Weather and Climate

Bering Land Bridge Summer 2014 Weather Summary

Nome Summer Weather 2014

June was drier and cooler than normal in Nome. The average temperature for June was 45.8° F compared to a normal of 47.8° F. The temperature dropped to 29° F on June 12, setting a record low for the date. Only 0.22 inches of rain fell in June, the 10th driest summer since 1907. Measurable precipitation was only recorded on 5 days in June.

Despite a warm spell the second week of the month, July was 1.1° F cooler than normal. The high temperature of 84° F on July 7th broke a record for the date. Mid-month was cool and rainy. 1.29 inches of rain fell from July 15-19. With a total of 2.62 inches of rainfall, July 2014 was 125% of normal.

It was the second warmest August since 1907. High temperatures were above normal for 25 out of 31 days. The average temperature of 55.7° F for the month was 5.6° F warmer than normal. 1.71 inches of rain fell in August compared to a normal of 3.22 inches. Almost half of the monthly rainfall total came the last two days of the month, with 0.74 inches on August 30-31.

The average summer temperature at Nome was 50.9° F which is 0.8° F warmer than the 1981-2010 normal and 2.0° F warmer than the long term average since 1907 (see Figure 6). The total summer precipitation was 6.31 inches, about 72% of normal (Figures 1 and 2; Table 1, 2, and 3).

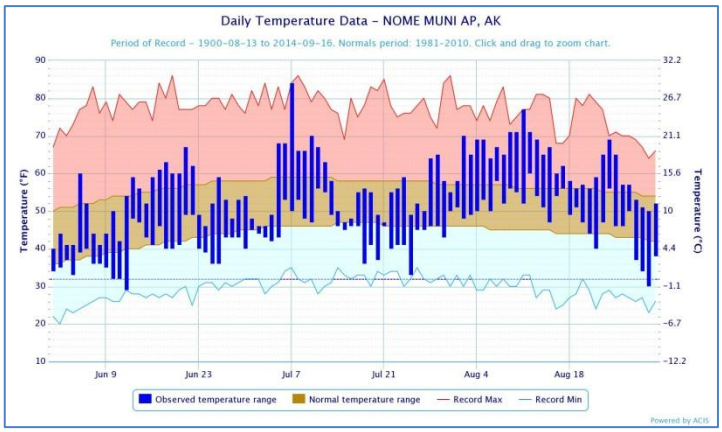

Figure 1. Summer 2014 daily temperatures at Nome showing record maximum (red), record minimum (blue), normal (brown) and **2014 observed** range (blue bars).

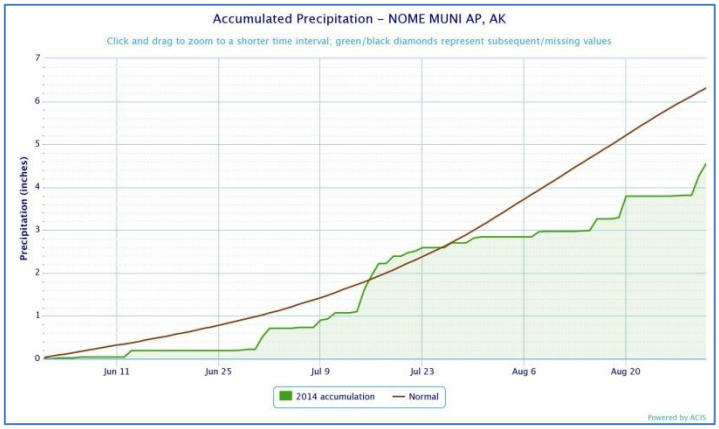

Figure 2. Summer **2014** accumulated precipitation at Nome (green) compared to **normal** (brown line).

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

Summer 2014	Average Monthly Temp °F	1981-2010 Normal °F	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
June	45.8	47.8	-2.0	67 / June 21	29 / June 12
July	51.1	52.2	-1.1	84 / July 7	33 / July 25
August	55.7	50.1	+5.6	77 / Aug 11	30 / Aug 30

Summer Season Temperature Departure from Normal: +0.8°F

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

Summer 2014	Total Monthly Precip. in.	1981-2010 Normal in.	Departure from Normal in.	Greatest 24 -hr. total in. / Date	# Days with >=0.01 in. water
June	0.22	0.98	-0.76	0.15 / June 13	5
July	2.62	2.11	+0.51	0.51 / July 15	17
August	1.71	3.22	-1.51	0.50 / Aug 20	11

Summer Season Precipitation Departure from Normal: -1.76 inches (72% of normal)

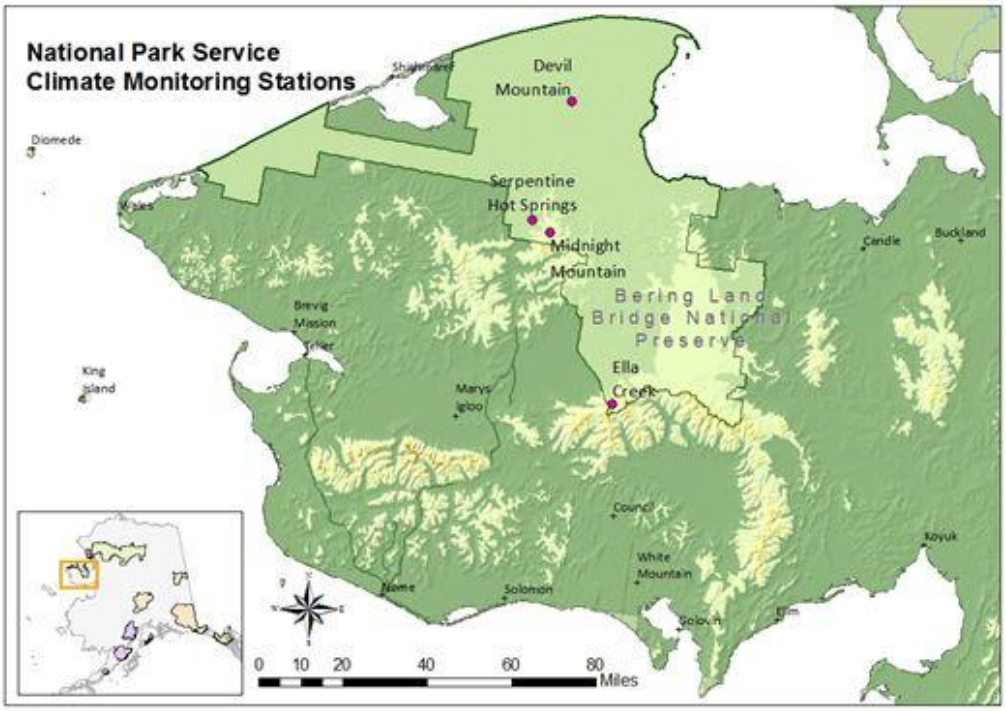

Figure 3. NPS Climate stations in Bering Land Bridge National Preserve.

Table 4. Summary of weather statistics from the Bering Land Bridge climate stations. All data are preliminary and subject to review.

Site	Elev. (ft)	Average Temp °F			Rainfall (inches)			Peak Wind Speed (mph)
		June	July	Aug	June	July	Aug	Summer
Devil Mtn	285	40.5	47.5	52.8	0.4	3.1	0.6	31
Ella Creek	2260	39.9	44.6	49.8	0.3	4.7	3.8	50
Hoodoo Hills	1495	44.8	48.5	52.8	0.2	3.9	1.54	20
Quartz Creek	321	48.4	52.0	56.0	0.2	2.7	2.1	38
Serpentine	518	44.3	49.2	53.2	0.1	3.2	1.5	31

Interesting notes from RAWS stations:

- June temperatures at RAWS stations were 8 to 10° F cooler in 2014 compared to 2013. In Nome, the difference between years was only 2.0° F.

- The temperature fell below freezing in every month at the Ella Creek station this summer.

- July was the windiest month of the summer. The average wind speed at Ella was 13 mph. Gusts at Ella exceeded 30 mph on 12 days in July.

Climate Monitoring in Bering Land Bridge National Park and Preserve

We now have additional NPS climate stations in Bering Land Bridge that complement the long-term record from the National Weather Service station in Nome. The new NPS stations will provide critical data for the Seward Peninsula which will help characterize the climate gradients and patterns affecting resources in Bering Land Bridge National Preserve. Table 4 summarizes the summer data for the new sites.

We have added phenology cameras to some of the climate stations (Figure 5). 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. Devil Mountain climate station at lower right.

Figure 5. Phenology camera at Serpentine Hot Springs.

Nome Summer Temperature Trend

The average summer temperature for 2014 was 50.9° F which is 0.8° F warmer than the 1981-2010 normal and 2.0° F warmer than the long-term record beginning in 1907.

We calculate the average summer temperature by simply taking the average of June, July, and August monthly temperatures. Average summer temperatures show great variability with a range between 43.9° F in 1922 and 54.5° F in 2004.

There has been an overall increase in summer temperatures of 0.2° F per decade based on a simple linear regression ($p<0.01$). The 10-year moving average shows the strongest warming through the late 1990s. (Figure 6)

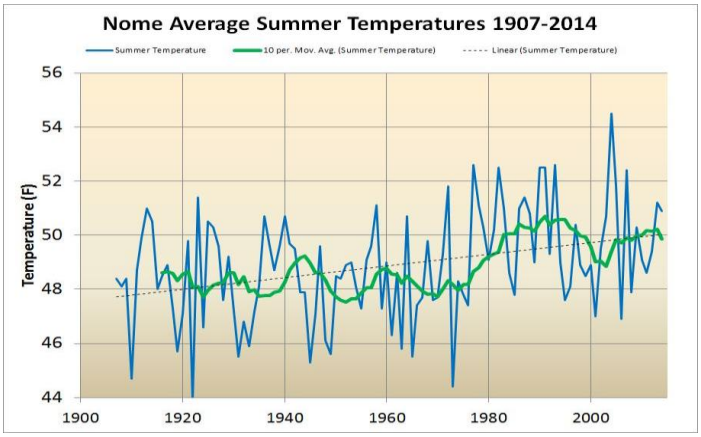

Figure 6. Average summer temperatures (June, July, August) at Nome since 1907. The green line is a 10-year moving average. The dashed line is a simple linear regression.

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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