



Bering Land Bridge N Pres. • Cape Krusenstern NM
Gates of the Arctic NP & Pres. • Kobuk Valley NP • Noatak N Pres.

Spring 2023

Weather & Climate Summary Bering Land Bridge National Preserve Spring 2023

Sledge Island, May 22, 2023. NPS Photo/Ken Hill

Nome Spring 2023 Weather Summary

Weather observations have been recorded in Nome since 1907 and this location is used as an index site for climate comparisons in Bering Land Bridge National Preserve. We'll look at spring conditions in respect to the latest climate normal period, 1991-2020, and highlight data from a few of the Arctic Inventory and Monitoring Network (ARCN) climate sites for the spring season.

Overall, spring was cooler and wetter than normal. Weather highlights for the season include a snowy March and a cold April. The average temperature for the 2023 spring season was 17.9°F, which is 5.3°F below the 1991-2020 normal. It was the coldest spring since 1999. Spring precipitation (melted snow and rain) totaled 3.69 inches, which is 156% of normal. Most of that spring precipitation fell as snow in March (Table 1 and 2, Figures 1 and 2).

March

Both the average temperature and the monthly precipitation total were above normal for March. The average monthly temperature was 0.9°F above normal at 10.5°F. Temperatures were well above normal during a series of early March storms that brought heat and moisture directly from the tropics to the Arctic. See the March Blizzard section for more details. The total precipitation (melted snow and rain) was 2.62 inches, well above the normal 0.74 inches. March is tied with April for the typically driest months of the year in Nome.

April

April was colder than March! April temperatures were much colder than normal, and the precipitation was below average. It was the third coldest April on record with a monthly average temperature 14.3°F colder than normal. It was especially cold between April 5 and 14 where the daily temperatures averaged 27°F colder than normal. New record low temperatures were

noted on April 8th, 10th, and 13th. The -30°F temperature on April 8 was a record low for April (tied with 1918 and 1968). For a dry month, this April was even drier than normal. The total monthly precipitation of 0.48 inches was 65% of normal.

May

Although temperatures moderated a bit in May they were still cooler than normal. The May precipitation followed suit and continued to be below normal. The daily high temperatures started to climb into the low 50s mid-month, but a cold front moved in the last few days of the month with highs only in the mid-30s to 40s. The average temperature for the month was 34.9°F, 2.4°F below normal. May precipitation totaled 0.59 inches, which is ~66% of normal.

Table 1. Nome spring 2023 average monthly temperatures compared to the 1991-2020 normal.

Spring 2023	Average Monthly Temp (°F)	1991-2020 Normal (°F)	Departure from Normal (°F)
March	10.5	9.6	+0.9
April	8.4	22.7	-14.3
May	34.9	37.3	-2.4

Spring Temperature Departure from normal: -5.3°F

Table 2. Nome spring 2023 monthly precipitation totals compared to normal

Spring 2023	Total Monthly Precip. (in.)	1991-2020 Normal (in.)	Departure from Normal (in.)
March	2.62	0.74	+1.88
April	0.48	0.74	-0.26
May	0.59	0.89	-0.30

Spring Precipitation Departure from normal: +1.32 in. (156% of normal).

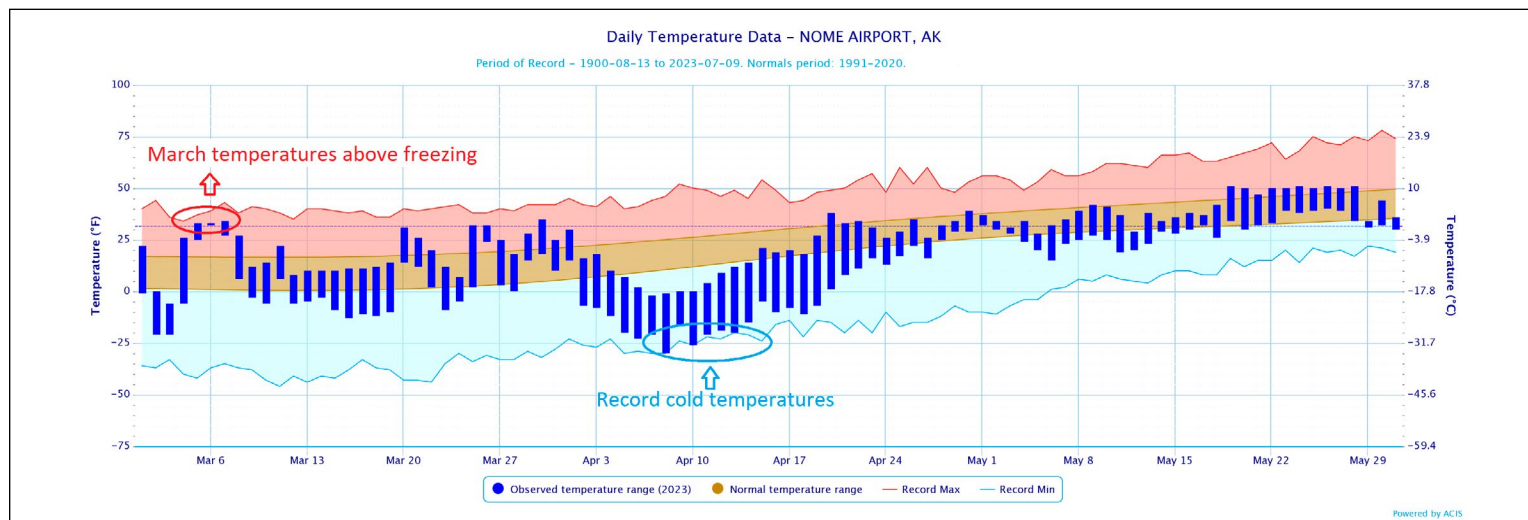


Figure 1. Spring 2023 daily temperatures at Nome showing record maximum (red), record minimum (blue), normal (brown) and observed range (blue bars). Data from: <http://xmacis.rcc-acis.org/>.

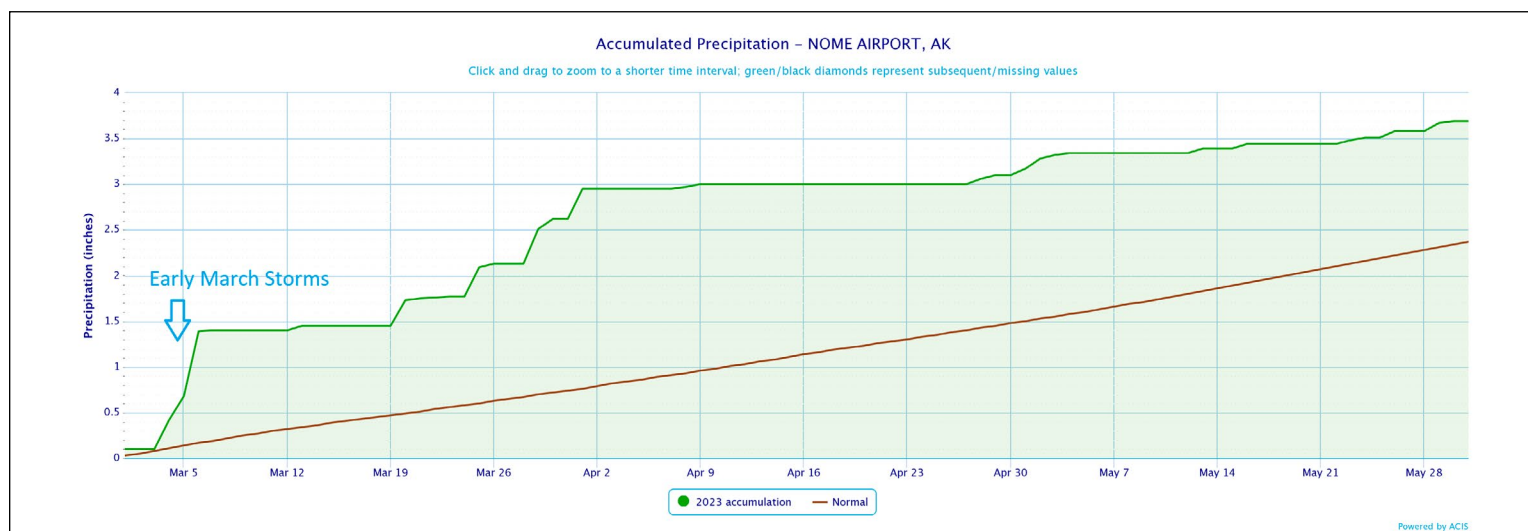


Figure 2. Spring 2023 accumulated precipitation at Nome (green) compared to normal (brown line). Data from: <http://xmacis.rcc-acis.org/>.

March Blizzards

Back-to-back blizzards pummeled the Seward Peninsula in early March. These were warm, wet storms that brought considerable snow and rain (Figure 3). The total precipitation (melted snow and rain) between March 4 -7 was 1.29 inches, with more than 0.71 inches falling on March 6, a new daily record. These are wet winter days, considering that the normal monthly total is 0.74 inches. The daily maximum temperatures at Nome were above freezing March 5-7. Read more about the March storms in the Alaska and Arctic Climate Newsletter [here](#).

Storms in March 2023 produced a total of 2.62 inches of precipitation (rain and melted snow). This is the third highest March precipitation total since observations began in 1907. More notably, this is the fifth March since 2018 to have more than double the normal precipitation in March. Overall declines in sea ice extent and warmer ocean waters are likely contributing factors for these intense early spring storms in western Alaska.

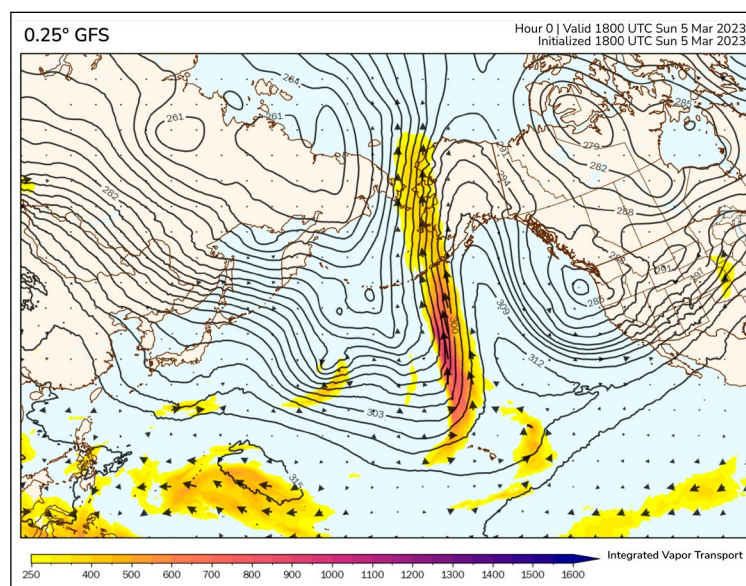


Figure 3. This graphic shows the plume of moisture (reds and yellows) that hit western Alaska on March 5 causing blizzard conditions in northwest Alaska. Graphic from <https://alaskaclimate.substack.com/>.

Cold April Statewide

Temperatures were below normal across most of Alaska in April with the coldest temperature departures in northwest Alaska and the northern Interior. On April 10th, the Pargon Creek Snotel site, northeast of Nome, recorded a low temperature of -43°F, the coldest temperature reading for Alaska that week. The cold April temperatures led to an increase in Bering Sea ice extent after a precipitous decline from the warm, wet storms in March (Figure 4).

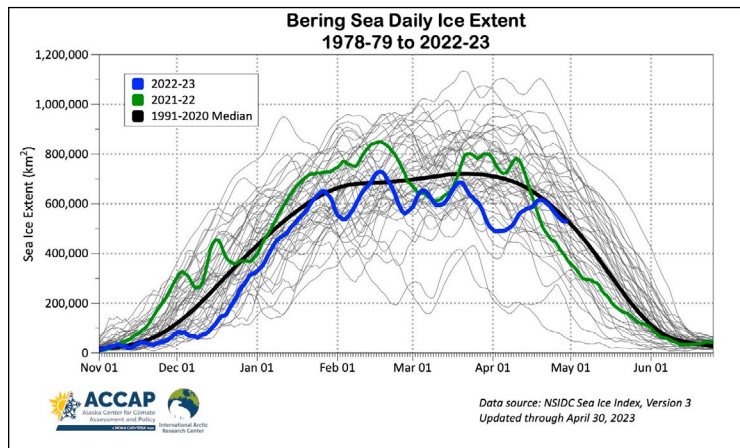


Figure 4. Bering Sea Ice Extent November through late April 2023 (blue line), compared to normal (black line), and last year (green line). The ice extent increased in April with colder temperatures. Data from [NSIDC](#) and graphic courtesy of [ACCAP/Rick Thoman](#).

Arctic Inventory and Monitoring Network Climate Stations

We monitor weather and climate in Bering Land Bridge National Preserve to help understand daily, monthly, and seasonal weather patterns and shifting climate averages (Figure 5). We track the weather extremes that cause disturbance such as drought, floods, heat waves, cold snaps, and high winds. The data are collected and analyzed along with other park 'vital signs' to provide a holistic view of how high latitude national park lands are changing. Here are a few spring highlights from the Pargon Creek Snotel (blue diamond on map below) and Serpentine Hot Springs sites:

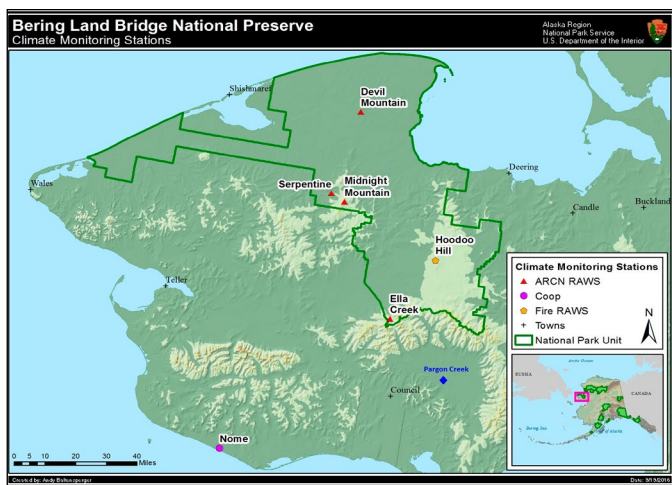


Figure 5. Arctic Inventory and Monitoring Network climate stations in Bering Land Bridge National Preserve.

Pargon Creek Snotel

A snow telemetry or 'Snotel' site is located 20 miles south of Bering Land Bridge and 19 miles northeast of Council (blue diamond on the location map in Figure 5). This site is the closest site to Bering Land Bridge that records year-round snow and precipitation data (Figure 6). At Pargon Creek, the peak snow depth for the 2022-2023 season was 26 inches and reached that depth on April 3rd. As of June 1, a total of 9.4 inches of precipitation had fallen at the site since the start of the water year on October 1. In comparison Nome had 11.98 inches of water equivalent since October 1, normal is 8.49 inches.



Figure 6. Pargon Creek Snotel site south of Bering Land Bridge National Preserve.

Serpentine Hot Springs Climate Station

It was the coldest April to date at the Serpentine Hot Springs climate station. The average monthly temperature was 4.8°F, which is 12.6°F degrees cooler than the 12-year average (Figure 7). When we started monitoring at this location the April monthly temperatures were warming fast but have since moderated. La Niña conditions persisted for three years from 2020-2023. This tropical ocean pattern brought a reprieve of cooler temperatures to Alaska. That has come to an end. El Niño conditions have developed with warmer-than-average tropical sea surface temperatures. El Niño is forecast to continue into winter and these conditions typically favor warmer than average temperatures in western Alaska.

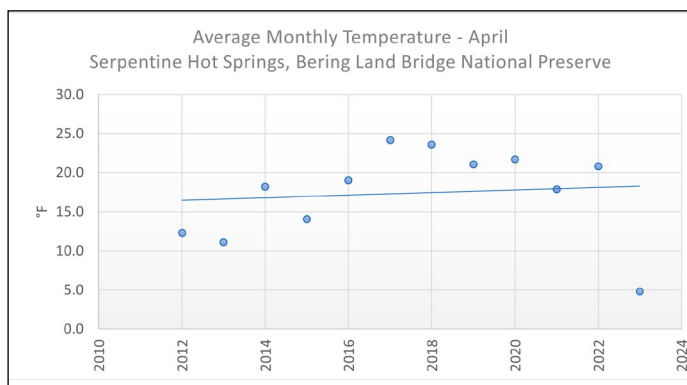


Figure 7. Average April temperatures at the Serpentine Hot Springs climate station in Bering Land Bridge National Preserve 2012-2023.

More Information

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<https://www.nps.gov/im/arcn/climate.htm>
[Latest weather conditions in Bering Land Bridge N Pres.](#)

Data disclaimer: Please note that the near-real time data used to generate these reports is subject to change. QA/QC data from the NPS ARCN climate stations are available at [NPS Data Store](#)