



Quarterly Weather & Climate Summary Bering Land Bridge National Preserve Summer 2015

Nome Summer Weather

June temperatures were near normal and precipitation was below normal at Nome. The average temperature for June was 47.4°F compared to a normal of 47.8°F. June 5-15 was particular cool with temperatures as low as 30°F on June 11. June 17-20 was well above normal with daily highs exceeding 70°F. 0.66 inches of precipitation fell during the month, which is 67% of normal; more than half of that fell on June 26. Nome, Fairbanks, and Bettles were the only three locations in the state with cooler than normal temperatures for June (based on data from the first order weather stations).

The average July temperature was 2.7°F above normal at 54.9°F. The high temperature of the month (71°F) occurred on July 4th and no precipitation was recorded for the holiday. Precipitation was recorded on twelve days in July and totaled 1.44 inches. Normal is 2.11 inches.

With a monthly average temperature of 48.5°F, it was 1.6°F colder than normal for August. No temperature records were broken in August with fairly consistent highs in the 50s and lows in the 40s. The end of August was cooler than normal, with a low temperature of 29°F on August 31. Precipitation was 115% of normal for August with 13 of 31 days having measurable rain.

Overall, the average summer temperature at Nome was 50.3 °F which is 0.2°F warmer than the 1981-2010 normal and 1.5°F warmer than the long-term average since 1907 (see Figure 5). The summer precipitation total was 5.80 inches, 92% of normal (Figures 1 and 2; Tables 1 and 2).

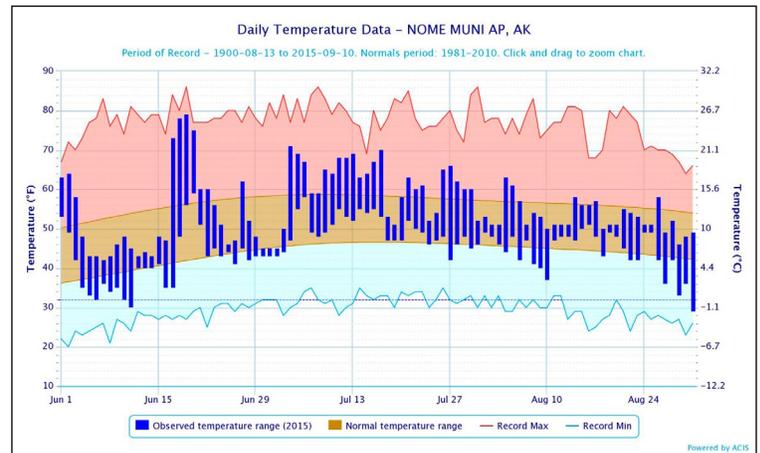


Figure 1. Summer 2015 daily temperatures at Nome showing **record maximum** (red), **record minimum** (blue), **normal** (brown) and **observed range** (blue bars).

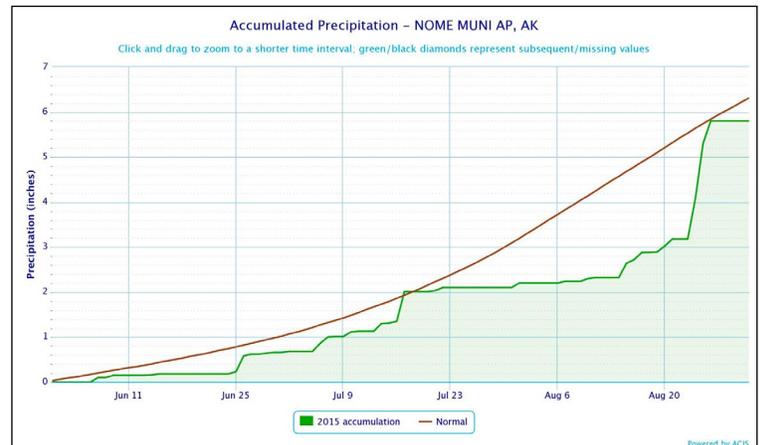


Figure 2. Summer 2015 accumulated precipitation at Nome (green) compared to **normal** (brown line).

Table 1. Temperature: Summer 2015 average monthly temperatures compared to the 1981-2010 normal.

Summer 2015	Average Monthly Temp °F	1981-2010 Normal °F	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
June	47.4	47.8	-0.4	79 / June 19	30 / June 11
July	54.9	52.2	+2.7	71 / July 4	42 / July 27
August	48.5	50.1	-1.6	63 / Aug. 4	29 / Aug. 31

Summer Season Temperature Departure from Normal: +0.2°F

Table 2. Precipitation: Summer 2015 monthly precipitation totals compared to normal.

Summer 2015	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	0.66	0.98	-0.32	0.35 / June 26	9
July	1.44	2.11	-0.67	0.66 / July 17	12
August	3.70	3.22	+0.48	1.22 / Aug 25	13

Summer Season Precipitation Departure from Normal: -0.51 inches (92% of normal)

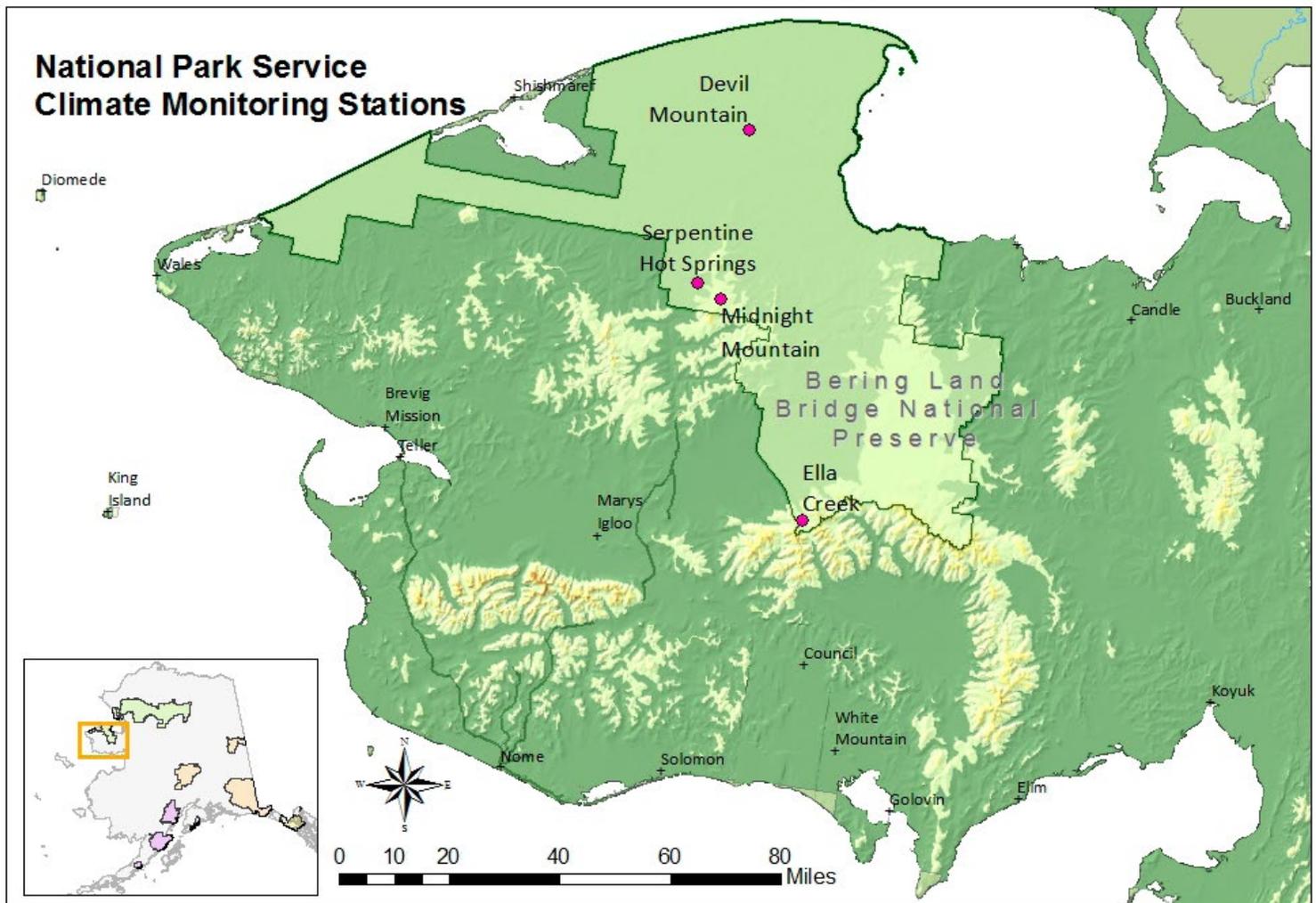


Figure 3. NPS Climate stations in Bering Land Bridge National Preserve.

Table 3. Summary of weather statistics from the Bering Land Bridge N Pres. climate stations. All data are preliminary and subject to review.

Site	Elev. (ft)	Average Temp °F			Extreme High (°F)	Extreme Low (°F)	Average Temp. Summer Season (°F)	Peak Wind (mph)	Rainfall (inches)		
		June	July	Aug.					June	July	Aug.
Devil Mtn.	285	46.7	50.9	44.5	77	32	47.4	33	0.36	0.43	3.23
Ella Creek	2260	43.9	49.7	41.3	74	23	45.0	63	0.90	0.87	3.64
Hoodoo Hill	1495	47.6	53.6	43.8	80	24	48.3	45	0.67	0.38	3.26
Serpentine	518	48.8	53.2	46.3	82	26	49.4	35	0.39	0.35	3.03

Interesting Notes from the RAWS Stations

- None of the RAWS stations recorded more than 1” of precipitation in June or July, but all stations recorded more than 3” in August. Most August precipitation occurred August 24-26.
- The August 24-26 storm brought between an inch (Hoodoo/Serpentine) and 2.4 inches (Ella Creek) of rain to the RAWS stations. Gusts as high as 63 mph

were recorded at the Ella Creek climate station (2260 ft. elevation). None measured 2.6 inches. The same system caused flooding in Barrow.

Climate Monitoring in Bering Land Bridge National Preserve

NPS climate stations were installed in Bering Land Bridge National Preserve in 2011 and 2012 as part of the Arctic Network Inventory and Monitoring Program. These new stations complement the long-term record from the National Weather Service station in Nome. The NPS stations will provide critical data for the Seward Peninsula which will help characterize the climate gradients and patterns affecting resources in the Preserve. Table 3 summarizes the summer data for these sites.

We have added a phenology camera to the Serpentine Hot Springs station (Figure 4). This camera captures images five times per day; the photos are stored on site and downloaded once a year. The images are used to help quantify the snow season, green-up period, and other basic phenologic information. Figure 4 shows selected images captured from the Serpentine camera in summer 2014.

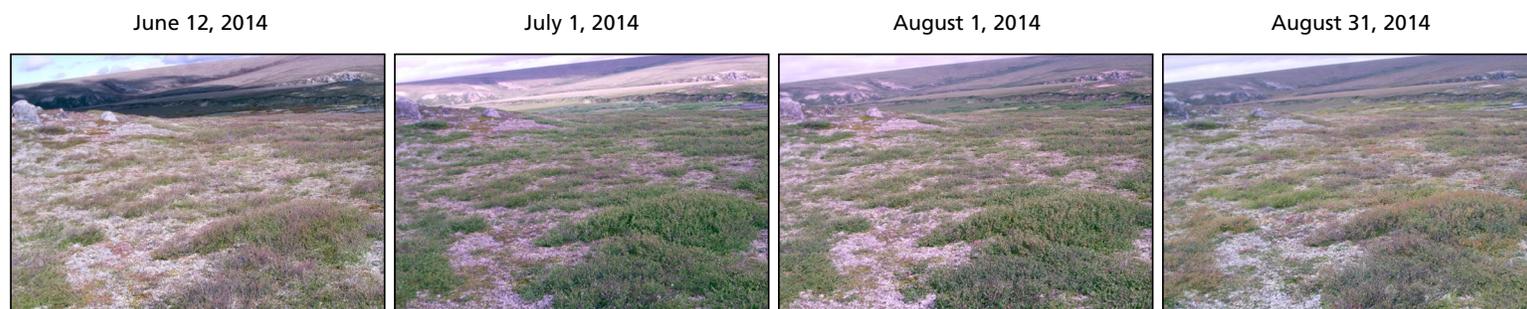


Figure 4. Selected images from the Serpentine Hot Springs time lapse camera from June 2014 – August 2014.

Nome Summer Temperature Trend

The average summer temperature for 2015 was 50.3°F which is 0.2°F warmer than the 1981-2010 normal and 1.5°F warmer than the long-term record beginning in 1907. 2015 ranks as the 25th warmest summer on record.

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.

The overall trend in summer temperatures shows a warming of 0.2°F per decade based on a simple linear regression ($p < 0.01$) (Figure 5).

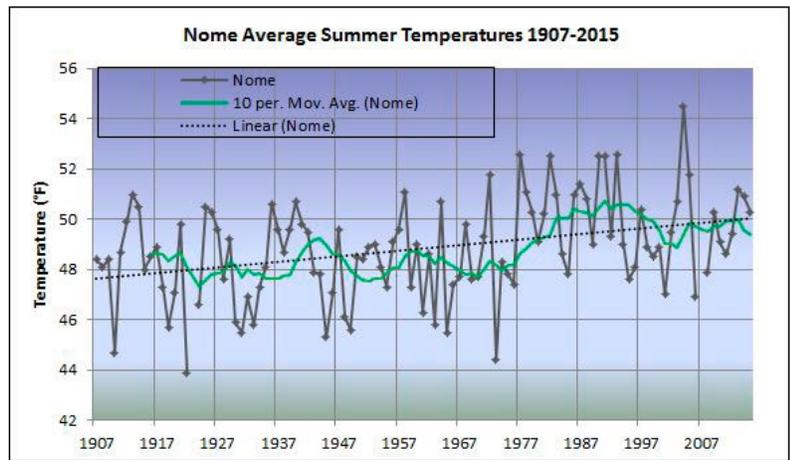


Figure 5. Average summer temperatures (June, July, August) at Nome since 1907. The green line is a 10-year moving average. The dashed line is a simple linear regression.

Nome Summer Precipitation Trend

The total precipitation for summer 2015 was 5.8 inches which is 92% of the 1981-2010 normal and 86% of the long-term average.

1922 was the wettest summer on record with a total of 13.64 inches of precipitation and 1962 was the driest with only 1.84 inches recorded. There is no significant trend in the summer precipitation data for Nome (Figure 6).

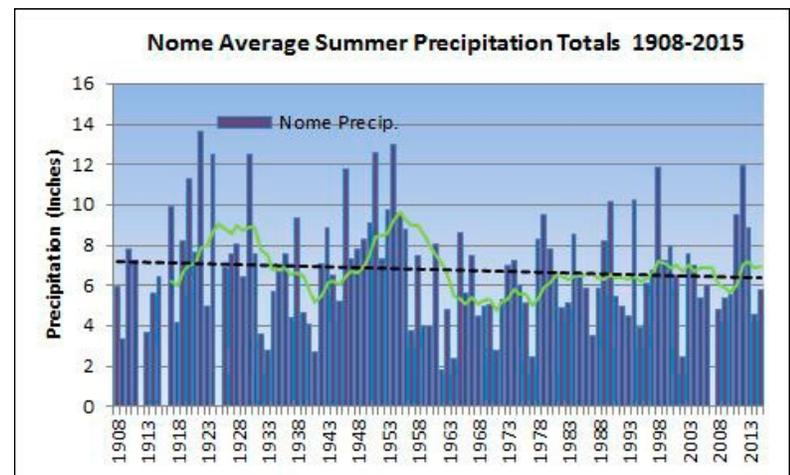


Figure 6. Total summer precipitation (June, July, August) at Nome since 1908. The green line is a 10-year moving average. The dashed line is a simple linear regression.



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](#)
- 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 Bering Land Bridge National Preserve

More Information

Pam Sousanes; pam_sousanes@nps.gov; ph 907-455-0677

Ken Hill; kenneth_hill@nps.gov; ph 907-455-0678

<http://science.nature.nps.gov/im/units/arcn>