



Weather and Climate



Yukon-Charley Rivers Fall 2013 Weather Summary

Was fall 2013 normal?

It was a warm, wet fall in Eagle: 3.4° F warmer than normal.

Fall 2013 records: October 2013 was the warmest October on record.

Record high temps:
Sep 13: 67° F tied
Oct 17: 50° F
Oct 18: 50° F
Oct 19: 52° F
Oct 20: 52° F
Oct 21: 49° F

Five record high *minimum* temperatures:
Sep 4: 51
Oct 16, 17, 18, & 29: 38, 41, 36, & 31° F respectively

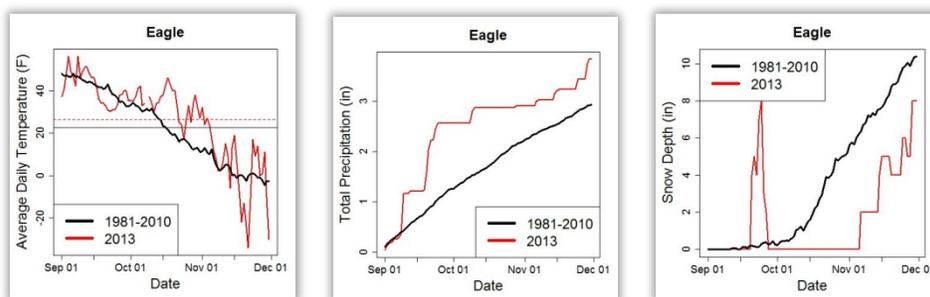
Record daily rainfall:
Sep 9: 0.80 inches
Record Daily snowfall:
Sep 20: 3.5 inches
Sep 23: 4.0 inches

In Eagle, September temperatures averaged just about average for the month. They were above average during the first part of September and then dropped below average mid-way through the month. The average monthly temperature was 41° F, 0.8° F below normal. The total precipitation for the month was 2.57 inches, 220% of normal. It rained during the first week of September and then between September 19 and 24th, 12.5 inches of snow fell. Normally about 1.3 inches of snow falls during September. The snow was short lived — the temperatures climbed back up and stayed above freezing for most of October.

October 2013 was the warmest on record for Eagle. The average temperature was 34° F, 11° F above the 1981-2010 average. Several high temperature records and high *minimum* temperature records were set. There was very little precipitation in October; the total for the month was 0.34 inches, which all fell as rain. There was no snowfall recorded in October, which is quite unusual.

In November, the temperature in Eagle was quite variable. The month started out warm and then cooled towards the end of the first week. A storm barreled across the state mid-month bringing warm temperatures and high winds to much of the interior. Soon after that the temperatures plummeted and the first < 40 below temperature was recorded for the season on November 21. A total of 15 inches of snow fell in November, which is 120% of normal. The total precipitation was just above normal for the month. November 6th marked the first day of the persistent snowpack for the season in Eagle, which is also referred to as the "snow on" date. This is ~ 3 weeks later than normal. On November 30th there was 8 inches of snow on the ground.

Eagle – Average air temperatures, cumulative precipitation, and snow depth



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Eagle Weather Records:

Climate Normal Period 1981 – 2010

Climate Record Period 1949 – 2013

Temperature

Fall 2013	Average Monthly Temp °F	1981-2010 Average °F*	Departure from Normal °F	Monthly High °F / Date	Monthly Low °F / Date
September	41.0	41.8	-0.8	68 / Sep 8	24 / Sep 17
October	34.0	23.0	+11.0	53 / Oct 4	9 / Oct 24
November	4.0	2.6	+1.4	39 / Nov 1	-41 / Nov 21

Fall Season Temperature Departure from Normal: +3.9 °F

Precipitation

Fall 2013	Total Monthly Precip. in.	1981-2010 Average in. *	Departure from Normal in.	Greatest 24 –hr. total in. / Date	# Days with >=0.01 in. water
September	2.57	1.17	+1.4	0.8 / Sep 9	14
October	0.34	0.95	-0.61	0.23 / Oct 9	3
November	0.92	0.73	+0.19	0.30 / Nov 28	8

Fall Season Departure from Normal: +0.11 inches

Snowfall

Fall 2013	Total Monthly Snowfall in.	1981-2010 Average in. *	Departure from Normal in.	Greatest 24 – hr. snowfall total in. / Date	Snowfall from July 1 in.	Normal Snowfall from July 1 - in.	Snow Depth End of Month In.
September	12.5	1.3	+11.2	3.5 / Sep 20	12.5	1.3	0
October	0.0	10.6	-10.6	No snow	12.5	11.9	0
November	15	12.4	+2.6	4 / Nov 24, 28	27.5	24.3	8

*Note: NOAA 1981-2010 "normals" not available for Eagle COOP site. These tables are based on calculated daily averages for the 1981-2010 base period.

As part of the climate monitoring vital sign, additional NPS climate stations were installed in the preserve to complement the long-term record available from the National Weather Service station in Eagle. These additional sites provide critical data that help characterize the climate gradients and patterns affecting resources in Yukon-Charley Rivers National Preserve.



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Yukon-Charley Rivers Remote Automated Weather Station (RAWS) summaries – Fall 2013:

Site	Elev. Ft.	Average Temp °F			Fall 2013	Extremes °F		Peak Wind mph	High T – Low T °F *
		Sep	Oct	Nov	Avg. Temp °F	High	Low		
Coal Creek	870	39.6	31.6	0.9	24.0	71	-40	16	111
Ben Creek	1850	38.9	31.4	3.5	24.6	68	-32	41	100

* The Upper Charley River station stopped transmitting in September

Interesting notes from RAWS stations:

- October is the transition month at Coal Creek, the site of extremes....the hot spot in the summer and the cold spot in the winter.
- The Upper Charley station stopped transmitting real-time data in September – we hope the station is still running and that we just lost the satellite transmissions; we'll find out when we can head back out there in the spring.
- The peak wind gust of 41 mph at Ben Creek on November 14th was quite unusual – over the past decade the peak winds have exceeded 40 mph only one other time (in February of 2011) at this station.
- The difference between the average September and the average October temperatures was ~ 8 degrees F; and between October and November it was ~ 29 degrees F.



Coal Creek Climate Station

Please Note: The summarized data are preliminary and have not undergone final quality control. Therefore, these data are subject to revision.

Connecting Further

Read the latest findings from the Intergovernmental Panel on Climate Change [IPCC Summary 2013](#)

[Central Alaska Network climate monitoring vital sign](#)

Access near real-time data from [Western Regional Climate Center](#) and [MesoWest](#)

Check out the Dec-Jan-Feb weather outlook from the [NOAA Climate Prediction Center](#)

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 in Yukon-Charley Rivers National Preserve.

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