



Quarterly Weather & Climate Summary Yukon-Charley Rivers National Preserve Fall 2015

Eagle Fall Weather

September was near normal in terms of average monthly temperature and total precipitation for the month. The monthly temperature was 41.5°F, the 1981-2010 average monthly temperature is 41.8°F. The total precipitation was 1.34 inches, normal is 1.31 inches. The warm and wet storm that impacted the state toward the end of the month dropped 6 inches of snow on September 29th.

The first few days of October were cooler than normal, but then the pattern shifted and for the remainder of the month temperatures were above normal. The average temperature for the month was 6.0°F warmer than normal at 29.0°F. The last week of the month was quite warm with maximum daily temperatures approaching 40°F. A total of 13.4 inches of snow fell during the month; normal is 11.1 inches. The 1.47 inches of total precipitation (melted snow) was 155% of normal.

November temperatures were a bit more variable, starting off the first week of the month with cooler temperatures, but ending that first week well above normal. There was a short cold spell mid-month with temperatures that were between 8° and 21°F colder than normal. The coldest temperature during this period, and for the month, was -30°F occurring on November 19. Snowfall was about 68% of normal with a total of 8.2 inches. The water content of the snow was higher than normal and the total precipitation was 0.73 inches, right at normal.

Overall, the average fall temperature at Eagle was 3.5°F warmer than normal at 26.1°F. It was the 12th warmest fall on

record (1949-2015). A total of 3.54 inches of rain/melted snow was measured, which is 118% of normal, it was the 14th wettest fall season on record (see Figures 1 and 2; Table 1, 2, and 3).

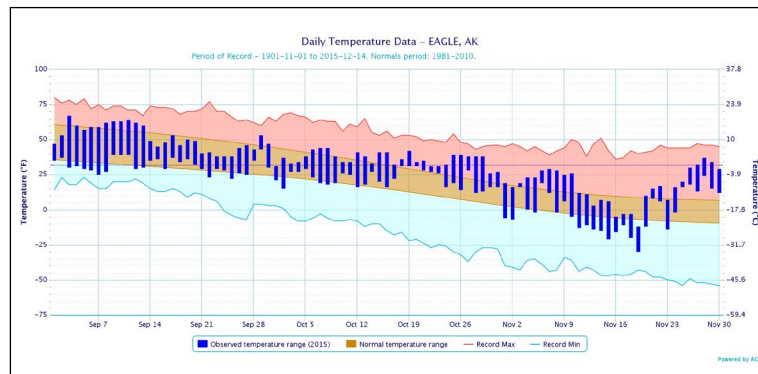


Figure 1. Fall 2015 daily temperatures at Eagle showing **record maximum** (red), **record minimum** (blue), **normal** (brown) and **2015 observed range** (blue bars).

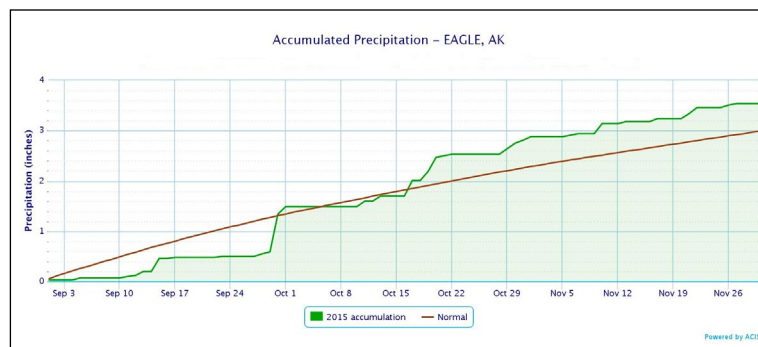


Figure 2. Fall **2015 accumulated precipitation** at Eagle (green) compared to **normal** (brown line).

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

Fall 2015	Average Monthly Temp (°F)	1981-2010 Normal (°F)	Departure from Normal (°F)	Monthly High (°F / Date)	Monthly Low (°F / Date)
September	41.5	41.8	-0.3	67 / Sep 3	22 / Sep 25
October	29.0	23.0	+6.0	44 / Oct 7, 8	12 / Oct 28
November	7.7	3	+4.7	37 / Nov 28	-30 / Nov 19

Fall Season Temperature Departure from Normal: + 3.5 °F

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

Fall 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
September	1.34	1.31	+0.03	0.75 / Sep 30	11
October	1.47	0.95	+0.52	0.31 / Oct 17	11
November	0.73	0.73	0.00	0.20 / Nov 10	10

Fall Season Precipitation Departure from Normal: +0.55 inches (118% of normal)

Table 3. Snowfall: Fall 2015 monthly snowfall totals compared to normal.

Fall 2015	Total Monthly Snowfall (in.)	1981-2010 Normal (in.)	Departure from Normal (in.)	Greatest 24-hr snowfall total (in. / Date)	Seasonal Cumulative Snowfall (in.)
September	6.0	1.3	+4.7	6.0 / Sep 30	6
October	13.4	11.1	+2.3	3.0 / Oct 17	19.4
November	8.2	12.1	-3.9	2.5 / Nov 26	27.6

Climate Monitoring in Yukon-Charley Rivers National Preserve

The NPS climate stations in Yukon-Charley Rivers have been in operation for a decade. The stations complement long-term records available from the National Weather Service station in Eagle. The Upper Charley station is providing critical high elevation data which helps characterize climate gradients and patterns affecting resources in Yukon-Charley Rivers National Preserve.

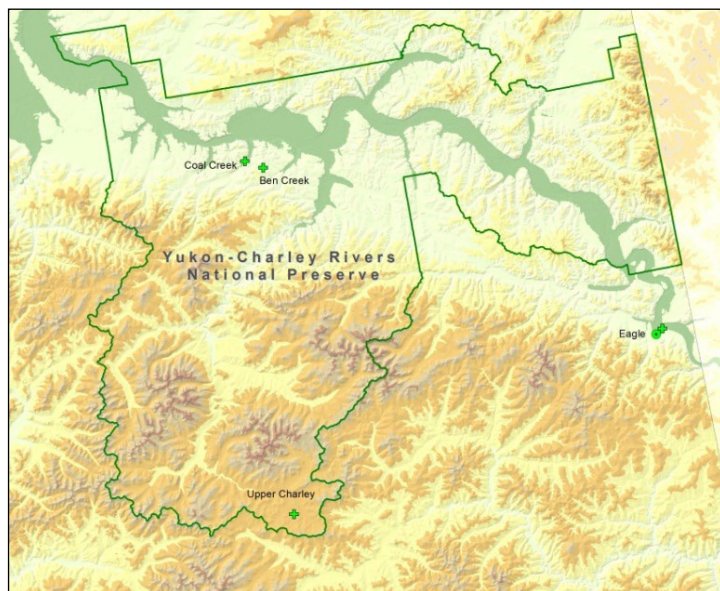


Figure 3. NPS climate stations in Yukon-Charley Rivers National Preserve.

The Upper Charley site is near the southern boundary of the Preserve, approximately 3 miles south of the Three Fingers airstrip in an area of gentle rolling hills. At an elevation of 3655 feet the site is cooler than the lower valleys in the summer, but often warmer in the winter due to persistent inversions that last from about October through March. Winds in the spring and fall tend to blow from the southeast and in mid-summer from the southwest. The period of record average air temperature is 23.1°F. The highest temperature recorded thus far is 83°F on 6/26/2013 and the lowest is -36°F on 2/23/2007. The maximum snow depth recorded at the site is 30 inches.



Figure 4. Upper Charley station, Yukon-Charley Rivers National Preserve.

Eagle Fall Temperature Trends

The average fall temperature for 2015 was 26.1°F, which is 3.5°F warmer than the 1981-2010 normal (the latest climate normal period). We calculate the average fall temperature by simply taking the average of September, October, and November monthly temperatures. The fall seasonal temperatures are variable and have ranged from 16.3°F in 2012 to 33.7°F in 2002. 2015 was the 12th warmest on record (1949-2015) (Figure 5).

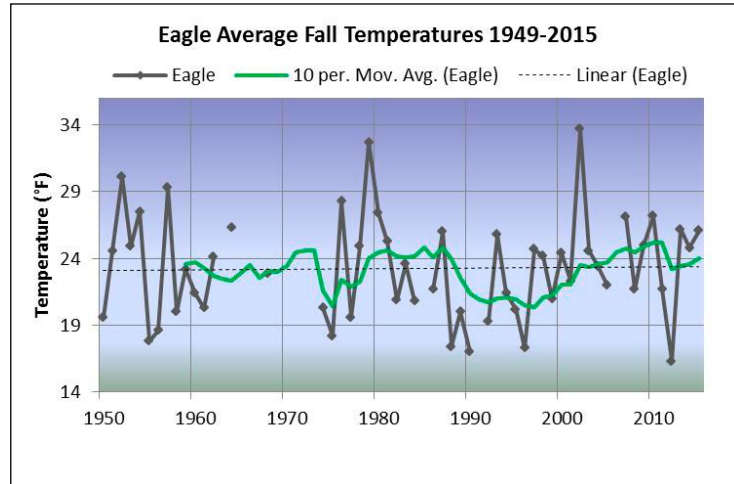


Figure 5. Average fall (September, October, November) temperatures in Eagle since 1949. The green line is a **10-year moving average**. The dashed line is a simple linear regression.



Eagle Fall Precipitation Trends

Precipitation amounts in the fall range from 1.27 inches (1984) to 4.77 inches (1961). The average fall precipitation total (rain and melted snow) is 2.99 inches; fall 2015 was 118% of normal with 3.54 inches. There is not a significant trend in fall precipitation totals for Eagle since 1949 (Figure 6).

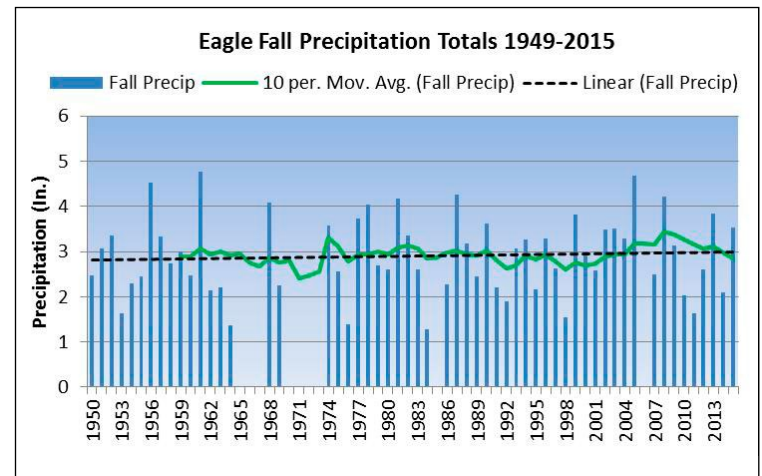


Figure 6. The bars show the fall precipitation totals in Eagle between 1949 and 2015. The green line represents a **10-year moving average** and the dashed line is a simple linear regression.



Connecting Further

- Previous weather summaries and other climate monitoring documents on the [Central Alaska 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 Yukon-Charley Rivers National Preserve

More Information

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