



Arizona Climate Summary

May 2013

Summary of conditions for April 2013

April 2013 Temperature and Precipitation Summary

April 1st – 16th: The first week of April featured a ridge of high pressure over Arizona with above average daily temperatures statewide. Daily average temperatures were 5-9 °F above normal from the 4th-7th in Flagstaff, 3rd-7th in Phoenix, and 4th-7th in Tucson. By the 8th, a surface low pressure system moved over northern Arizona. The cold front associated with the low progressed across the state from the 8th-9th helping to kick up wind and generate fair amounts of precipitation. Highest precipitation totals on the 9th included 1.35” in Alpine, 0.82” in White River, 0.76” in Payson, and 0.44” in Show Low. The system lingered over the state through the 10th where most of the precipitation occurred over northern and eastern Arizona. Daily temperatures climbed to above normal once again by the 12th as high pressure returned to the state. On the 16th another surface frontal system approached the state causing winds to become gusty especially in the high country. Average wind speeds on the 16th were 22.2mph with a peak gust of 43mph in Flagstaff, 33.7mph in Winslow with a peak gust of 53mph, and 13.5mph with a peak gust of 28mph in Phoenix. An absence of moisture across the southwest resulted in a dry frontal system and only a couple locations received trace amounts of precipitation from the 16th-17th.

April 17th – 31st: The surface cold front finally departed Arizona by the 17th, and daily temperatures remained below normal though the 19th until the next ridge of high pressure built in. Daily average temperatures were 7°F below normal in Yuma on the 17-18th, 13°F below normal in Flagstaff on the 18th, and 9°F below normal in Tucson on the 18th. High pressure returned to the state by the 21st and persisted through the 25th. Daytime high temperatures remained elevated for the latter part of the month. A small cutoff low approached Arizona on the 25th producing more breezy conditions. Average wind speeds on the 25th were 15.2mph with a peak gust of 35mph in Douglas, and 11.2mph with a peak gust of 40mph in Winslow. As the low pressure system proceeded eastward, high pressure took its place keeping daily average temperatures well above normal. Many new record high temperatures were set statewide from the 28th-30th and Phoenix recorded its first 100 °F day of the year on the 28th which was 4 days earlier than the 30 yr. average first date of May 2nd. Some locations that recorded new record high temperatures included Page (90°F) and Tuzigoot (96°F) on the 29th, and Parker (106°F), Ajo (103°F), Youngtown (102°F), and Carefree (97°F) on the 30th. In total, 27 record high temperatures were tied or broken this April.

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

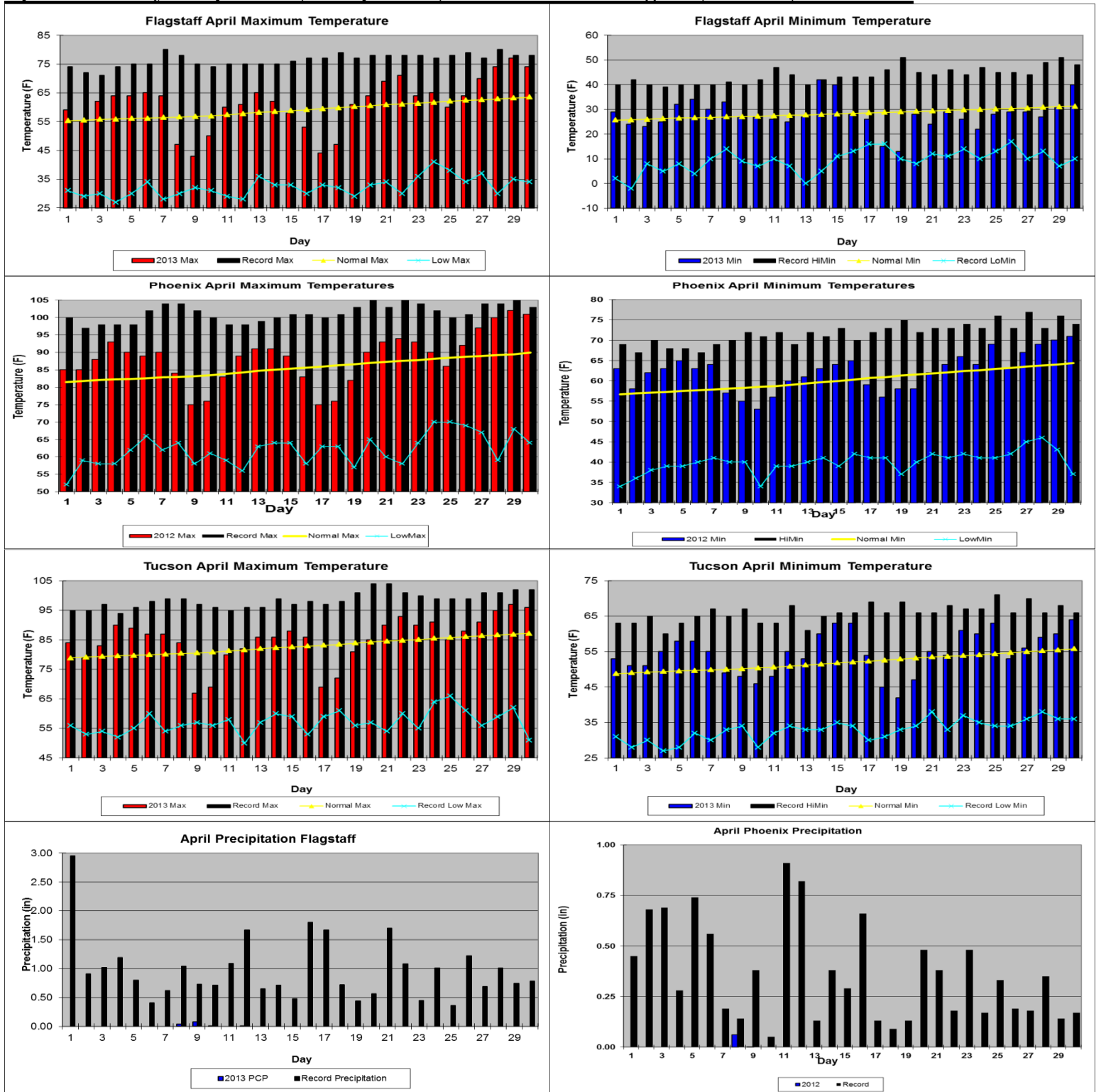
****Note:** The discrepancy between the Statewide Temperature and Precipitation values for Phoenix, Flagstaff and Tucson and the daily values in their graphs are due to the reporting times. Statewide Temperature and Precipitation values are taken at 5pm, while official daily records at the airports are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

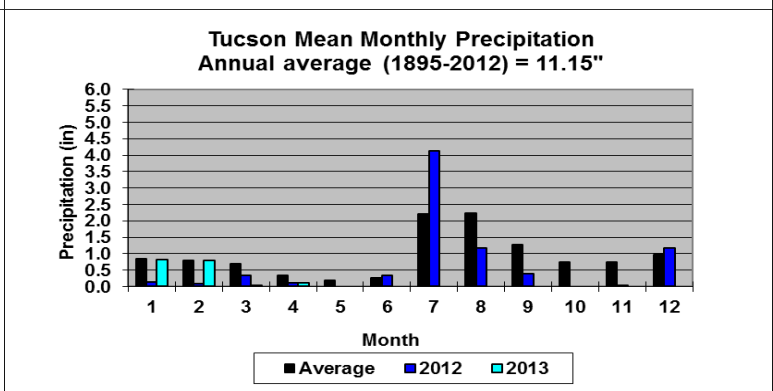
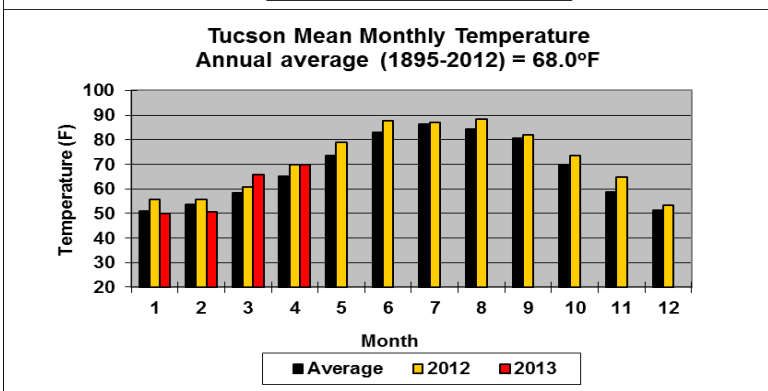
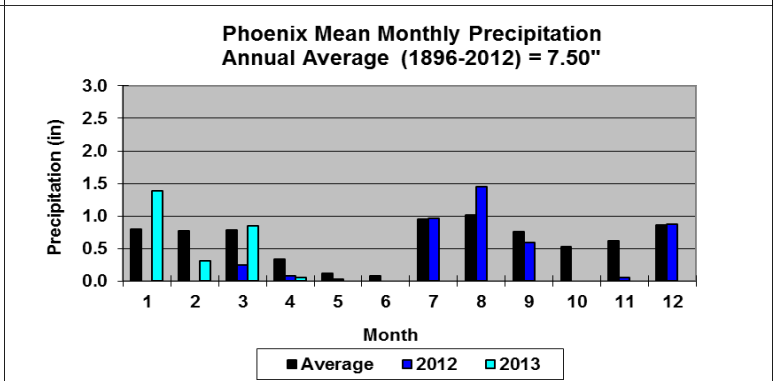
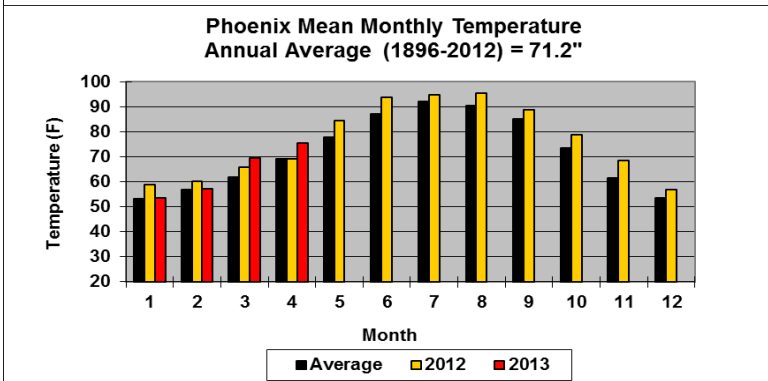
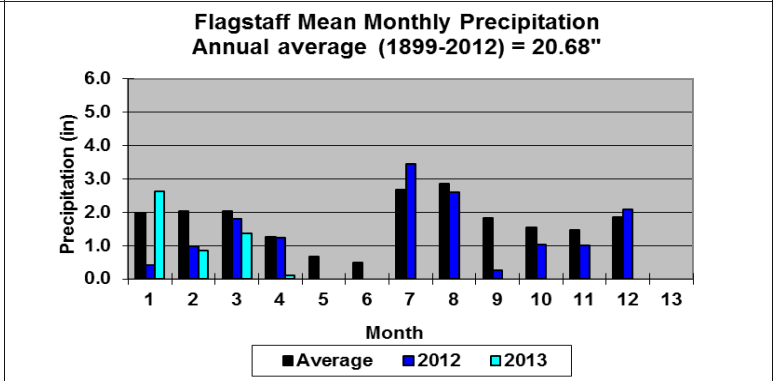
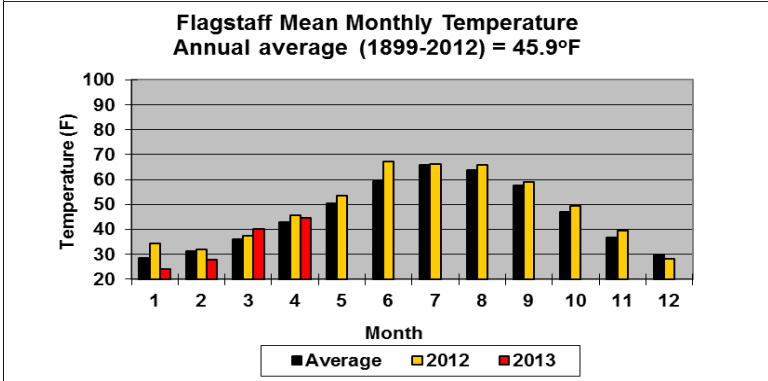
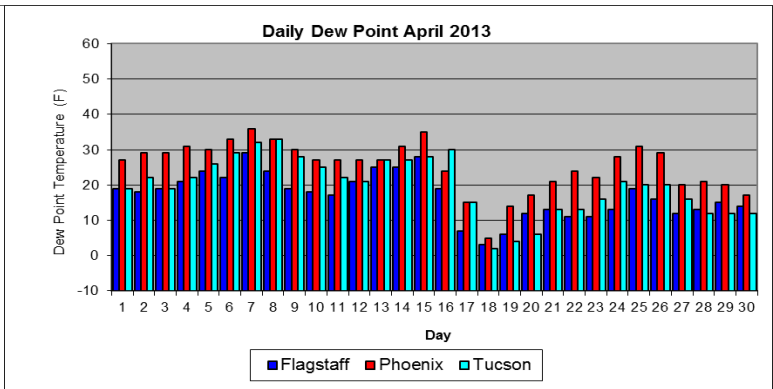
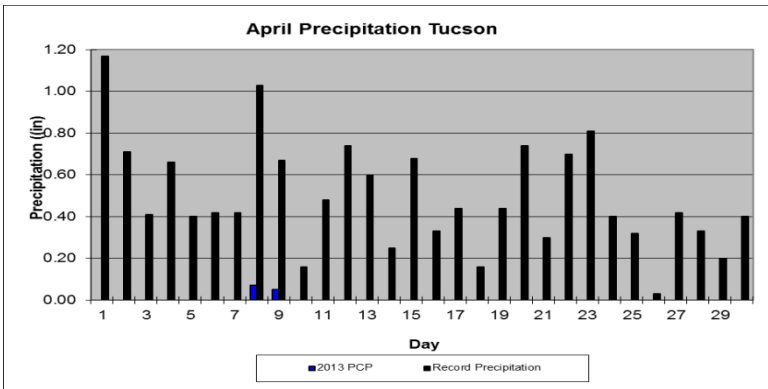
State Climate Office
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April 2013 Daily Temperature, Precipitation, & Dew Point for Flagstaff, Phoenix, and Tucson





FLAGSTAFF CLIMATE STATISTICS

April 2013

This April had no significant ranking for temperature and was the 10th driest on record.

Maximum Temp 70°F or higher	5
Maximum Temp 50°F or lower	5

Avg Max Temp (F)	61.2	Normal	58.2
Avg Min Temp (F)	28.0	Normal	28.5
Avg Mean Temp (F)	44.6	Normal	43.3
Departure from Normal (F)	+1.3		

Heating Degree Days	607	Normal	649
Cooling Degree Days	0	Normal	0
Degree base 65°F			

Highest Monthly Avg Temp (F)	50.4 in 1989
Lowest Monthly Avg Temp (F)	36.2 in 1975

Total April Precipitation	0.12"
Normal April Precipitation	1.15"
Departure from normal	-1.03"
Greatest 24-Hr Precipitation	0.12" on 4/8-4/9
Total Precipitation Year-to-Date	5.00"
Departure from Normal	-7.48"

Highest Temp this month (F): 77 on 29th
 Lowest Temp this month (F): 13 on 19th

Record High (F):	80 on 04/28/1992
	04/07/1989
Record Low (F):	-2 on 04/02/1975

Number of Days:

Clear	24
Partly Cloudy	6
Cloudy	0

Temperature or precipitation records this month:
 14th HiMin 42 tied, first set in 1904

Greatest April Precipitation	5.62" in 1965
Least April Precipitation	0.00" in 1991

Flagstaff Number of Days of:

Minimum Temp 40°F or higher	3
Minimum Temp 20°F or lower	2

Average Wind Speed	9.1 mph
Highest Peak Gust	63 mph from 220° on 8 th

PHOENIX CLIMATE STATISTICS

April 2013

This April was the 7th warmest on record and had no significant ranking for precipitation.

No temperature or precipitation records this month:

Avg Max Temp(F)	88.4	Normal	85.2
Avg Min Temp(F)	62.3	Normal	60.2
Avg Mean Temp (F)	75.3	Normal	72.7
Departure from Normal (F)	+2.6		

Phoenix Number of Days of:

Minimum Temp 60°F or lower	10
Minimum Temp 70°F or higher	2
Maximum Temp 80°F or lower	4
Maximum Temp 100°F or higher	3

Highest Monthly Avg Temp (F)	80.0 in 1989
Lowest Monthly Avg Temp (F)	62.4 in 1967

Heating Degree Days	0	Normal	20
Cooling Degree Days	316	Normal	251
Degree base 65°F			

Highest Temp this month (F): 102 on 29th
 Lowest Temp this month (F): 53 on 10th

Record High (F):	105 on 04/22/2012
	04/29/1992
	04/20/1989
Record Low (F):	35 on 04/10/1922

Total April Precipitation	0.06"
Normal April Precipitation	0.28"
Departure from normal	-0.22"
Greatest 24-Hr Precipitation	0.06" on 8 th

Total Precipitation Year-to-Date 2.61"
 Departure from Normal -0.49"

Greatest April Precipitation 3.36" in 1926
 Least April Precipitation 0.00" in 2000, 2006,
 2008, and 27 other years

Number of Days:

Clear 19
 Partly Cloudy 11
 Cloudy 0

Average Wind Speed 7.1 mph
 Highest Peak Gust 43 mph from 260° on 8th

TUCSON CLIMATE STATISTICS
 April 2013

This April was tied for 10th warmest on record and
 had no significant ranking for precipitation.

Heating Degree Days 27 Normal 60
 Cooling Degree Days 182 Normal 121
 Degree base 65°F

Avg Max Temp(F) 85.0 Normal 82.1
 Avg Min Temp(F) 54.6 Normal 52.0
 Avg Mean Temp(F) 69.8 Normal 67.0
 Departure from Normal (F) +2.8

Total April Precipitation 0.12"
 Normal April Precipitation 0.31"
 Departure from normal -0.19"
 Greatest 24-Hr Precipitation 0.12" on 4/8-4/9
 Total Precipitation Year-to-Date 1.73"
 Departure from Normal -1.11"

Highest Monthly Avg Temp (F) 73.8 in 1989
 Lowest Monthly Avg Temp (F) 57.8 in 1975

Greatest April Precipitation 3.53" in 1905
 Least April Precipitation 0.00" in 2000, 2002,
 2006 and 23 other years

Highest Temp this month (F): 97 on 29th
 Lowest Temp this month (F): 42 on 19th

Record High (F): 104 on 04/21/1989
 04/20/1989

Record Low (F): 27 on 04/04/1945

Number of Days:

Clear 27
 Partly Cloudy 1
 Cloudy 2

No temperature or precipitation records this month:

Tucson Number of Days of:

Minimum Temp 50°F or lower 7
 Minimum Temp 60°F or higher 8
 Maximum Temp 80°F or lower 6
 Maximum Temp 90°F or higher 9

Average Wind Speed 8.1 mph
 Highest Peak Gust 49 mph from 220° on 8th

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

Winds for April:

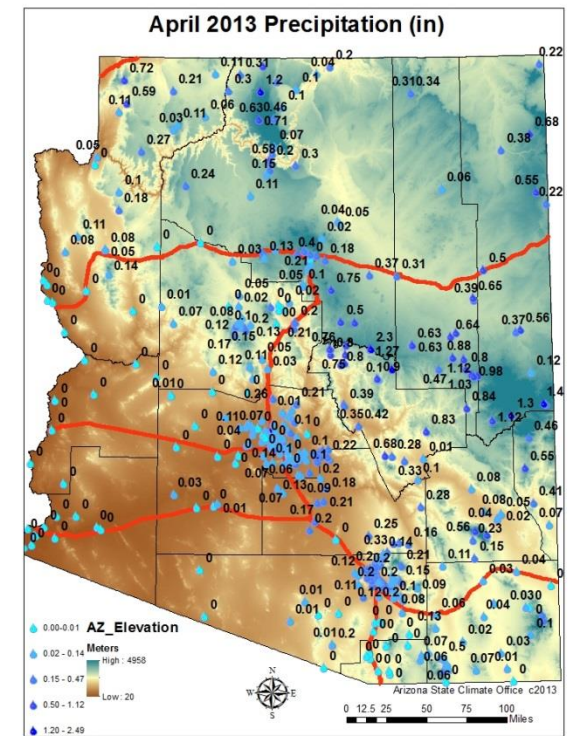
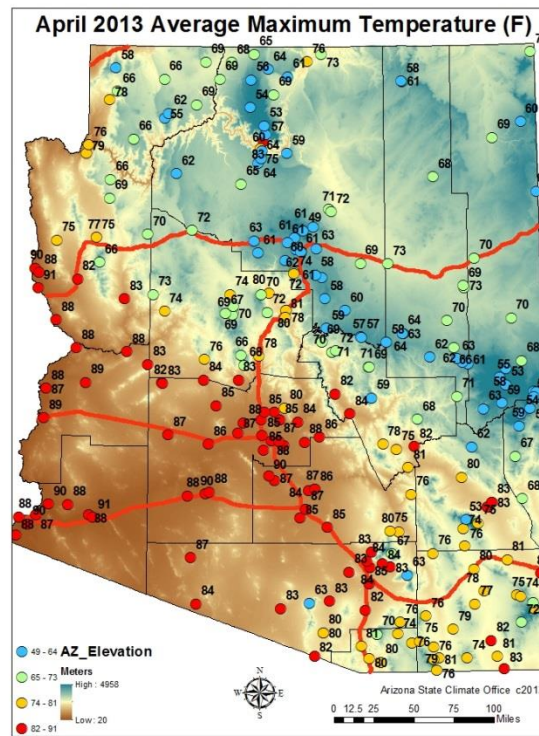
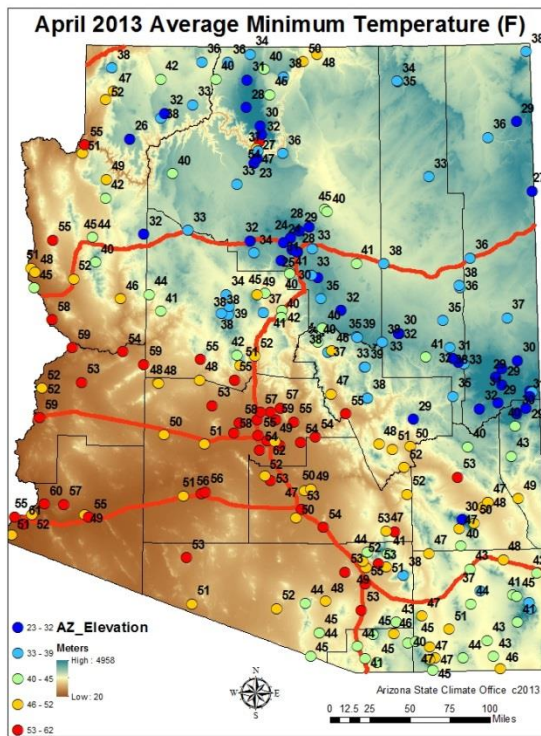
Day	Phoenix		Flagstaff		Tucson	
	Avg	Max	Avg	Max	Avg	Max
1	6.8	23	11.3	38	5.3	29
2	8	28	5.4	33	6.3	24
3	3.6	15	5.9	29	5.8	17
4	4.5	15	5.1	24	7.5	19
5	6.6	26	9.2	38	7.2	31
6	4.3	20	7.1	30	6.4	27
7	4.9	23	6.9	33	6.4	25
8	13.7	43	16.5	63	19	49
9	12.8	35	6.5	29	10.1	30
10	5.4	25	10.5	37	6.9	25
11	6.3	17	4.6	37	6.8	20
12	5.2	16	3.2	31	6.8	23
13	7.9	24	14.2	41	7	29
14	7.4	24	19.4	40	10.2	35
15	7.5	35	24.5	51	13.4	34
16	11	33	22.2	56	12.9	35
17	13.5	33	7.1	28	12.1	31
18	8.2	24	9.1	31	6.7	25
19	5.7	23	6	26	6.9	30
20	7.3	25	6.4	30	6.5	25
21	5.1	20	6.4	30	6	22
22	5.7	21	11.6	39	6.8	23
23	7.1	23	5.9	21	8.1	32
24	5.7	14	6.2	28	8	28
25	9.5	32	8.2	35	12.3	40
26	4.7	17	3.9	30	6.6	18
27	3.2	18	3.6	24	5.5	20
28	3.5	24	2.6	21	5.5	19
29	7.4	23	6.5	32	6.3	21
30	9.8	31	15.6	47	7.6	25

Dew Points for April:

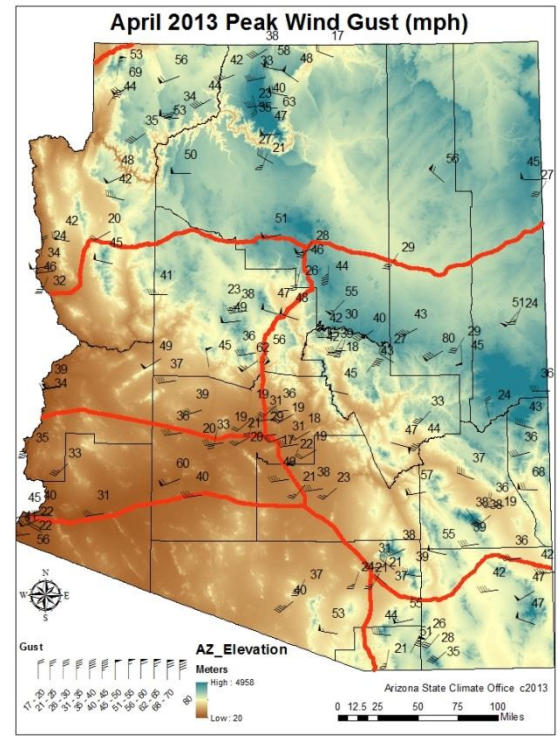
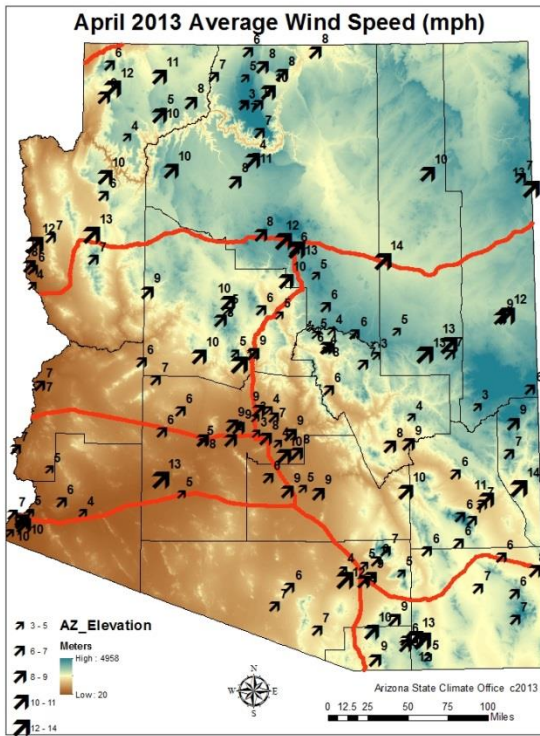
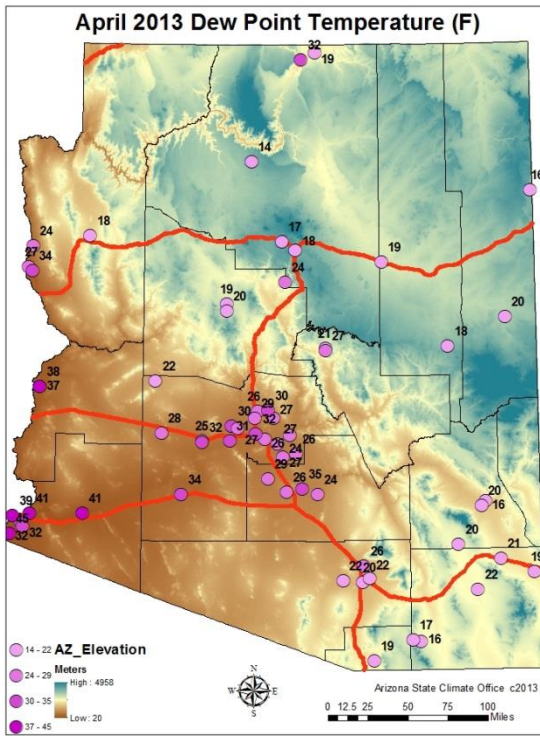
Daily Average Dew Point (°F):

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

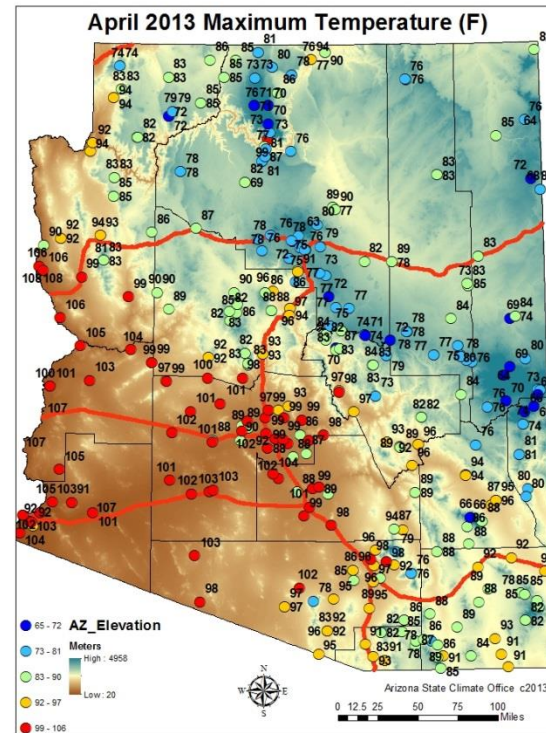
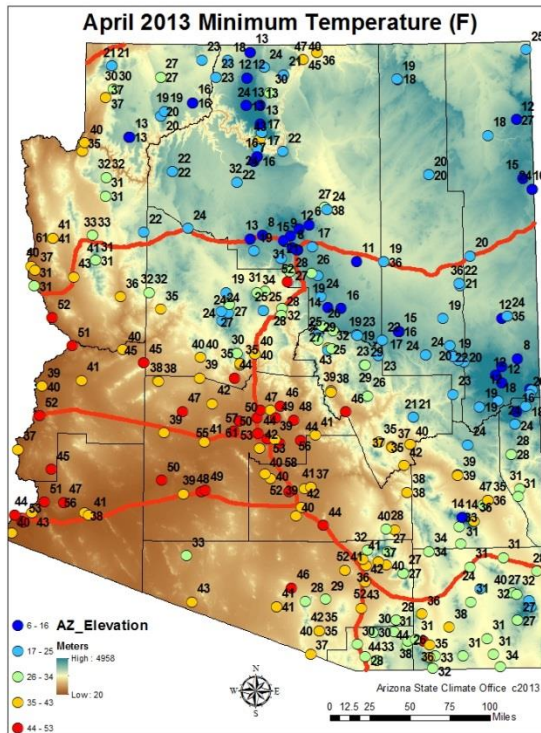
April 2013 Temperature, Dew Point, Wind Speed, and Precipitation Maps are based on **preliminary data** from the National Weather Service, the Arizona Meteorological Network (AZMet), operated by the University of Arizona College of Agriculture Cooperative Extension and the RAWS (Remote Automated Weather Station) network operated by the Bureau of Land Management and Forest Service, and the CoCoRaHS (Community Collaborative Rain, Hail and Snow) Network.



Average nighttime temperatures ranged from 23°F at Grand Canyon National Park to 62°F at Phoenix Sky Harbor Airport. Average daytime temperatures ranged from 91°F at Tacna to 49°F at Snowslide Canyon. Precipitation values ranged from zero at many locations in the southwest to 2.49" at Phoenix Greenway and 2.30" at Promontory.

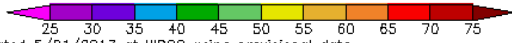
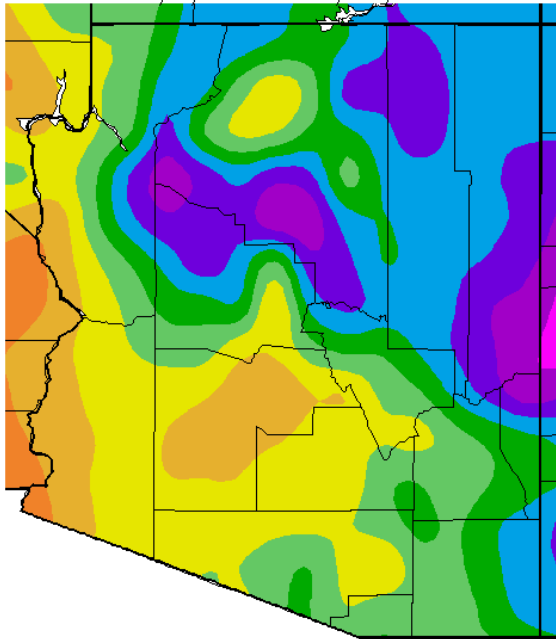


Average monthly dew points ranged from 14°F at Grand Canyon National Park, to 45°F at Yuma. As in most months, average winds were light, with 14 mph as the highest average at both Guthrie and Winslow. The highest peak wind gust was 80 mph at Limestone Canyon. Peak wind gusts blew in all different directions, which is typical as the high winds are generally attributed to thunderstorm outflows, which have no dominant direction. The arrows point to the direction the winds blow from.



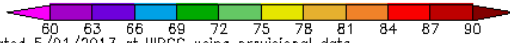
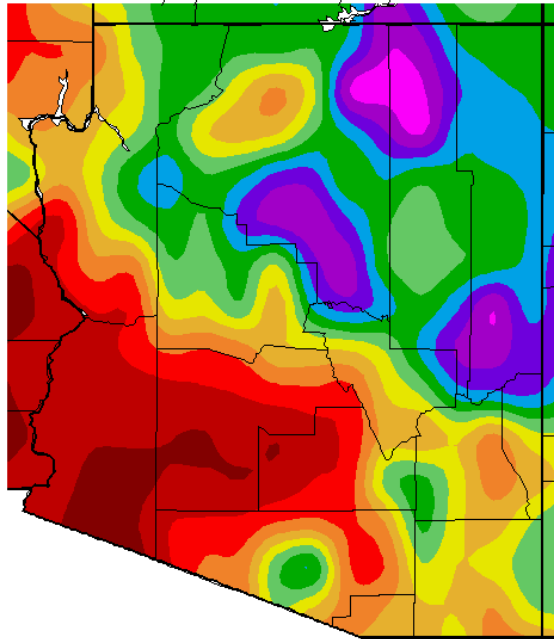
Lowest temperature in April was 6°F recorded at Sunset Crater. The highest daytime temperature of the month was 108°F recorded at Lake Havasu.

Av. Min. Temperature (deg. F)
4/1/2013 – 4/30/2013



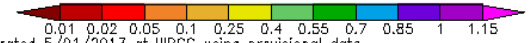
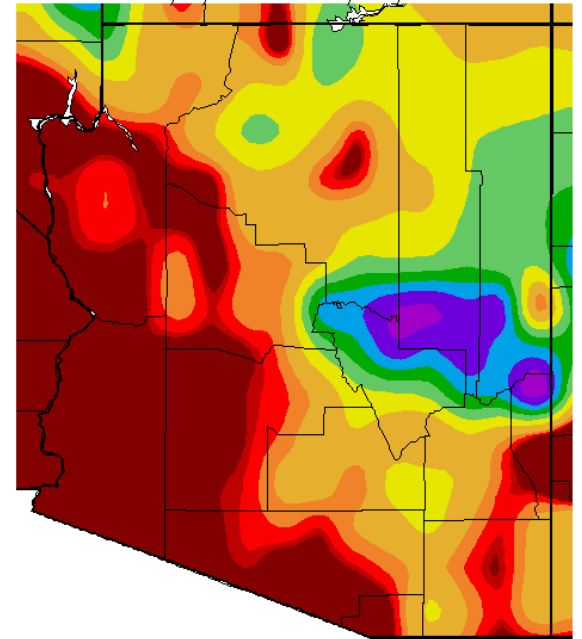
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Av. Max. Temperature (deg. F)
4/1/2013 – 4/30/2013



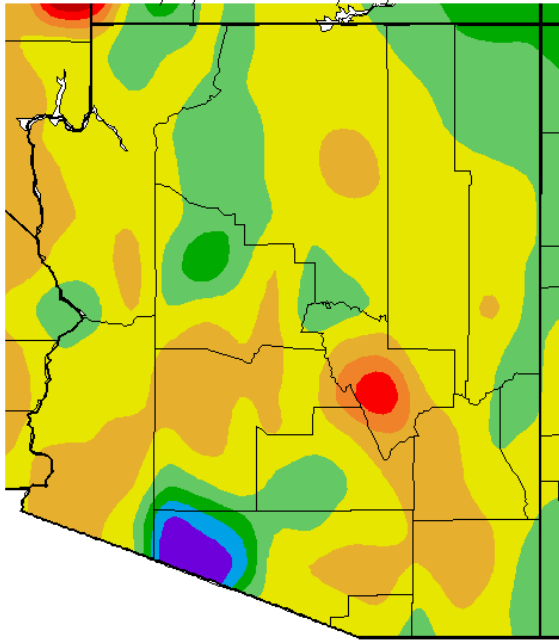
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Total Precipitation (in.)
4/1/2013 – 4/30/2013



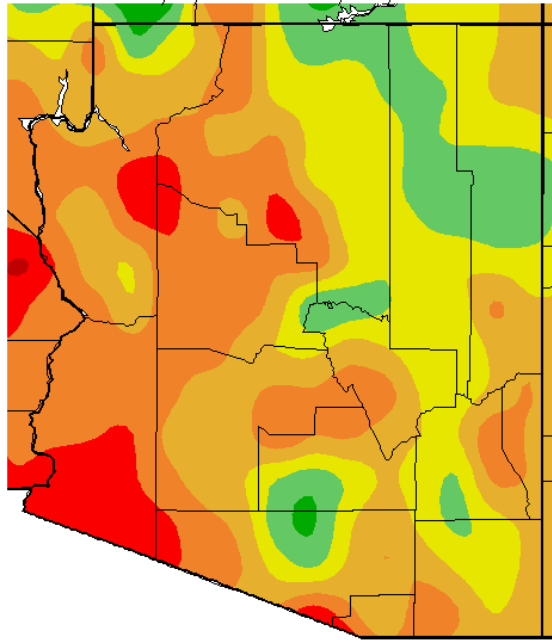
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Av. Min. Temperature dep from Ave (deg. F)
4/1/2013 – 4/30/2013



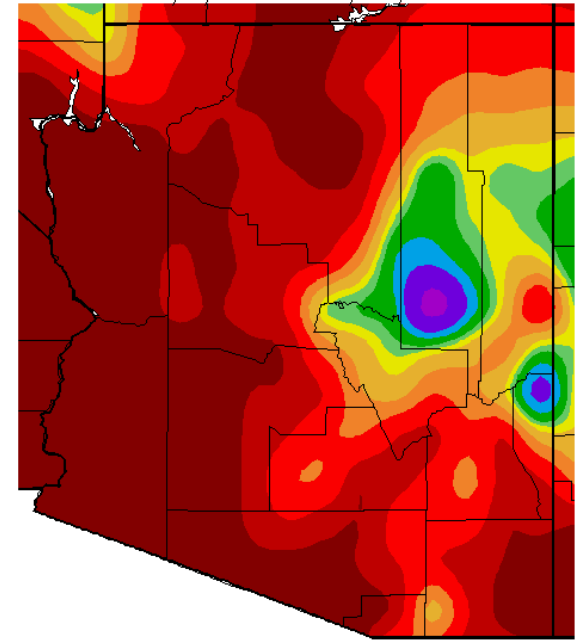
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Av. Max. Temperature dep from Ave (deg F)
4/1/2013 – 4/30/2013



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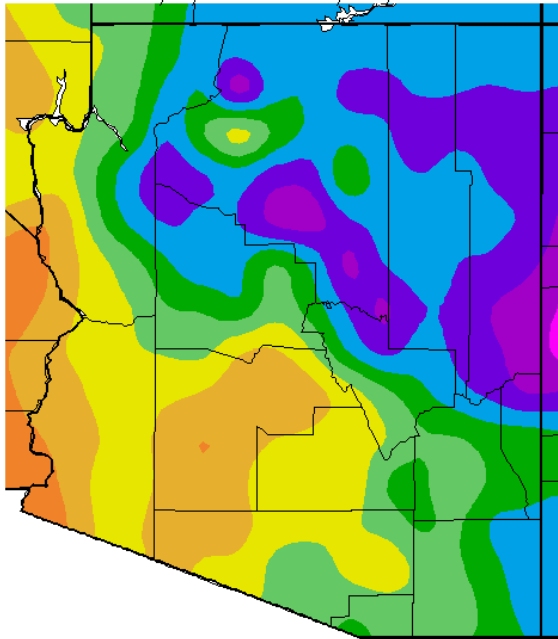
Percent of Average Precipitation (%)
4/1/2013 – 4/30/2013



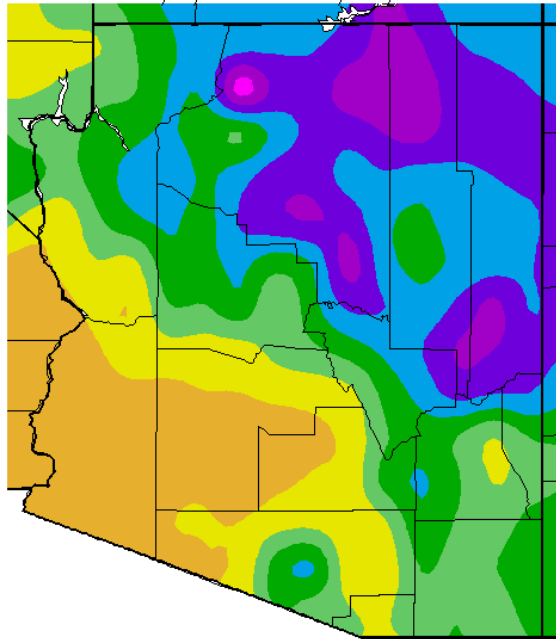
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April minimum temperatures were within 2°F of normal everywhere except western Pima County, which was much cooler than normal, and Gila County which was much warmer than normal. Daytime temperatures were 4 to 8 degrees warmer than normal the western half of the state, and within 1°F of normal on the Colorado Plateau. Precipitation was less than 25% of average across most of the state, with the only wet locations on the Little Colorado River Basin in southern Navajo and Apache counties.

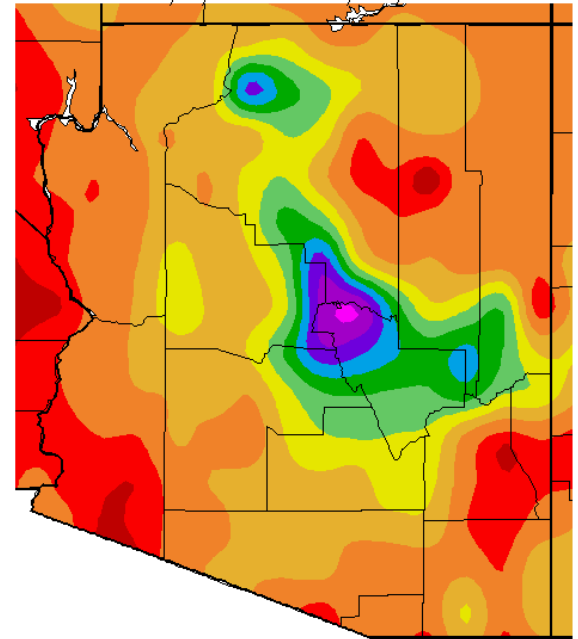
Av. Min. Temperature (deg. F)
1/1/2013 - 4/30/2013



Av. Max. Temperature (deg. F)
1/1/2013 - 4/30/2013



Total Precipitation (in.)
1/1/2013 - 4/30/2013

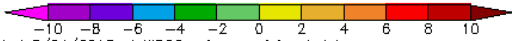
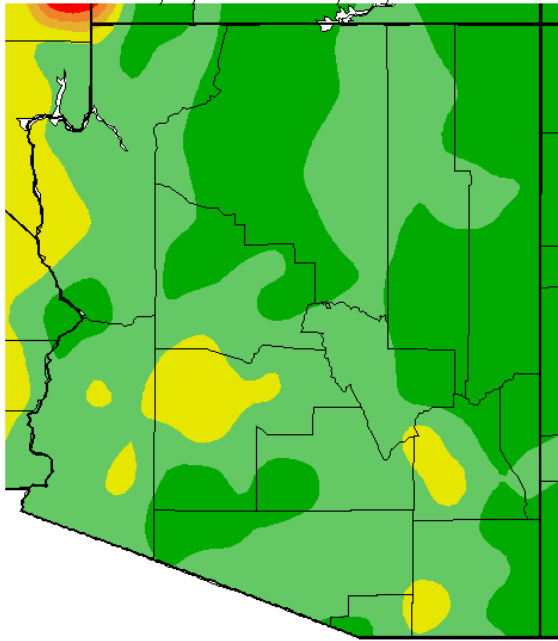


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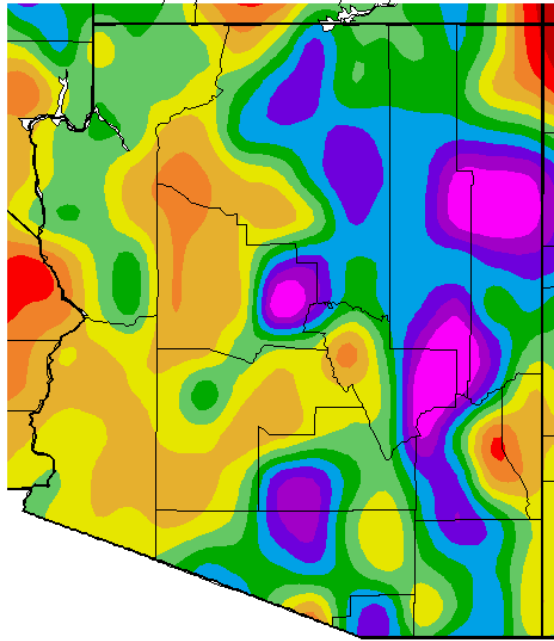
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Av. Min. Temperature dep from Ave (deg. F)
1/1/2013 – 4/30/2013



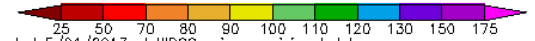
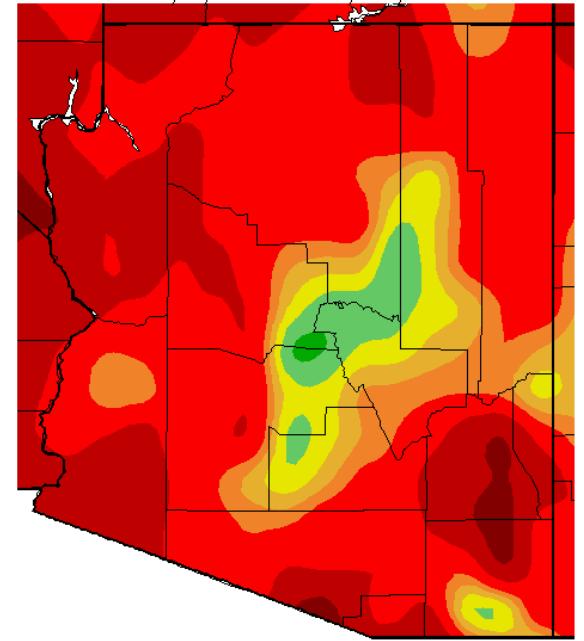
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Av. Max. Temperature dep from Ave (deg F)
1/1/2013 – 4/30/2013



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Percent of Average Precipitation (%)
1/1/2013 – 4/30/2013

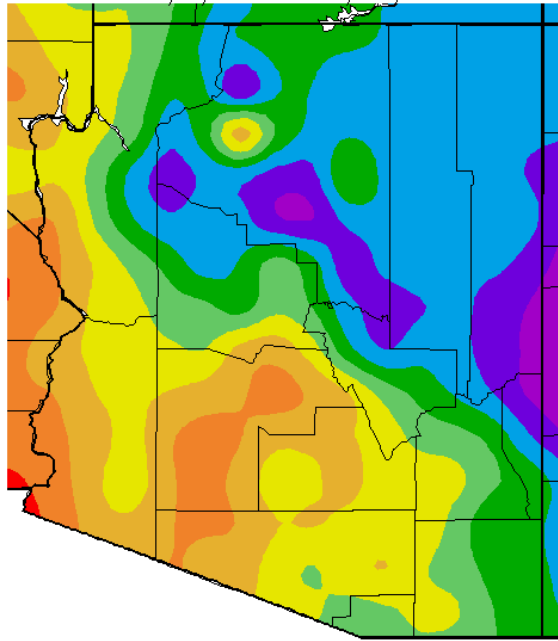


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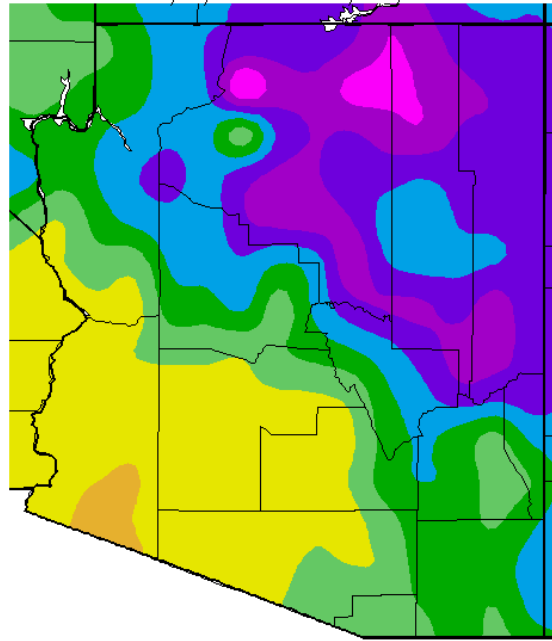
Calendar Year 2013

Average nighttime temperatures have been 0 to 4°F colder than normal, while daytime temperatures have only been 1 to 3°F colder than normal on the Colorado Plateau, and 0-1.5°F warmer than normal in western Arizona. Precipitation is near average in central Arizona and less than 70% of normal in the rest of the state.

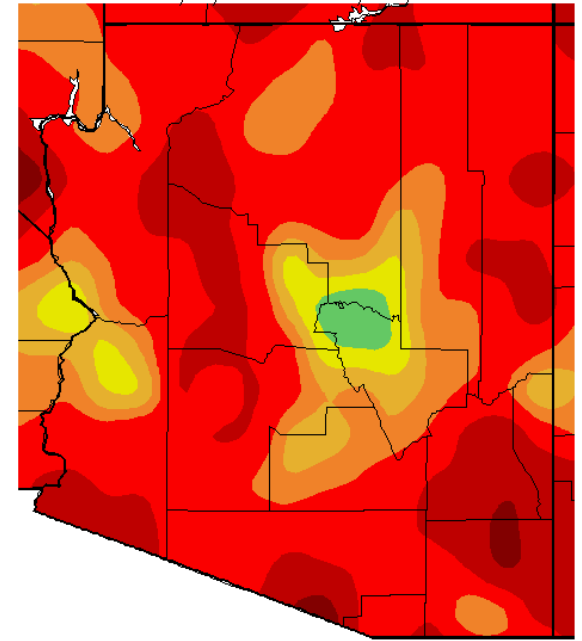
Av. Min. Temperature (deg. F)
10/1/2012 - 4/30/2013



Av. Max. Temperature (deg. F)
10/1/2012 - 4/30/2013



Percent of Average Precipitation (%)
10/1/2012 - 4/30/2013

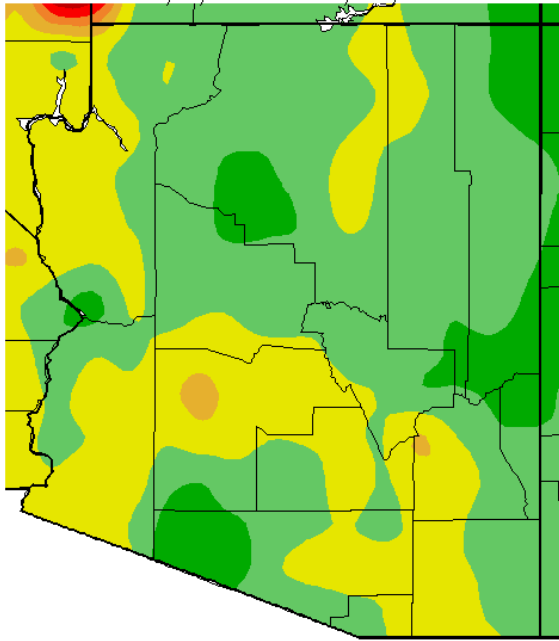


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Generated 5/01/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

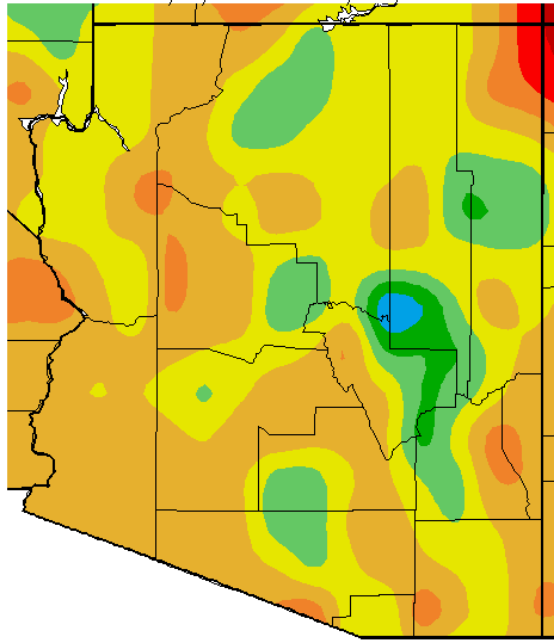
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NOAA Regional Climate Centers

Av. Min. Temperature dep from Ave (deg. F)
10/1/2012 - 4/30/2013



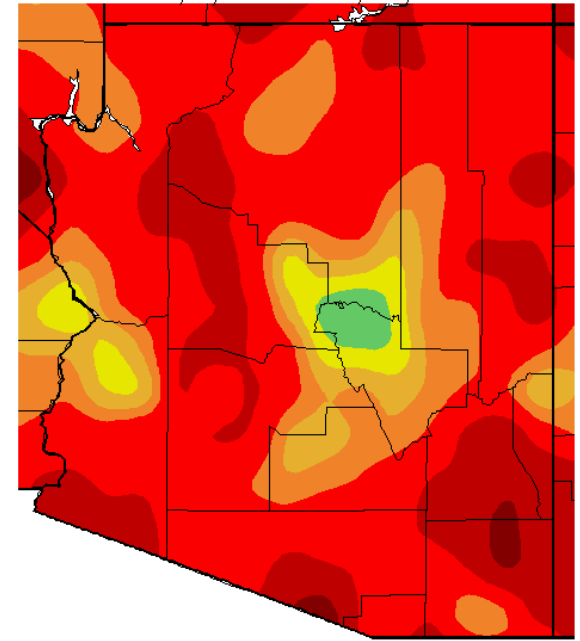
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Generated 5/01/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

Av. Max. Temperature dep from Ave (deg F)
10/1/2012 - 4/30/2013



-5 -4 -3 -2 -1 0 1 2 3 4 5
Generated 5/01/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

Percent of Average Precipitation (%)
10/1/2012 - 4/30/2013

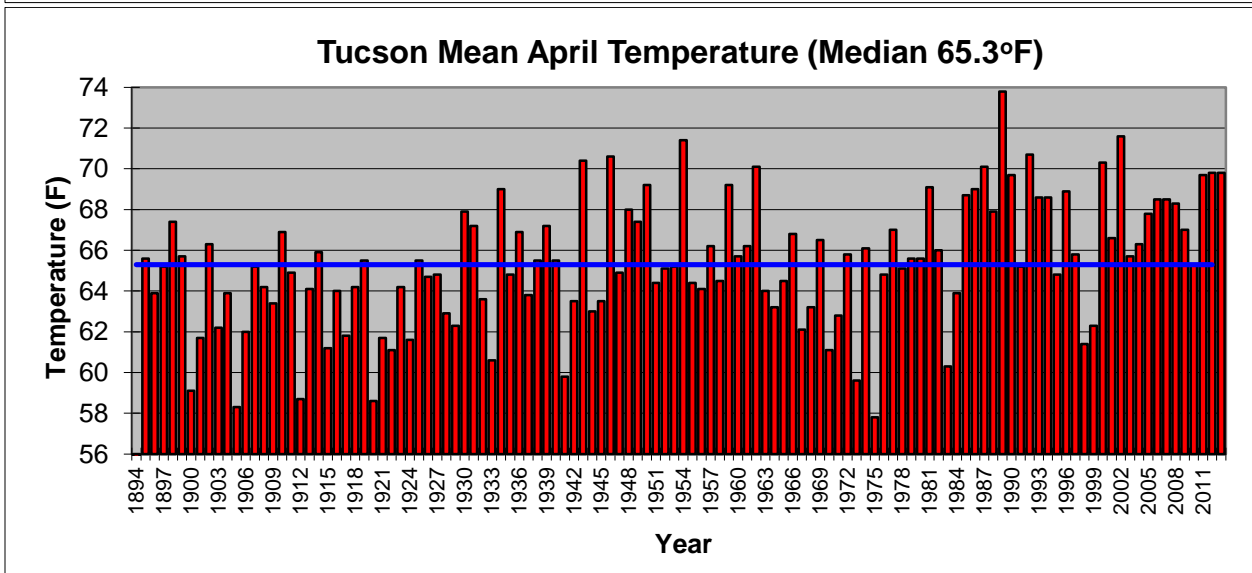
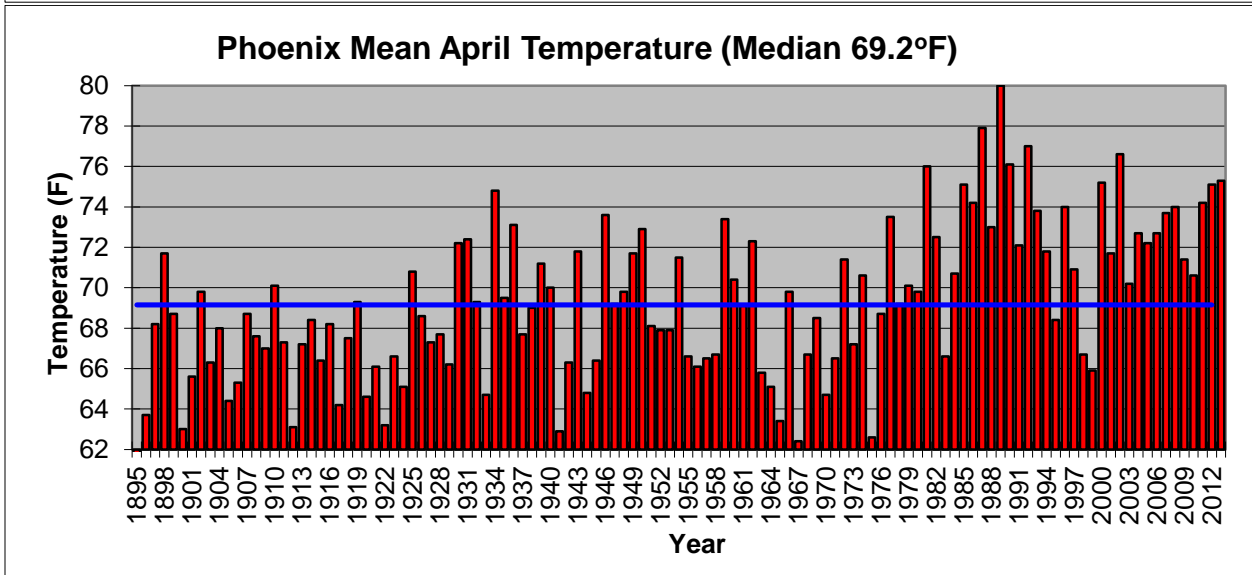
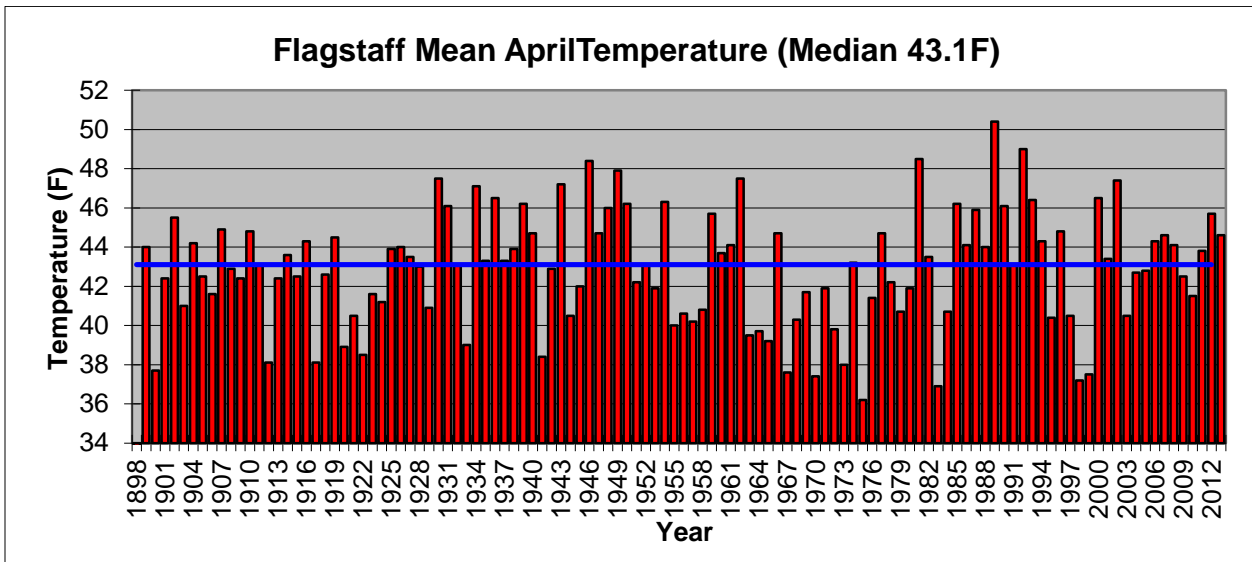


25 50 70 80 90 100 110 120 130 150 175
Generated 5/01/2013 at WRCC using provisional data.
NOAA Regional Climate Centers

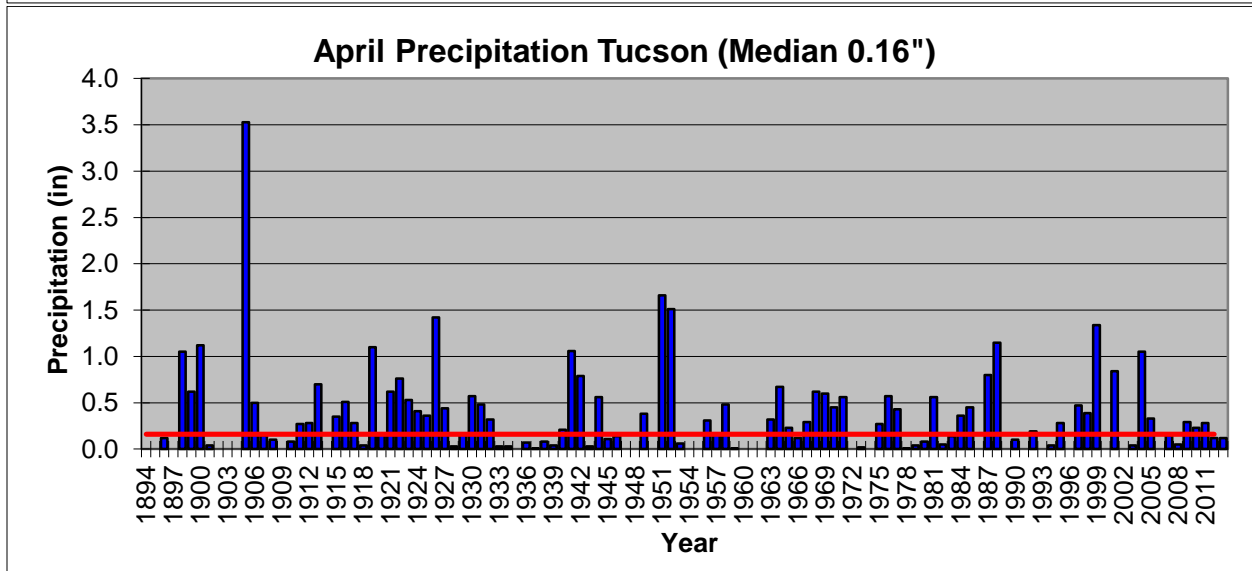
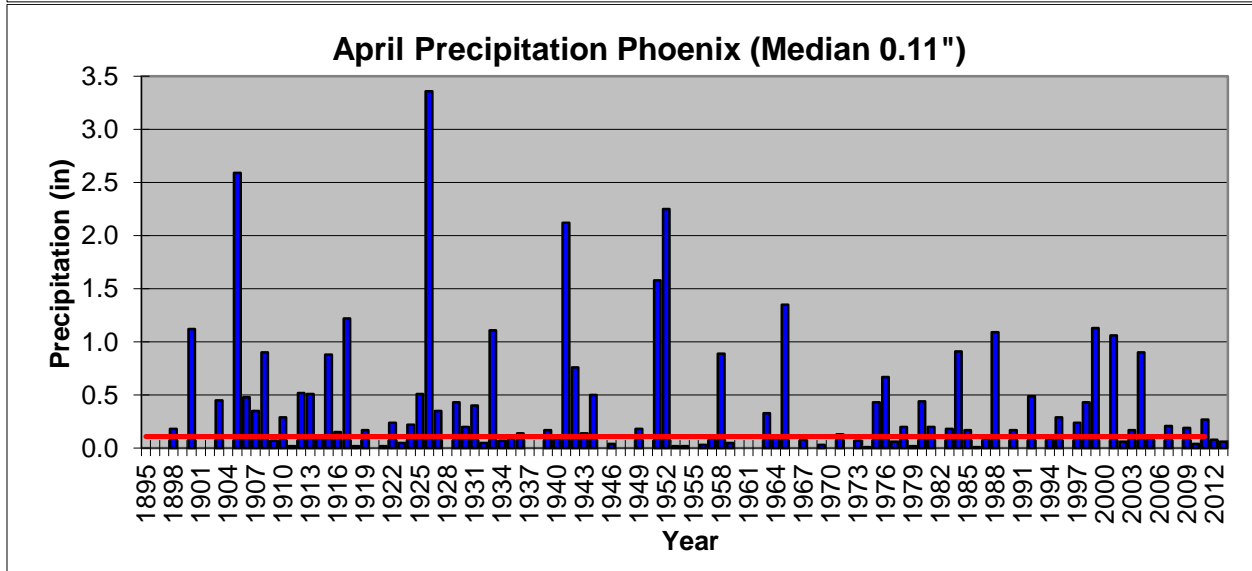
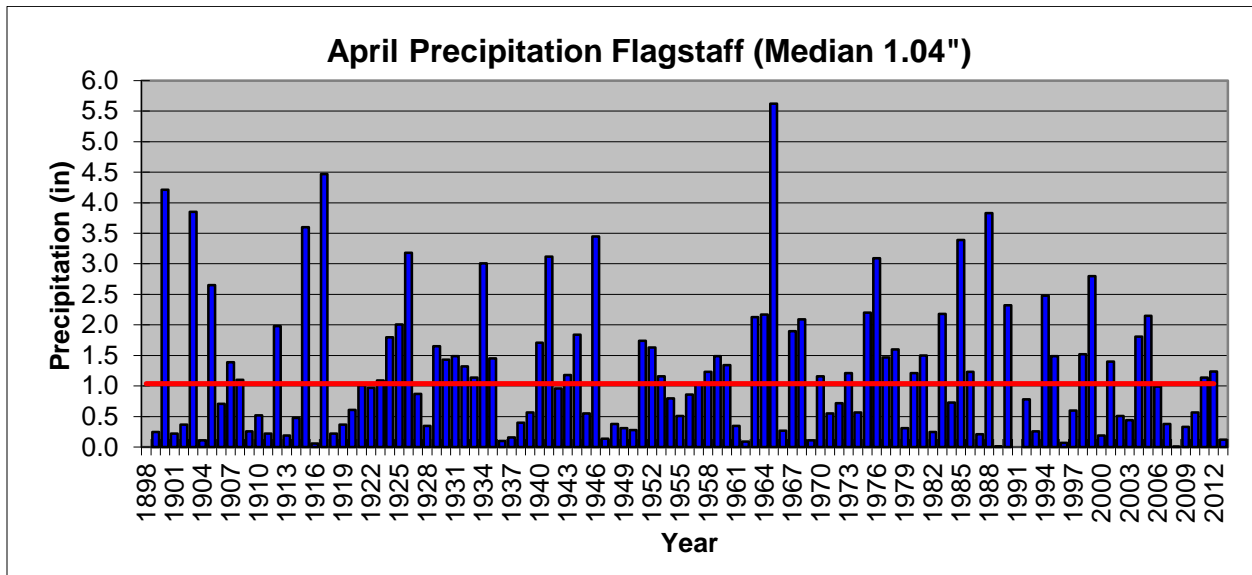
2013 Water Year

Minimum temperatures have been within 2°F of normal across the state, while maximum temperatures have been 0 to 2°F warmer than normal except in southern Navajo and eastern Gila counties. Through the end of April, the water year remains much drier than normal, generally less than 70% of average. The wettest area is in northern Gila, and southern Coconino counties.

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

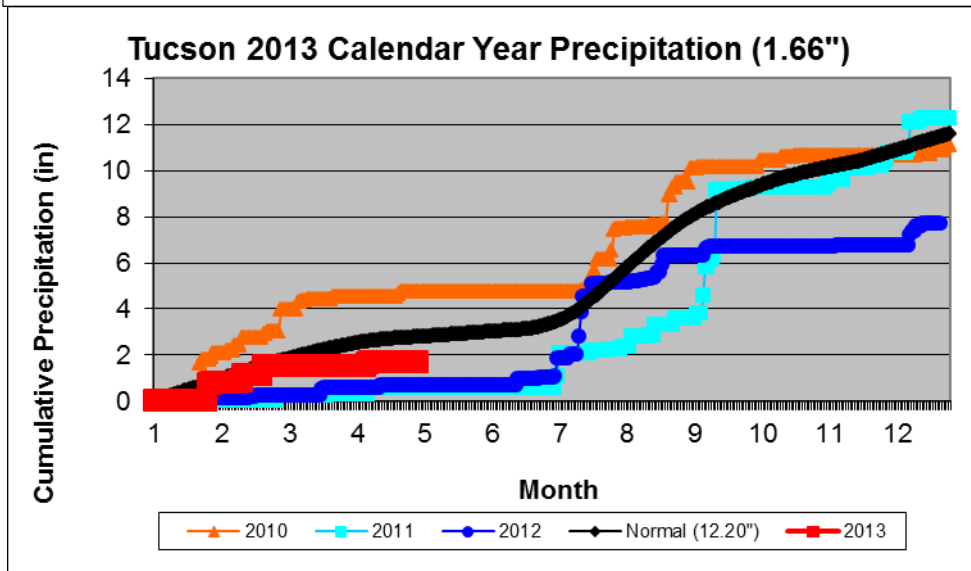
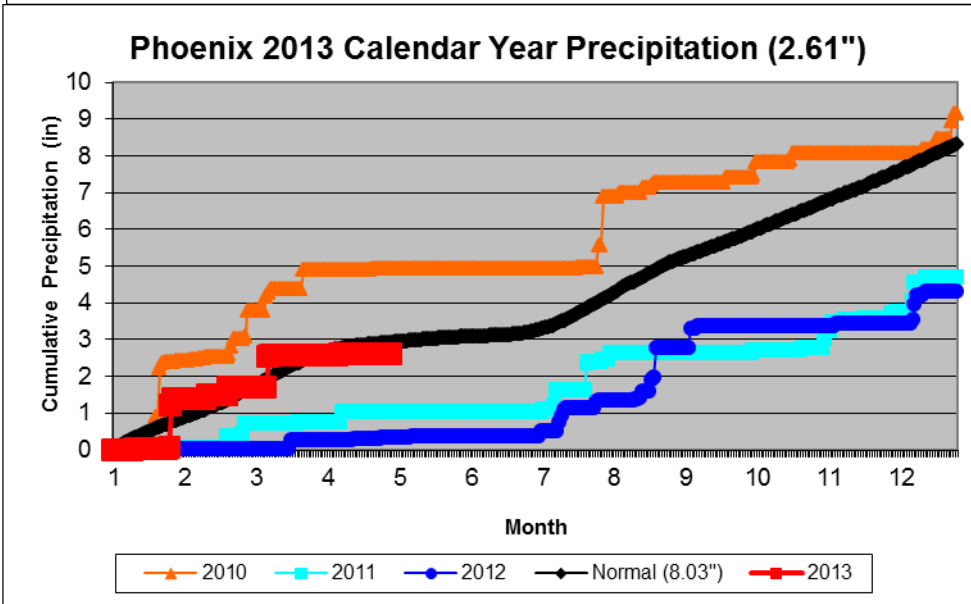
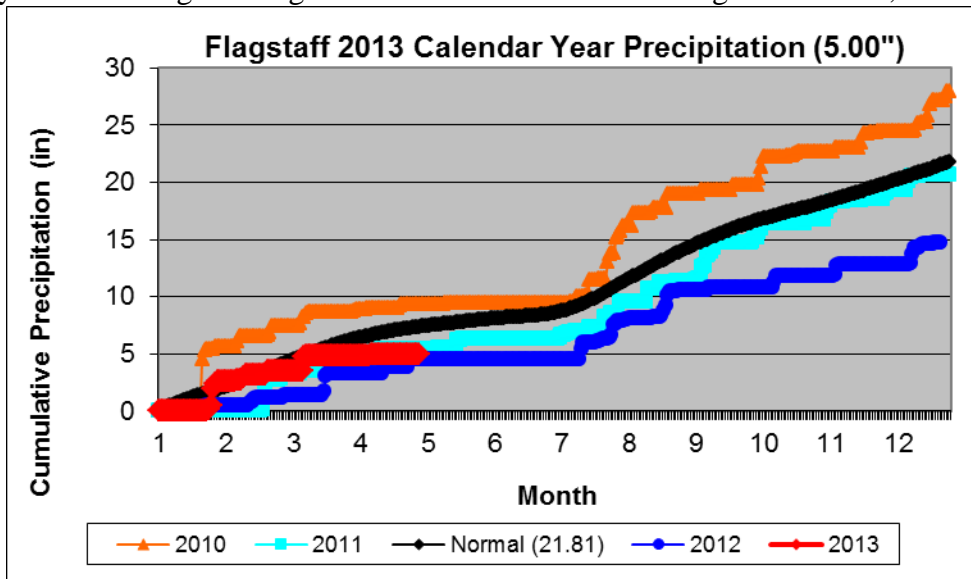


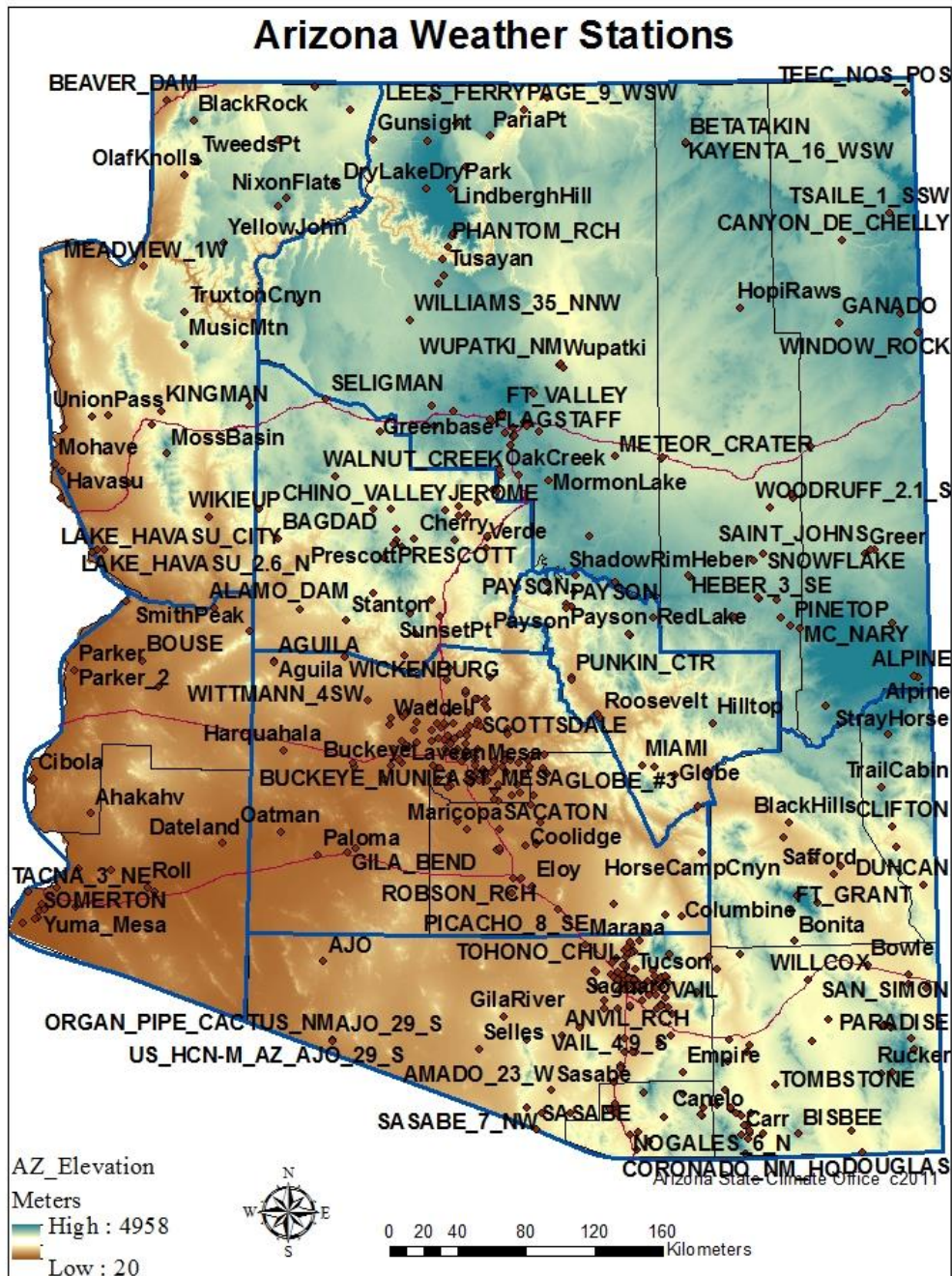
April Mean Precipitation Graphs – Flagstaff, Phoenix, and Tucson 1895-2013:



2013 Cumulative Precipitation Graphs – Flagstaff, Phoenix and Tucson:

Precipitation is slightly below average in Flagstaff and Tucson and near average in Phoenix, for the calendar year.





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)