



Weather and Climate



Western Arctic Parklands Spring 2013 Weather Summary

Was spring 2013 normal for Kotzebue?

It was a cold spring...3.1° F colder than normal, with little snow in March and April, and quite a bit more snow than normal in May.

Records - Spring 2013

April 5: 23°F highest minimum temperature for this date on record.

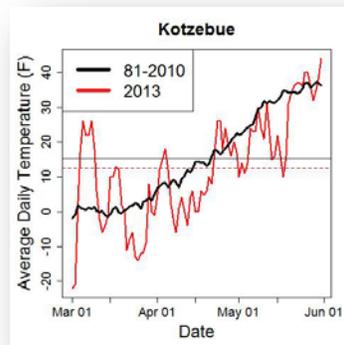
May 17: 18°F lowest maximum temperature for this date on record.

May 17 & 18: 3°F & 2°F lowest minimum temperatures for these days on record.

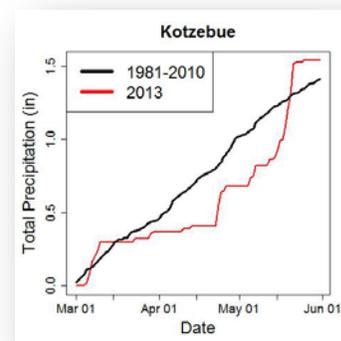
May 20: 1.1 inches of snow. Record snowfall total for this date.

Kotzebue was one of the few locations in Alaska where the average temperature for March was above normal. The average monthly temperature was 1.6°F, 0.5 degrees warmer than normal. Temperatures started out well below normal, then climbed way above normal, and then dropped below normal for the latter part of the month. There was 3.7 inches of total snowfall for the month, which is 63% of normal and equal to about 0.37 inches of water. Temperatures cooled in April, every weather station in the state reported colder than normal temperatures for the month. The average temperature for Kotzebue was 9.4° F, 3.9 degrees F colder than normal. It remained relatively dry through April with a total monthly snowfall of 3.1 inches, 61% of normal. May was cold and there was quite a bit more snow than normal. The temperatures were cold through most of May and only rose above normal during the last few days of the month. The average monthly temperature was 26.4° F; 5.5° F colder than normal. Two new minimum daily temperature records were set on May 17 and 18. The total snowfall for May was 6.3 inches, 525% of normal. This little bump of snow brought the 2012-2013 season total to 37.4 inches (since July 1). This is 71% of the normal annual total snowfall for Kotzebue.

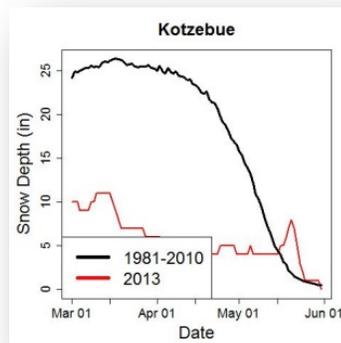
Kotzebue – Average Air Temperatures



Kotzebue – Cumulative Precipitation



Kotzebue – Cumulative Snow Depth



Western Arctic Parklands Weather Summary Spring 2013

Kotzebue Weather Records:
 Climate Normal Period 1981 – 2010
 Climate Record Period 1897 – 2013

Temperature

Spring 2013	Average Monthly Temp °F	1981-2010 Normal °F	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
March	1.6	1.1	+0.5	30 / Mar 8, 9	-35 / Mar 2
April	9.4	13.3	-3.9	33 / Apr 24	-16 / Apr 8
May	26.4	31.9	-5.5	52 / May 31	0 / Amy 1

Spring Season Temperature Departure from Normal: -3.1°F

Precipitation

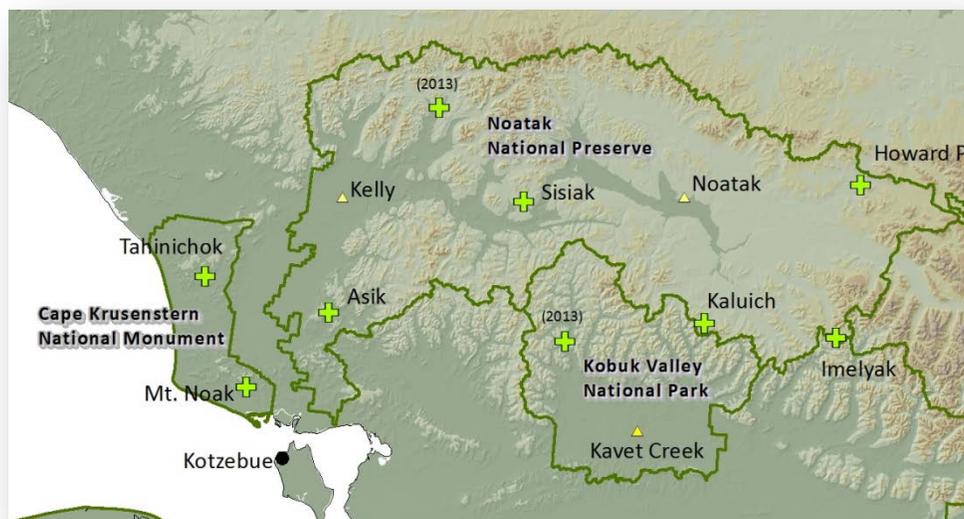
Spring 2013	Total Monthly Precip in.	1981-2010 Normal in.	Departure from Normal in.	Greatest 24-hr total in. / Date	# Days with ≥ 0.01 in. Water
March	0.37	0.44	-0.07	0.99 / Mar 7	9
April	0.31	0.54	-0.23	0.14 / Apr 23	5
May	0.86	0.41	0.45	0.21 / May 21	14

Spring Season Precipitation Departure from Normal: +0.05 inches

Snowfall

Spring 2013	Total Monthly Snowfall in.	1981-2010 Normal in.	Departure from Normal in.	Greatest 24 – hr snowfall total in. / Date	Cumulative since 1-July in.	Normal Snowfall from July 1 in.
March	3.7	5.9	-2.2	0.7 / Mar 8	28.0	47.7
April	3.1	5.1	-2.0	1.4 / Apr 23	31.1	52.0
May	6.3	1.2	5.1	1.1 / May 20	37.4	53.0

We now have additional NPS climate stations in Cape Krusenstern, Noatak, and Kobuk Valley that complement existing National Weather Service stations at Kotzebue and along the Kobuk River to the south. The new NPS stations will provide critical data on high elevation sites in the Arctic and will help characterize the climate gradients and patterns affecting resources in the Western Arctic parklands.



Western Arctic Parklands Weather Summary Spring 2013

Arctic Network RAWS weather summaries – Spring 2013:

Park	Site	Elev. ft.	Avg Temp °F			Spring Avg Temp °F	Extremes °F		Peak Wind mph	High T - Low T °F *
			Mar	Apr	May		High	Low		
CAKR	Mt. Noak	809	5.0	12.9	27.0	15.0	59	-16	38	75
	Tahinichok	966	4.5	m	m	--	m	-16	48	--
NOAT	Asik	1329	6.9	13.3	26.4	15.5	61	-15	54	76
	Kelly	382	6.8	15.3	32	18.0	66	-19	35	85
	Sisiak	1823	3.3	7.9	24.4	11.9	61	-20	43	81
	Noatak	985	-3.3	4.4	28.6	9.9	72	-28	50	100
	Kaluich	2486	2.1	4.5	26.8	11.1	56	-25	60	81
	Imelyak	3569	5.1	6.6	21	10.9	56	-23	47	79
KOVA	Kavet Creek	235	6.8	16.7	35.9	19.8	73	-22	37	95

* Difference between the high and low temperature for the season

Interesting notes from RAWS stations:

- The north-south temperature gradient is apparent between Noatak (RAWS), Kaluich, and Kavet Creek – cold in the low Noatak River valley, warmer in the hills to the south of the river, and significantly warmer in the lowlands south of the Brooks Range.
- Asik had the highest maximum wind speed for the spring season at 60 mph. The wind blows predominantly out of the northwest at this site and is only calm ~ 9 % of the time.
- The winter inversions start to break down in spring as the solar radiation increases, this is especially evident in the average temperatures for both April and May.



Kaluich climate station in Noatak

Connecting Further

Previous weather summaries and other climate monitoring documents on the [Arctic Network web portal](#)

Access near real-time data from [Western Regional Climate Center](#) and [MesoWest](#)

Check out the Jul-Aug-Sep weather outlook from the [NOAA Climate Prediction Center](#)

Statewide summary of weather highlights in the latest [Alaska Climate Dispatch](#) from the Alaska Center for Climate Assessment and Policy

[Maps](#) of projected temperature and precipitation changes for the WEAR parks.

For more information contact:

Pam Sousanes or Ken Hill

Arctic Inventory and Monitoring Network

pam_sousanes@nps.gov; kenneth_hill@nps.gov

907.455.0677

907.455.0678

Please Note: The summarized data are preliminary and have not undergone final quality control. Therefore, these data are subject to revision.