National Weather Service Medford

August 2017 Climate Summary

*These data are preliminary and have not undergone final QC by NCEI. Therefore, these data are subject to revision. Final and certified climate data can be accessed at the National Centers for Environmental Information (NCEI).

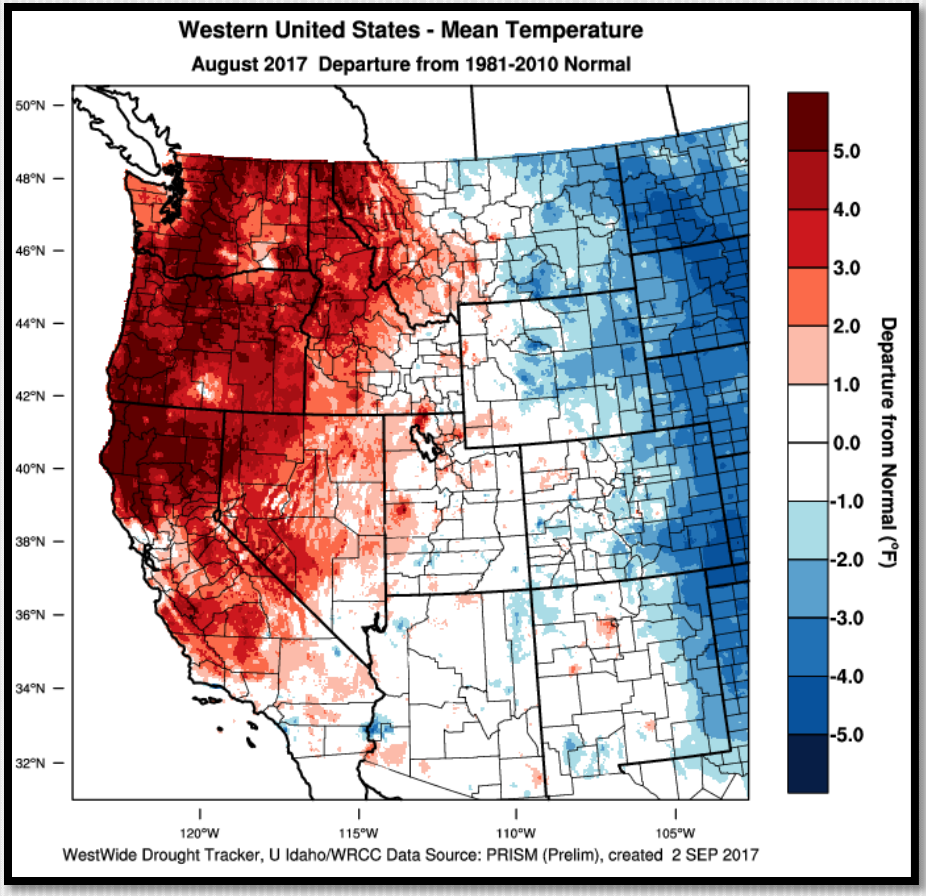
August 2017 Weather Review

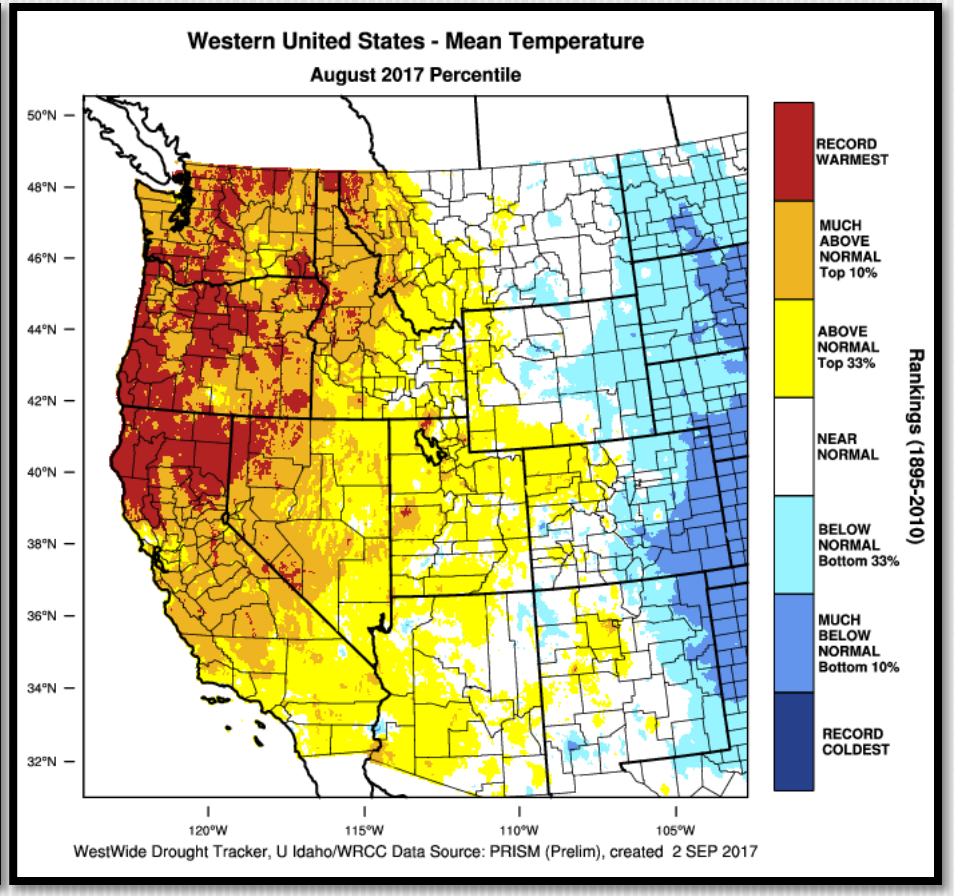
Hot and smoky is how August 2017 will be remembered. During the first week of August, dangerously hot temperatures occurred across the forecast area, where record all-time high temperatures were challenged. Many of the climate sites reached values that were only a few degrees shy of the all time warmest temperature for that location. To go along with this, overnight temperatures were also very warm and provided little, if any, relief from the hot daytime temperatures. Another unusual aspect of this heat was the duration of the very hot temperatures. Some locations set records for the number of consecutive days at or above 100 degrees.

This stretch of heat broke thanks to cloud cover and unfortunately with this cloud cover came thunderstorms that put out over 3,000 strikes over the course of the following week. These lightning strikes were responsible for starting numerous fires across the area. High pressure dominated the weather for the majority of the remainder of the month. This led to hot and dry conditions over the forecast area, which was very conducive to fire growth. The fires ignited from the lightning outbreak quickly grew in acreage and produced a lot of smoke. Southerly winds carried the smoke north, creating very smoky conditions with poor air quality and low visibilities for the majority of the area west of the Cascades. These smoky conditions continued for the last half of August with only a day or two of relief as a weak trough passed through the area around the 24th.

One benefit from the smoke was that high temperatures during the end of the month were moderated. Another round of very hot temperatures was expected during the last week, but the thick smoke kept temperatures around 5 -10 degrees below what was expected. To grasp how much the smoke tempered high temperatures, record setting high temperatures occurred for most locations outside of smoked-in locations. Regardless of the smoke helping to temper high temperatures, August 2017 still ended up the warmest August on record for many climate sites in the forecast area.

August 2017 *Observed Temperatures*





Average Temperatures

	Average (°F)	Departure from Normal	Average Max (°F)	Departure from Normal	Average Min (°F)	Departure from Normal
North Bend	60.4	***1.3°***	67.7	***2.3°***	53.2	***0.3°***
Roseburg	75.4	***5.3°***	91.4	***6.7°***	59.5	***4.0°***
Medford	78.1	***4.4°***	95.0	***4.3°***	61.1	***4.3°***
Klamath Falls	69.3	***4.4°***	88.3	***5.1°***	50.3	***3.7°***
Montague, CA	75.3	***4.6°***	94.9	***5.2°***	55.7	***4.1°***
Mt. Shasta City, CA	72.5	***5.9°***	91.2	***6.0°***	53.9	***5.9°***
Alturas, CA	70.7	***6.1°***	91.1	***4.7°***	50.4	***7.7°***

Monthly Max & Min Temperatures

	Max (°F)	Date(s)	Min (°F)	Date(s)
North Bend	85°	2nd	45°	26th
Roseburg	108°	2nd & 3rd	50°	25th
Medford	112°	2nd	52°	15th
Klamath Falls	99°	2nd	42°	31st
Montague, CA	107°	2nd	46°	31st
Mt. Shasta City, CA	101°	2nd	47°	15th
Alturas, CA	100°	2nd & 3rd	44°	29th & 31st

Warmest August on Record? Yes!

	2017 Aug Average Temperature	Old Record / Year
Roseburg	75.4°	74.8° / 2014
Medford	78.1°	77.9° / 1967
Klamath Falls	69.3° (2nd)	(1st) 69.7° / 1967
Mt. Shasta City	72.5°	71.5° / 1967
Montague	75.3°	74.0° / 2012
Alturas	70.7°	67.5° / 2012

Record High Temperatures

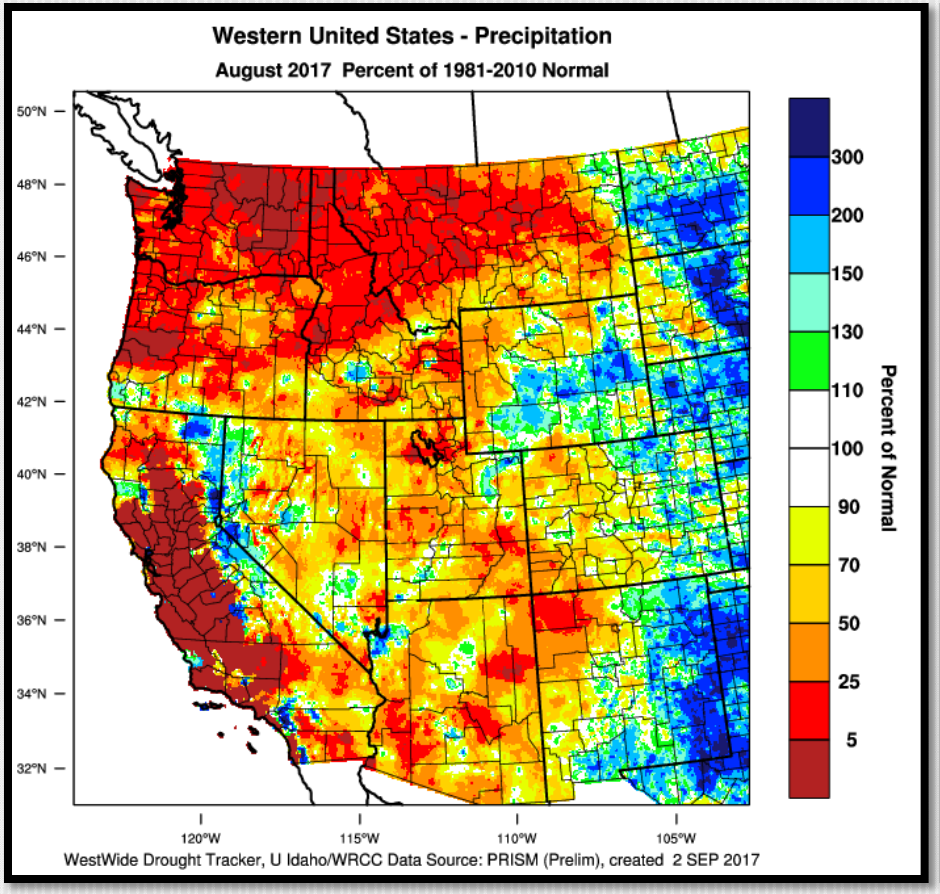
Where	Date	Record High	Old Record/Year
Medford	1st	110°	104° / 2015
	2nd	112°	105° / 1993
	3rd	109°	106° / 1987
Klamath Falls	1st	99°	97° / 2015
	2nd	99°	93° / 1961
	27th	91°	Ties with 1998
	29th	95°	Ties with 1950
Montague	1st	107°	103° /2015
	2nd	107°	101° / 2007
	3rd	105°	99° / 2012
	26th	97°	Ties with 1950
	27th	99°	97° / 2014
Alturas	1st	100°	99° /2015

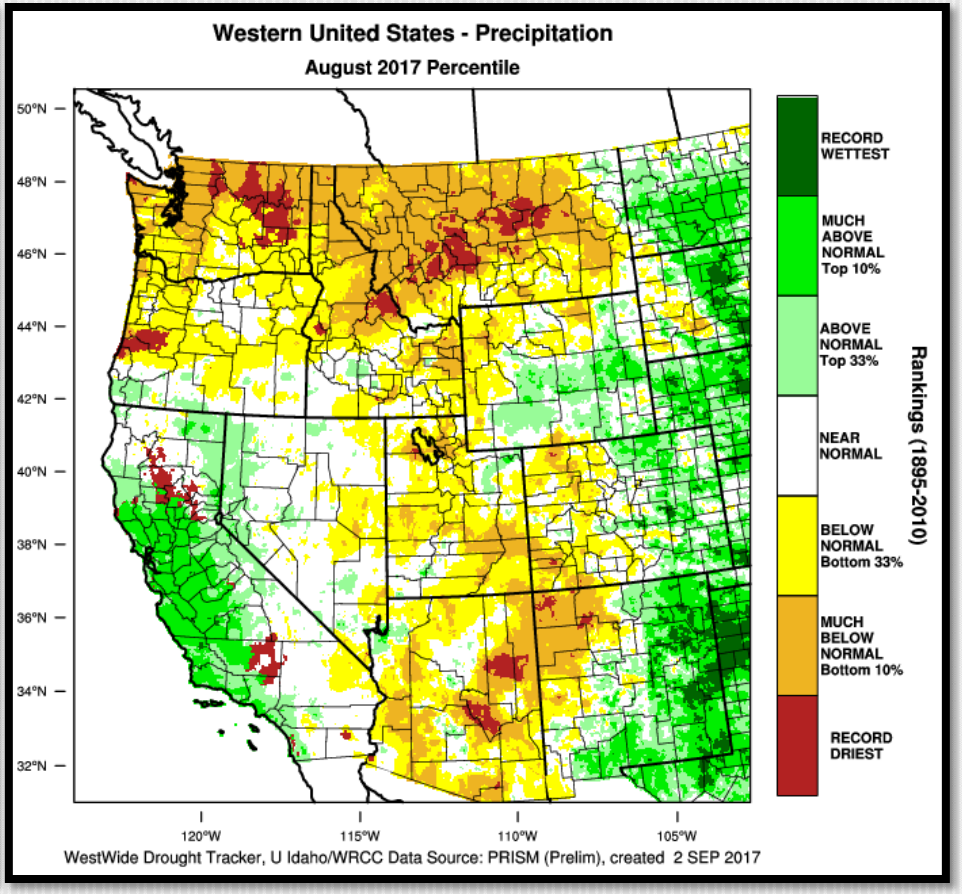
Where	Date	Record High	Old Record/Year
North Bend	1st	74°	Ties with 1940
	2nd	85°	74° / 1918
Roseburg	1st	102°	99° / 2015
	2nd	108°	104° / 1939
	3rd	108°	102° / 1952
	27th	99°	Ties with 2006
	28th	102°	98° / 1931
Mt Shasta City	1st	100°	98° / 1977
	2nd	101°	100° / 1977
	3rd	100°	97° / 1978
	21st	95°	Ties with 2009
	28th	98°	96° / 1950

All-time Record Challenging Heat: July 31st – August 3rd

	Peak temp	Rank	All-time Record high temp (Date)		Consecutive number of days at or above 100°	Record length of consecutive days at or above 100° (Dates)
Roseburg	108°	2nd	109 (7/20/1946)		4	**Ties for 1st** (6/29 – 7/2 *1942*)
Medford	112°	3rd	115° (7/20/1946)		5	**10** (8/10 – 8/19 *1967*)
Klamath Falls	99°	9th	101° (7/02/2013)		4	**5** (7/19 – 7/23 *2013*)
Montague	107°	2nd	109° (7/11/2002)		5	**8** (7/12 – 7/19 *2014*)
Mt Shasta City	101°	8th	105° (8/7/1981)		3	**Ties for 1st** (8/6 – 8/8 *1981*)
Alturas	100°	26th	107° (7/11/2002)		4	**5** (7/19 – 7/23 *2003*)

August 2017 *Observed Precipitation*



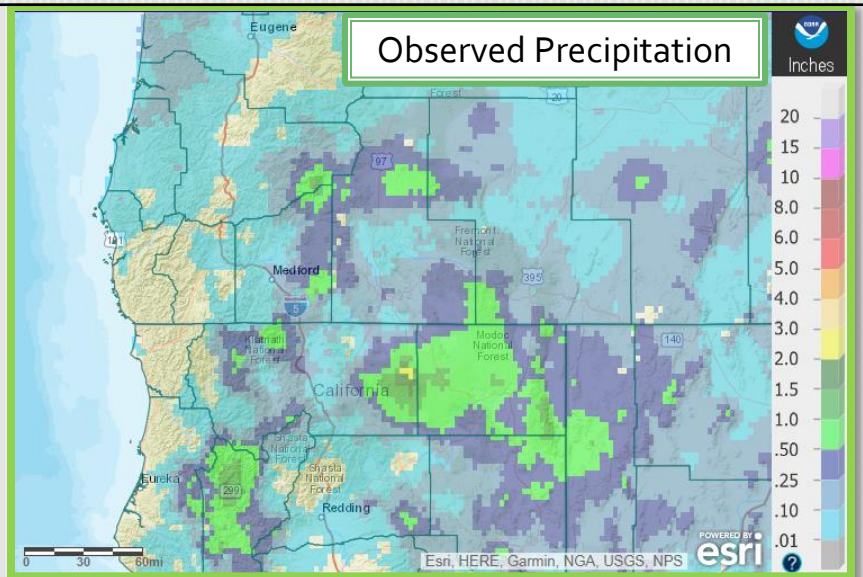


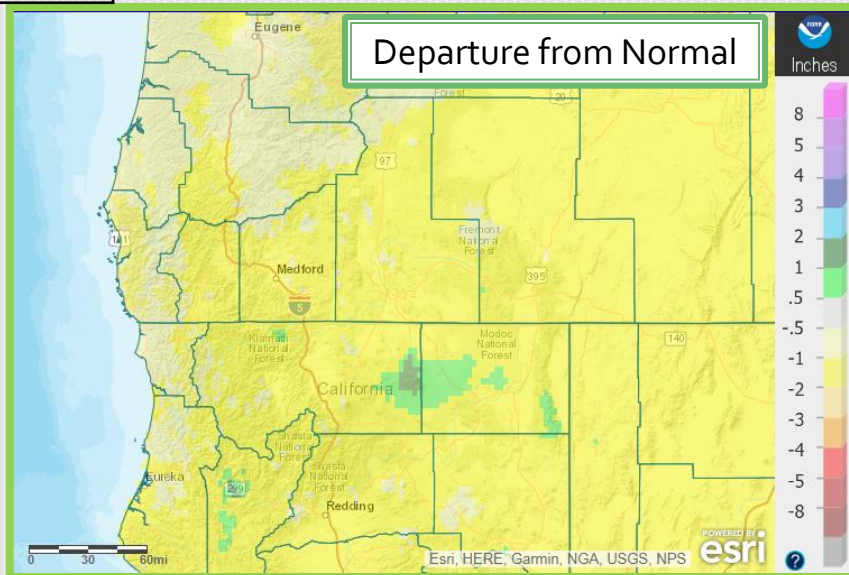
August Precipitation

	Total	Departure from Normal	Greatest 24-hr Total	Date(s)
North Bend	0.14″	-0.48	0.08″	13th
Roseburg	Trace	-0.47	Trace	13th
Medford	0.14″	-0.26	0.14″	8th
Klamath Falls	0.28″	-0.15	0.25″	10th
Montague, CA	0.02″	-0.32	0.01″	8th
Mt. Shasta City, CA	0.14″	-0.20	0.14″	22nd
Alturas, CA	0.53″	0.17	0.40″	22nd

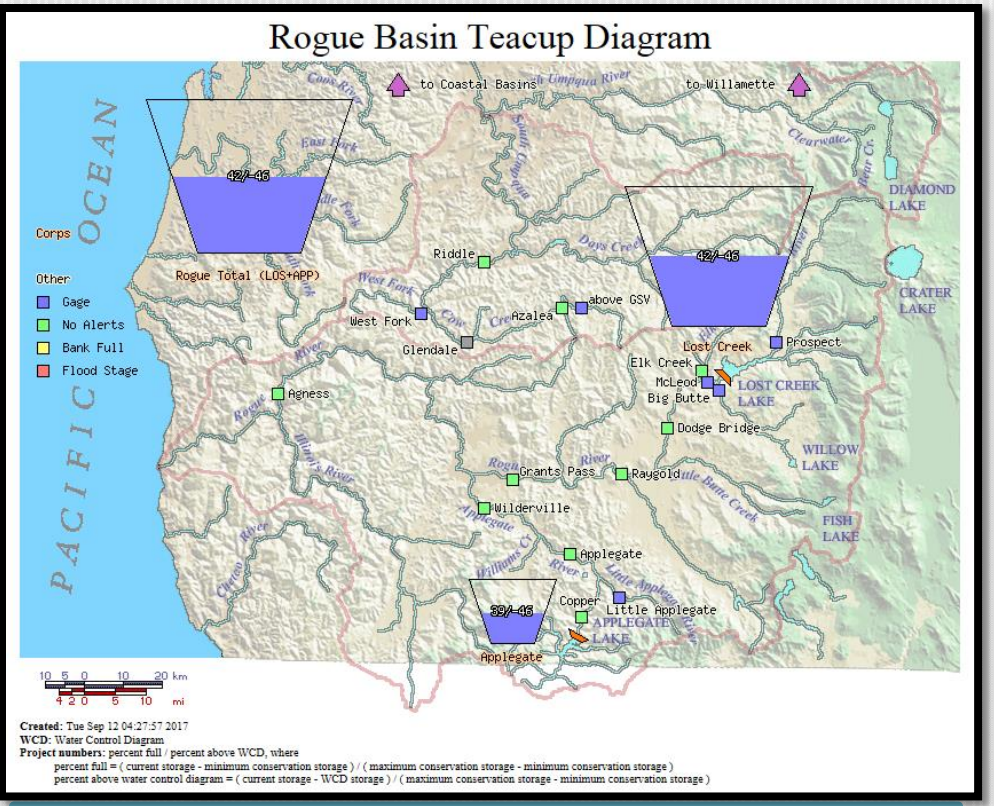
Record Daily Precipitation

	New Record	Date	Old Record	Year
Alturas	0.40″	22nd	0.37″	1947



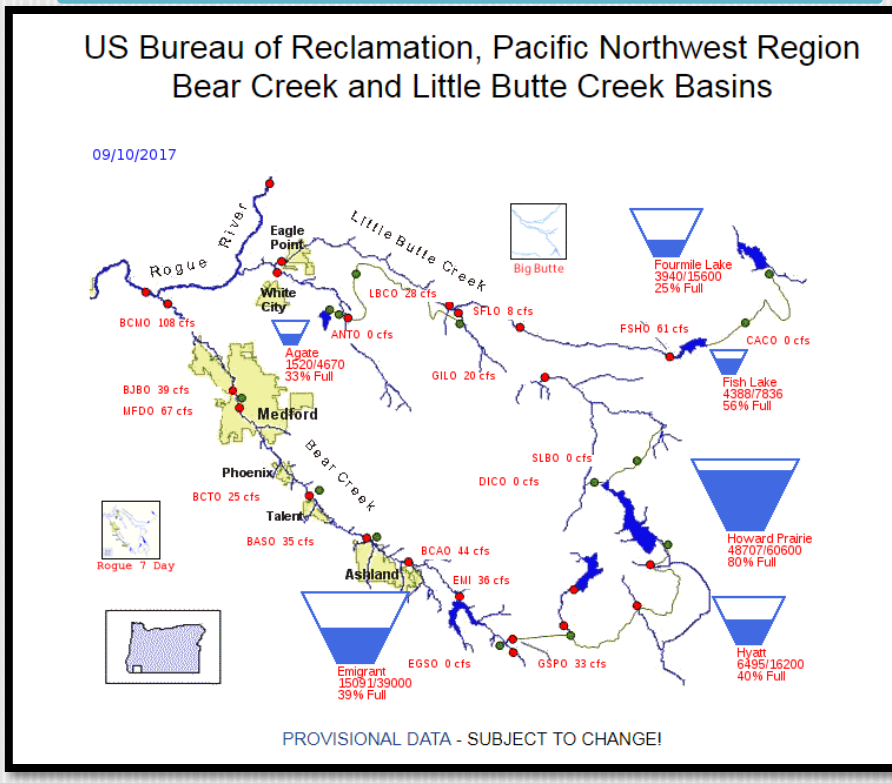


Reservoir Status



Data above courtesy of US Army Corps of Engineers

Data below courtesy of Bureau of Reclamation



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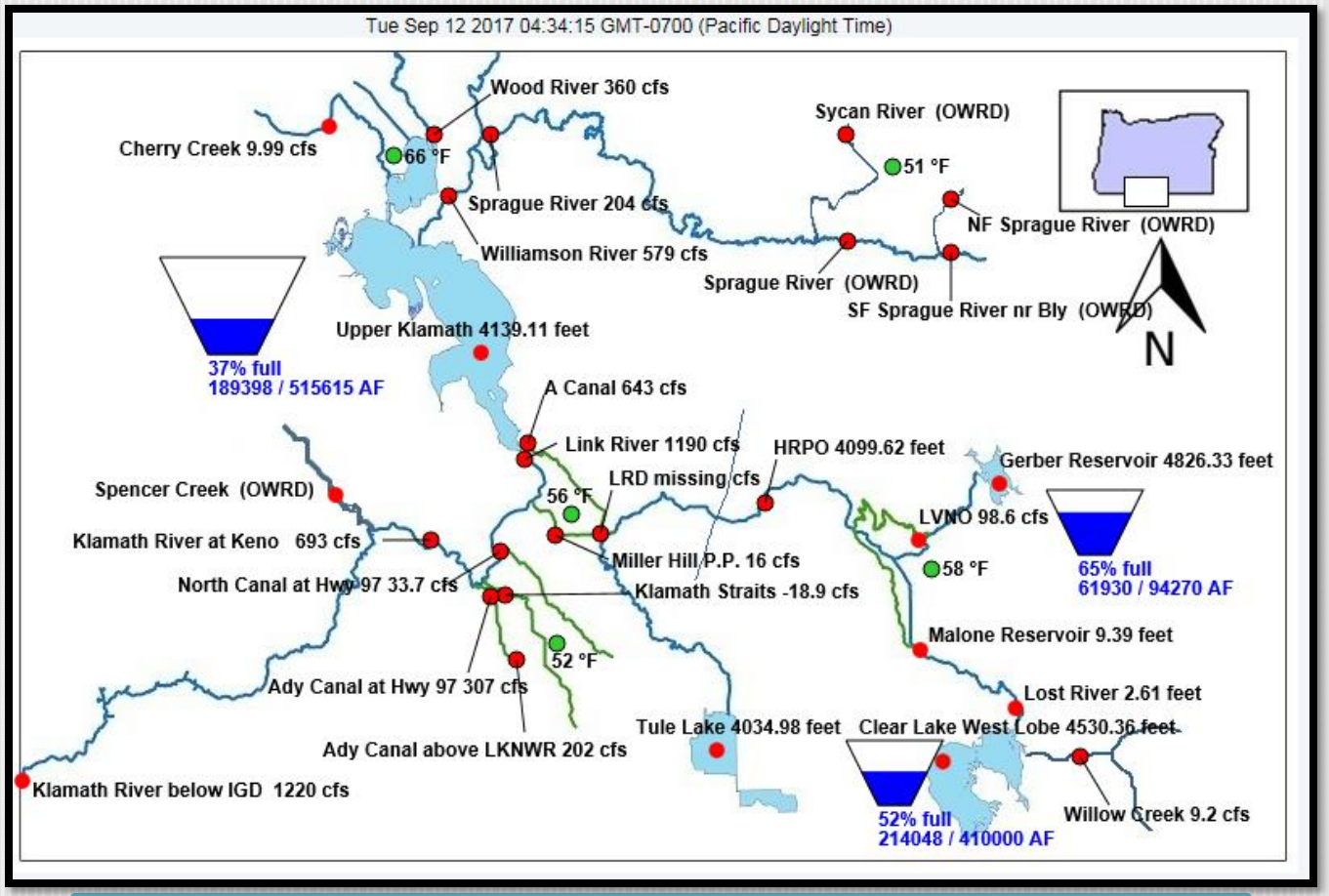
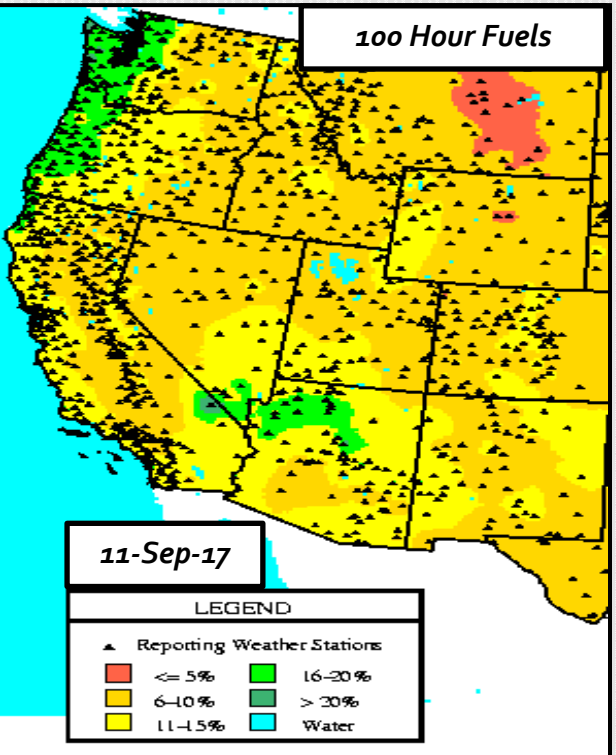
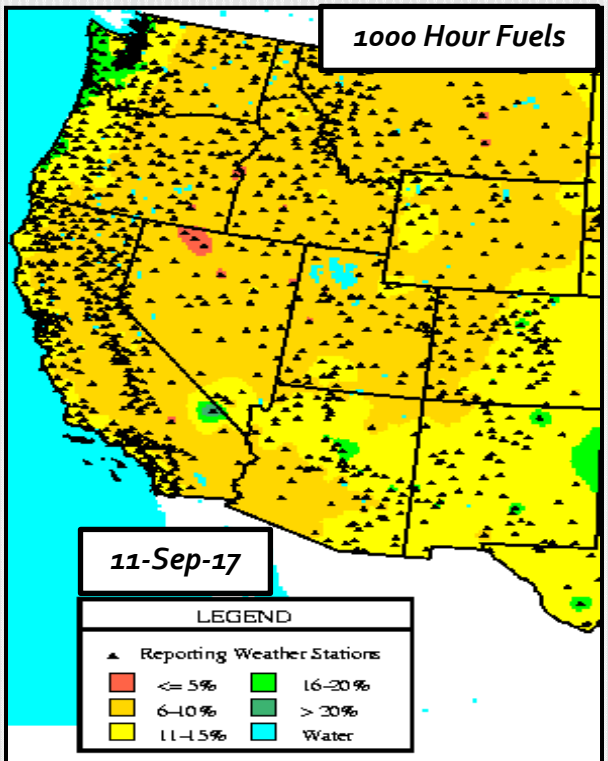


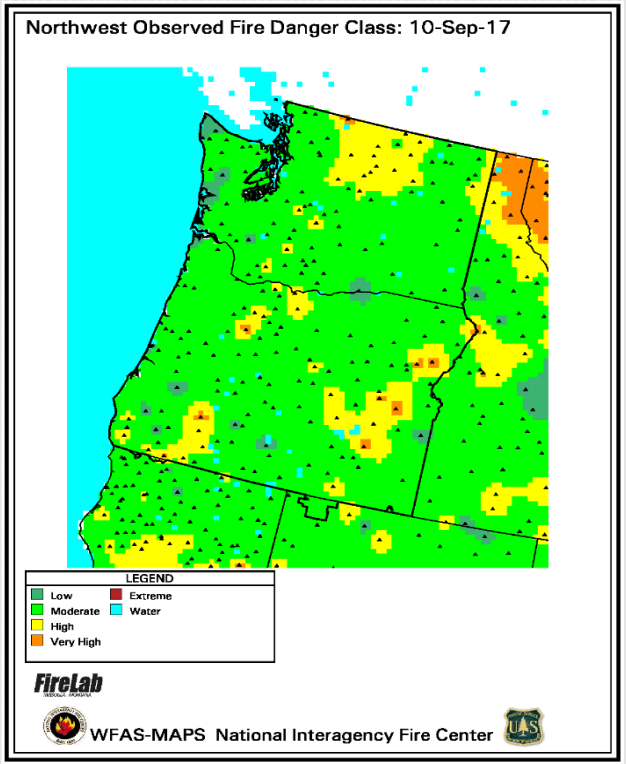
Klamath River Basin. Data courtesy of Bureau of Reclamation

Fuel & Fire Potential Status as of September 11th, 2017

While a couple of rounds of monsoonal thunderstorms in late August and then in the first week of September brought substantial rainfall that broke daily records at some locations east of the Cascades, they also started a number of fires that are still burning across the area. Record temperatures during the first three days of September, which were near all time record highs, combined with prolonged above normal temperatures since mid-June, left the area primed for lightning ignited fires. Areas west of the Cascades finally did receive some measurable rainfall during the first week of September. This early September rainfall and cooler temperatures with higher humidities has begun diminishing fire danger as well as lightning ignition probability. However, with more hot weather expected early this month, more fire starts will be possible until widespread wetting rain occurs across the area. Also, existing fires will continue to burn until this rain occurs.







Crater Lake

	Average Max Temp (°F)	Average Min Temp (°F)	Total Precipitation	Total Snowfall	Snow Depth as of: 8/31/17	Highest Max/ Lowest Min
August	*72.8°*	*45.6°*	*0.63″*	0.0″	0″	84° (3rd) / 34° (14th)
Normal (1981-2010)	*69.7°*	*40.5°*	*1.00″*	*0.0″*	*0″*	*N/A*

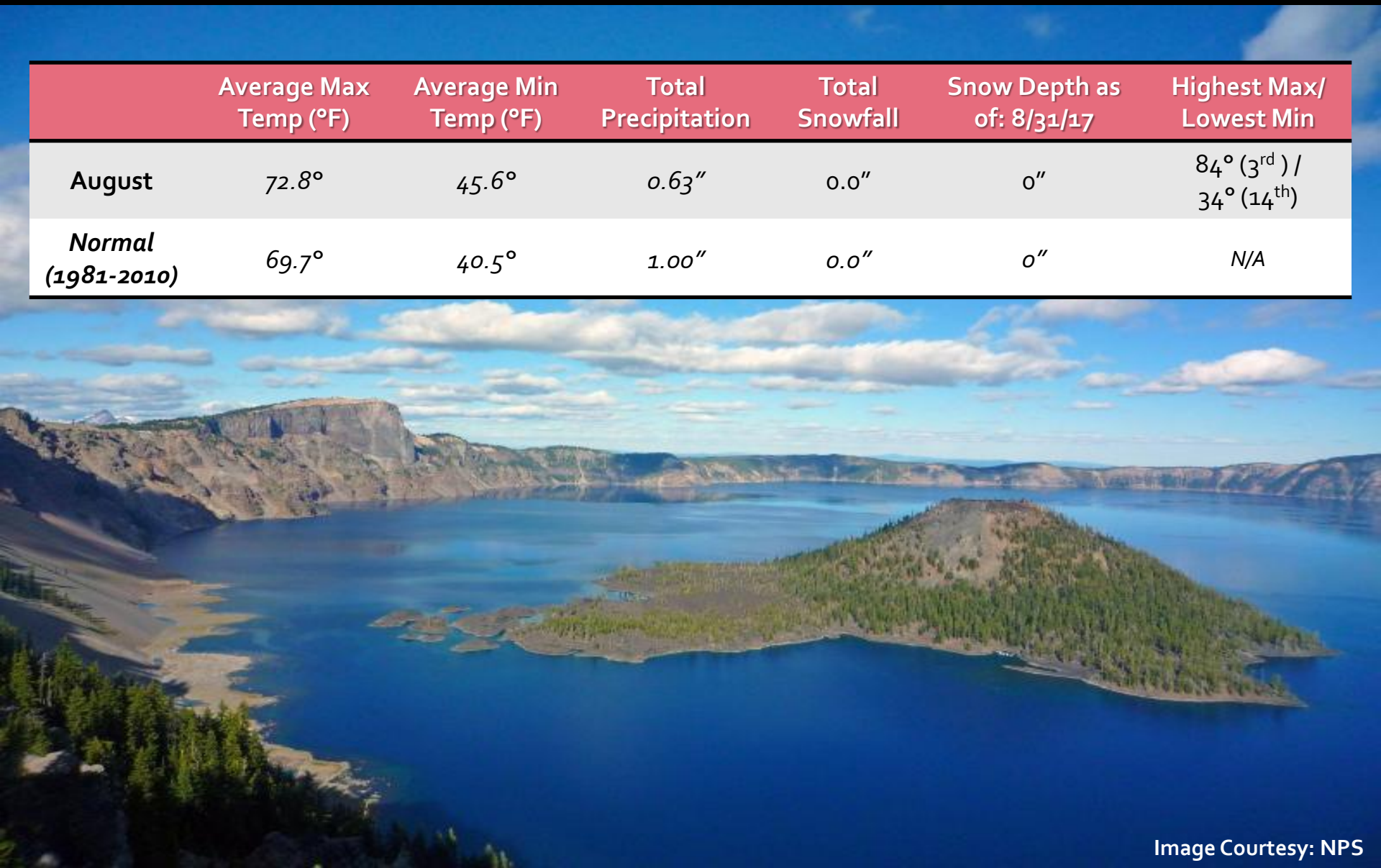
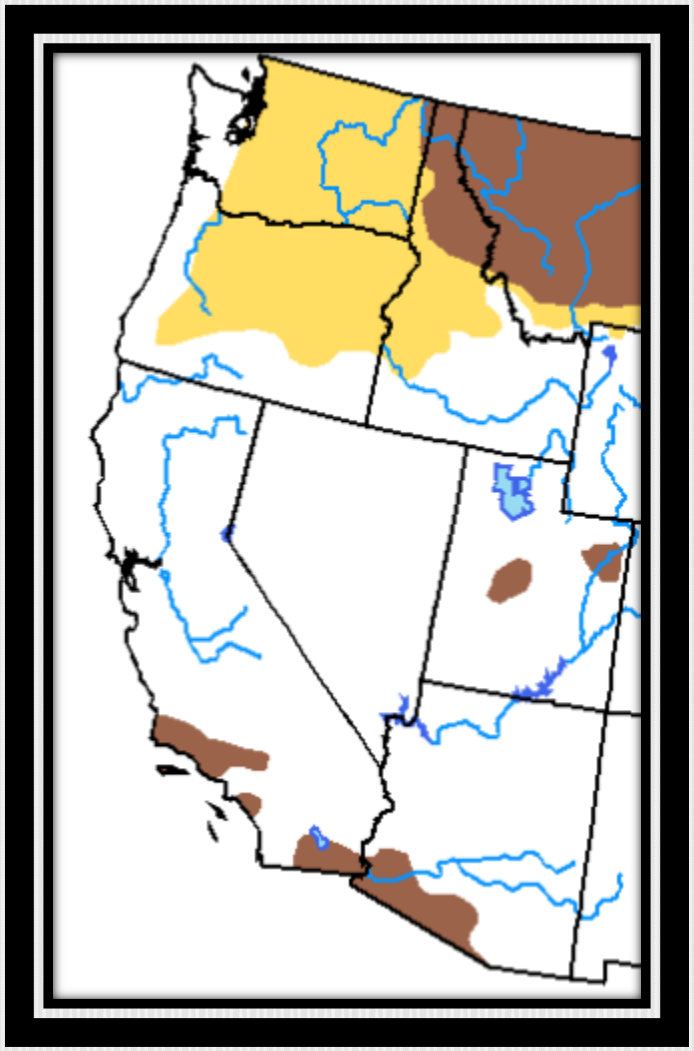


Image Courtesy: NPS

Drought Outlook: September



Drought persists

Drought remains but improves

Drought removal likely

Drought development likely

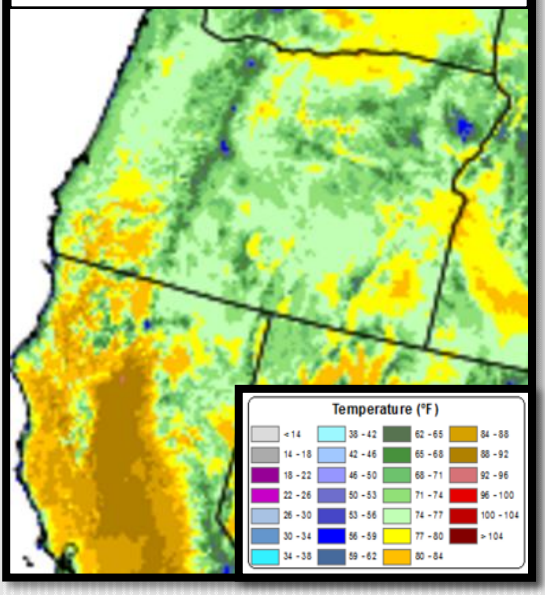
Valid for September 2017
Released August 31, 2017

http://www.cpc.ncep.noaa.gov/products/expert_assessment/month_drought.png

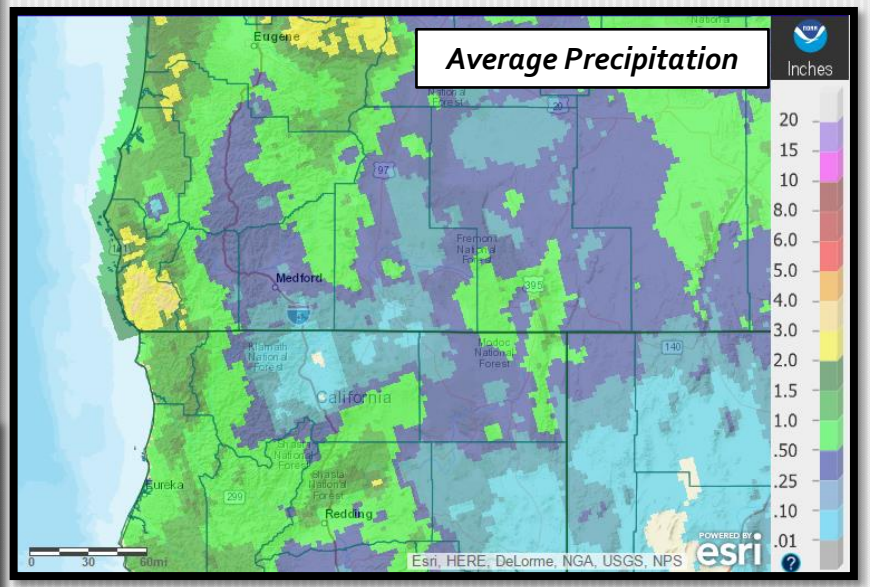
Looking Ahead: September Normals (1981-2010)

September typically marks the end of summer both astronomically and meteorologically. Longer nights and shorter days yield cooler conditions than August and the chance of rainfall increases, especially during the 2nd half of the month. Typically, daily high temperatures are in the 80s in the interior valleys west of the Cascades, in the 70s across the valleys east of the Cascades, and in the 60s and 70s in the mountains and along and near the coast. Daily low temperatures reach frosty low to mid 30s in much of Klamath and northern Lake Counties, and 35-45°F for most of the rest of the area from the Cascades eastward. 40s and lower 50s are normal west of the Cascades, with the warmest nights typically along the Curry County coast at 52-55°F, on average. Precipitation is usually half an inch or more for most of the forecast area, with an inch or more for the highest terrain of the Cascades westward, coastal counties, and coastal mountains. 2-4 inches is normal in the wetter portions of the Coastal Mountains. Northeast and east winds related to enhanced seasonal pressure gradients can result in periods of cool nights and warm days in the valleys along with low relative humidities. This pattern often yields relatively warm days along and near the coast, as well.

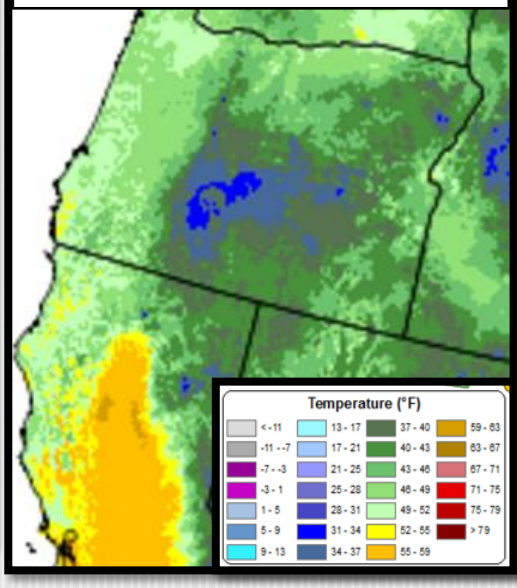
Average Maximum Temperatures



Average Precipitation



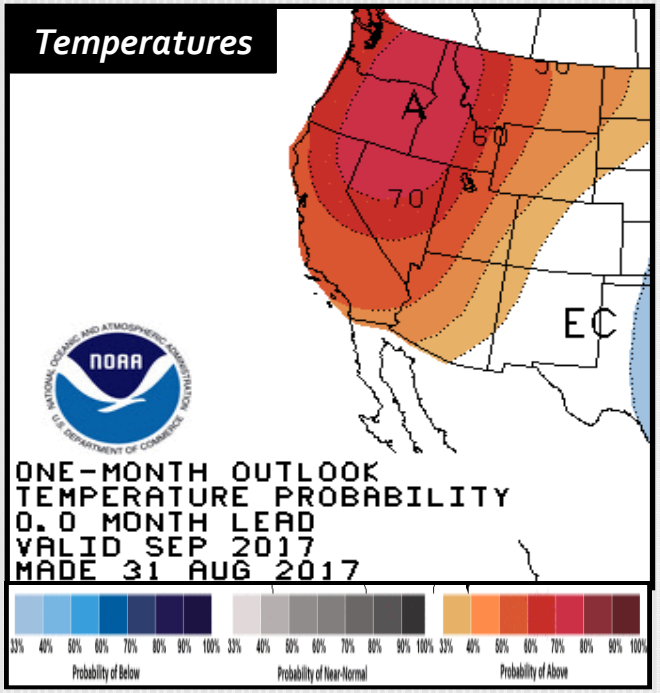
Average Minimum Temperatures



September 2017 Outlook

The official CPC forecast for September 2017 calls for substantially increased chances for warmer than normal temperatures and equal chances for at, below, or above normal precipitation. The one exception is over far southeastern portions of the area, where odds are tilted slightly more toward the above normal precipitation category. This forecast looks to be on track as of September 10th. Well above normal temperatures, thus far, this month and some precipitation across the area with expectations of cooler and wetter conditions beginning around mid-month mean that temperatures probably will not be too far above normal for the month, as a whole. As for precipitation, indications are that some will occur, but the chances of above normal precipitation is greatest over southeastern sections of the area, where less is typically occurs. Frontal systems due in during the 2nd half of the month will determine where most of the area ends up.

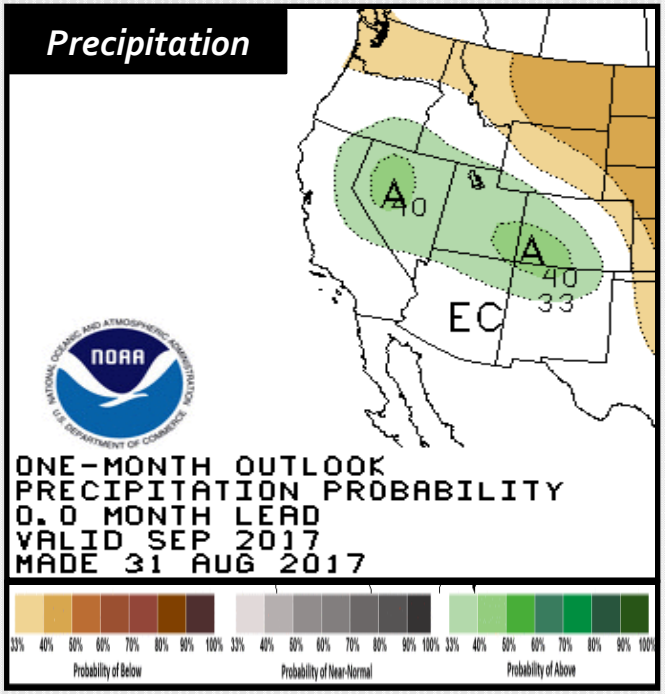
Temperatures



Expected Impact, September 2017:

Heat, smoke, and wildfires early in the month have generally given way to cleaner air and moistening conditions. Shorter days, longer nights, cooler temperatures, and rainfall air likely to cause fire season to draw to a close this month, though some larger fires are likely to linger through month's end. Altogether, we expect a turn to Fall-like conditions which will lead to less stress on water supplies, plants, firefighters, and the public. This will provide welcome relief to many.

Precipitation



*A note about Period of Record (POR)

When looking at record setting events, it's important to consider the length and completeness of the site's period of record (POR). For example, a site August have records back to the early 1900's, but if there is a significant portion of the record missing, it's possible that the POR is not encompassing another significant event that August have surpassed the event in question. Therefore, "record setting" should be considered relative to the completeness/length of POR. To help keep records in context, the POR for each climate site is listed below:

- **North Bend: 1/1/1902 – Present**
- **Roseburg: 4/1/1900 – Present**
  - *Missing:*
    - *05/1900-01/1901*
    - *03/1901-06/1902*
    - *08/1902-12/1930*
    - *10/1965-06/1997*
- **Medford: 3/11/1911 – Present**
- **Klamath Falls: 1/1/1948 – Present**
  - *Missing:*
    - *08-10/1970*
    - *1971-10/1997*
- **Montague, CA: 7/1/1948 – Present**
  - *Missing:*
    - *08-09/1952*
    - *02/1953-06/2000*
- **Mount Shasta City, CA: 4/15/1948 – Present**
  - *Missing:*
    - *10/1984-01/1985*
    - *10/1985-03/1986*
    - *09/1986-07/1997*
- **Alturas, CA: 6/1/1998 – Present**
  - *Missing:*
    - *08/1998*