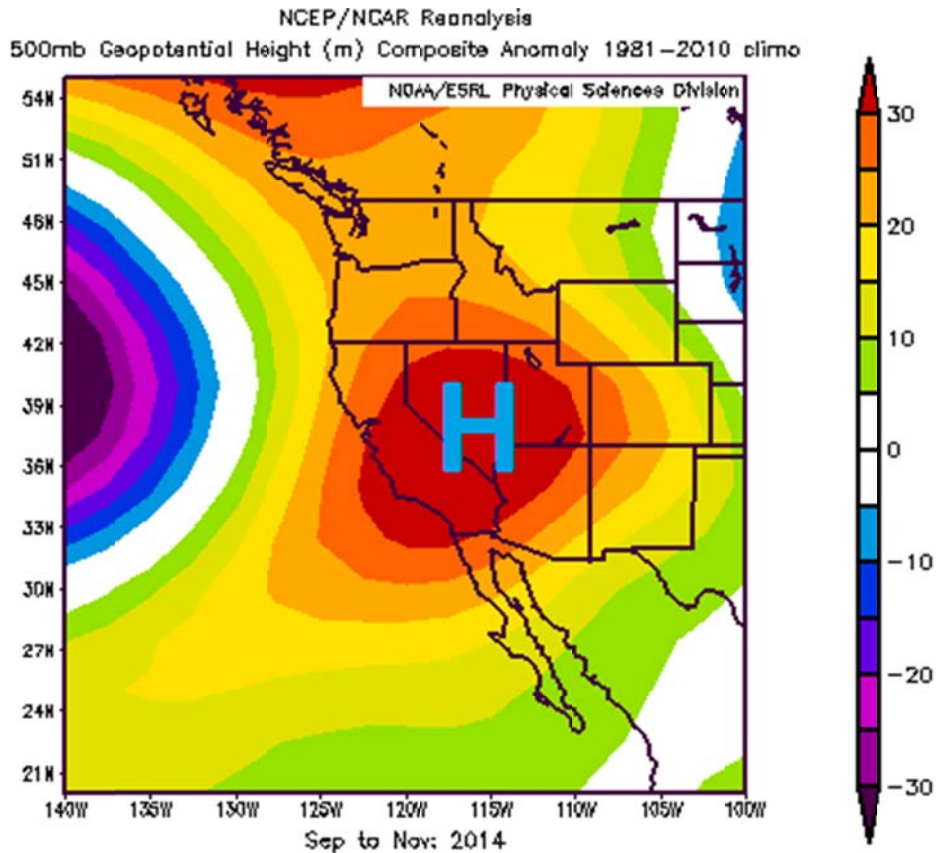


# NNSS Climate Summary

## Fall 2014



500 mb height anomalies from September thru November 2014. Courtesy NOAA/ESRL

Fall 2014 was warm and dry at the NNSS due to persistent high pressure located over the West. Temperatures steadily declined from summer values but remained above average for most of the season. Very little precipitation was recorded. A long dry spell was observed from September 29 until November 1<sup>st</sup>.

September is the first month of meteorological fall and is a time of transition from the summer heat. Even though there were several periods of hot weather, temperatures steadily declined during the month which ended on a cool note. Several tropical systems also affected the NNSS as they passed by well to the southeast.

Hot and dry conditions were observed the first week of the month as high pressure dominated the weather over the Southwest. A deep surge of moisture associated with former Hurricane Norbert overspread the area on the 7<sup>th</sup> leading to widespread showers and thunderstorms on the 8<sup>th</sup>. Many sites, except for those located in the southwest corner of the NNSS, recorded measureable precipitation. Meda 14 in Area 14 recorded the highest 24-hour total of 0.80". The moisture had moved east of the area by the 11<sup>th</sup> and was followed by a period of warm and dry weather which lasted through the 19<sup>th</sup>. Low pressure appeared off the central California coast on the 20<sup>th</sup>. Moisture was drawn northward

ahead of the low resulting in the last widespread precipitation event of the month. Once again, Meda 14 recorded the highest 24 hour total, 0.48". The low moved northeast of the NNSS by the 22<sup>nd</sup>.

A brief warm up followed before a significant pattern change occurred when the first significant Pacific weather system of the season affected the area. A large trough slowly approached the coast beginning on the 25<sup>th</sup>. As a result, gusty southwest winds developed ahead of the cold front prompting wind advisories to be issued on the 25<sup>th</sup> and 26<sup>th</sup>. By the 27<sup>th</sup>, an area of low pressure had developed at the base of the trough and was located over central Nevada. A few showers and much cooler temperatures accompanied the low. The coolest temperatures of the month were observed on the morning of the 28<sup>th</sup> with most locations reporting temperatures in the 40's. The coolest reading, 36 degrees, was recorded at Meda 40 in Area 12. September ended with a gradual warming trend as the low slowly moved off to the northeast.

October usually is a time of transition to cooler and occasionally unsettled weather. This year was an exception. High pressure was located over or just offshore of the West Coast for most of the month and kept the area warm and dry. In fact, no measureable precipitation was recorded on SORD's mesonet.

The month did begin with cooler temperatures due to a trough that had impacted the area at the end of September. By the 3<sup>rd</sup>, the trough was replaced by a ridge of high pressure which allowed afternoon temperatures to rise well above normal. Many stations at lower elevations exceeded 90 degrees with the warmest temperatures of the month observed on the afternoon of the 6<sup>th</sup>. An area of low pressure undercut the ridge and began to affect the area on the 8<sup>th</sup>. The low had just enough moisture for an isolated afternoon thunderstorm to develop which prompted the only lightning alert of the month. High pressure reestablished itself and remained over the West during the middle of the month.

A pattern shift occurred during the last week of October as a trough developed offshore of the Pacific Northwest. As a result, the ridge moved off to the east and windy conditions developed which prompted the issuance of a wind advisory on the afternoon of the 24<sup>th</sup>. By the 26<sup>th</sup>, The trough was east of the area and cooler air overspread the NNSS. A second and stronger system approached the area on the 31<sup>st</sup> bringing an increase on clouds and wind.

November is the last month of meteorological fall and usually a time when much cooler temperatures are observed on the NNSS. However, this was not the case in November 2014. The "warm" and dry conditions that were observed in October persisted well into the month as high pressure remained over the West. There were a few exceptions when weather systems brought more "fall-like weather" to our area.

November started with the only widespread precipitation event of the month. On the first and second, Schooner Crater in the far northwest corner of the site recorded 0.47" of precipitation. This proved to be the highest monthly total for the site. Once this system departed the area, high pressure built over the West and produced well above seasonal average temperatures through the 10<sup>th</sup>. Many locations recorded their highest reading on the afternoon of the 8<sup>th</sup> when several locations exceeded 80 degrees.

A strong cold front passed through the NNSS on the evening of the 14<sup>th</sup>. It was accompanied by gusty northerly winds and much cooler temperatures. This led to a cool morning on the 16<sup>th</sup> when light winds and dry air combined to produce the first widespread freeze of the season. High pressure built over the West once again and persisted through the end of the month. There was an increase in clouds and wind at end the month as a series of Pacific systems passed to the north of the area.

A fairly common occurrence at the NNSS during this time of year is the large diurnal temperature range on the dry lakes. On the 29<sup>th</sup>, Meda 5 in Area 5 observed a morning low of 16 degrees and an afternoon high of 71 - a 55 degree temperature range!

Listed below are some selected stations with temperature and precipitation amounts for the period.

<u>Station</u>	<u>Month</u>	<u>Highest (F)</u>	<u>Date</u>	<u>Lowest (F)</u>	<u>Date</u>	<u>Precipitation (in.)</u>
<u>Meda 23 (Mercury)</u>	Sep	97	02	52	28	0.46
	Oct	88	04	51	27	0.00
	Nov	79	08	32	16	M
<u>Desert Rock Airport</u>	Sep	101	02	49	28	0.34
	Oct	92	06	45	29	0.00
	Nov	81	06	28	25	M
<u>Meda 05 (W5B)</u>	Sep	101	15	41	30	0.07
	Oct	92	06	30	29	0.00
	Nov	81	08	15	28	0.03
<u>Meda 40 (Rainer Mesa)</u>	Sep	79	01	36	28	0.48
	Oct	72	04	32	27	0.00
	Nov	63	07	13	16	0.20
<u>Meda 43 (Yucca Dry Lake)</u>	Sep	95	16	42	30	0.21
	Oct	91	04	32	28	0.00
	Nov	80	08	17	25	0.01

M = missing data

**Hazardous Weather Notifications:**

- A Lightning Alert was issued for September 8<sup>th</sup> from 0915 to 1900 PDT.
- A Lightning Alert was issued for September 16<sup>th</sup> from 1630 to 2100 PDT.
- A Lightning Alert was issued for September 17<sup>th</sup> from 1430 to 1900 PDT.
- A Wind Advisory was issued for September 25<sup>th</sup> from 1145 to 2000 PDT.
- A Wind Advisory was issued for September 26<sup>th</sup> from 1200 to 2000 PDT.
- A Lightning Alert was issued for October 8<sup>th</sup> from 1600 to 2000 PDT.
- A Wind Advisory was issued for October 24<sup>th</sup> from 1400 to 2200 PDT.

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