



Weather and Climate

Bering Land Bridge Spring 2014 Weather Summary



Nome Spring Weather 2014

In Nome, March temperatures were warmer than normal, while the snowfall total for the month was quite a bit above normal. The average temperature for March was 2.0° F warmer than normal. The warmest temperatures were recorded between March 20 and 27. The total snowfall for the month was 12.3 inches, which is 138% of normal.

April was significantly warmer than normal with a monthly average temperature of 28.4° F, 7.9° F above the 1981-2010 normal. A record high temperature of 47° F was recorded on April 20th, breaking the old record of 45° F. April was also drier than normal with 3.1 inches of total snowfall; normal is 7.5 inches for the month.

The spring warm trend ended in May – May was cooler than normal and the snowfall was near normal. The average monthly temperature was 1.7° F colder than normal at 35.1° F. A total of 2.6 inches of snow fell in May, normal is 2.3 inches of snow. The total snowfall for the 2012-2013 snow season was 72.3 inches, 3.9 inches below the 1981-2010 normal (Figure 1; Table 1, 2, and 3).

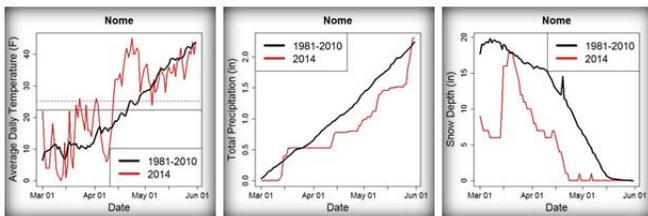


Figure 1. Average spring temperatures and precipitation accumulation in Nome compared to the 1981-2010 normal.

Spring Temperature Trend

The average spring temperature for 2014 was 25.3° F, which is 2.8° F warmer than the 1981-2010 normal (the latest climate normal period) and 4.3° F degrees warmer than the long-term average (1907-2014).

We calculate the average spring temperature by simply taking the average of March, April, and May monthly temperatures. Average spring temperatures show great variability with a range between ~11°F in 1920 and ~ 30° F in 1981.

There has been an overall increase in spring temperatures over the period of record. The 10-year moving average highlights a warmer period in the 1940s, a cooling trend from ~1950 through the late 1970s, and then a shift to warmer temperatures through the mid-2000s. Other than 2014, the spring period over the past seven years has been a bit cooler (Figure 2).

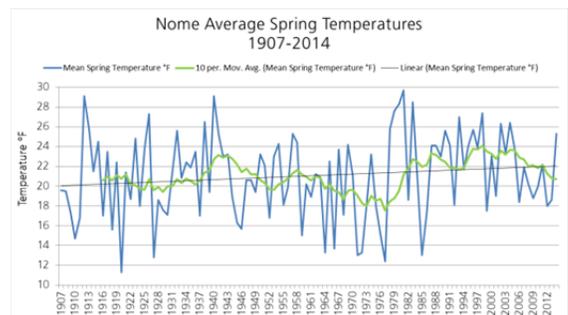


Figure 2. Average spring (March, April, May) temperatures in Nome over the past 107 years.

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Table 1. Temperature: Spring 2014 average monthly temperatures compared to the 1981-2010 normal.

Spring 2014	Average Monthly Temp °F	1981-2010 Normal °F	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
March	12.3	10.3	2	44 / Mar 22	-9 / Mar 13
April	28.4	20.6	7.8	51 / Apr 23	-4 / Apr 8
May	35.1	36.8	-1.7	55 / May 22	20.0 / May 5

Spring Season Temperature Departure from Normal: +2.7°F

Table 2. Precipitation: Spring 2014 monthly precipitation totals compared to normal.

Spring 2014	Total Monthly Precept. in.	1981-2010 Normal in.	Departure from Normal in.	Greatest 24 -hr. total in. / Date	# Days with >=0.01 in. water
March	0.53	0.65	-0.12	0.29 / Mar 14	8
April	0.45	0.76	-0.31	0.17 / Apr 12-13	8
May	1.32	0.86	0.46	0.26 / May 27	17

Spring Season Departure from Normal: +0.01 inches

Table 3. Snowfall: Spring 2014 monthly snowfall totals compared to normal.

Spring 2014	Total Monthly Snowfall in.	1981-2010 Normal in.	Departure from Normal in.	Greatest 24 -hr. snowfall total in. / Date	Cumulative snowfall since 1-July in.
March	12.3	8.9	3.4	7.1 / Mar 14	66.6
April	3.1	7.5	-4.4	1.3 / Apr 12	69.7
May	2.6	2.3	0.3	1.1 / May 6	72.3

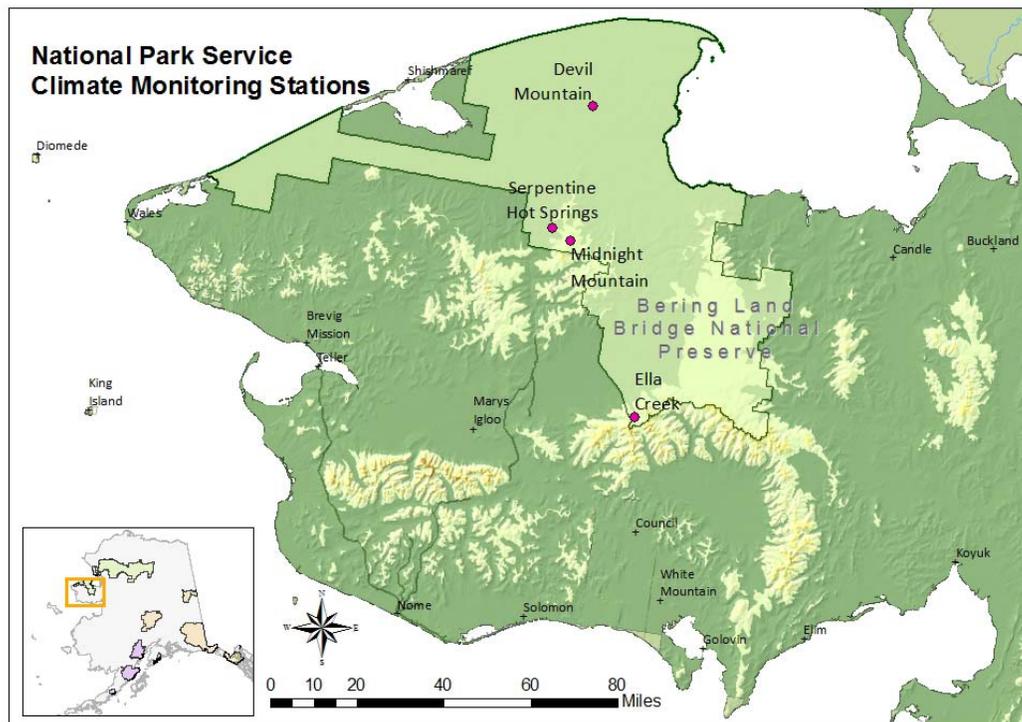


Figure 3. Climate stations in Bering Land Bridge National Preserve.

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Table 4. Summary of weather statistics from the BELA climate stations.

Site	Elev. Ft.	Average Temp ° F			Spring 2014 Avg. Temp °F	Extremes ° F		Peak Wind mph	High T- Low T °F
		Mar	Apr	May		High	Low		
Devil Mountain	285	7.1	19.9	33.6	20.2	53	-18	38	71
Serpentine	518	7.9	19.4	36.7	21.3	56	-23	43	79
Ella Creek	2318	7.4	21.9	29.4	19.6	43	-21	66	64
Quartz Creek	321	6.1	23.1	37.8	22.3	57	-15	44	72

Climate Monitoring in Bering Land Bridge NP

We now have additional NPS climate stations in Bering Land Bridge that complement the long-term record available from the National Weather Service station in Nome (Figure 3). The new NPS stations will provide critical data along a north south transect across the Seward Peninsula that will help characterize the climate gradients and patterns affecting resources in Bering Land Bridge National Preserve. Table 4 summarizes the spring weather data for the new sites.

We have added phenology cameras to some of the climate stations (Fig. 4). These cameras capture images four times per day; the images are downloaded once a year. The images are used to help quantify the snow season, green-up period, and other basic phenologic information.



Figure 4. New phenology camera mounted on the Serpentine climate station.

Interesting notes from RAWS stations:

The average monthly temperature at Devil Mountain last March was 2.7° F; this year it was 6.8°F.

At the Ella Creek site the average wind speed was 37 mph with the peak gust reaching 66 mph between April 30 and May 1. It is calm at this site only 8% of the time during the spring.



Figure 5. A sinuous river in Bering Land Bridge

Connecting Further

- New paper published – [Recent Sea Ice Increase and Temperature Decrease in the Bering Sea area, Alaska](#)
- 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](#)
- Statewide summary of weather highlights in the latest [Alaska Climate Dispatch](#) from the Alaska Center for Climate Assessment and Policy
- [Map](#) of projected temperature and precipitation changes for Bering Land Bridge National Preserve.

More Information

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