



Arizona Climate Summary

September 2014

Summary of conditions for August 2014

August 2014 Temperature and Precipitation Summary

August 1st – 16th: The first 5 days of August were quite wet with high pressure to the southeast over Mexico pushing moisture northward into Arizona, and an inverted trough providing a trigger for thunderstorm activity. On the 1st, Eloy had 1.03", and on the 2nd, Davis Monthan AFB had 1.80", Nogales had 1.77", Pinnacle Peak 1.48" and Williams 0.95". On the 3rd, Carefree had 0.85", and on the 4th, Valle had 1.35", St. Johns had 0.83", Bouse had 0.91, Grand Canyon North Rim had 0.77, and Wickenburg had 1.30". Conditions dried a little from the 5th through the 9th when less than 0.50" fell anywhere in the state. ON the 10th, moisture moved back into southern Arizona with 1.02 at Coronado National Monument. By the 10th the high pressure system had moved over the Four Corners area, and an inverted trough moved through to trigger a huge thunderstorm over south central Arizona, parking itself over South Mountain in Phoenix for about 90 minutes on the afternoon of the 12th. Heavy rain, exceeding 0.50" per five minutes at one point, fell on the north side of South Mountain, causing debris flows on the mountain and overflowing washes that became clogged with both sediment and tree limbs, branches, and bushes. Water flowed down 15th and 19th Avenues and west along Dobbins as well as both east and west along Baseline, creating rivers. Swift water rescues were performed by the Phoenix Fire Department and rescue teams as multiple cars were stranded in 4 foot deep water on Dobbins near 19th Ave. Many homes in the area and in Laveen, further west along Dobbins were flooded and mud flowed into a number of homes on the mountain as well. On CoCoRaHS observer on South Mountain recorded 3.37" of rain within the 90 minute period. Flood Control District of Maricopa County rain gauges on South Mountain had more than 2.5", and a complete flood report was produced by the county. The annual return interval for the storm at that location was 673 years for the 15 minute interval, 970 years for the 60 minute interval and approximately 743 years for a 45-minute interval. The moisture and activity continued to the north and on the 13th, Castle Hot Springs had 3.25", Cottonwood had 1.45", Prescott had 1.60" and Prescott Airport had 1.42", Flagstaff had 1.14", and Bellemont had 1.09". Scattered rain fell around the state through the 15th, but daily values were 0.60" or less.

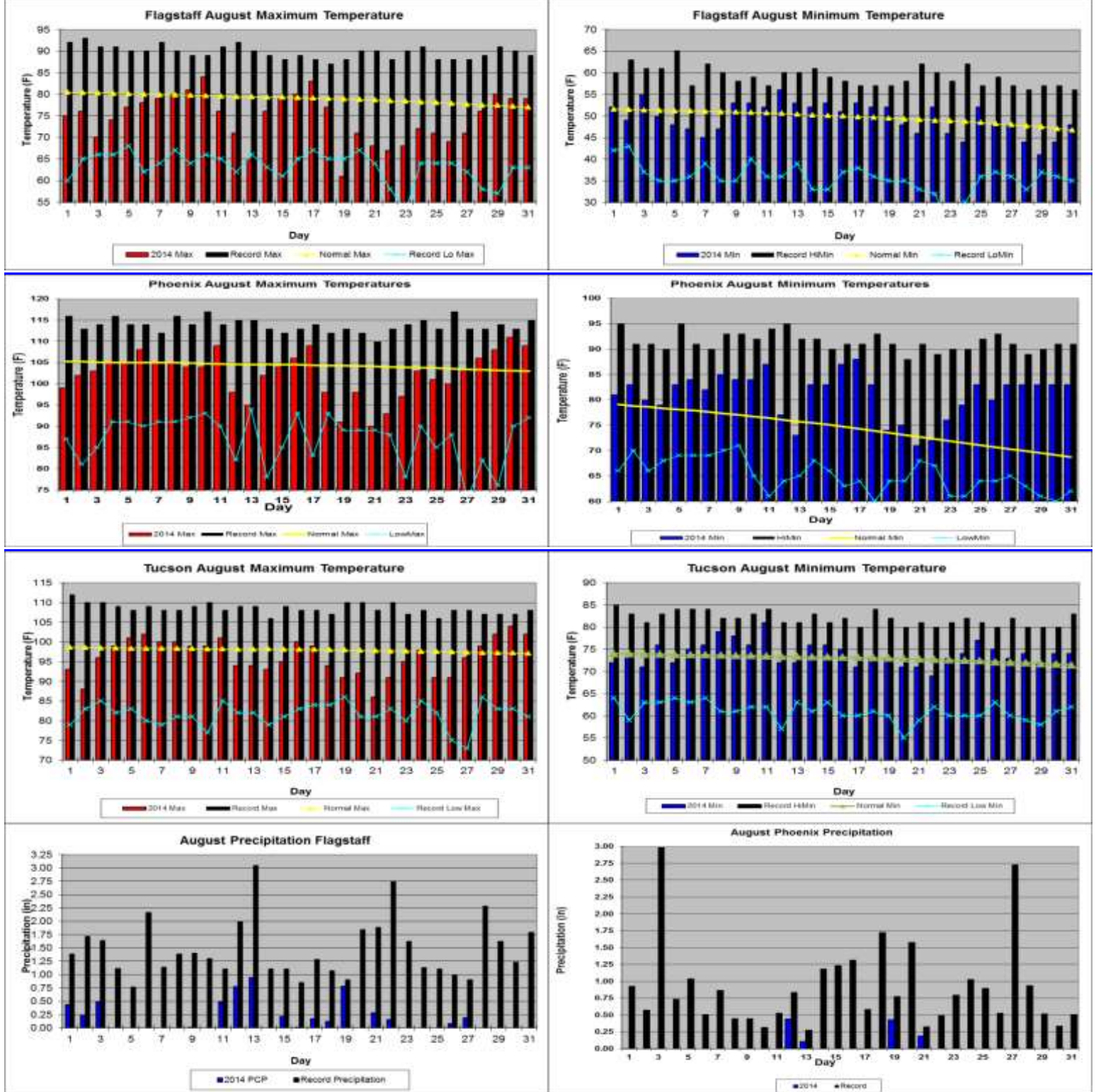
August 17th – 31st: High pressure remained over the Four Corners, bringing moisture into the southeastern part of the state. On the 17th, Tucson had 0.99" and Davis Monthan AFB had 1.15". On the 18th, Bisbee had 0.74" and Bellemont had 1.50". By the 19th, a very moist atmosphere again stalled over central Arizona, accompanied by an upper level low, with Prescott, Cottonwood, New River, north Scottsdale receiving the brunt of this storm. There was extensive flooding in New River. Payson had 1.47", Cottonwood had 2.42", Prescott had 1.36", Bullhead City had 1.49", Scottsdale Airport had 1.82", and Flagstaff had 0.79". On the 20th, Prescott had 1.33", Valle had 0.91" and Nogales had 0.85". On the 21st, Elgin had 1.31", Yuma had 0.88" and Kingman had 0.65". Things calmed down a bit from the 22nd through the 25th, as the high retreated to the east, bringing in drier westerly flow. On the 26th, Wickenburg received 2.25" and the Sonoran Desert Museum had 1.23", and Prescott had 0.89". The last significant rain for August was on the 27th, when Prescott had 0.91" and Douglas had 1.48". Westerly flow returned and the state was essentially dry the rest of the month.

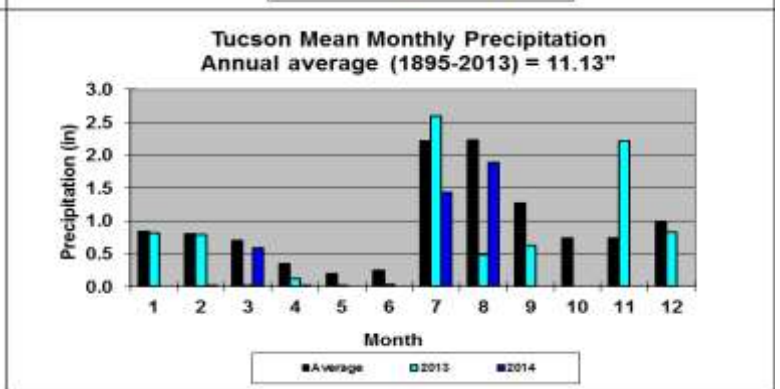
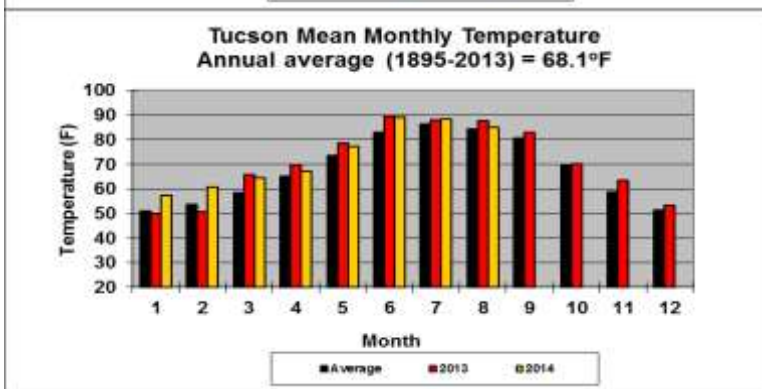
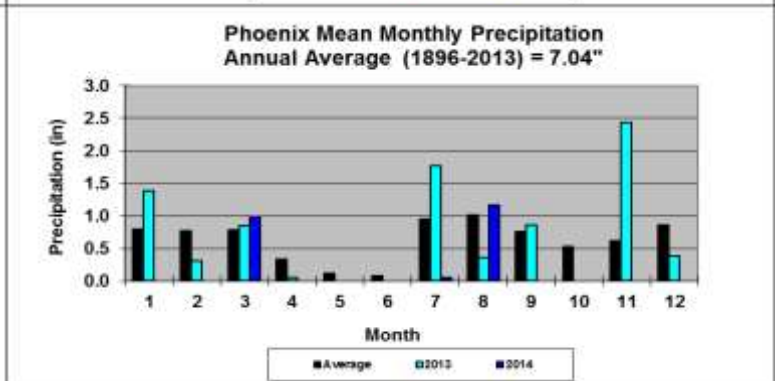
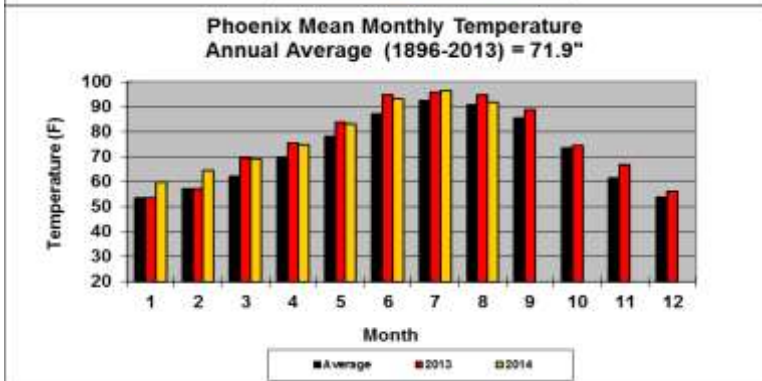
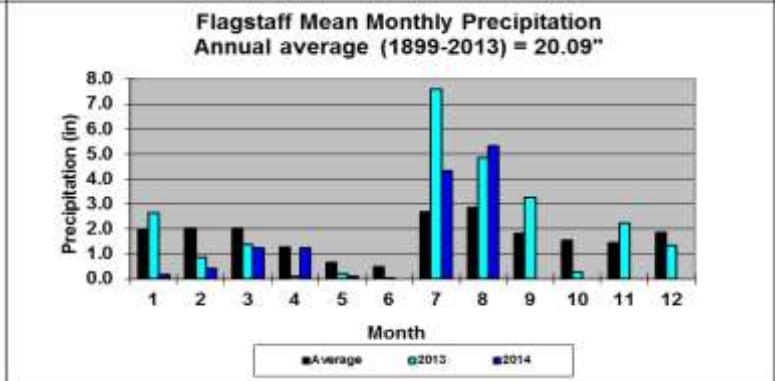
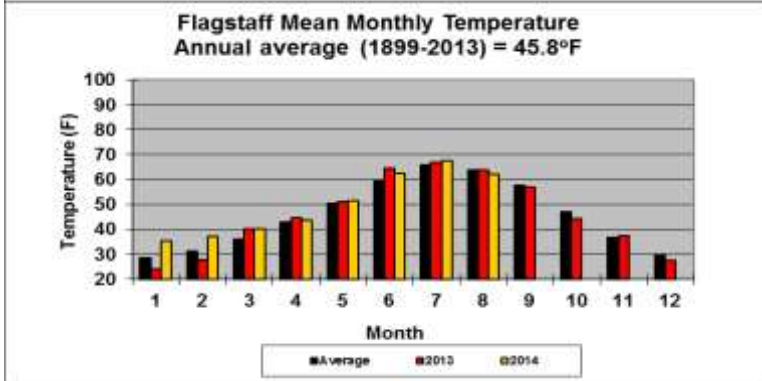
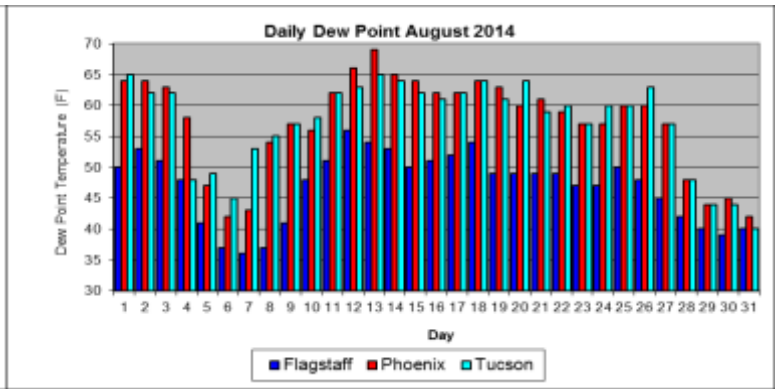
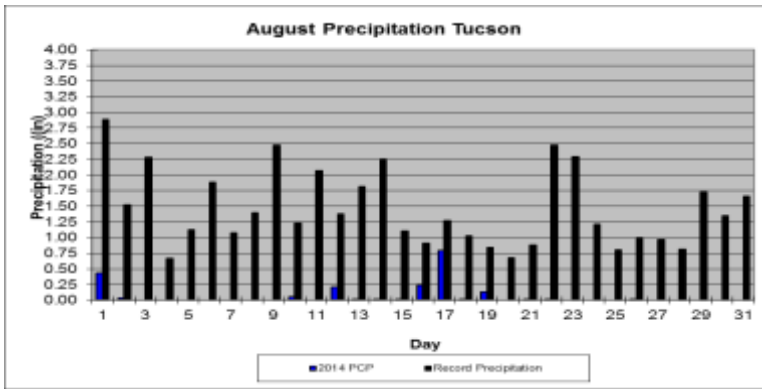
In This Issue: Overview of August, graphs of the August daily maximum and minimum temperatures, precipitation, mean daily dew points for Flagstaff, Phoenix, and Tucson; August climate statistics, maps of mean monthly maximum and minimum temperatures, precipitation, dew points, wind speeds for August; and graphs of the mean August 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. 19 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.

August 2014 Daily Temperature, Precipitation, & Dew Point for Flagstaff, Phoenix, and Tucson





FLAGSTAFF CLIMATE STATISTICS

August 2014

This August was the 14th coolest and 8th wettest on record.

Maximum Temp 80°F or higher	6
Maximum Temp 79°F or lower	7

Avg Max Temp (F)	74.6	Normal	78.4
Avg Min Temp (F)	49.5	Normal	50.1
Avg Mean Temp (F)	62.0	Normal	64.2
Departure from Normal (F)	-2.2		

Heating Degree Days	93	Normal	56
Cooling Degree Days	11	Normal	33
Degree base 65°F			

Highest Monthly Avg Temp (F)	67.5 in 1944
Lowest Monthly Avg Temp (F)	59.5 in 1968

Total August Precipitation	5.31"
Normal August Precipitation	3.11"
Departure from normal	2.20"
Greatest 24-Hr Precipitation	1.57" on 08/12-13
Total Precipitation Year-to-Date	12.84"
Departure from Normal	-1.35"

Highest Temp this month (F): 84 on 10th
 Lowest Temp this month (F): 41 on 29th

Number of Days:

Record High (F): 93 on 08/02/1902

Clear	16
Partly Cloudy	14
Cloudy	9

Record Low (F): 24 on 08/23/1968

Temperature or precipitation records this month:
 13th LoMax of 65 set, previous record 66 in 1916
 19th LoMax of 61 set, previous record 65 in 1979

Greatest August Precipitation	8.77" in 1904
Least August Precipitation	0.26" in 1962

Flagstaff Number of Days of:

Minimum Temp 55°F or higher	2
Minimum Temp 50°F or lower	16

Average Wind Speed	4.7 mph
Highest Peak Gust	35 mph from 220° on 31 st

PHOENIX CLIMATE STATISTICS

August 2014

This August had no significant ranking for temperature or precipitation.

No temperature or precipitation records this month

Avg Max Temp(F)	102.3	Normal	104.4
Avg Min Temp(F)	80.8	Normal	82.7
Avg Mean Temp (F)	91.6	Normal	93.6
Departure from Normal (F)	-2.0		

Phoenix Number of Days of:

Minimum Temp 80°F or lower	12
Minimum Temp 90°F or higher	0
Maximum Temp 100°F or lower	10
Maximum Temp 105°F or higher	12

Highest Monthly Avg Temp (F)	98.3 in 2011
Lowest Monthly Avg Temp (F)	84.6 in 1918

Heating Degree Days	0	Normal	0
Cooling Degree Days	831	Normal	885
Degree base 65°F			

Highest Temp this month (F): 111 on 30th
 Lowest Temp this month (F): 71 on 21st

Record High (F):	117 on 08/26/2011
Record Low (F):	58 on 08/20/1917

Total August Precipitation	1.17"
Normal August Precipitation	1.00"
Departure from normal	0.17"

Greatest 24-Hr Precipitation 0.51" on 8/12-13
 Total Precipitation Year-to-Date 2.22"
 Departure from Normal -3.06"

Least August Precipitation 0.00" in 1973,
 1975, 2002

Average Wind Speed 7.1 mph
 Highest Peak Gust 40 mph from 260° on 21st

Number of Days:
 Clear 14
 Partly Cloudy 16
 Cloudy 1

Greatest August Precipitation 5.33" in 1951

TUCSON CLIMATE STATISTICS August 2014

This August had no significant ranking for
 temperature or precipitation.

Total August Precipitation 1.89"
 Normal August Precipitation 2.39"
 Departure from normal -0.50"
 Greatest 24-Hr Precipitation 0.99" on 08/16-17
 Total Precipitation Year-to-Date 3.93"
 Departure from Normal -3.98"

Avg Max Temp(F) 96.3 Normal 97.4
 Avg Min Temp(F) 74.0 Normal 73.3
 Avg Mean Temp(F) 85.1 Normal 85.3
 Departure from Normal (F) -0.2

Highest Monthly Avg Temp (F) 90.2 in 1994
 Lowest Monthly Avg Temp (F) 80.8 in 1923

Greatest August Precipitation 7.93" in 1955
 Least August Precipitation 0.08" in 1924

Highest Temp this month (F): 104 on 30th
 Lowest Temp this month (F): 69 on 22nd

Number of Days:
 Clear 25
 Partly Cloudy 3
 Cloudy 0

Record High (F): 112 on 08/01/1993
 Record Low (F): 55 on 08/20/1917

Average Wind Speed 6.7 mph
 Highest Peak Gust 45 mph from 70° on 17th

No temperature or precipitation records this month

Tucson Number of Days of:
 Minimum Temp 75°F or lower 22
 Minimum Temp 80°F or higher 1
 Maximum Temp 90°F or lower 2
 Maximum Temp 100°F or higher 9

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

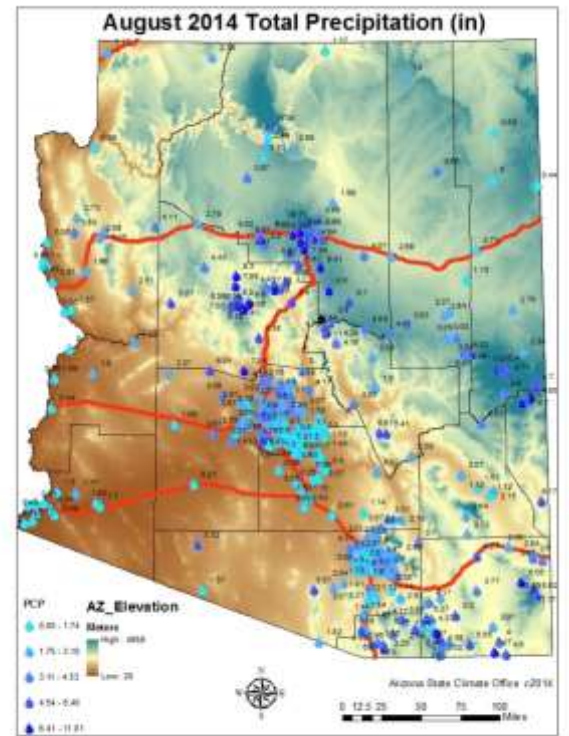
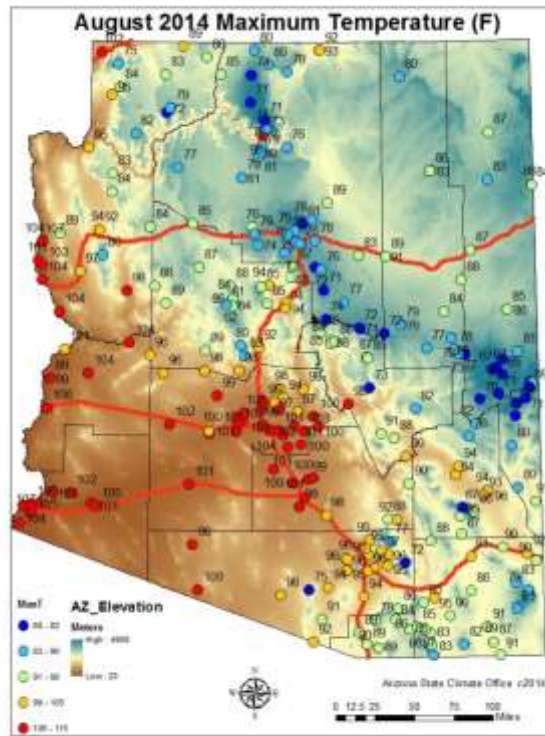
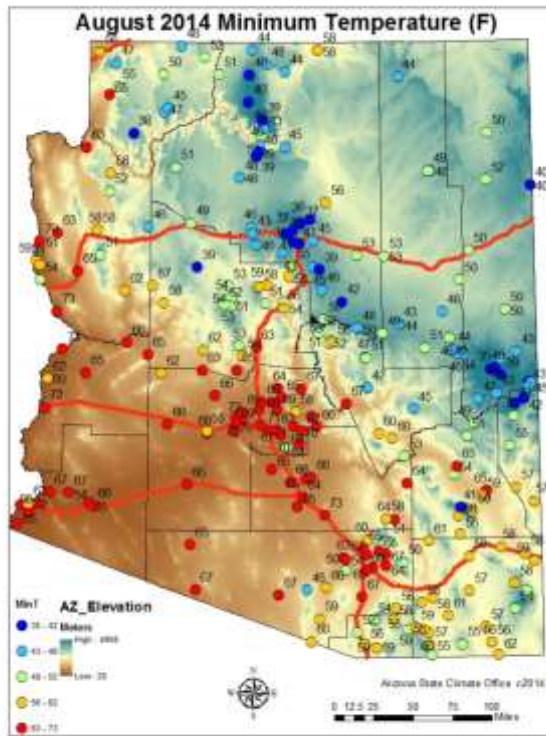
Heating Degree Days 0 Normal 0
 Cooling Degree Days 633 Normal 631
 Degree base 65°F

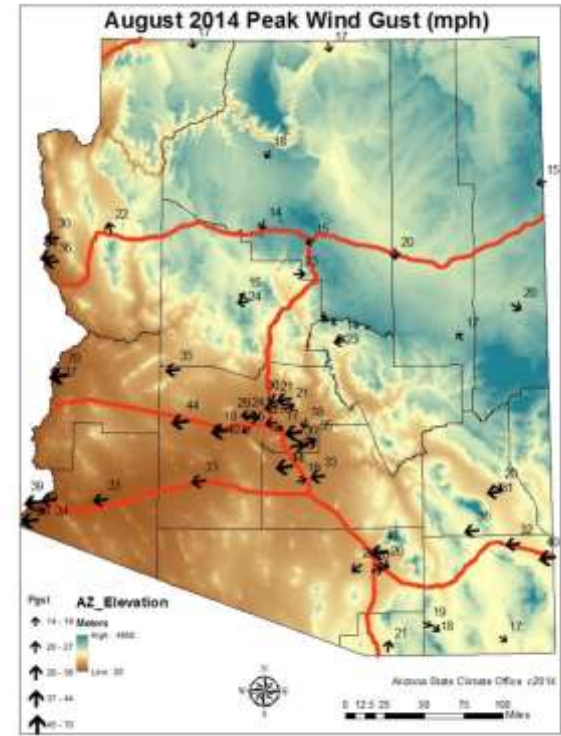
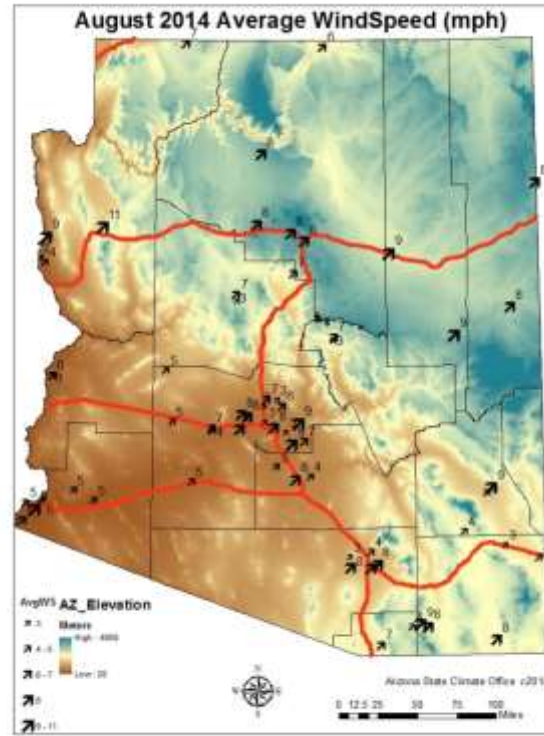
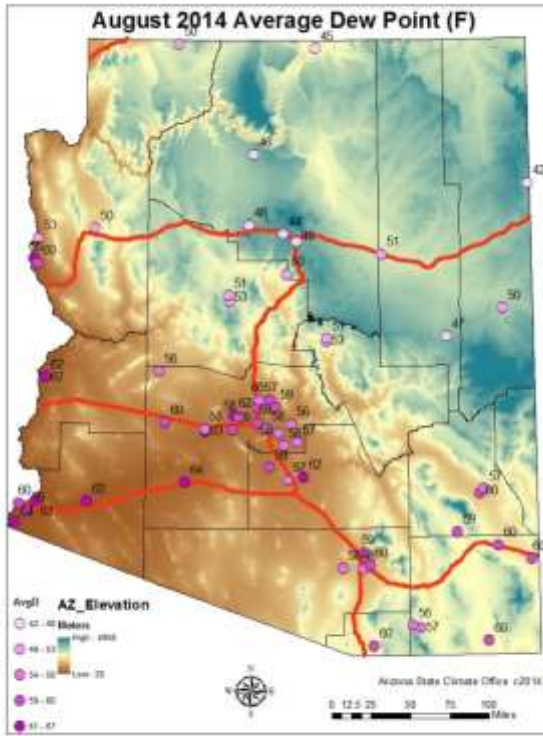
Wind Speeds:

Day	Phoenix		Flagstaff		Tucson	
	Avg	Max	Avg	Max	Avg	Max
1	7.2	33	3.1	24	6.8	31
2	9.9	32	3.9	22	8.4	24
3	7.6	28	5.2	22	5.6	18
4	6.1	23	7.4	27	5.3	26
5	6.1	22	5.1	24	5.6	16
6	4.8	26	4.4	27	5.7	19
7	7.2	24	5.5	24	4.8	16
8	8.3	26	4.8	29	5.6	18
9	9.2	24	3.4	25	9.7	42
10	7.9	26	5.3	27	6.1	35
11	7.1	33	3	30	9.1	29
12	7.5	36	M	M	8.4	36
13	4.7	18	7.2	23	7.8	23
14	7.5	29	5.1	20	5.7	23
15	6.3	24	3.2	28	6	24
16	7.5	22	2.3	17	6.5	36
17	10.1	37	3.6	14	8.8	45
18	7.3	27	5.7	24	7	25
19	8.3	34	5.6	20	8.3	31
20	6.7	25	4.6	24	6.3	24
21	8	40	2.4	15	5.6	22
22	3.6	17	6.8	24	4.8	23
23	5.4	18	5.8	23	6.1	19
24	7.2	22	4.2	26	7.6	20
25	6.8	27	6.3	24	6.9	21
26	7.4	19	2.4	24	5.8	22
27	7.3	21	3.9	23	5.1	20
28	5.5	20	2.1	17	6.8	19
29	5.6	20	2.1	18	6	19
30	6	31	5.5	23	6.9	26
31	7.8	20	9.6	35	7.9	25

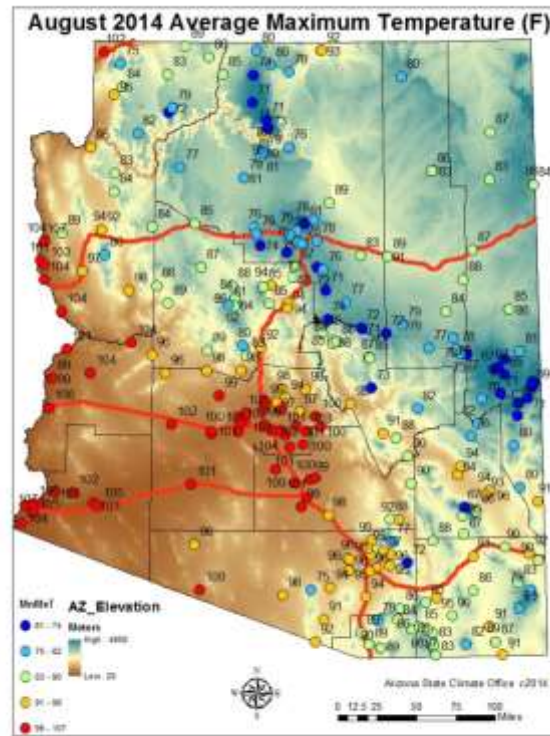
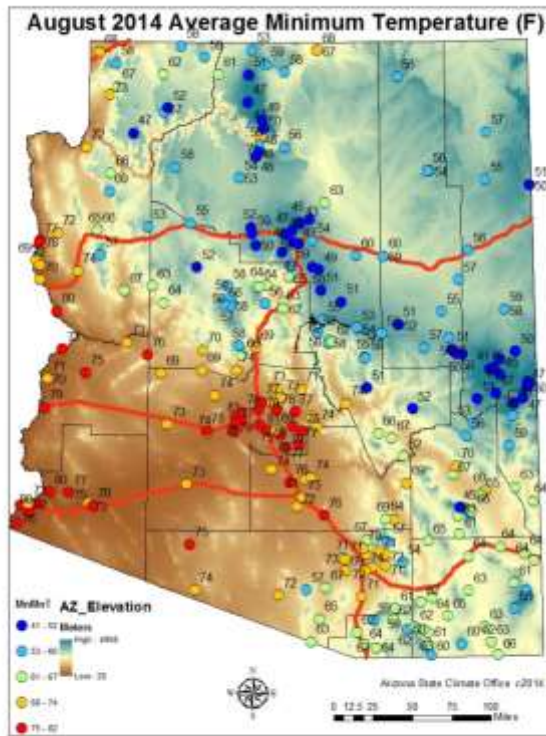
Dew Points for August:**Daily Average Dew Point (°F):**

Day	Phx	Tuc	Flg
1	64	65	50
2	64	62	53
3	63	62	51
4	58	48	48
5	47	49	41
6	42	45	37
7	43	53	36
8	54	55	37
9	57	57	41
10	56	58	48
11	62	62	51
12	66	63	56
13	69	65	54
14	65	64	53
15	64	62	50
16	62	61	51
17	62	62	52
18	64	64	54
19	63	61	49
20	60	64	49
21	61	59	49
22	59	60	49
23	57	57	47
24	57	60	47
25	60	60	50
26	60	63	48
27	57	57	45
28	48	48	42
29	44	44	40
30	45	44	39
31	42	40	40





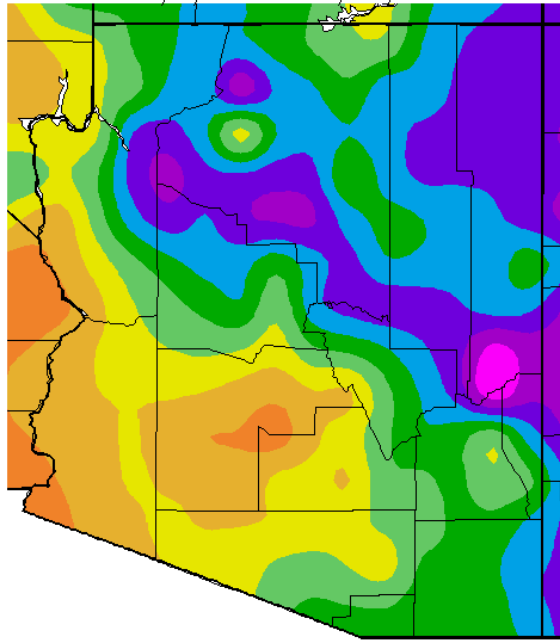
The lowest minimum temperature was 35°F at Havasu and Sunrise, and the highest minimum was 73°F at Parker and Picacho. The lowest maximum temperature of 68°F was recorded at Snowslide Canyon, while the highest maximum temperature of 115°F was reported at Lake Havasu City. The lowest rainfall amount was 0.00” at several stations in Arizona and the highest was 11.01” at Paradise. The lowest dew point was 42°F at Window Rock and the highest was 67°F at Parker. The highest peak wind gust was 70 mph at Parker.



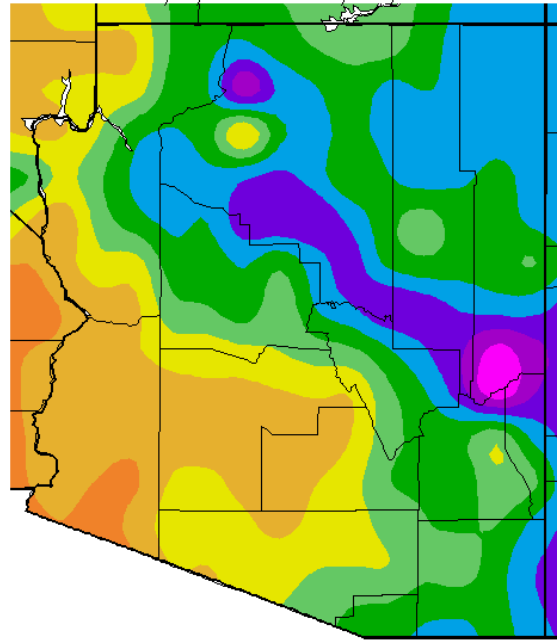
August 2014

The highest average minimum temperature was 82°F at Yuma and the lowest average minimum temperature was 41°F at Sunrise Mountain. The highest average maximum temperature was 107°F at Bullhead City and lowest average maximum temperature was 61°F at Snowslide Canyon.

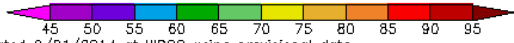
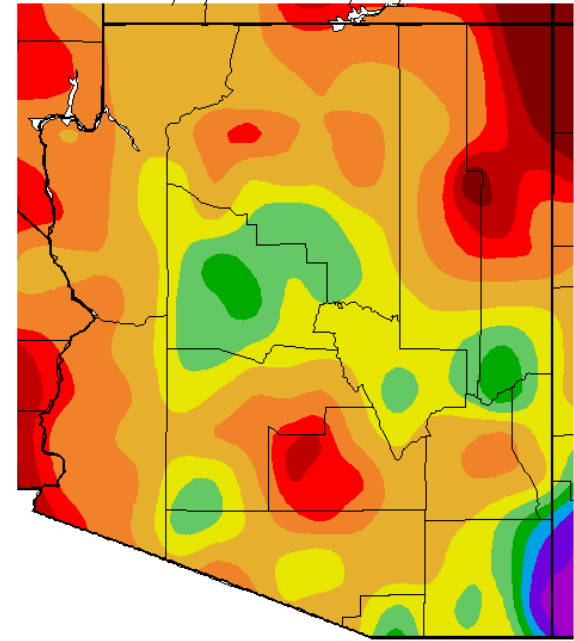
Av. Min. Temperature (deg. F)
8/1/2014 – 8/31/2014



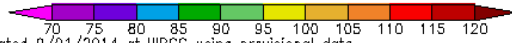
Av. Max. Temperature (deg. F)
8/1/2014 – 8/31/2014



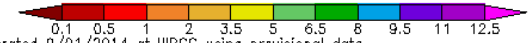
Total Precipitation (in.)
8/1/2014 – 8/31/2014



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NOAA Regional Climate Centers

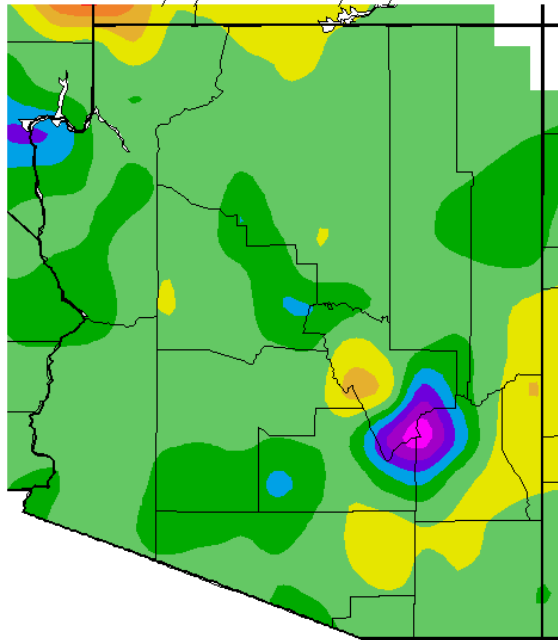


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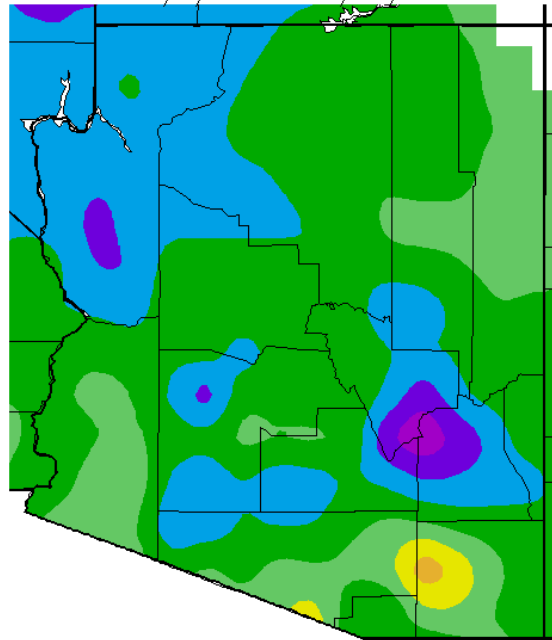
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Av. Min. Temperature dep from Ave (deg. F)
8/1/2014 – 8/31/2014



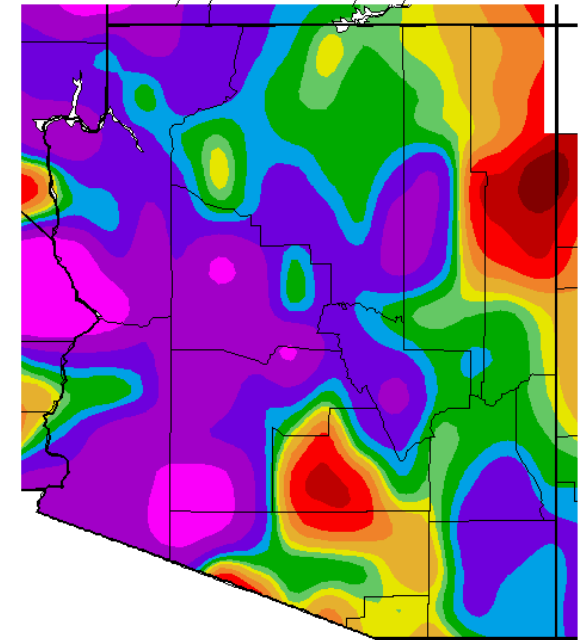
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Av. Max. Temperature dep from Ave (deg F)
8/1/2014 – 8/31/2014



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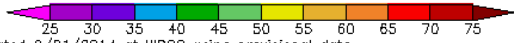
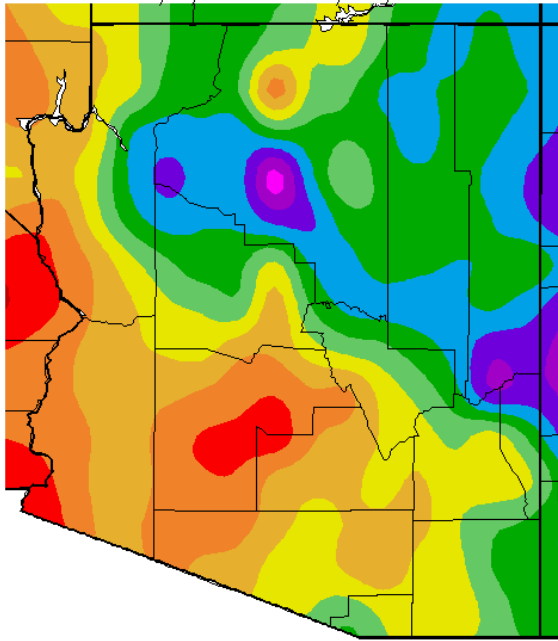
Percent of Average Precipitation (%)
8/1/2014 – 8/31/2014



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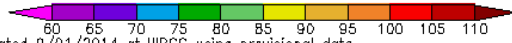
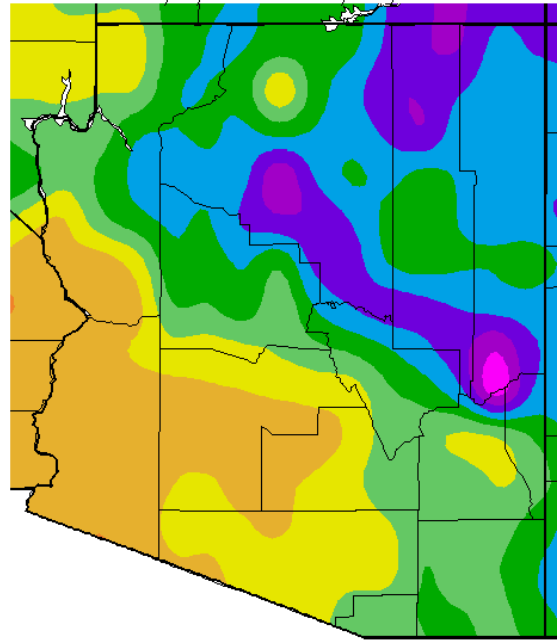
August minimum temperatures were 0-4°F cooler than normal statewide with even cooler temperatures near the Gila, Pinal, Graham county borders. Daytime temperatures were 2-6°F cooler than normal statewide, with even cooler temperatures near the Gila, Pinal, Graham county borders. August precipitation finally brought many areas closer to average. The wettest areas have been in the western half of the state, while Apache County had a very dry August.

Av. Min. Temperature (deg. F)
1/1/2014 – 8/31/2014



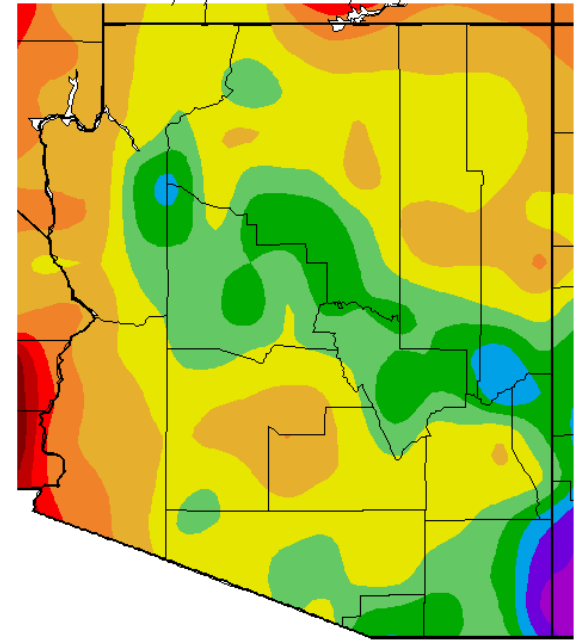
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Av. Max. Temperature (deg. F)
1/1/2014 – 8/31/2014



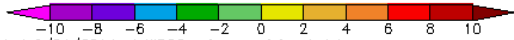
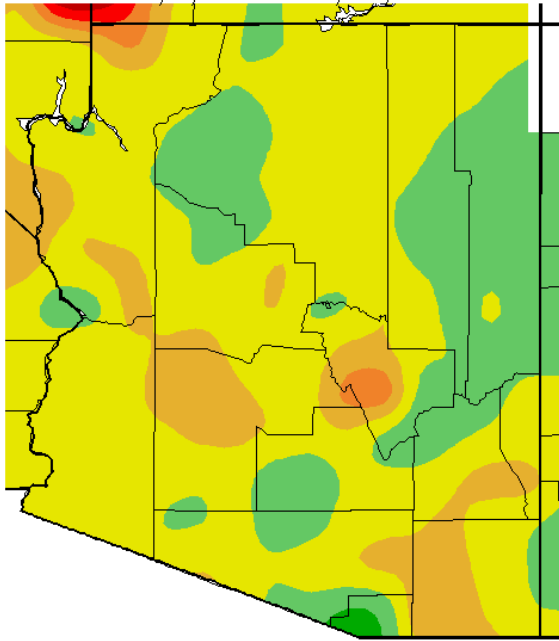
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Total Precipitation (in.)
1/1/2014 – 8/31/2014



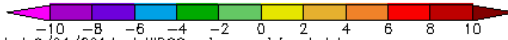
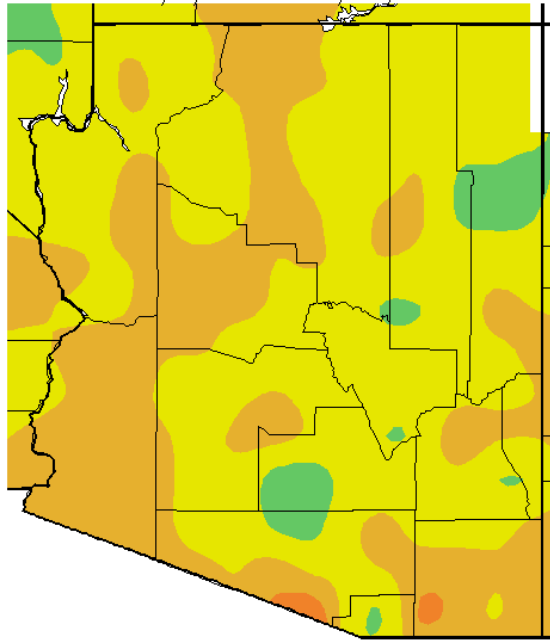
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Av. Min. Temperature dep from Ave (deg. F)
1/1/2014 – 8/31/2014



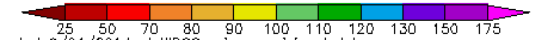
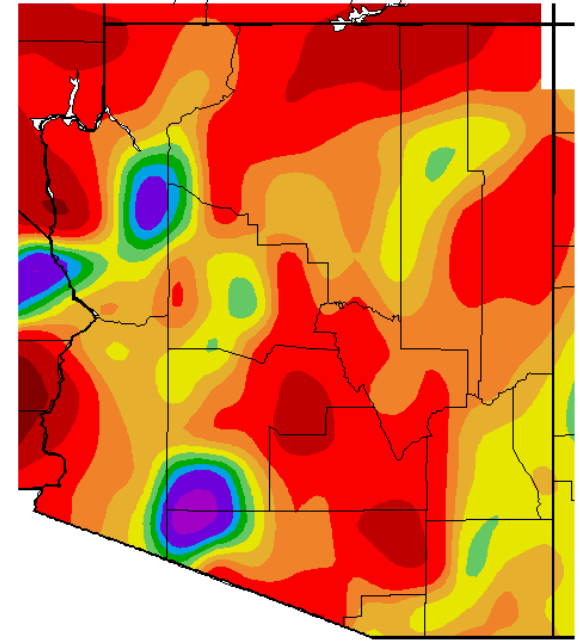
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Av. Max. Temperature dep from Ave (deg F)
1/1/2014 – 8/31/2014



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Percent of Average Precipitation (%)
1/1/2014 – 8/31/2014

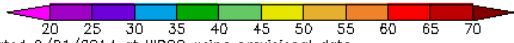
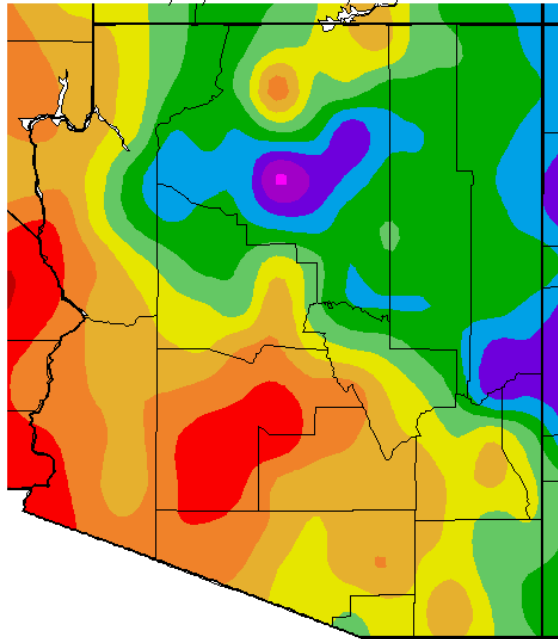


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Calendar Year 2014

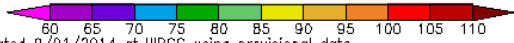
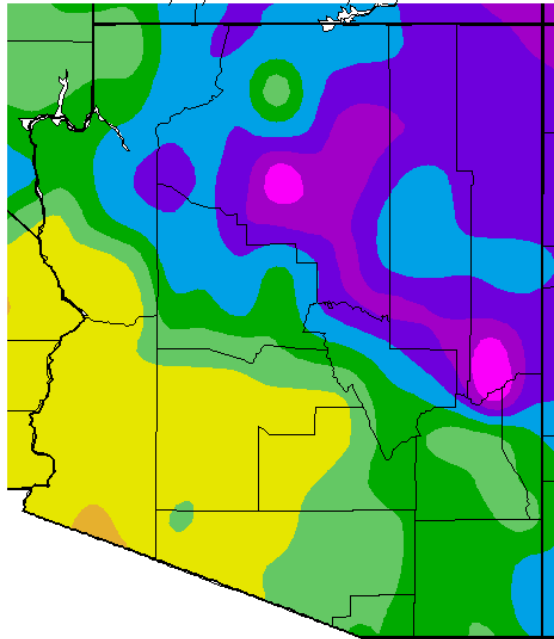
Calendar year minimum temperatures were within 2°F of normal statewide with only Gila County have significantly warmer than normal temperatures. Daytime highs have been 0 to 4°F warmer than normal statewide. Precipitation so far this year has been less than 70% of normal in central Arizona, and wetter than that along the western counties.

Av. Min. Temperature (deg. F)
10/1/2013 – 8/31/2014



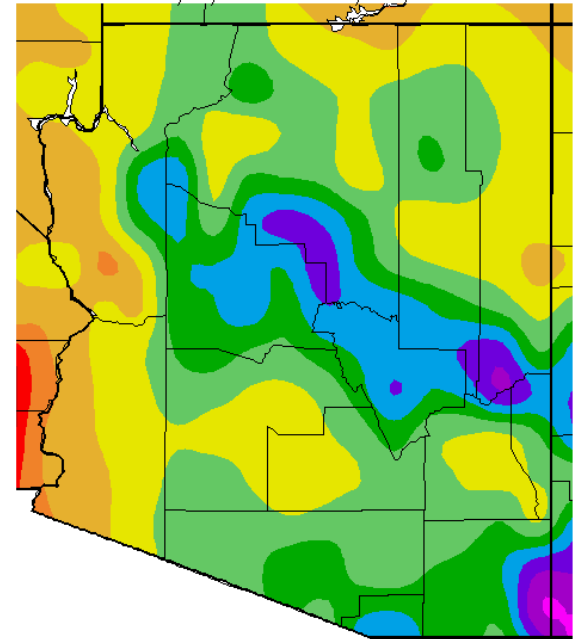
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Av. Max. Temperature (deg. F)
10/1/2013 – 8/31/2014



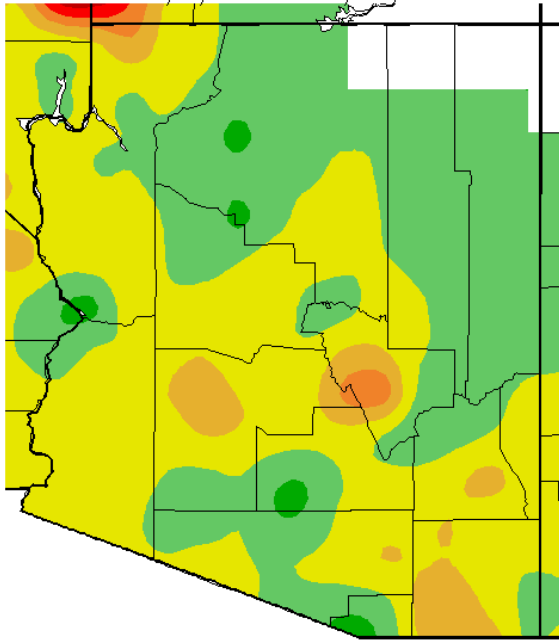
Generated 9/01/2014 at WRCC using provisional data.
NOAA Regional Climate Centers

Total Precipitation (in.)
10/1/2013 – 8/31/2014



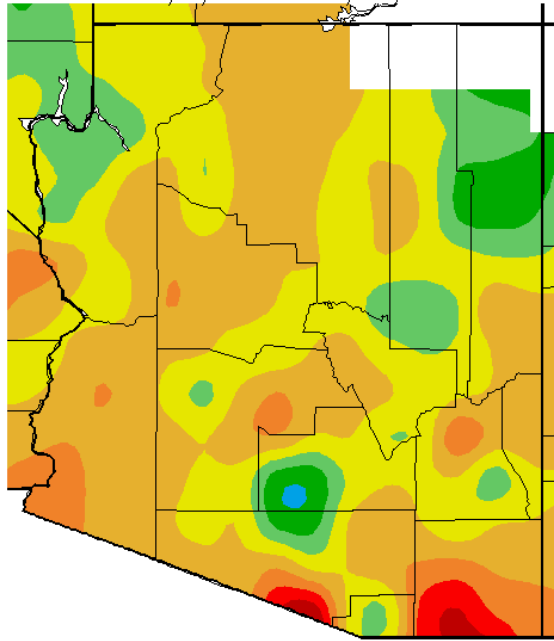
Generated 9/01/2014 at WRCC using provisional data.
NOAA Regional Climate Centers

Av. Min. Temperature dep from Ave (deg. F)
10/1/2013 – 8/31/2014



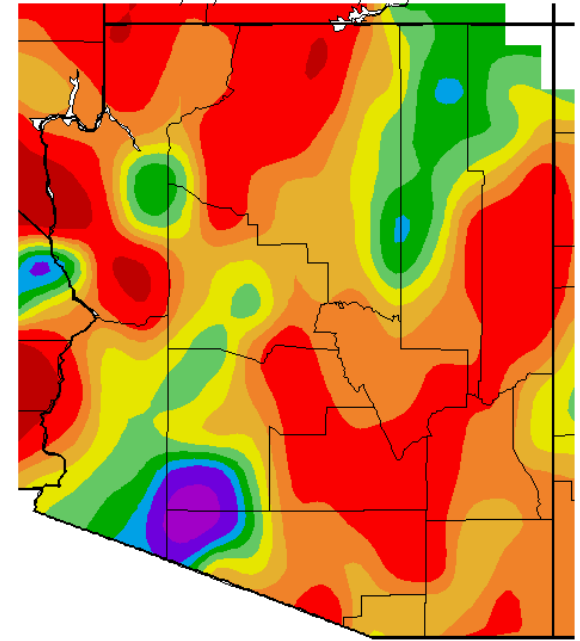
Generated 9/01/2014 at WRCC using provisional data.
NOAA Regional Climate Centers

Av. Max. Temperature dep from Ave (deg F)
10/1/2013 – 8/31/2014



Generated 9/01/2014 at WRCC using provisional data.
NOAA Regional Climate Centers

Percent of Average Precipitation (%)
10/1/2013 – 8/31/2014

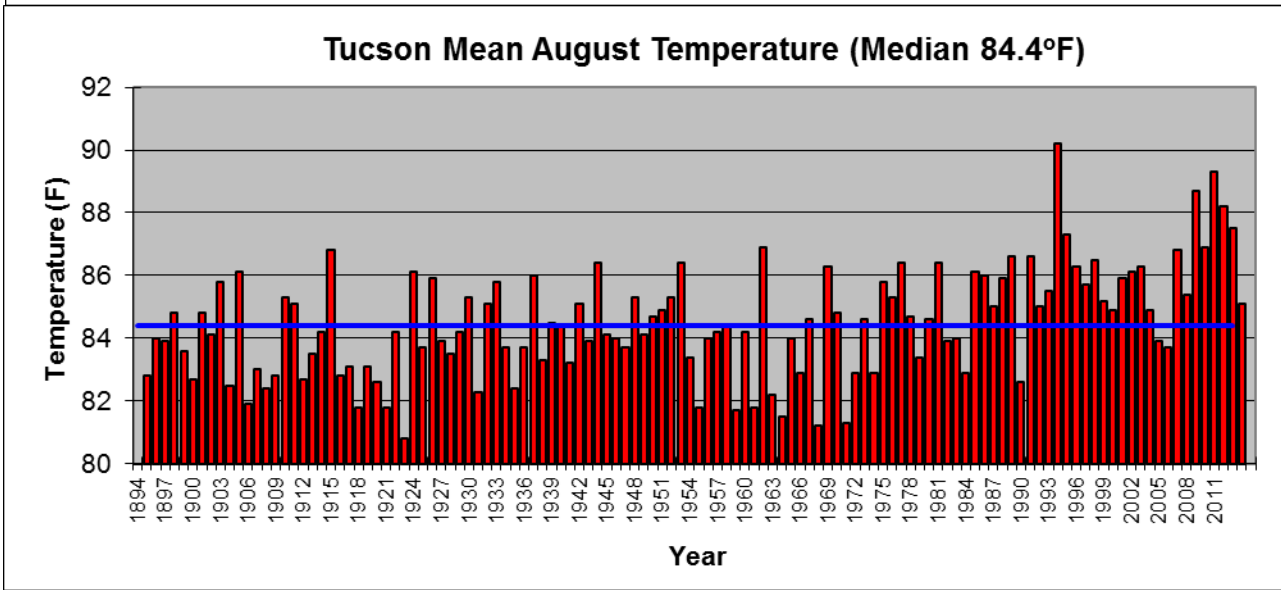
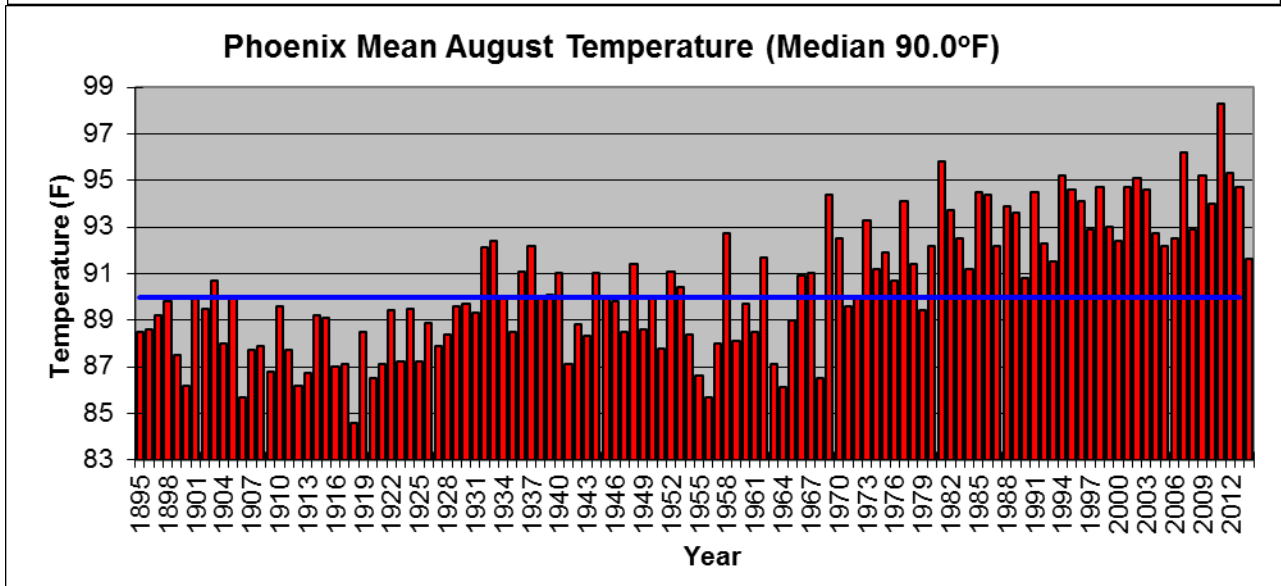
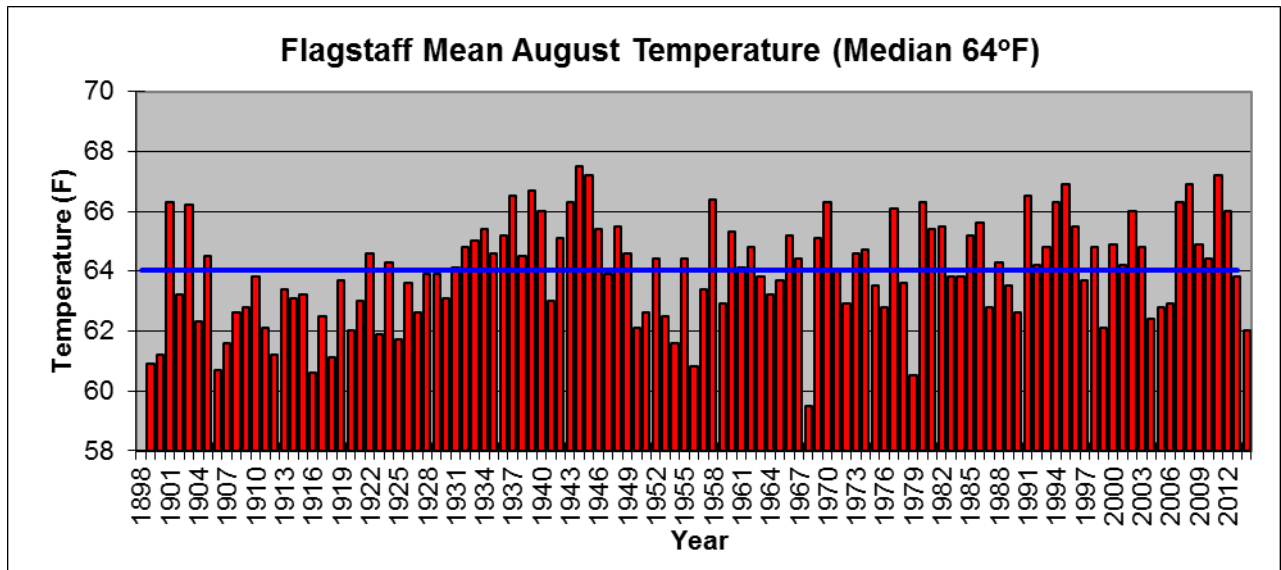


Generated 9/01/2014 at WRCC using provisional data.
NOAA Regional Climate Centers

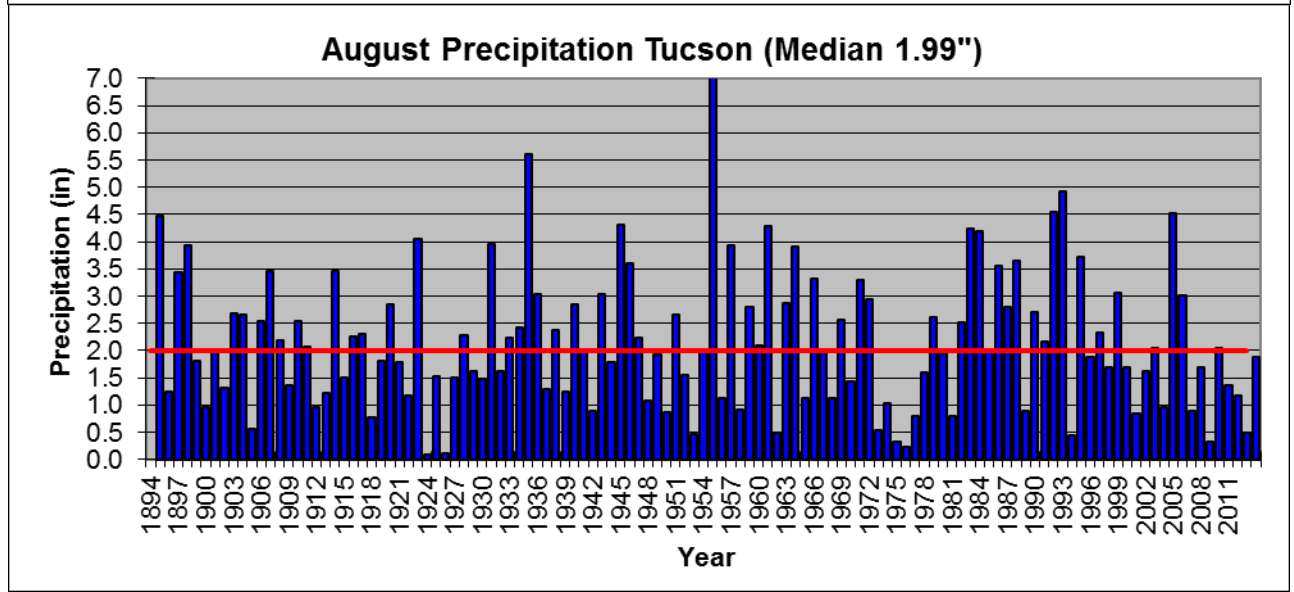
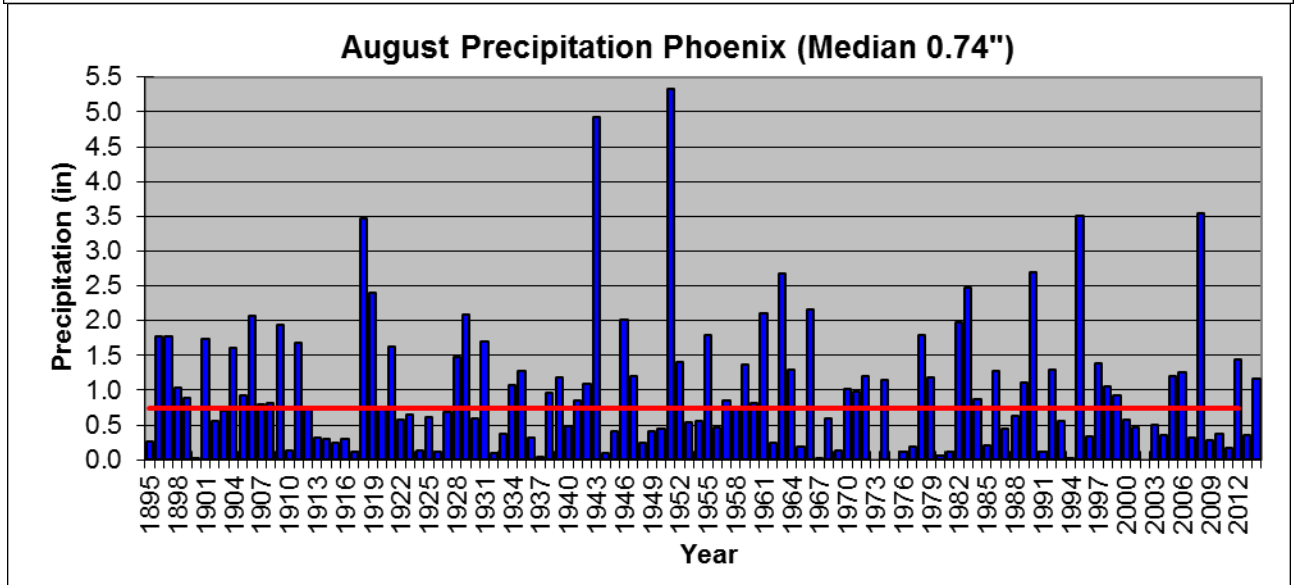
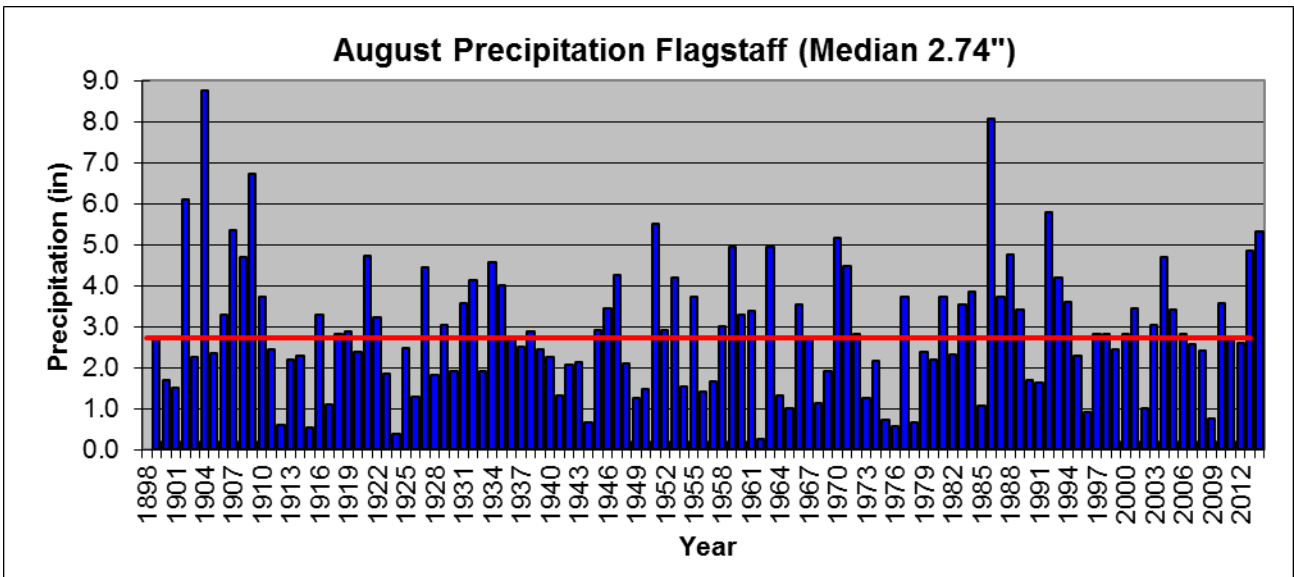
2014 Water Year

Minimum temperatures on the Colorado Plateau have been within 2°F of normal. Daytime temperatures have been 0 to 2°F warmer than normal across most of the state, with the northeastern corner 0 to 2°F cooler than normal and western Pinal County 0 to 3°F cooler than normal. The third consecutive dry water year continues to record below average precipitation across most of the state with near or above average precipitation finally attained in the southwest and northeast counties, due to the heavy monsoon precipitation.

August Mean Temperature Graphs – Flagstaff, Phoenix, and Tucson 1895-2014:

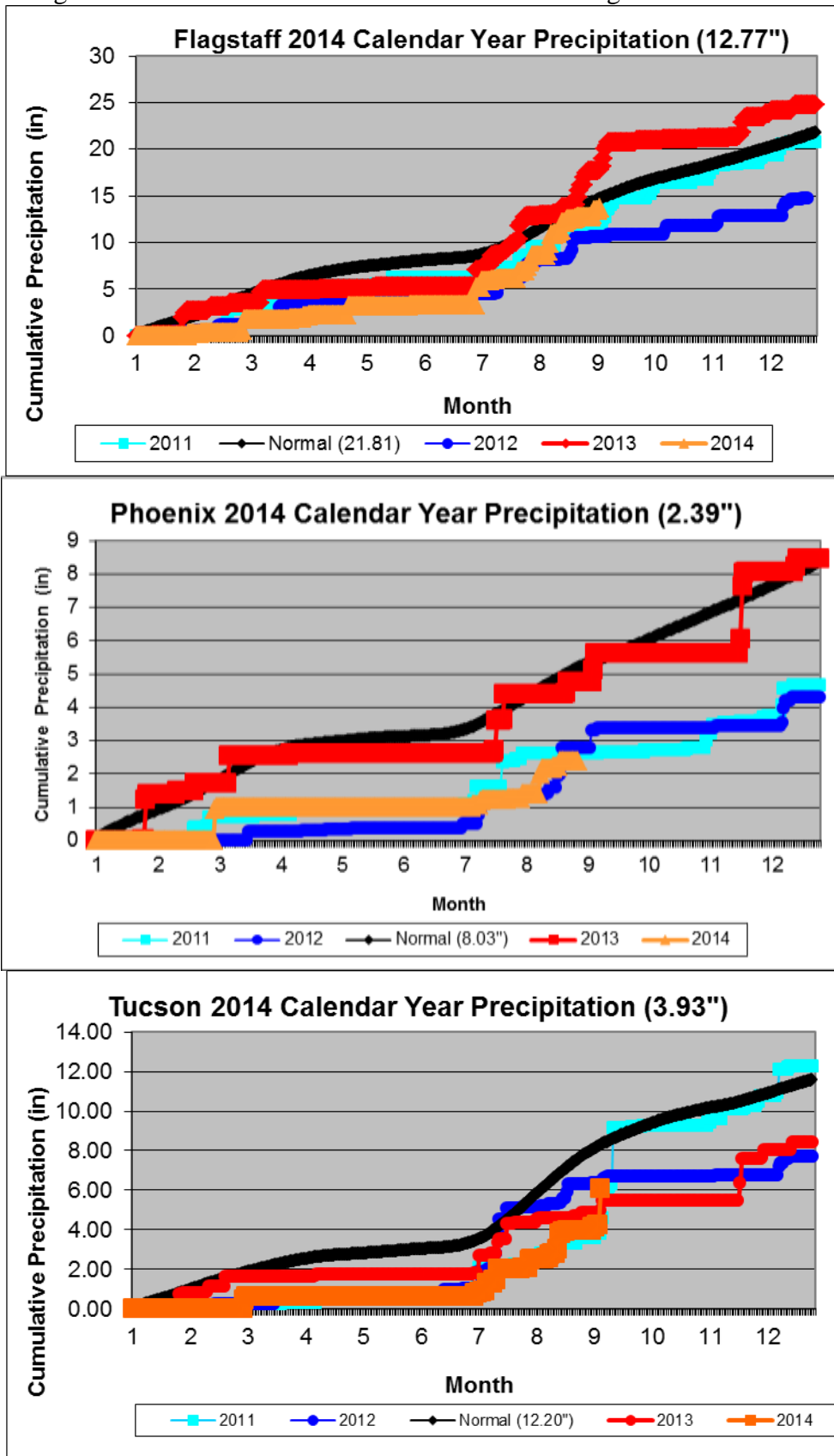


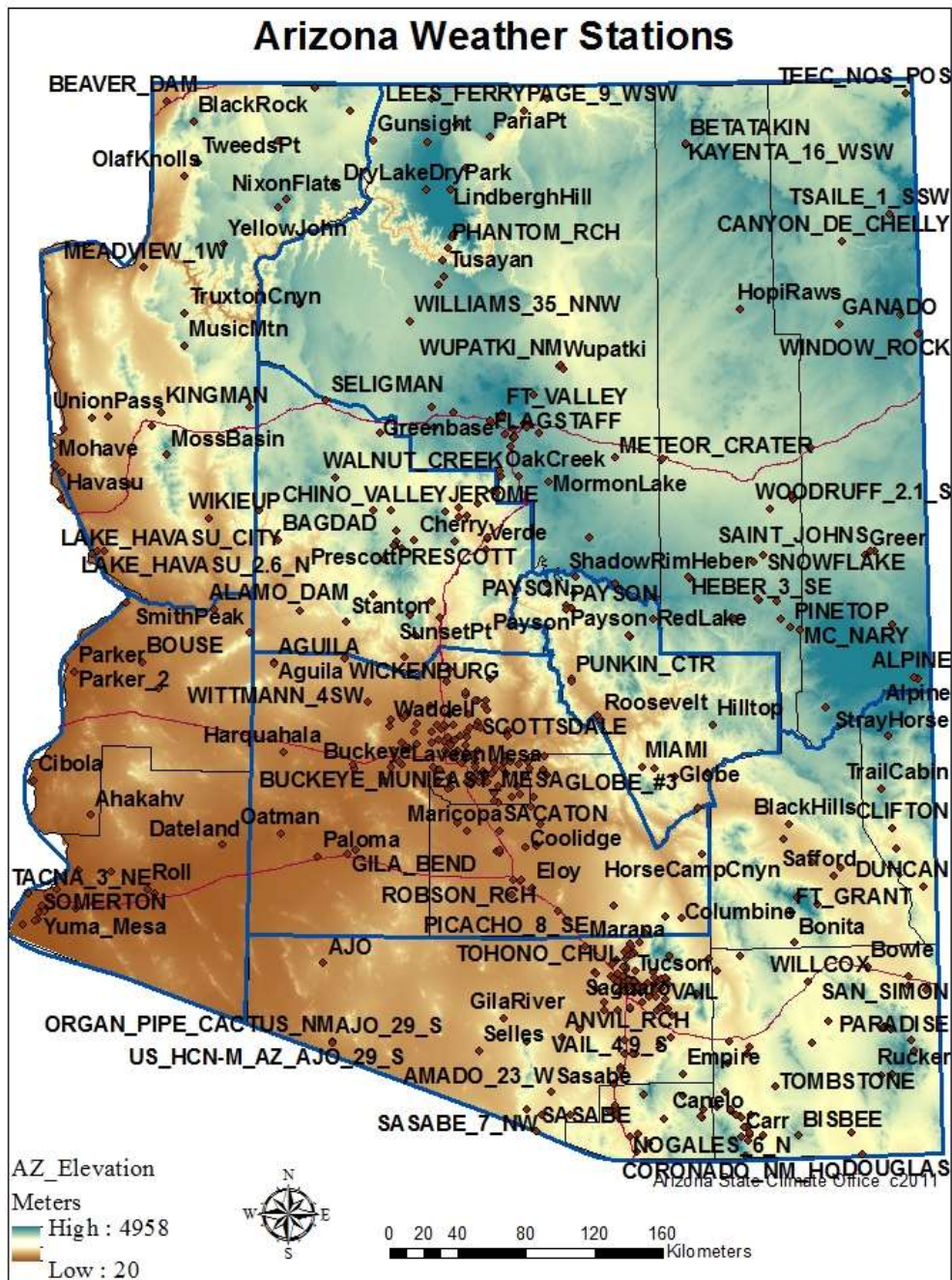
August Mean Precipitation Graphs – Flagstaff, Phoenix, and Tucson 1895-2014:



2014 Cumulative Precipitation Graphs – Flagstaff, Phoenix and Tucson:

Flagstaff is now near average while Phoenix and Tucson are still below average.





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)