



Arizona Climate Summary

November 2013

Summary of conditions for October 2013

October 2013 Temperature and Precipitation Summary

October 1st – 16th: The month of October started off with fair weather conditions throughout the state, but with little moisture present. Areas in Northern Arizona experienced high winds due to a deepening trough on the 3rd and 4th day of the month. Flagstaff reported a peak wind gust of 41 mph on the 3rd. Some moisture was able to make its way into the state as a cold front passed through on the 10th, which provided plenty of uplift for some of the intercepted moisture at higher elevations. Winslow reported 0.25” of rainfall and Flagstaff reported 0.18” of precipitation and 0.6” of snowfall on the 10th, breaking the previous record of “trace” in 1930. Phoenix reported a trace of precipitation for the 10th of October, but reported no more precipitation for the rest of the month. Tucson reported no rainfall for the month of October.

October 17th – 31st: Much of the state continued to experience fair weather conditions. Very little precipitation was reported overall. On the 24th, an upper air disturbance in the jet stream allowed for some air uplift, but with little moisture to work with. Winslow reported a trace of precipitation on the 24th. A few days later another disturbance in the jet stream made its way into the southwest, producing high winds for locations at higher elevations. Winslow reported a peak wind gust of 51 mph on the 29th while Flagstaff reported a peak wind gust of 48 mph on the 28th. Winslow reported trace precipitation for the on the 29th and received 0.04” of rainfall the following day. Flagstaff received 0.07” of rainfall on the 29th and 0.04” on the 30th as well. In general October was a relatively cool and dry month across Arizona.

In This Issue: Overview of October, graphs of the October daily maximum and minimum temperatures, precipitation, mean daily dew points for Flagstaff, Phoenix, and Tucson; October climate statistics, maps of mean monthly maximum and minimum temperatures, precipitation, dew points, wind speeds for October; and graphs of the mean October temperature and precipitation for the period of record for Tucson, Phoenix, and Flagstaff, graphs of the cumulative precipitation for the calendar year for Flagstaff, Phoenix, and Tucson. Climate calendars for Flagstaff, Phoenix, Tucson, Prescott, Winslow and Yuma, including daily and monthly normals and extremes, for each month of the year, can be downloaded directly from the State Climate website. See p. 16 of this report for calendar abbreviations.

Data are preliminary and are from the National Weather Service Forecast Offices in Flagstaff, Phoenix and Tucson.

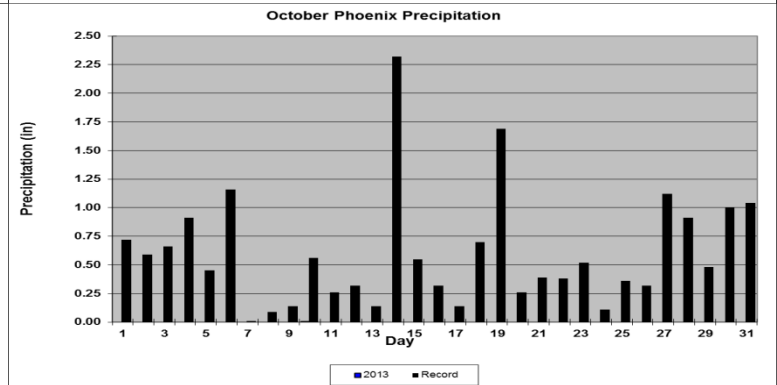
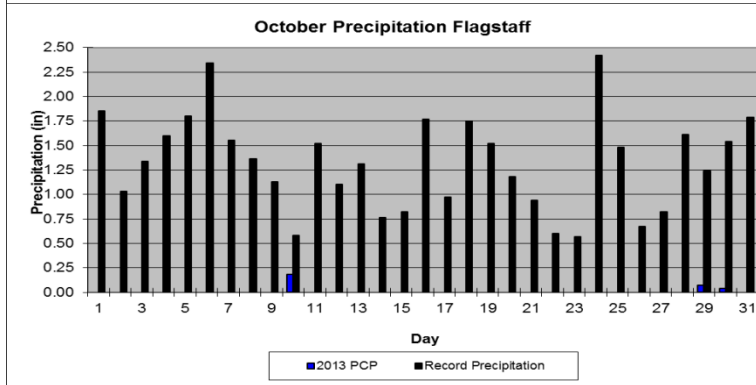
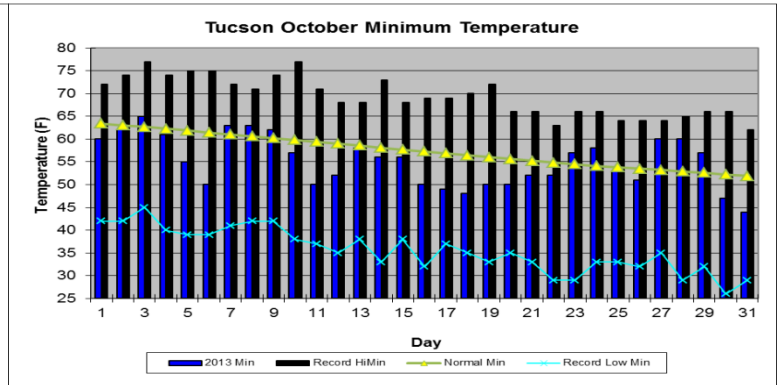
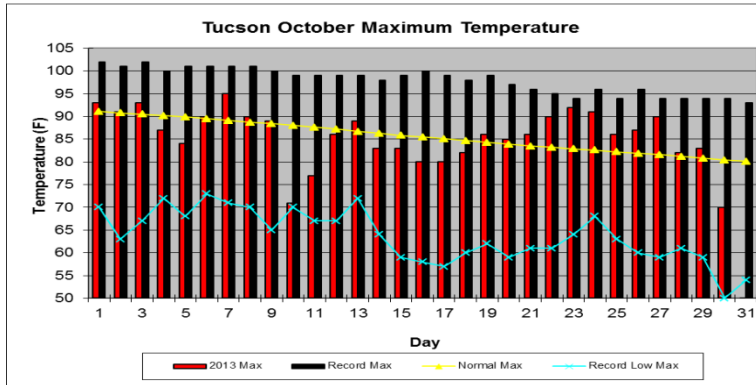
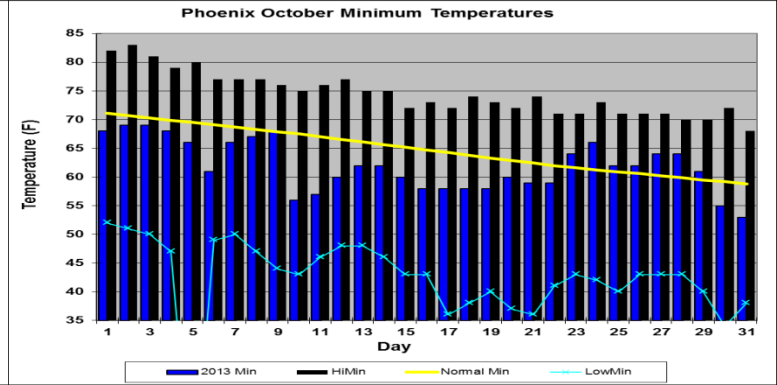
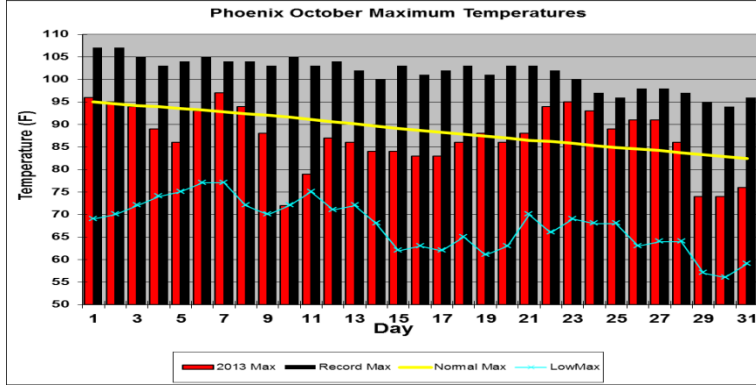
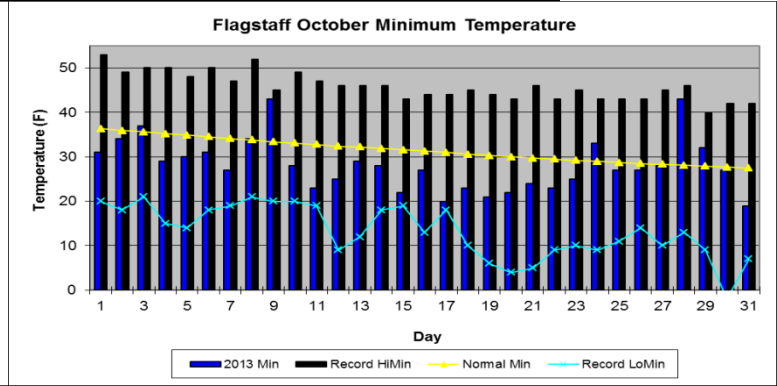
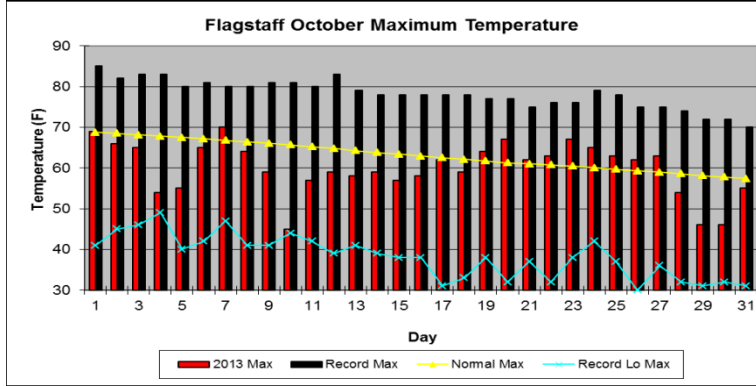
****Note:** The discrepancy between the Statewide Temperature and Precipitation values for Phoenix, Flagstaff and Tucson and the daily values in their graphs are due to the reporting times. Statewide Temperature and Precipitation values are taken at 5pm, while official daily records at the airports are taken from Midnight to Midnight.

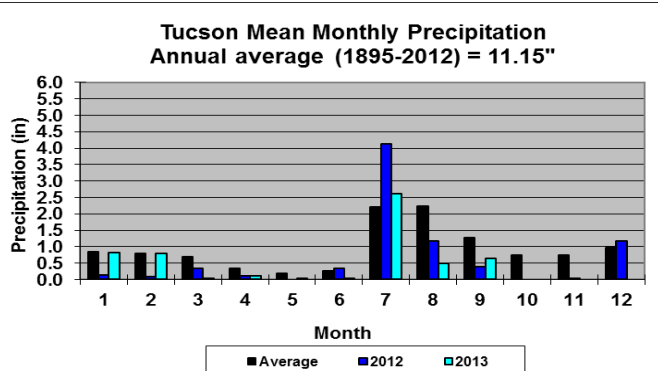
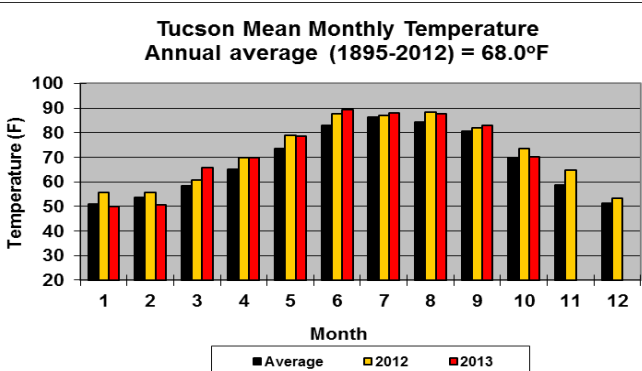
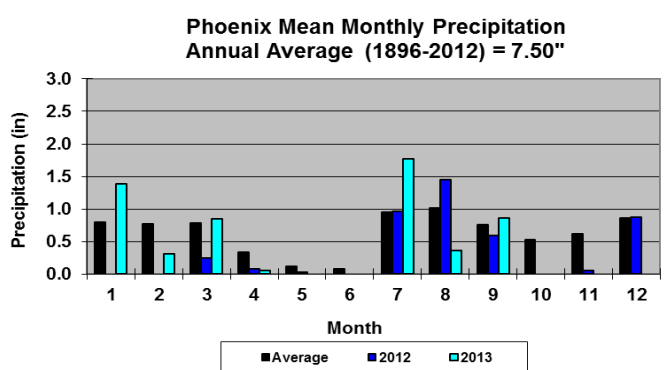
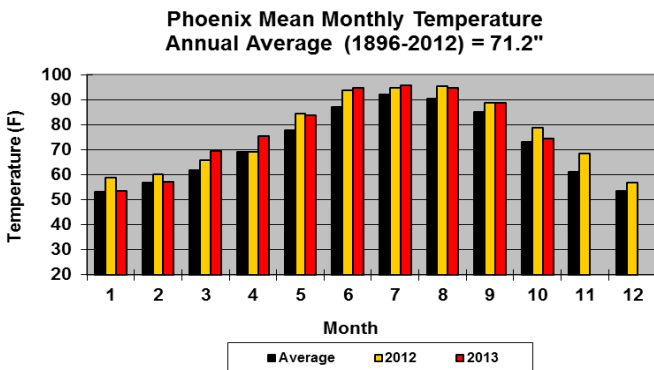
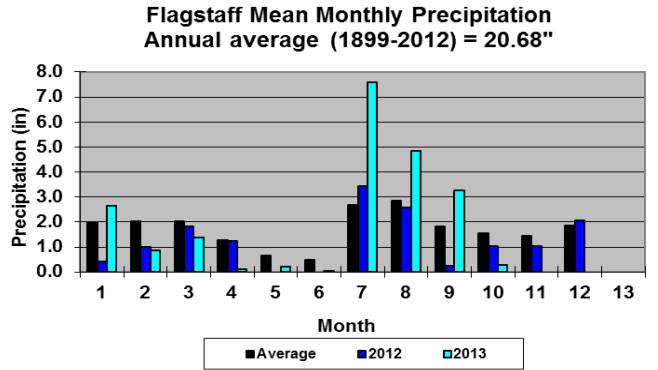
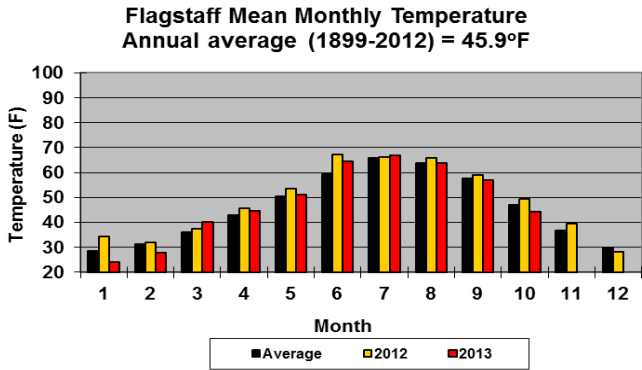
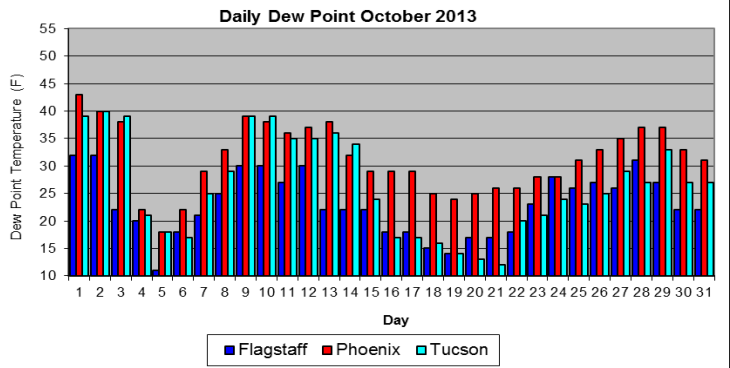
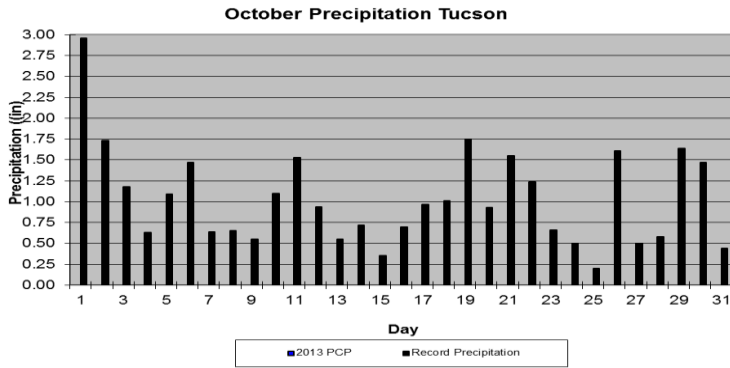
State Climate Office
Dr. Nancy J. Selover, State Climatologist
<http://azclimate.asu.edu> Tel: 480-965-6265
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October 2013 Daily Temperature, Precipitation, & Dew Point for Flagstaff, Phoenix, and Tucson





FLAGSTAFF CLIMATE STATISTICS

October 2013

This October had no significant ranking in temperature and precipitation.

Avg Max Temp (F)	60.0	Normal	62.0
Avg Min Temp (F)	28.4	Normal	31.5
Avg Mean Temp (F)	44.2	Normal	46.8
Departure from Normal (F)	-2.6		

Highest Monthly Avg Temp (F)	52.5	in	1988
Lowest Monthly Avg Temp (F)	38.6	in	1971

Highest Temp this month (F):	70	on	7 th
Lowest Temp this month (F):	20	on	17 th

Record High (F):	85	on	10/01/1980
Record Low (F):	-2	on	10/30/1971

Temperature or precipitation records this month:
11th Snowfall 0.6" set, previous record "trace" in 1930

Flagstaff Number of Days of:

Minimum Temp 40°F or higher	2
Minimum Temp 20°F or lower	1
Maximum Temp 70°F or higher	1

Maximum Temp 50°F or lower	3
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Heating Degree Days	639	Normal	566
Cooling Degree Days	0	Normal	0
Degree base 65°F			

Total October Precipitation	0.29"
Normal October Precipitation	1.66"
Departure from normal	-1.37"
Greatest 24-Hr Precipitation	0.18" on 10/10-10/10
Total Precipitation Year-to-Date	21.22"
Departure from Normal	2.99"

Number of Days:

Clear	27
Partly Cloudy	2
Cloudy	2

Greatest October Precipitation	9.86" in 1972
Least October Precipitation	0.00" in 1999 and 7 other years

Average Wind Speed	7.2 mph
Highest Peak Gust	48 mph from 220° on 28 th

PHOENIX CLIMATE STATISTICS

October 2013

This October had no significant ranking in temperature and precipitation.

Avg Max Temp(F)	87.1	Normal	88.5
Avg Min Temp(F)	61.9	Normal	64.8
Avg Mean Temp (F)	74.5	Normal	76.7
Departure from Normal (F)	-2.2		

Highest Monthly Avg Temp (F)	82.7	in	2003
Lowest Monthly Avg Temp (F)	66.1	in	1916

Highest Temp this month (F):	97	on	7 th
Lowest Temp this month (F):	53	on	31 st

Record High (F):	107	on	10/01/1980
			10/02/1980
Record Low (F):	34	on	10/30/1971

Temperature and precipitation records this month.
10th LoMax 72 tied, first set in 1960

Phoenix Number of Days of:

Minimum Temp 55°F or lower	2
Minimum Temp 65°F or higher	9
Maximum Temp 75°F or lower	3
Maximum Temp 95°F or higher	4

Heating Degree Days	1	Normal	6
Cooling Degree Days	305	Normal	367
Degree base 65°F			

Total October Precipitation	T
Normal October Precipitation	0.58"
Departure from normal	-0.58"

Greatest 24-Hr Precipitation T on 10/10 –
 10/10
 Total Precipitation Year-to-Date 5.60”
 Departure from Normal -0.90”

Greatest October Precipitation 4.40” in 1972
 Least October Precipitation 0.00” in 2013 and
 20 other years

Average Wind Speed 5.9 mph
 Highest Peak Gust 37 mph from 190° on 9th

Number of Days:
 Clear 22
 Partly Cloudy 9
 Cloudy 0

TUCSON CLIMATE STATISTICS
 October 2013

This October had no significant ranking in
 temperature and precipitation.

Heating Degree Days 13 Normal 24
 Cooling Degree Days 183 Normal 212
 Degree base 65°F

Avg Max Temp(F) 85.4 Normal 84.8
 Avg Min Temp(F) 55.1 Normal 57.3
 Avg Mean Temp(F) 70.2 Normal 71.0
 Departure from Normal (F) -0.8

Total October Precipitation 0.00”
 Normal October Precipitation 0.89”
 Departure from normal -0.89”
 Greatest 24-Hr Precipitation 0.00” on 31-31

Highest Monthly Avg Temp (F) 76.8 in 1950
 Lowest Monthly Avg Temp (F) 63.1 in 1920

Total Precipitation Year-to-Date 5.48”
 Departure from Normal -4.61”
 Greatest October Precipitation 4.98” in 1983
 Least October Precipitation 0.00” in 2013 and
 17 other years

Highest Temp this month (F): 95 on 7th
 Lowest Temp this month (F): 44 on 31st

Record High (F): 102 on 10/01/2010
 10/03/1993

Record Low (F): 26 on 10/30/1971

Number of Days:
 Clear 27
 Partly Cloudy 1
 Cloudy 0

No temperature or precipitation records this month.

Tucson Number of Days of:
 Minimum Temp 45°F or lower 1
 Minimum Temp 65°F or higher 1
 Maximum Temp 70°F or lower 1
 Maximum Temp 95°F or higher 1

Average Wind Speed 7.3 mph
 Highest Peak Gust 41 mph from 190° on 9th

Data are from the National Weather Service and the
 National Climatic Data Center and are **preliminary**.

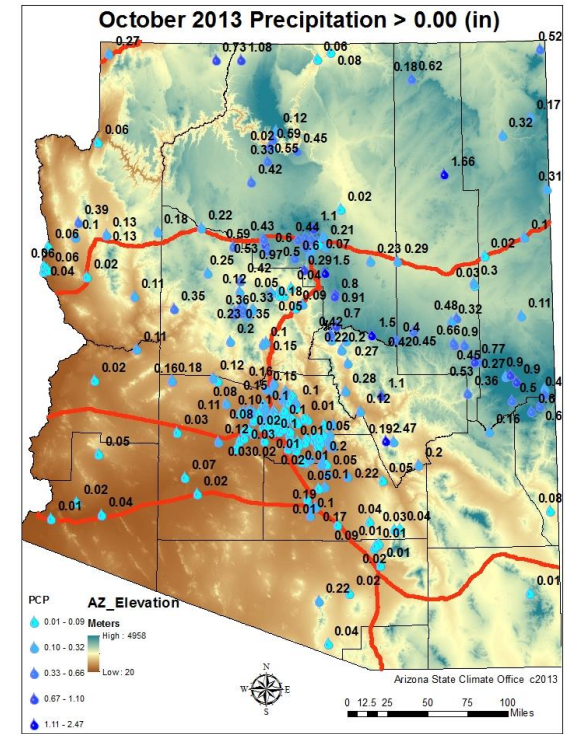
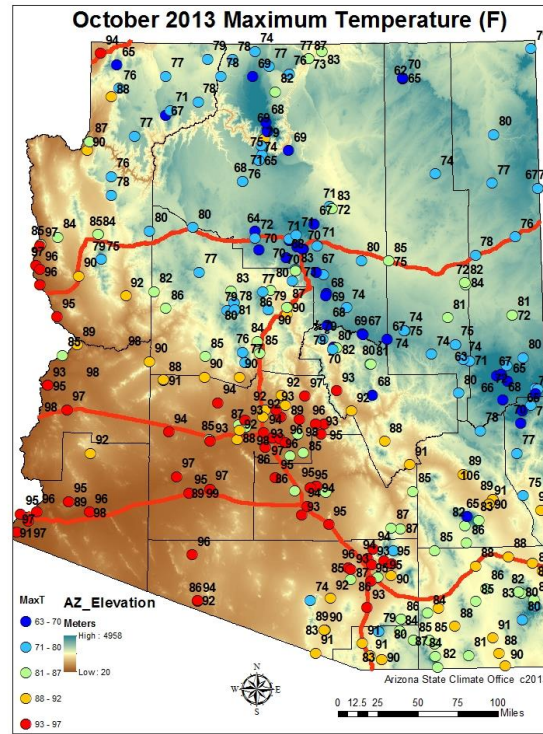
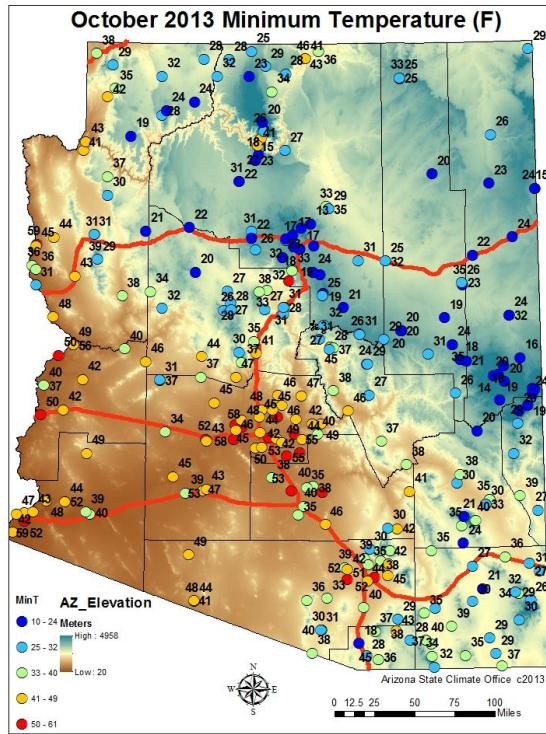
Winds for October:

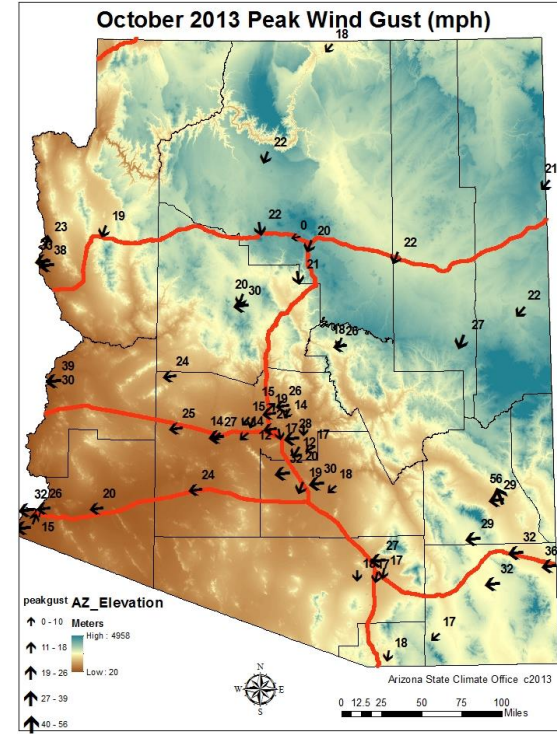
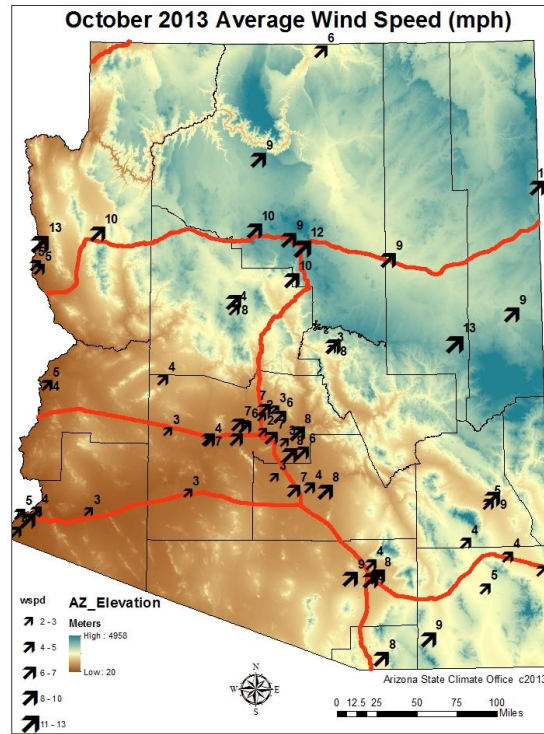
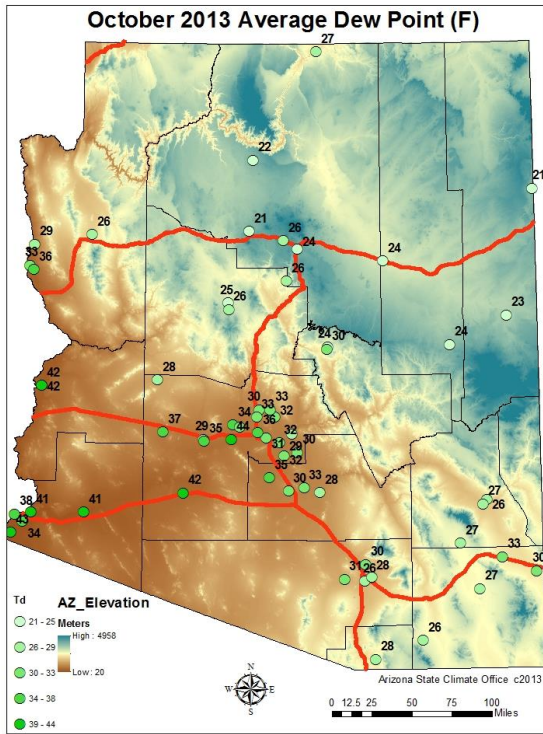
Day	Phoenix		Flagstaff			
	Tucson					
(mph)	Avg	Max	Avg	Max	Avg	Max
1	6.2	16	5	25	4.5	16
2	6.7	M	7.2	29	5.7	M
3	7.5	21	13.3	41	8.3	24
4	7.8	27	10.3	31	6.5	23
5	7.3	19	15	37	6.3	21
6	5.5	21	8.3	30	7.8	29
7	4.3	21	3.4	22	8.5	24
8	6.3	20	10.5	39	8	23
9	13.3	37	17.7	48	14.2	41
10	8.9	30	11.2	41	10.5	29
11	2.4	14	2.5	15	4.7	17
12	4.9	22	3.8	24	6	17
13	6.2	17	11.7	39	8.2	38
14	4.7	21	3.7	18	3.6	20
15	5.7	19	6	29	5.9	23
16	5.1	13	7	18	4.7	14
17	5	14	4.5	21	5.9	18
18	4.7	18	5.2	28	5.9	16
19	3.7	13	2.1	M	6.3	20
20	6.3	14	2.2	21	6.7	21
21	4.7	13	4.4	22	7.3	18
22	3.7	14	3	17	9.1	24
23	4.4	15	2.2	18	8.2	24
24	4.9	20	3.5	23	7.4	23
25	4.8	14	2.4	22	6.2	15
26	3.4	13	4.8	24	5.1	17
27	5.8	19	8.2	28	9	28
28	8.8	32	19.3	48	12.8	37
29	8.2	31	14.2	46	11.1	35
30	5.9	19	4.2	23	6	22
31	4.6	17	M	M	5.2	15

Dew Points for October:

Daily Average Dew Point (°F):

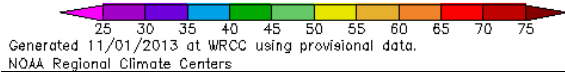
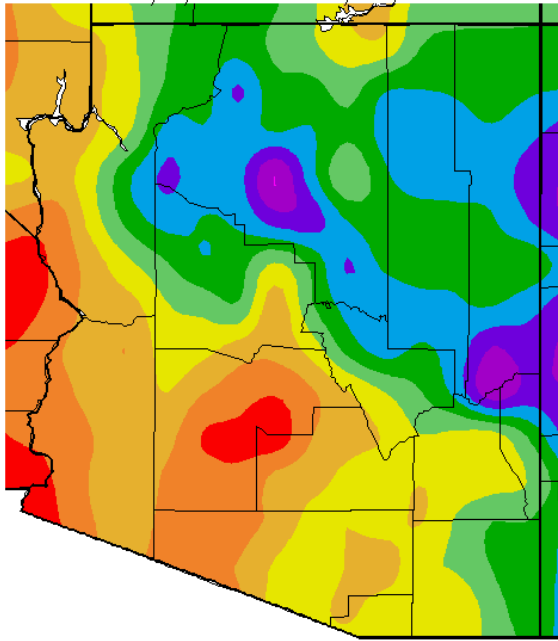
Day	Phx	Tuc	Flg
1	43	39	32
2	40	40	32
3	38	39	22
4	22	21	20
5	18	18	11
6	22	17	18
7	29	25	21
8	33	29	25
9	39	39	30
10	38	39	30
11	36	35	27
12	37	35	30
13	38	36	22
14	32	34	22
15	29	24	22
16	29	17	18
17	29	17	18
18	25	16	15
19	24	14	14
20	25	13	17
21	26	12	17
22	26	20	18
23	28	21	23
24	28	24	28
25	31	23	26
26	33	25	27
27	35	29	26
28	37	27	31
29	37	33	27
30	33	27	22
31	31	27	22



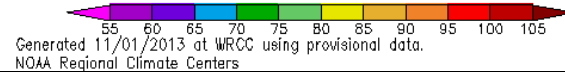
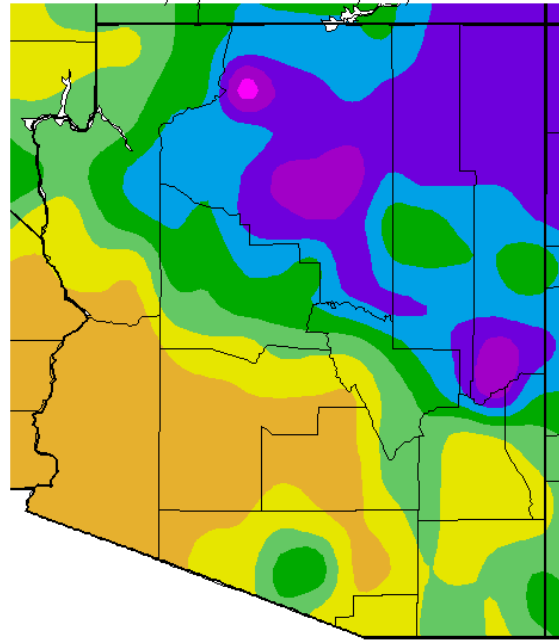


The lowest minimum temperature was 10°F at Alpine, and the highest minimum was 61°F at Mesa Falcon Field. The lowest maximum temperature of 59°F was recorded at Snowslide, while the highest maximum temperature of 106°F was reported at Fort Thomas. The lowest rainfall amount was 0.00” in many locations in the southern third of the state and the highest was 2.47” at Miami. The lowest dew point was 21°F at Window Rock and the highest was 44°F at Phoenix Goodyear Airport. The highest peak wind gust was 56 mph at Safford.

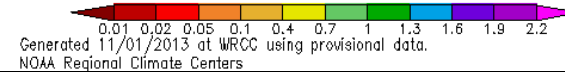
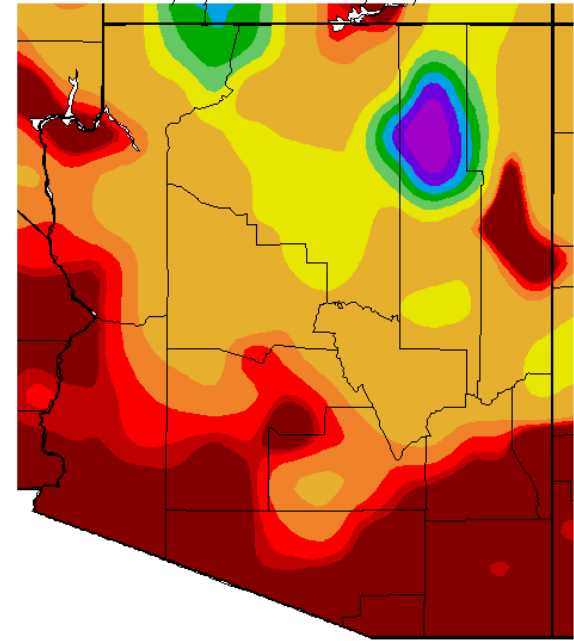
Av. Min. Temperature (deg. F)
1/1/2013 – 10/31/2013



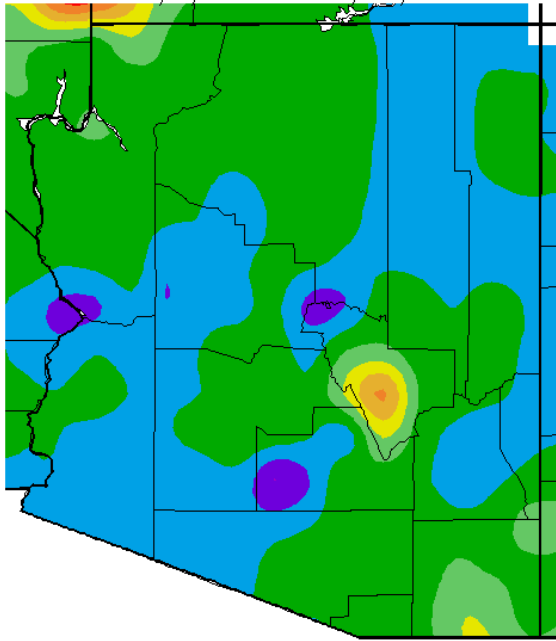
Av. Max. Temperature (deg. F)
10/1/2013 – 10/31/2013



Total Precipitation (in.)
10/1/2013 – 10/31/2013

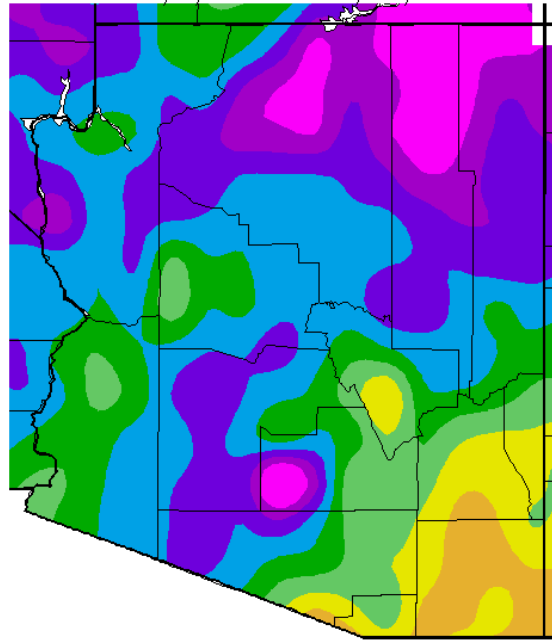


Av. Min. Temperature dep from Ave (deg. F)
10/1/2013 – 10/31/2013



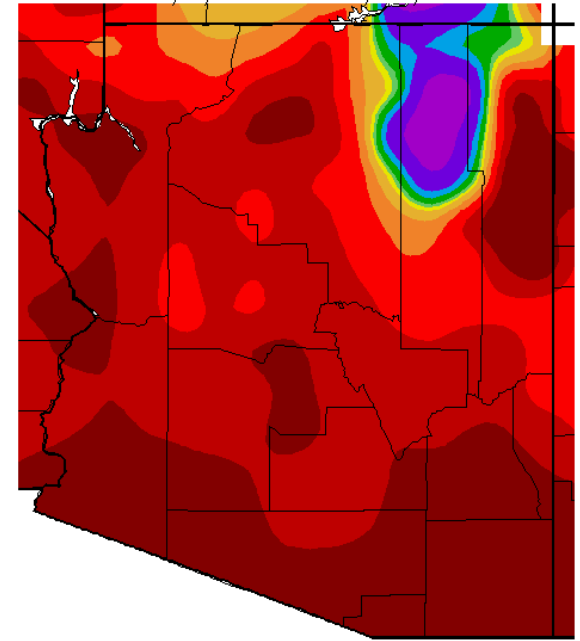
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NOAA Regional Climate Centers

Av. Max. Temperature dep from Ave (deg F)
10/1/2013 – 10/31/2013



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NOAA Regional Climate Centers

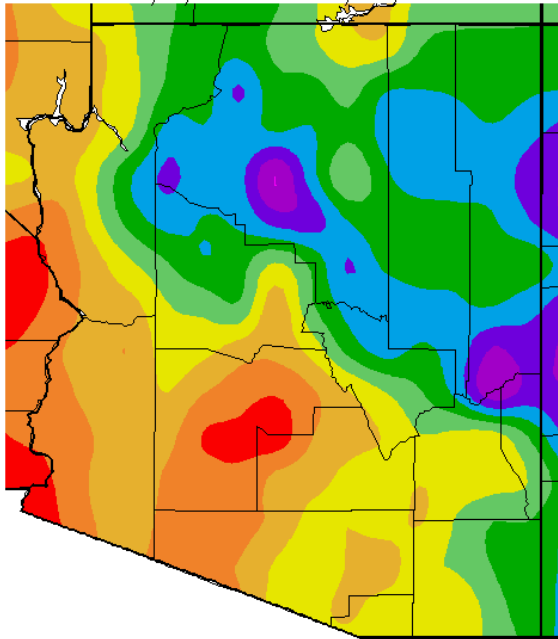
Percent of Average Precipitation (%)
10/1/2013 – 10/31/2013



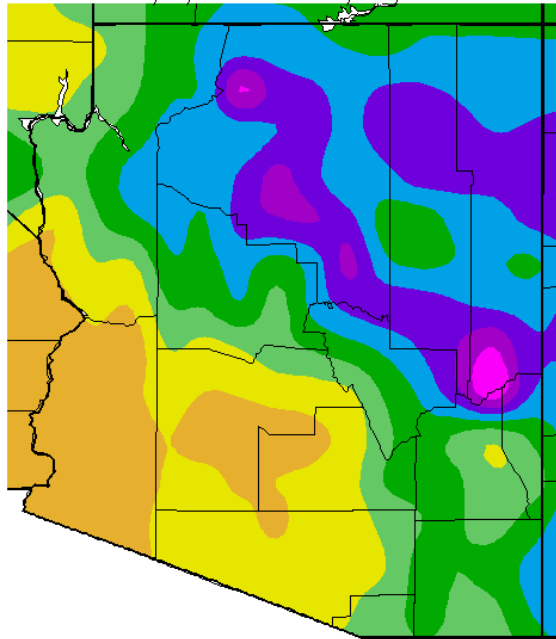
Generated 11/01/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

October minimum temperatures were 2° to 6°F cooler than normal statewide. Daytime temperatures were also generally cooler than normal, with the Colorado Plateau 3-6°F colder than normal, as was southwestern Arizona. Southeastern Arizona was nearly 2°F warmer than normal. October precipitation was very light across the state, with less than 50% of normal across most of the state. Only the Colorado Plateau had above average precipitation.

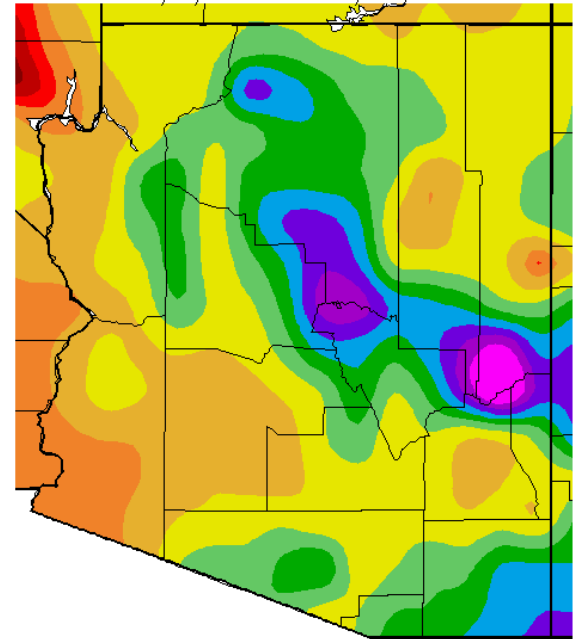
Av. Min. Temperature (deg. F)
1/1/2013 – 10/31/2013



Av. Max. Temperature (deg. F)
1/1/2013 – 10/31/2013



Total Precipitation (in.)
1/1/2013 – 10/31/2013

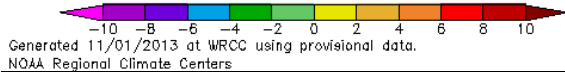
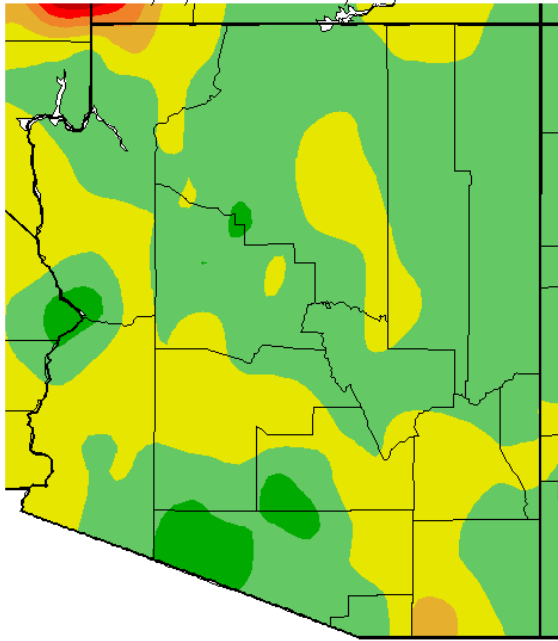


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NOAA Regional Climate Centers

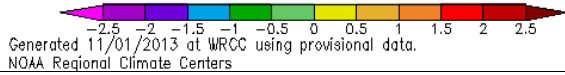
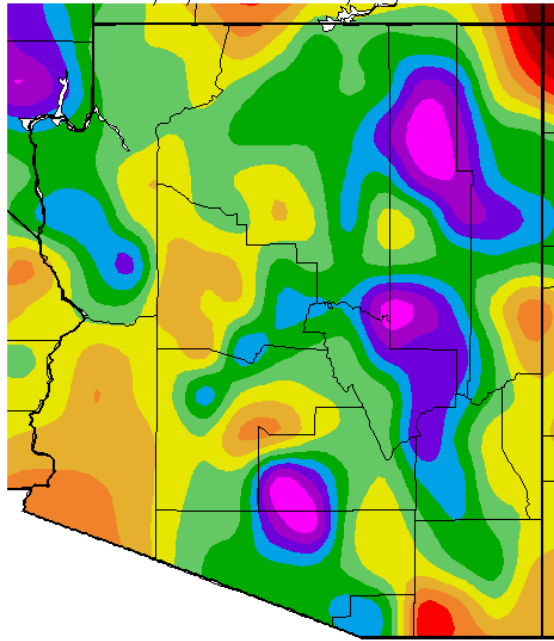
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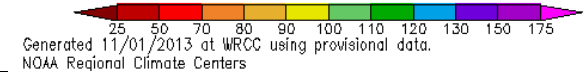
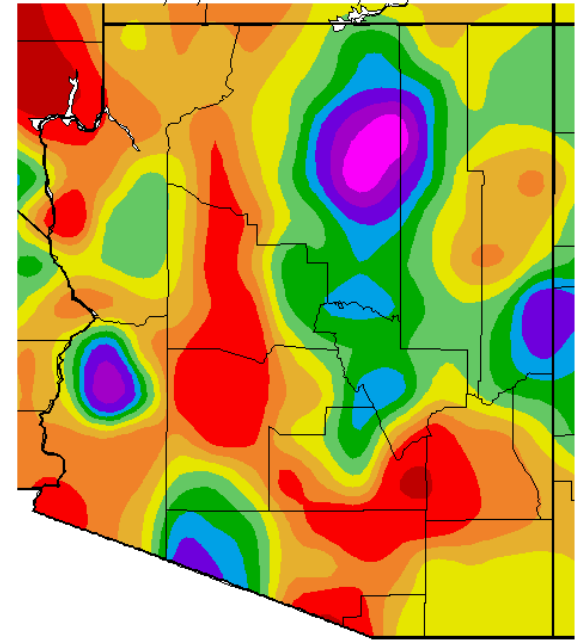
Av. Min. Temperature dep from Ave (deg. F)
1/1/2013 – 10/31/2013



Av. Max. Temperature dep from Ave (deg F)
1/1/2013 – 10/31/2013



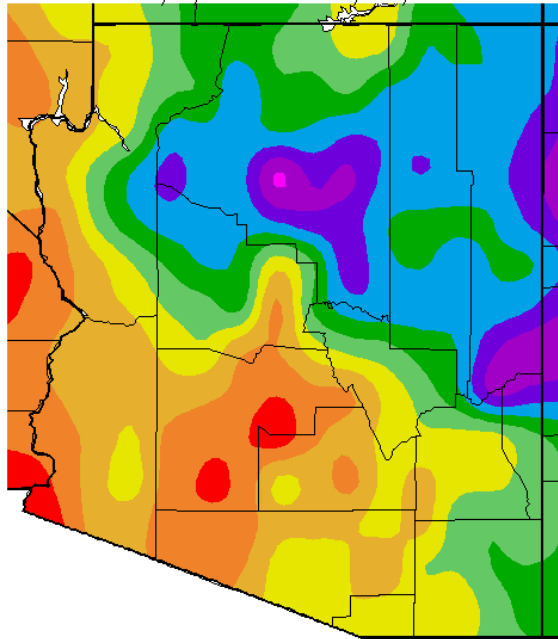
Percent of Average Precipitation (%)
1/1/2013 – 10/31/2013



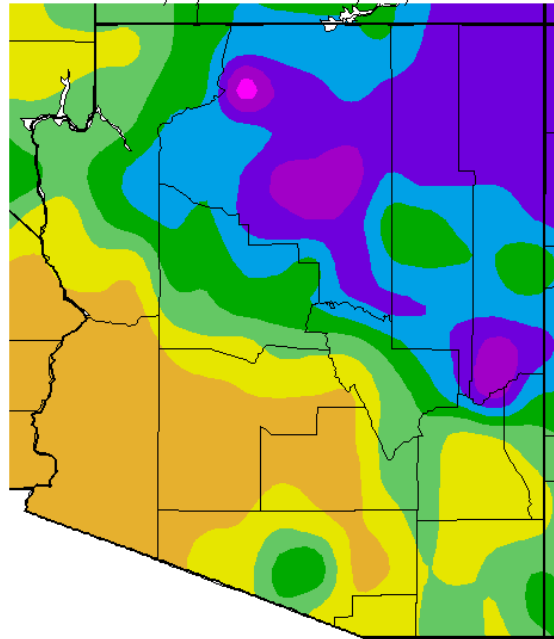
Calendar Year 2013

Nighttime temperatures for the calendar year are still within 2°F of normal for this time of year. Daytime temperatures have been more variable around the state. Most of the state was within 1°F of normal, though northern and southern Navajo County, and southwestern Pinal County were 2 to 3°F colder than normal.

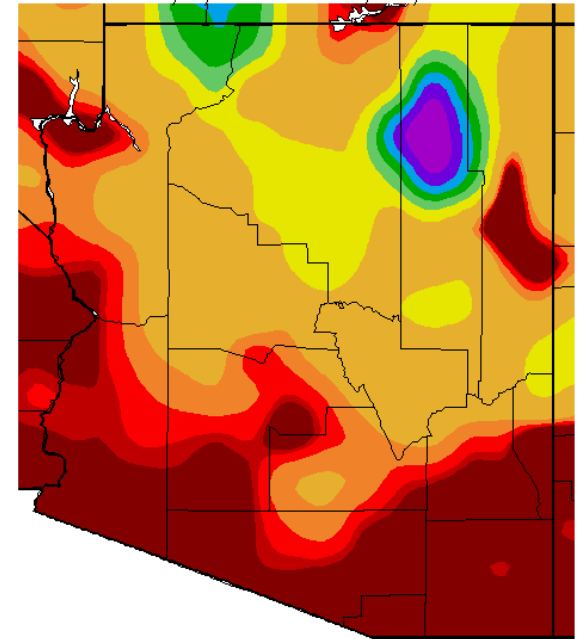
Av. Min. Temperature (deg. F)
10/1/2013 – 10/31/2013



Av. Max. Temperature (deg. F)
10/1/2013 – 10/31/2013



Total Precipitation (in.)
10/1/2013 – 10/31/2013

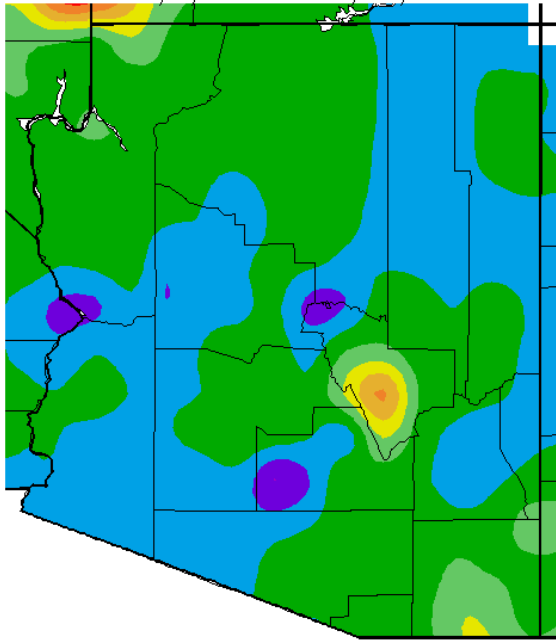


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Generated 11/01/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

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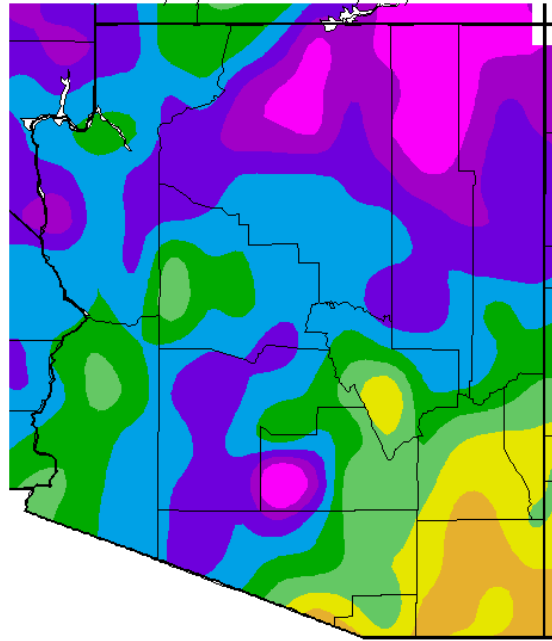
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NOAA Regional Climate Centers

Av. Min. Temperature dep from Ave (deg. F)
10/1/2013 – 10/31/2013



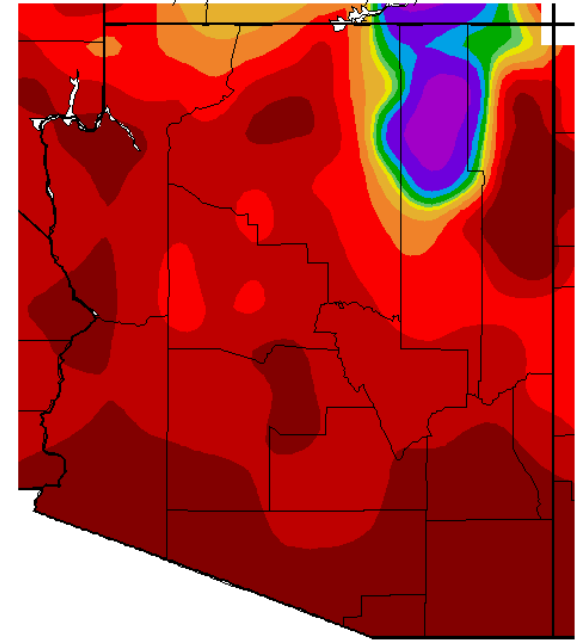
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Av. Max. Temperature dep from Ave (deg F)
10/1/2013 – 10/31/2013



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NOAA Regional Climate Centers

Percent of Average Precipitation (%)
10/1/2013 – 10/31/2013

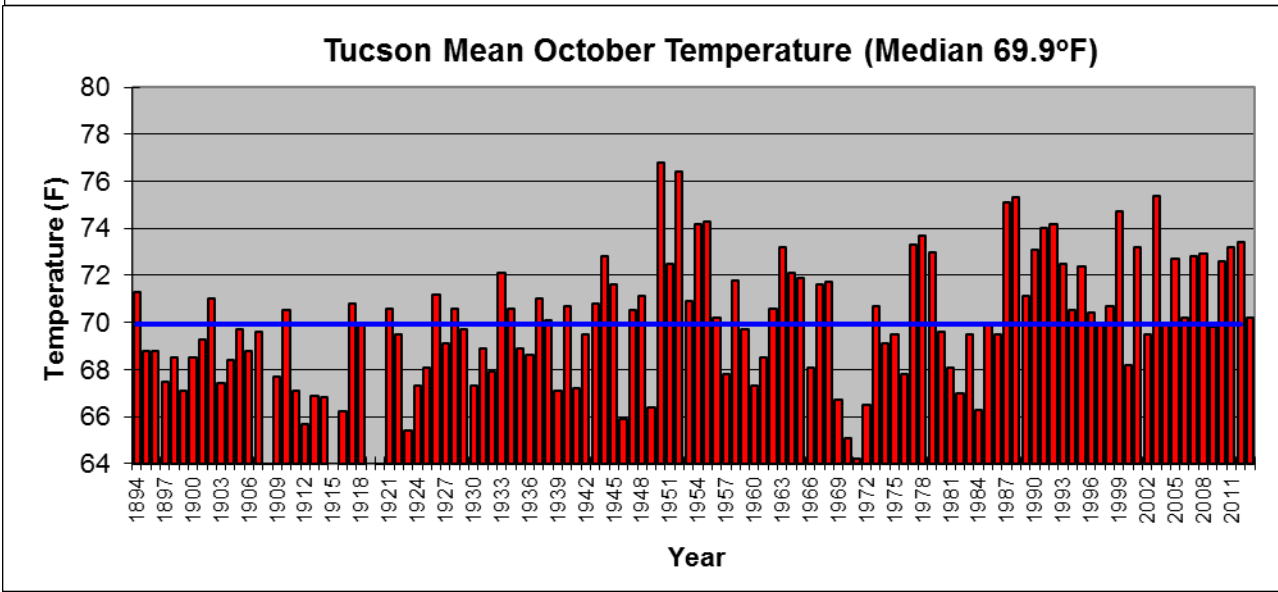
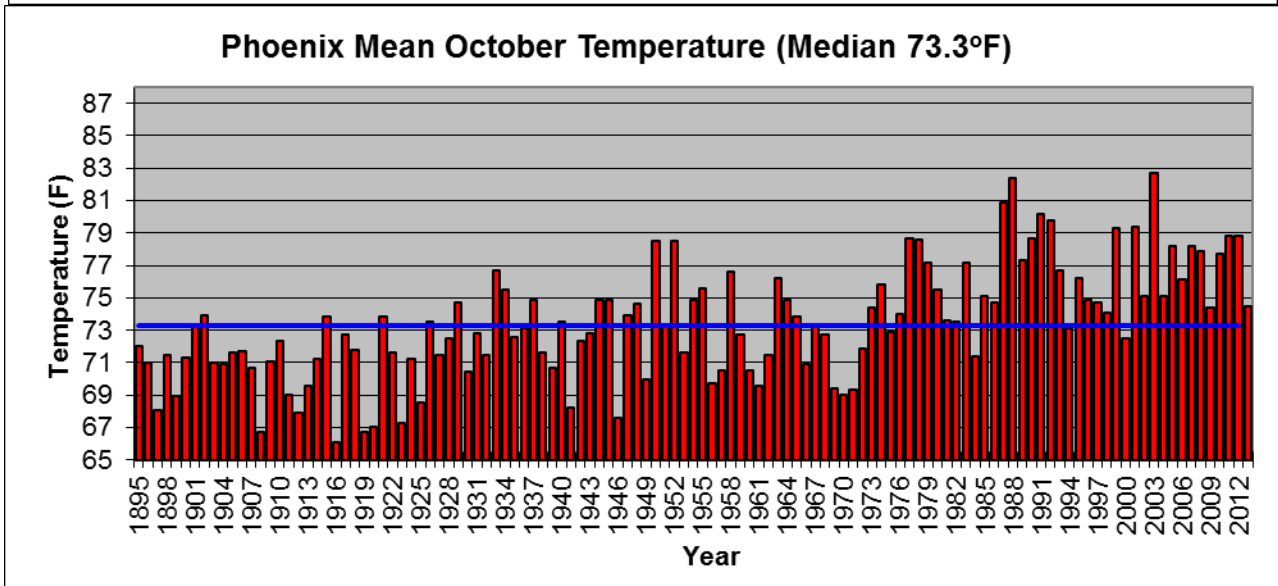
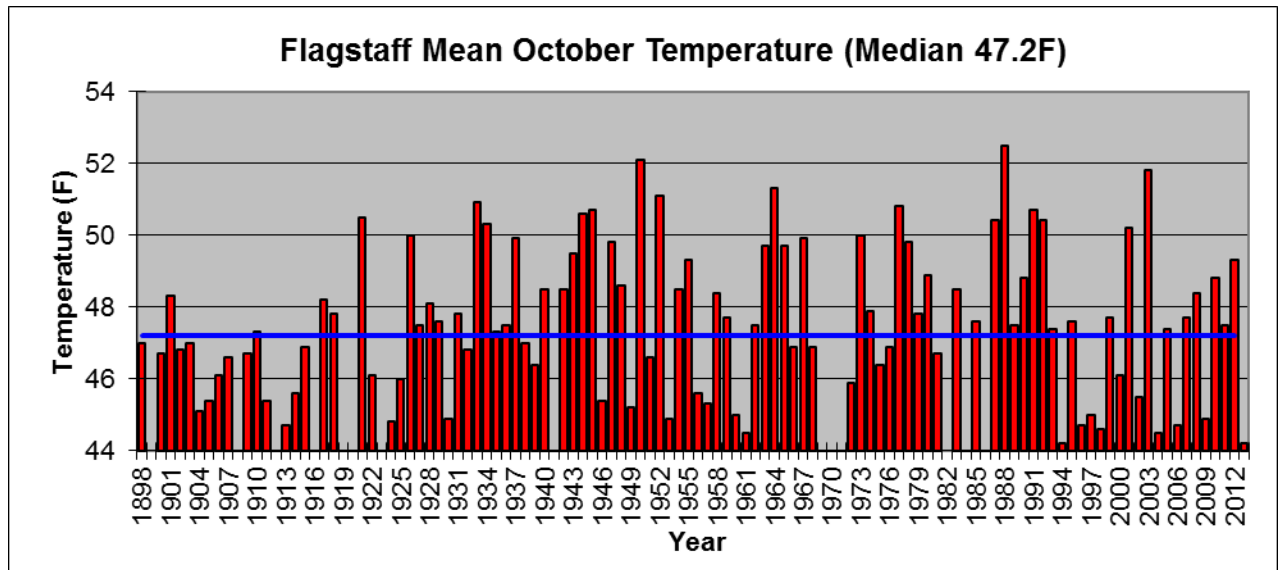


Generated 11/01/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

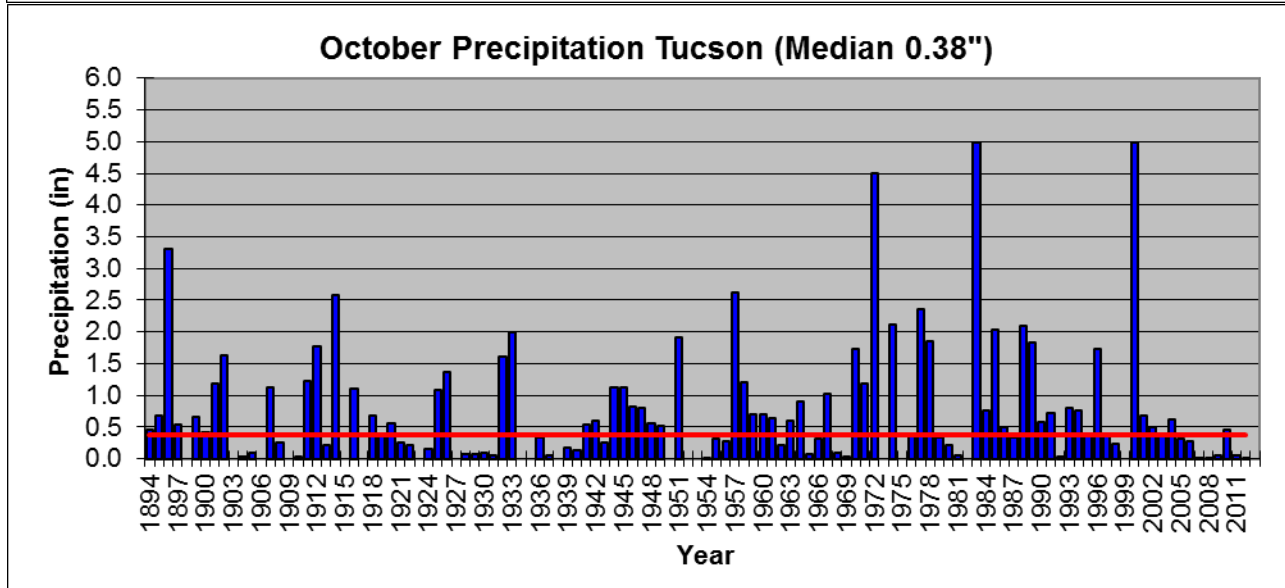
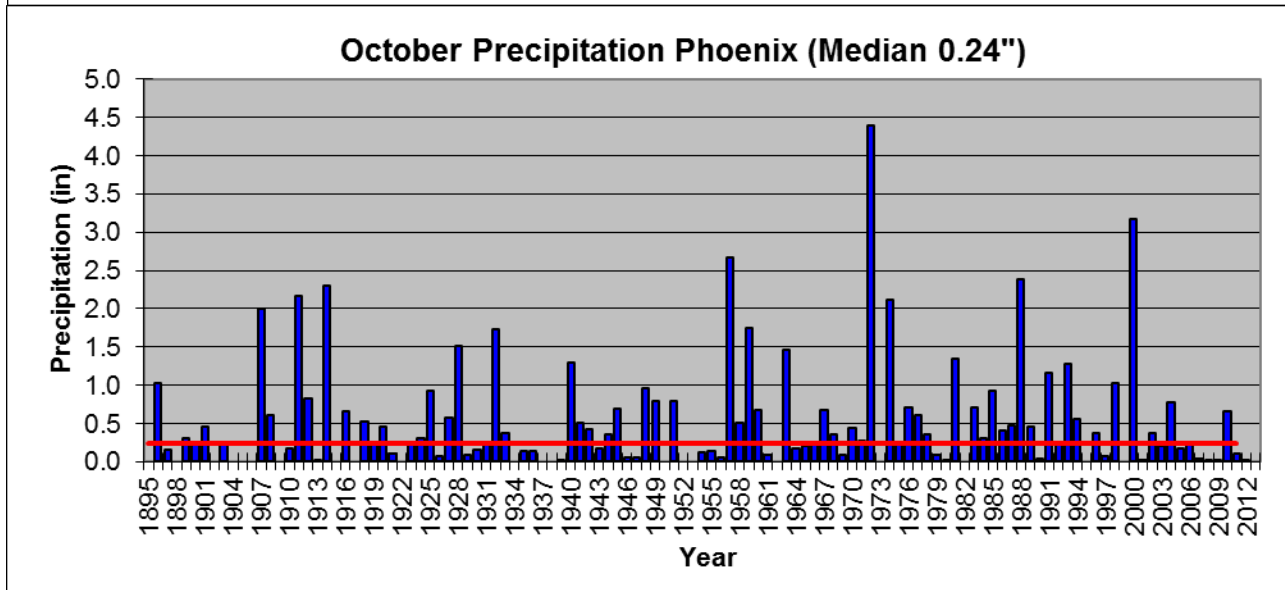
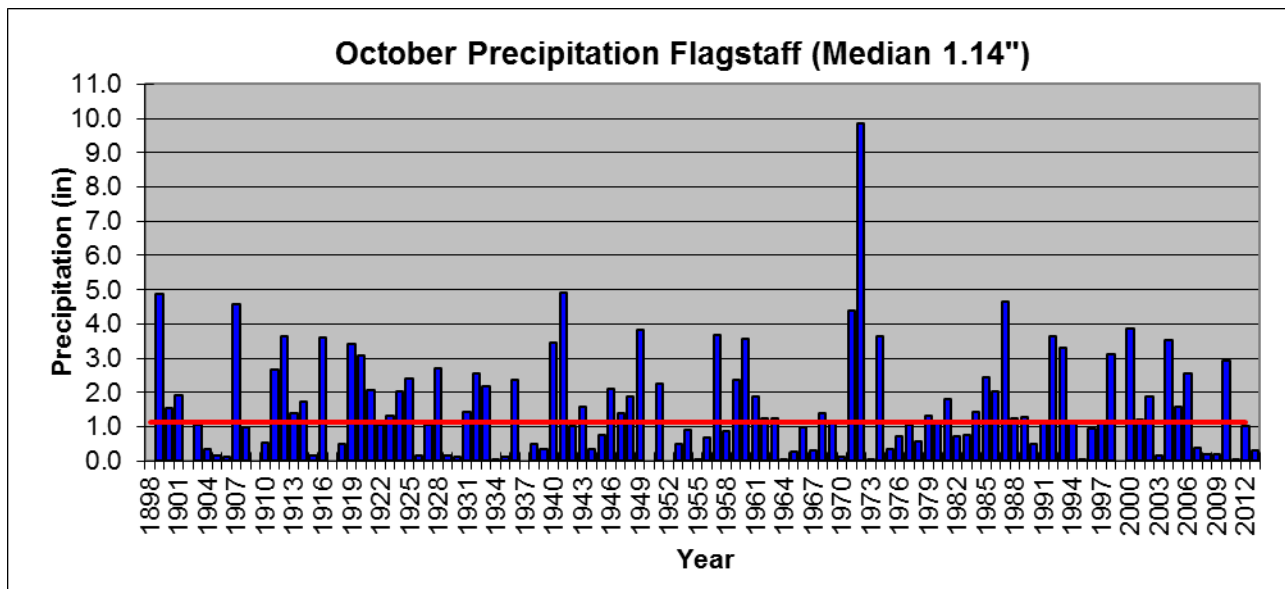
2014 Water Year

The new water year began with minimum temperatures 2° to 6°F cooler than normal statewide. Daytime temperatures were also generally cooler than normal, with the Colorado Plateau 3-6°F colder than normal, as was southwestern Arizona. Southeastern Arizona was nearly 2°F warmer than normal. October precipitation was very light across the state, with less than 50% of normal across most of the state. Only the Colorado Plateau had above average precipitation.

October Mean Temperature Graphs – Flagstaff, Phoenix, and Tucson 1895-2013:

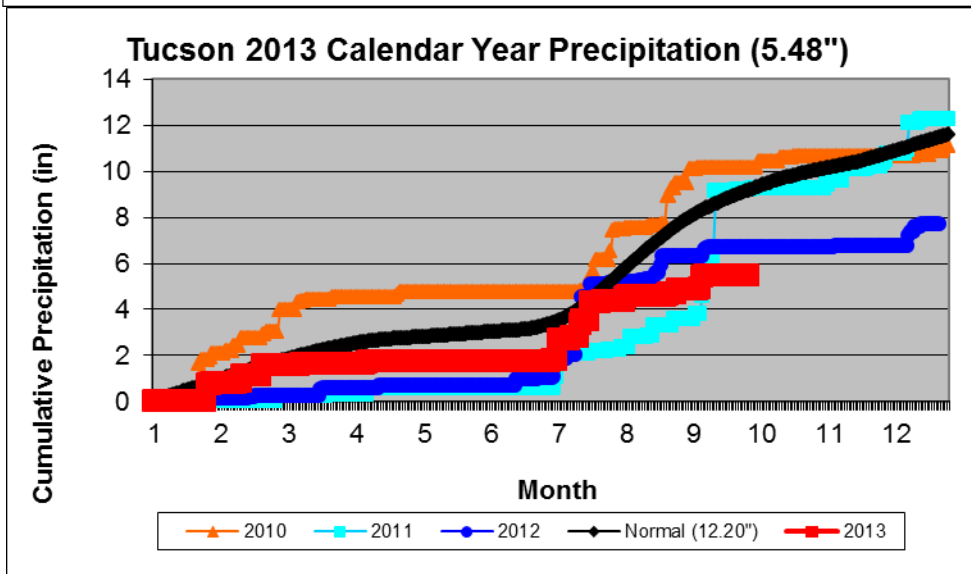
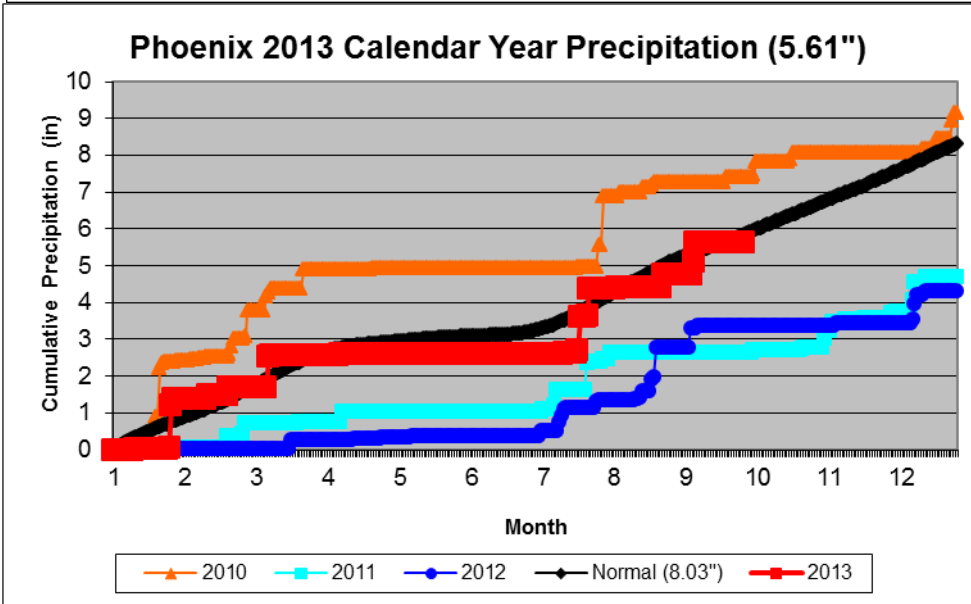
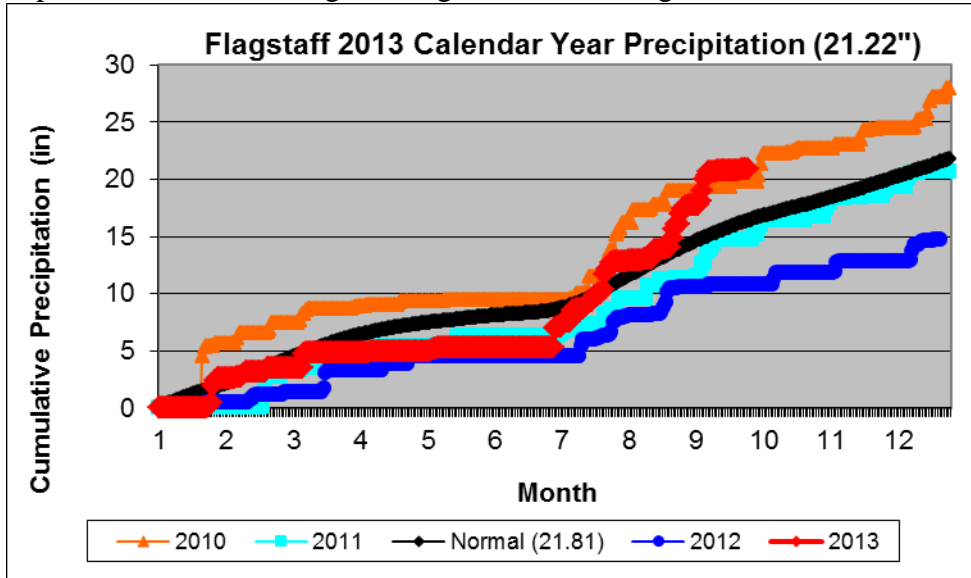


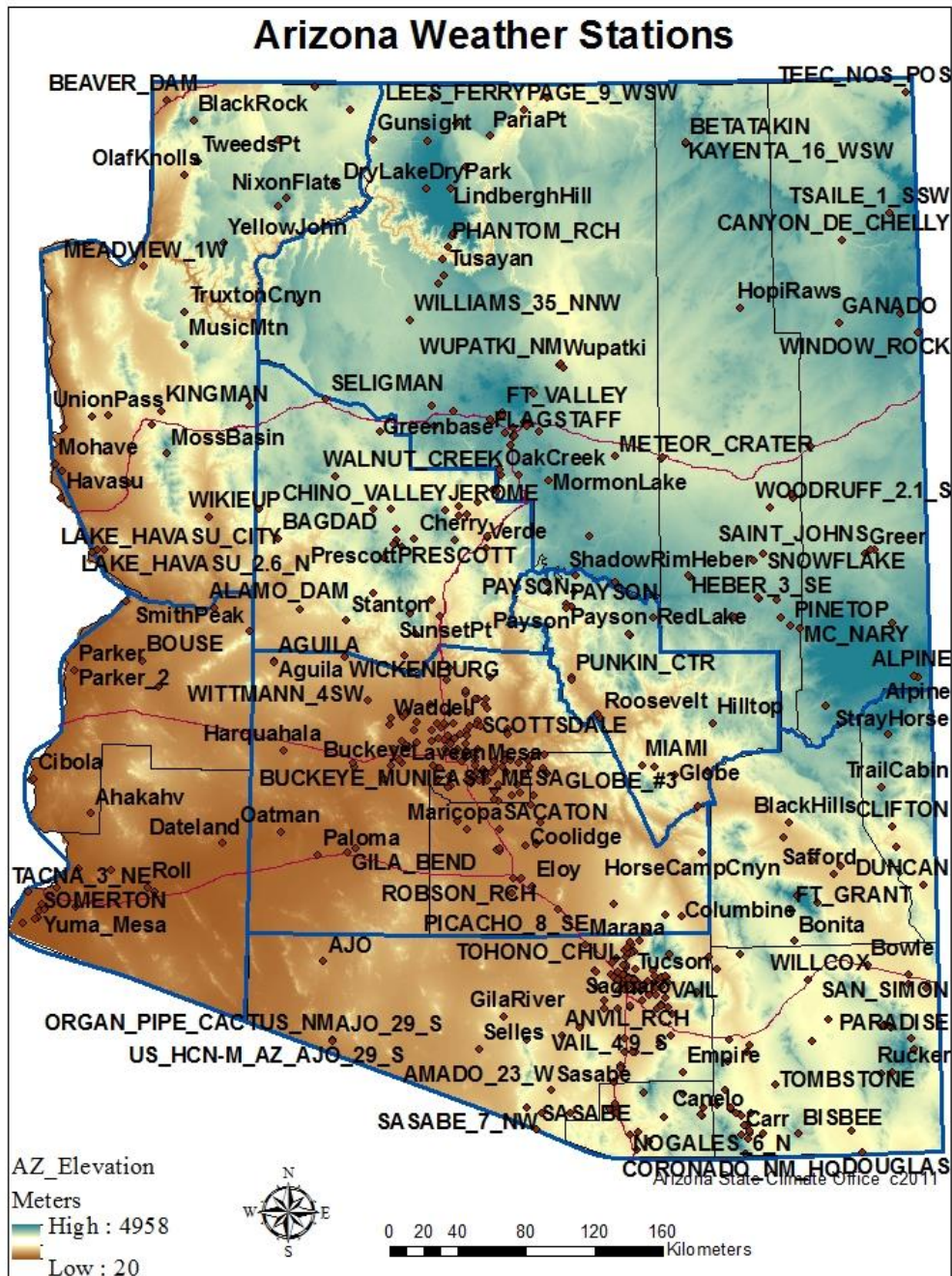
October Mean Precipitation Graphs – Flagstaff, Phoenix, and Tucson 1895-2013:



2013 Cumulative Precipitation Graphs – Flagstaff, Phoenix and Tucson:

After the monsoon, precipitation is above average in Flagstaff, near average in Phoenix, and below average in Tucson.





The downloadable normals and extremes calendars use the following abbreviations:

- NORM = 30 year (1971-2000) average value (degrees Fahrenheit (F))
- OBS = The temperature observation for that day this year
- AVG = Average daily temperature
- HI MAX = Highest maximum temperature for that day (F)
- LO MAX = Lowest maximum temperature for that day (F)
- LO MIN = Lowest minimum temperature for that day (F)
- HI MIN = Highest minimum temperature for that day (F)
- Mx PCP = Maximum precipitation for that day (inches)
- Mx SNO = Maximum snowfall for that day (inches)