperature	66	66	1940
04/23/16	King Salmon	High Temperature	56	56	2014
04/24/16	Bethel	High Temperature	63	59	1938
04/24/16	Delta Junction	High Temperature	63	62	1994
04/24/16	McGrath	High Temperature	64	60	2007
04/24/16	St. Paul	High Temperature	46	43	1979
04/25/16	Bethel	High Temperature	59	56	1998
04/25/16	Cold Bay	High Temperature	53	49	1998
04/25/16	St. Paul	High Temperature	46	45	1979
04/26/16	McGrath	High Temperature	63	62	1958
04/26/16	Nome	High Temperature	52	52	1940

04/26/16	St. Paul	High Temperature	45	43	2004
04/27/16	St. Paul	High Temperature	38	37	1958
04/28/16	Bethel	High Temperature	60	58	1940
04/28/16	Nome	High Temperature	50	49	1953

The exceptional warmth of the month is also demonstrated in the number of new record high monthly mean temperatures, which are listed in the table below. St. Paul tied the monthly high for April with 36.1°F, originally set in 1979. Note that both Juneau and Sitka also set new monthly highs for March 2016.

Station	Monthly High Temperature Records			
	New Record	Old Record	Difference	Year of old Record
Anchorage	43.5	40.7	2.8	2015
Bethel	41.5	39.8	1.7	1940
Delta Junction	41.7	40.3	1.4	1993
Gulkana	39.2	36.5	2.7	1980
Homer	42.9	41.9	1.0	2015
Juneau	44.9	44.4	0.5	1993
Kenai	42.3	40.5	1.8	1904
King Salmon	43.2	42.0	1.2	1940
Kotzebue	25.5	24.9	0.6	2004
McGrath	39.0	38.8	0.2	2007
Northway	39.4	37.5	1.9	1995
Sitka	46.9	46.0	0.9	1993

Skagway	45.3	45.1	0.2	1958
Talkeetna	42.4	40.7	1.7	1940

It was the second warmest April on record in Fairbanks with 42.4°F after the record of 43.7°F set in 1940. Nome also had its second warmest April (34.3°F) after the 35.6°F observed in 1940. Similar for Cold Bay (39.9°F) the temperature is second to 40.8°F set in 1979. Kodiak's record high of 44.1°F also from 1979 is 1.9°F warmer than this April. Ketchikan had its second warmest April with 47.3°F after the record of 48°F from 1940. Finally Dutch Harbor rounds out the stations with their second warmest April with 40.6°F, just under 40.7°F from 2003.

It was the third warmest April for Barrow and Cordova, and the fourth warmest for Yakutat. Haines and Bettles each had their fifth warmest Aprils on record.

Looking back at the first four months of 2016, many stations set record high average mean temperatures for first third of a calendar year. The table below delineates those stations.

Station	Jan-April High Mean Temperature Records			
	New Record	Old Record	Difference	Year of old Record
Anchorage	33.5	31.8	1.7	1981
Barrow	-0.4	-3.6	3.2	2014
Bethel	26.5	23.9	2.6	1981
Cordova	38.2	37.5	0.7	1926
Haines Airport	38.1	37.3	0.8	1926
Homer	37.1	35.5	1.6	2015
Juneau	39.3	38.3	1.0	1977
Kenai	33.6	32.0	1.6	1981

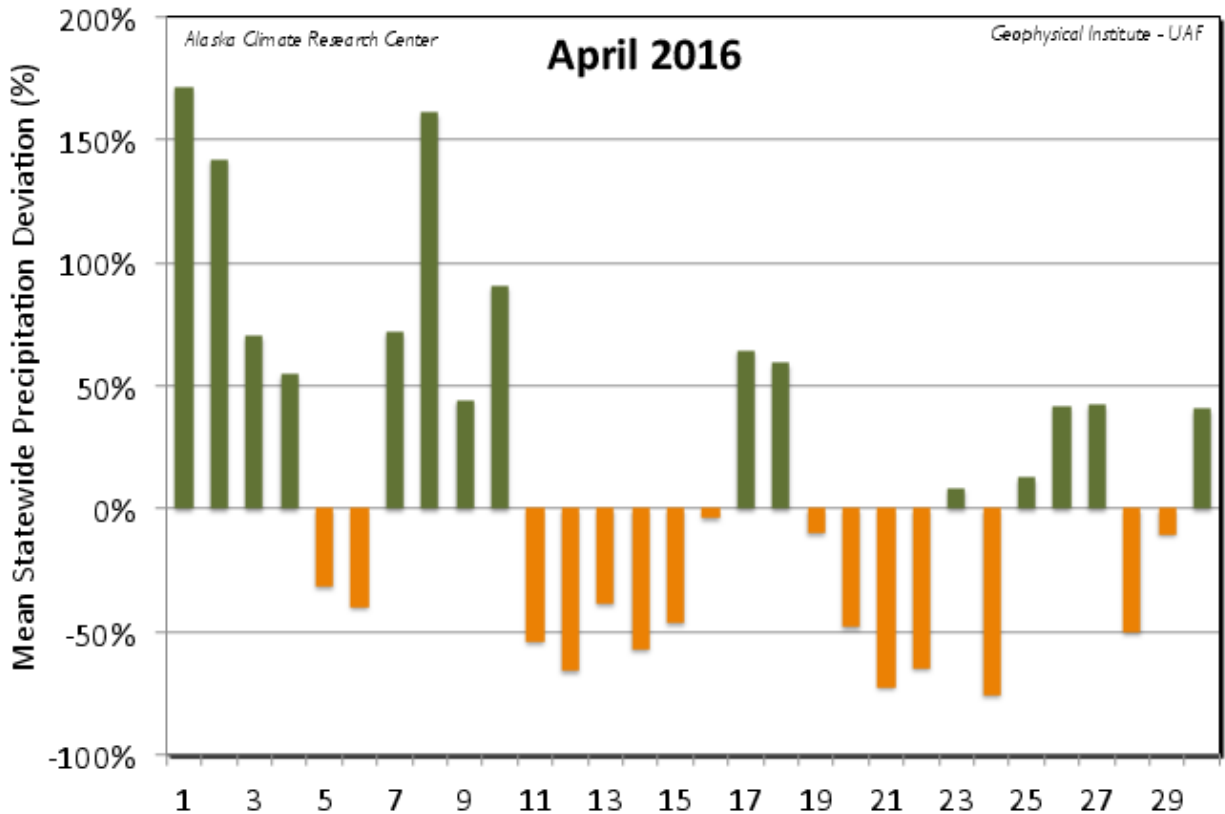
Ketchikan	43.5	43.3	0.2	1988
King Salmon	35.8	30.6	5.2	1981
Kodiak	38.5	38.4	0.1	1981
Nome	20.5	18.9	1.6	2014
Northway	14.6	10.3	4.3	1981
Sitka	44.6	41.5	3.1	1981
Talkeetna	31.9	31.1	0.8	2003

Precipitation

April's precipitation was marginally higher than expected, with the overall precipitation calculated as 3% above 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 15 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. This is considerably drier than April 2015, which had a precipitation total of 28% above normal. The greatest daily deviation of 171% occurred on the 1st. The leading station with a greater than normal precipitation amount was Annette with 78% above normal. Homer and Juneau both had 76% above normal, while Anchorage was the relatively driest station at just 4% of normal precipitation observed. This is the third lowest precipitation for April in Anchorage on record, while it was the 5th highest April on record for Juneau.

Station	Precipitation				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)
Anchorage	0.02	0.47	-0.45	-96%	4%
Annette	12.04	6.77	5.27	78%	178%
Barrow	0.07	0.16	-0.09	-56%	44%

Bethel	0.67	0.74	-0.07	-9%	91%
Bettles	0.43	0.60	-0.17	-28%	72%
Cold Bay	3.04	2.42	0.62	26%	126%
Delta Junction	0.13	0.23	-0.10	-43%	57%
Fairbanks	0.52	0.31	0.21	68%	168%
Gulkana	0.23	0.24	-0.01	-4%	96%
Homer	1.88	1.07	0.81	76%	176%
Juneau	5.16	2.94	2.22	76%	176%
King Salmon	0.85	0.97	-0.12	-12%	88%
Kodiak	8.90	5.81	3.09	53%	153%
Kotzebue	0.60	0.54	0.06	11%	111%
McGrath	0.42	0.74	-0.32	-43%	57%
Nome	0.80	0.76	0.04	5%	105%
St. Paul Island	1.20	1.08	0.12	11%	111%
Talkeetna	0.40	1.29	-0.89	-69%	31%
Yakutat	9.90	9.19	0.71	8%	108%



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

The maximum monthly precipitation total reported for a First Order Station was 12.04" at Annette, and Annette also reported the highest daily total of 2.15" on the 17th. There were four new daily precipitation records of note: At Fairbanks on the 3rd, with 0.12" measured, breaking the old 1967 record of 0.09". Also on the 3rd Kotzebue observed 0.18", just topping the 0.17" from 1972. The total of 0.89" observed in Juneau on the 17th topped the 0.63" from 1983. Then on the 23rd the total of 1.34" measured in Kodiak broke the old record of 0.97" from 1940.

Snowfall

Like every month since November 2015, snowfall was light in April, with twelve of the 15 First Order Stations that measure snowfall reporting below normal amounts. Kotzebue (208%), Fairbanks (128%) and Bettles (111%) were the only stations reporting above normal amounts. Based on the mean of the deviations from all 15 stations, the overall deviation from the normals was 42% below the expected amount. Snowpack averaged about 33% of normal.

Station	Snowfall				
	Observed (in)	Normal (in)	Delta (in)	Delta (%)	(%)
Anchorage	0.0	4.0	-4.0	-100%	0%
Annette	0.0	1.4	-1.4	-100%	0%
Barrow	1.2	3.2	-2.0	-63%	38%
Bethel	0.4	5.7	-5.3	-93%	7%
Bettles	7.0	6.3	0.7	11%	111%
Cold Bay	0.7	6.6	-5.9	-89%	11%
Fairbanks	3.7	2.9	0.8	28%	128%
Juneau	0.0	1.1	-1.1	-100%	0%
King Salmon	0.0	3.9	-3.9	-100%	0%
Kodiak	0.0	8.0	-8.0	-100%	0%
Kotzebue	10.6	5.1	5.5	108%	208%
McGrath	1.6	5.1	-3.5	-69%	31%
Nome	6.1	7.5	-1.4	-19%	81%
St. Paul Island	0.9	5.7	-4.8	-84%	16%
Yakutat	0.0	10.2	-10.2	-100%	0%

Kotzebue reported the highest total snowfall for any First Order Station at 10.6" and Kotzebue also reported the highest one-day snowfall at 4.6" on the 3rd, a new daily record, breaking the previous record of 3.6" from 1972. One other daily snowfall record was set in Fairbanks also on the 3rd with 2.3", topping the old 1970 record of 1.4". The deepest snowpack was recorded at Kotzebue at 45" on the 4th.

Newsworthy Events

As an early breakup began across the Interior, members of the public were asked to stop using Interior logging roads at the start of the month. The public was also warned about unsafe ice conditions on Interior rivers. On the 4th hazardous driving conditions were reported on the Dalton Highway for blowing snow, poor visibility and high winds, and similar conditions were reported two and three days later also for the Dalton Highway. On the 7th a small wildfire was fought at McHugh Creek above Seward Highway.

On the 8th the Denali Park Road was opened to mile 30, the earliest opening since 2010, due to the early snowmelt. Poor visibility also forced the Arctic Man race to call off races on the 8th. The same day geese were spotted at Clearwater Lake near Delta Junction, and then two days later geese and swans were reported at Creamers Field in Fairbanks.

The Taylor Highway was opened to Eagle on the 11th, however the Top of the World Highway towards Canada remained closed. The same day hazardous conditions due to blowing snow the Dalton Highway were reported. Similar conditions were reported along portions of the Dalton Highway over the next four days. The second brown bear of the year in the Fairbanks area was spotted awake in on the 13th. Fish and Game has reported the bears are awake early this spring due to the warm conditions. On the 17th firefighters were fighting a small wildfire near Palmer that was discovered the day before. It was described as nearly contained on the 19th. Also on the 19th, driving conditions on portions of the Dalton Highway again deteriorated to hazardous due to blowing snow. Similar conditions persisted for the next three days.

Break up began on the middle Kuskokwim River on the 20th, earliest on record. The ice went out on the Tanana River at Nenana on the 23rd, according to the Nenana Ice Classic. This is the second earliest end to the annual guessing game in 100 years. The earliest is April 20th.

Avalanche reduction was performed between mileposts 241 to 247 of the Dalton Highway on the 26th. The same day the ice on the Yukon River broke up at Eagle, the earliest on record. This resulted in an ice jam downstream, and flood advisories were issued in Eagle as a result. Flooding into roads, and yards was reported at Eagle on the 28th. The water level started dropping the next day as the ice jam broke up.

The Steese highway was closed for part of the 28th at mile 138 due to water across the road. The Yukon River broke up at Circle on the 29th, while the Koyukuk River broke up at Bettles the next day. Water was reported flowing over the Dalton Highway at mile 57 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.