



# Arizona Climate Summary

October 2012

## Summary of conditions for September 2012

### September 2012 Temperature and Precipitation Summary

**September 1<sup>st</sup> – 14<sup>th</sup>:** September began with an upper level low pressure system moving across Utah, generating some showers in the northern half of the state. Temperatures remained in near 110°F for the first week of the month along the lower Colorado River valley. By the 3<sup>rd</sup>, high pressure had returned to the southwest, bringing monsoonal flow and thunderstorms to Arizona, which continued through the 9<sup>th</sup>. Rainfall totals included 1.00” on the 3<sup>rd</sup> in Nogales, 0.62” on the 4<sup>th</sup> in Seligman, 1.38” on the 6<sup>th</sup> in Nogales, 1.30” on the 7<sup>th</sup> in East Mesa, and 1.04” on the 8<sup>th</sup> at Coronado National Monument. On the 9<sup>th</sup>, another upper level low pressure system moved in the southwest, generating more showers and thunderstorms that lasted through the 14<sup>th</sup>. Totals included 0.49” in Grand Canyon National Park on the 10<sup>th</sup>, 1.40” on the 11<sup>th</sup> at Organ Pipe National Monument and 1.10” at Navajo National Monument, 1.05” at Bisbee on the 12<sup>th</sup> and 0.18” at Phoenix Deer Valley on the 13<sup>th</sup>. The humidity brought temperatures down 5 to 10 degrees during this time. By the 14<sup>th</sup>, the high pressure had move over Nevada, resulting in northerly or northeasterly winds, bringing drier air into the state. As the humidity dropped, we saw our first freezing temperatures in the state on the 14<sup>th</sup>, with 31°F at Alpine. On the 15<sup>th</sup>, Fort Valley near Flagstaff had a low of 32°F. For the Phoenix area, the monsoon ended on the 13<sup>th</sup>.

**September 15<sup>th</sup> – 30<sup>th</sup>:** Starting on the 15<sup>th</sup>, a strong ridge of high pressure developed off the west coast bringing dry northwesterly or westerly flow. Temperatures began to climb again reaching 5-8°F above normal over the next week or so. Daytime highs ranged from 107-108°F along the lower Colorado River valley including Bullhead City and Yuma. The southwest deserts saw highs reach 105-106°F. Northern Arizona and the higher elevations saw temperatures in the 80s and 90s, while the highest elevations had highs in the 70s. Nighttime temperatures finally dropped into the 60s to 70s in most locations. On the 19<sup>th</sup> and 21<sup>st</sup>, Alpine had nighttime temperatures of 23°F. On the 24<sup>th</sup> a weak upper level low pressure system passed through Utah and brought a few showers to northern Arizona, and Window Rock reported 0.02” on the 25<sup>th</sup>. As the system moved off to the northeast, clear skies returned. On the 28<sup>th</sup>, the tail end of the low pressure system tapped into some sub-tropical moisture over northern Mexico, and showers and thunderstorms were reported across southeastern Arizona. Nogales, Sierra Vista, Elgin and Bowie all had rainfall, with the highest, 0.23”, reported at Bowie. The system cleared out and skies remained clear through the end of the month with temperatures rising again.

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

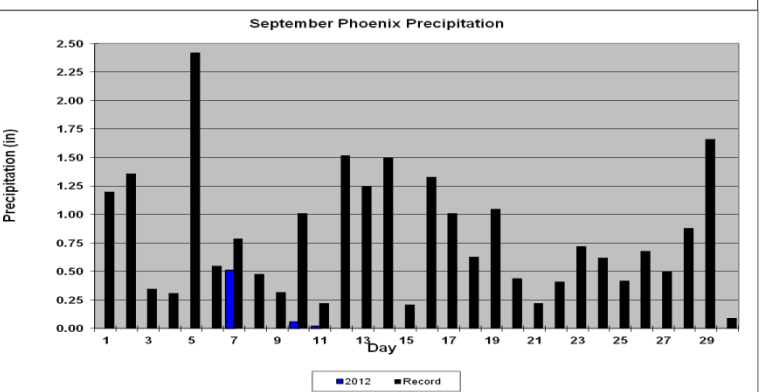
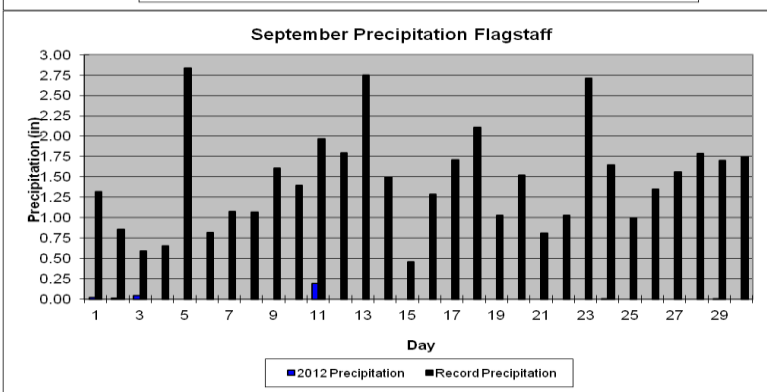
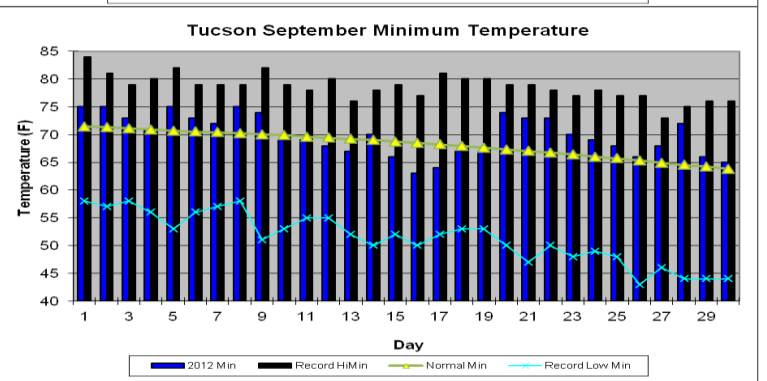
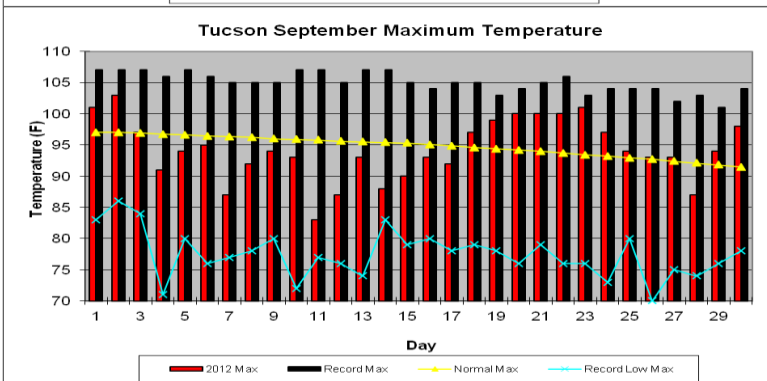
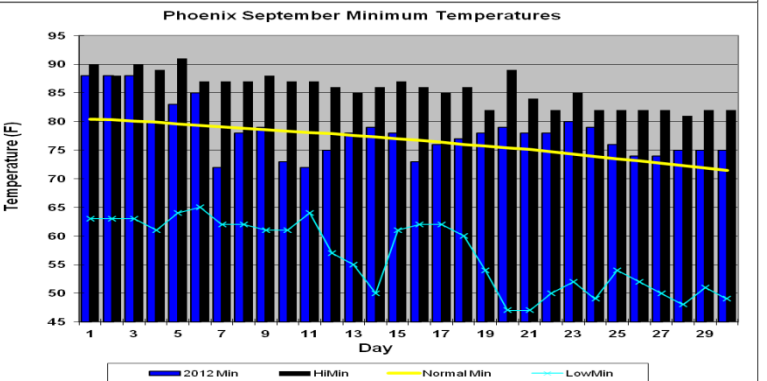
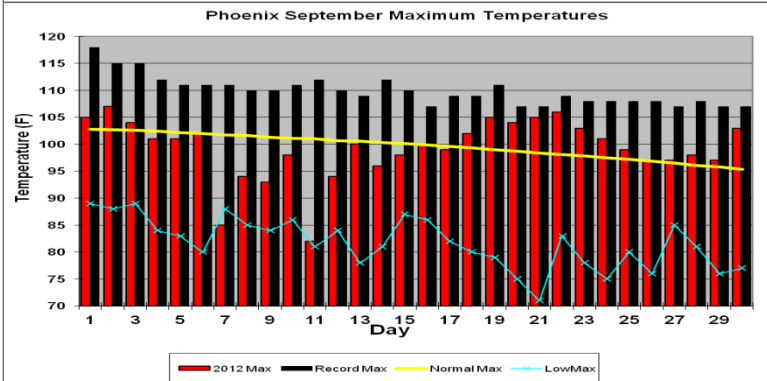
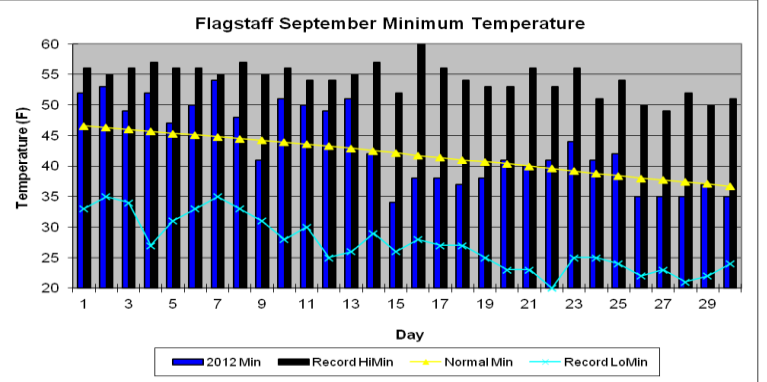
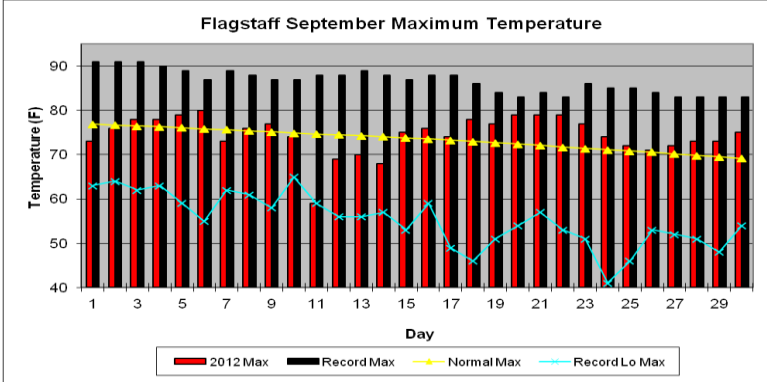
**\*\*Note:** The discrepancy between the Statewide Temperature and Precipitation values for Phoenix, Flagstaff and Tucson and the daily values in their graphs are due to the reporting times. Statewide Temperature and Precipitation values are taken at 5pm, while official daily records at the airports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

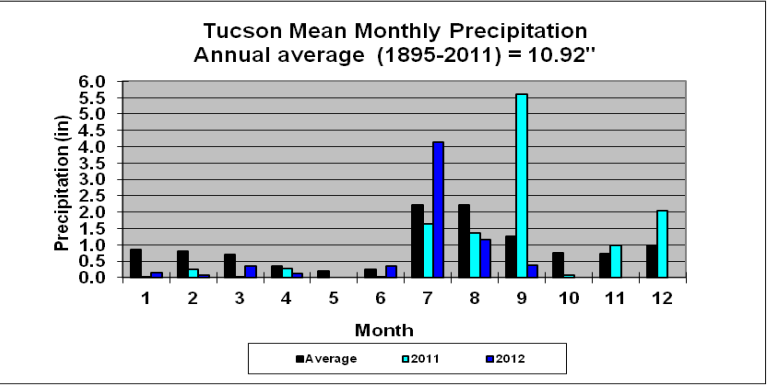
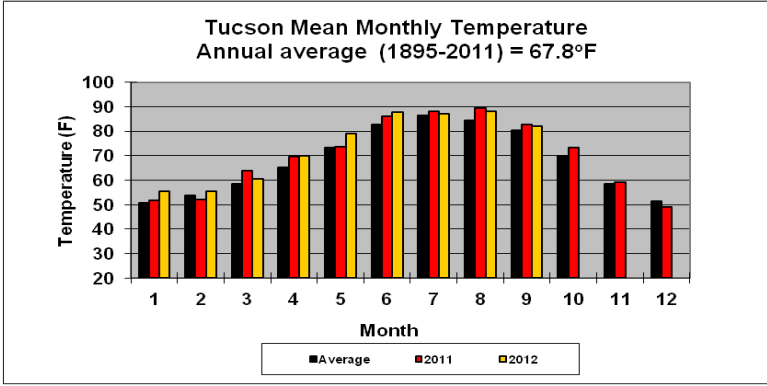
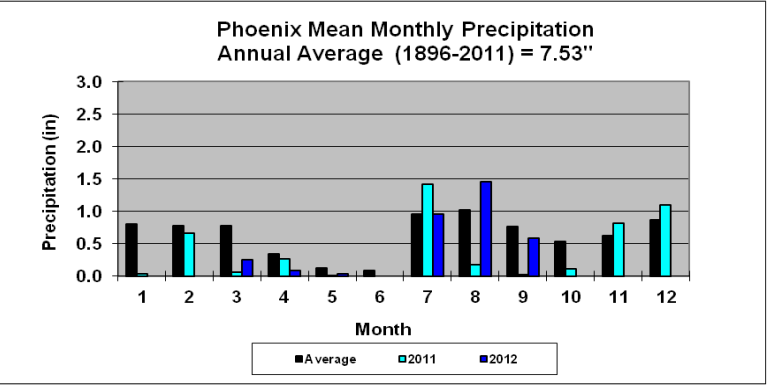
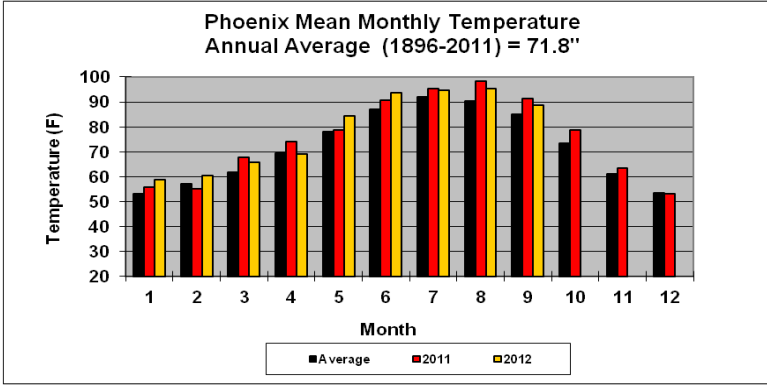
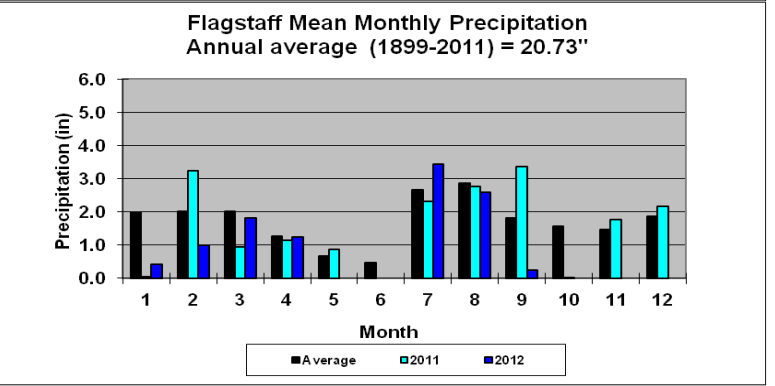
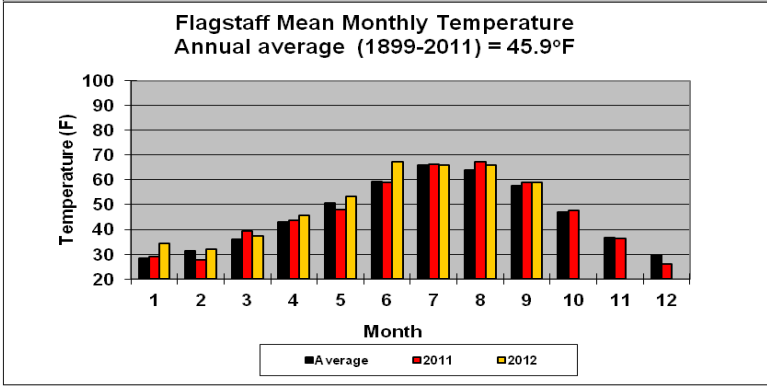
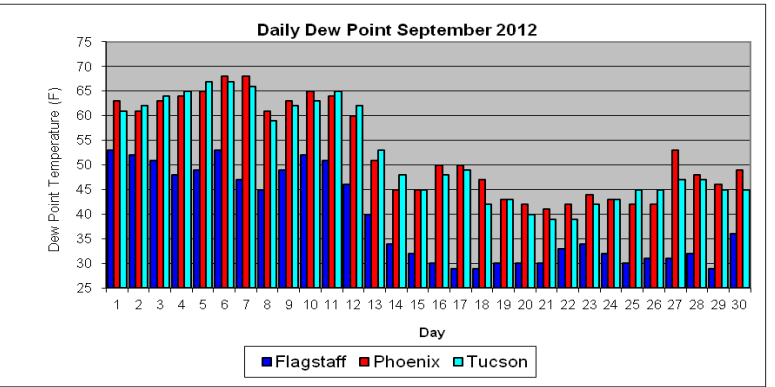
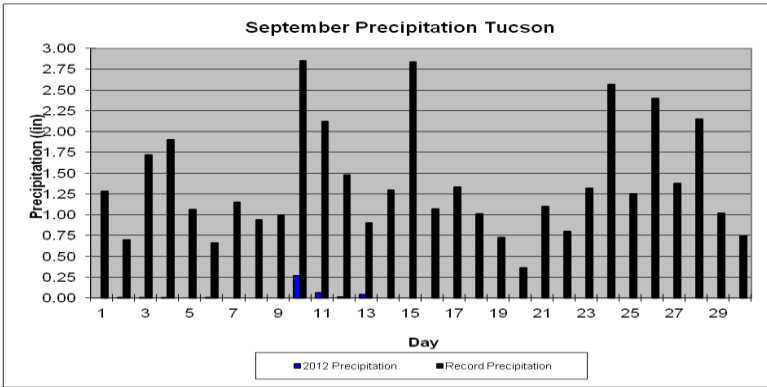
State Climate Office  
**Dr. Nancy J. Selover, State Climatologist**  
<http://azclimate.asu.edu> Tel: 480-965-6265  
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School of Geographical Sciences & Urban Planning  
Arizona State University  
Tempe, AZ 85287-1508  
Edited by Nancy J. Selover & Matt Salerno

# September 2012 Daily Temperature, Precipitation, & Dew Point for Flagstaff, Phoenix, and Tucson





## FLAGSTAFF CLIMATE STATISTICS

September 2012

This September had no significant ranking for temperature was the 17<sup>th</sup> driest on record.

|                           |      |        |      |
|---------------------------|------|--------|------|
| Avg Max Temp (F)          | 74.5 | Normal | 72.9 |
| Avg Min Temp (F)          | 43.3 | Normal | 42.0 |
| Avg Mean Temp (F)         | 58.9 | Normal | 57.4 |
| Departure from Normal (F) | +1.5 |        |      |

|                              |      |    |      |
|------------------------------|------|----|------|
| Highest Monthly Avg Temp (F) | 62.1 | in | 1947 |
| Lowest Monthly Avg Temp (F)  | 52.3 | in | 1912 |

Highest Temp this month (F): 80 on 6<sup>th</sup>  
 Lowest Temp this month (F): 34 on 15<sup>th</sup>

|                  |    |    |            |
|------------------|----|----|------------|
| Record High (F): | 91 | on | 09/03/1948 |
|                  |    |    | 09/02/1948 |
|                  |    |    | 09/01/1948 |
| Record Low (F):  | 20 | on | 09/22/1912 |

Temperature or precipitation records this month:  
 11<sup>th</sup> LoMax 59 tied, first set in 1985.

Flagstaff Number of Days of:

|                            |    |
|----------------------------|----|
| Minimum Temp 50° or higher | 8  |
| Minimum Temp 40° or lower  | 11 |
| Maximum Temp 80° or higher | 1  |

Maximum Temp 70° or lower 4

|                     |     |        |     |
|---------------------|-----|--------|-----|
| Heating Degree Days | 176 | Normal | 229 |
| Cooling Degree Days | 0   | Normal | 3   |
| Degree base 65°F    |     |        |     |

|                                  |                  |
|----------------------------------|------------------|
| Total September Precipitation    | 0.26"            |
| Normal September Precipitation   | 2.38"            |
| Departure from normal            | -2.12"           |
| Greatest 24-Hr Precipitation     | 0.19" on 9/10-11 |
| Total Precipitation Year-to-Date | 10.76"           |
| Departure from Normal            | -5.81"           |

Number of Days:

|               |    |
|---------------|----|
| Clear         | 20 |
| Partly Cloudy | 9  |
| Cloudy        | 1  |

|                                  |                                       |
|----------------------------------|---------------------------------------|
| Greatest September Precipitation | 6.75" in 1983                         |
| Least September Precipitation    | 0.00" in 1898, 1955, 1957, 1973, 1992 |

|                    |                                      |
|--------------------|--------------------------------------|
| Average Wind Speed | 4.4 mph                              |
| Highest Peak Gust  | 36 mph from 220° on 24 <sup>th</sup> |

## PHOENIX CLIMATE STATISTICS

September 2012

This September was the 18<sup>th</sup> warmest on record and had no significant ranking for precipitation.

|                           |      |        |      |
|---------------------------|------|--------|------|
| Avg Max Temp(F)           | 99.2 | Normal | 99.8 |
| Avg Min Temp(F)           | 78.1 | Normal | 76.9 |
| Avg Mean Temp (F)         | 88.6 | Normal | 88.4 |
| Departure from Normal (F) | +0.2 |        |      |

|                              |      |    |      |
|------------------------------|------|----|------|
| Highest Monthly Avg Temp (F) | 92.2 | in | 2001 |
| Lowest Monthly Avg Temp (F)  | 78.9 | in | 1912 |

Highest Temp this month (F): 107 on 2<sup>nd</sup>  
 Lowest Temp this month (F): 72 on 7<sup>th</sup>, 11<sup>th</sup>

|                  |     |    |                |
|------------------|-----|----|----------------|
| Record High (F): | 116 | on | 09/01/1950     |
| Record Low (F):  | 47  | on | 09/20, 21/1965 |
|                  |     |    | 09/22/1895     |

Temperature or precipitation records this month:  
 2<sup>nd</sup> HiMin – 88 tied, first set in 2003  
 7<sup>th</sup> LoMax 85 set, previous record 88, set in 1975

Phoenix Number of Days of:

|                             |    |
|-----------------------------|----|
| Minimum Temp 75° or lower   | 10 |
| Minimum Temp 85° or higher  | 4  |
| Maximum Temp 95° or lower   | 5  |
| Maximum Temp 105° or higher | 5  |

|                     |     |        |     |
|---------------------|-----|--------|-----|
| Heating Degree Days | 0   | Normal | 0   |
| Cooling Degree Days | 719 | Normal | 700 |
| Degree base 65°F    |     |        |     |

Total September Precipitation 0.59"

Normal September Precipitation 0.64"  
 Departure from normal -0.05"  
 Greatest 24-Hr Precipitation 0.51" on 9/07  
 Total Precipitation Year-to-Date 3.36"  
 Departure from Normal -2.56"

Greatest September Precipitation 5.41" in 1939  
 Least September Precipitation 0.00" in 1898,  
 1901, 1910, 1914, 1938, 1945, 1948, 1953, 1955,  
 1957, 1963, 1968, 1973, 1978, 1988, 2001

Average Wind Speed 6.2 mph  
 Highest Peak Gust 36 mph from 170° on 10<sup>th</sup>

Number of Days:  
 Clear 12  
 Partly Cloudy 16  
 Cloudy 2

TUCSON CLIMATE STATISTICS  
 September 2012

This September was tied for 29<sup>th</sup> warmest and had  
 no significant ranking for precipitation

Heating Degree Days 0 Normal 0  
 Cooling Degree Days 517 Normal 497  
 Degree base 65°F

Avg Max Temp(F) 94.2 Normal 94.5  
 Avg Min Temp(F) 69.9 Normal 68.6  
 Avg Mean Temp(F) 82.1 Normal 81.6  
 Departure from Normal (F) +0.5

Total September Precipitation 0.38"  
 Normal September Precipitation 1.29"  
 Departure from normal -0.91"  
 Greatest 24-Hr Precipitation 0.29" on 9/10-11  
 Total Precipitation Year-to-Date 6.70"  
 Departure from Normal -2.50"

Highest Monthly Avg Temp (F) 84.8 in 2000  
 Lowest Monthly Avg Temp (F) 76.3 in 1964

Greatest September Precipitation 5.60" in 2011  
 Least September Precipitation 0.00" in 1894,  
 1898, 1953, 1957, 1959, 1968

Highest Temp this month (F): 103 on 2<sup>nd</sup>  
 Lowest Temp this month (F): 63 on 16<sup>th</sup>

Record High (F): 107 on 09/14/2000  
 09/11/1990  
 09/10/1990

Number of Days:  
 Clear 26  
 Partly Cloudy 3  
 Cloudy 1

Record Low (F): 43 on 09/26/1913

No Temperature or precipitation records this month:

Tucson Number of Days of:  
 Minimum Temp 65° or lower 3  
 Minimum Temp 75° or higher 4  
 Maximum Temp 90° or lower 6  
 Maximum Temp 100° or higher 6

Average Wind Speed 6.9 mph  
 Highest Peak Gust 59 mph from 040° on 29<sup>th</sup>

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

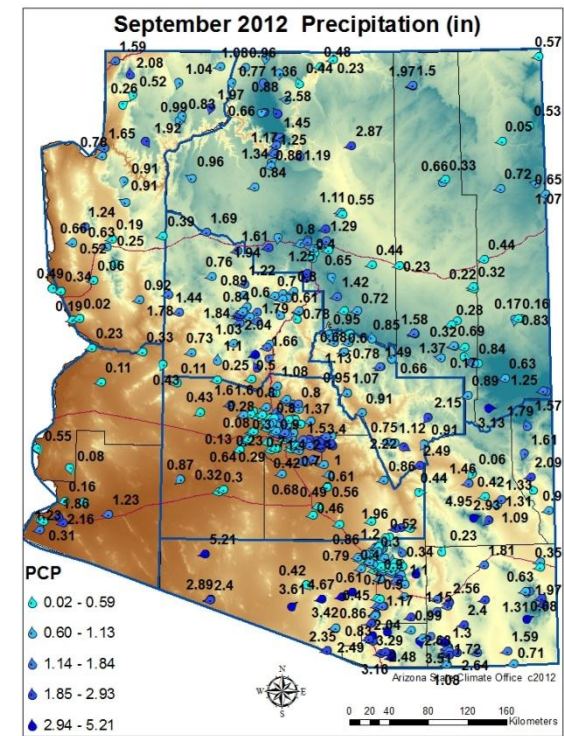
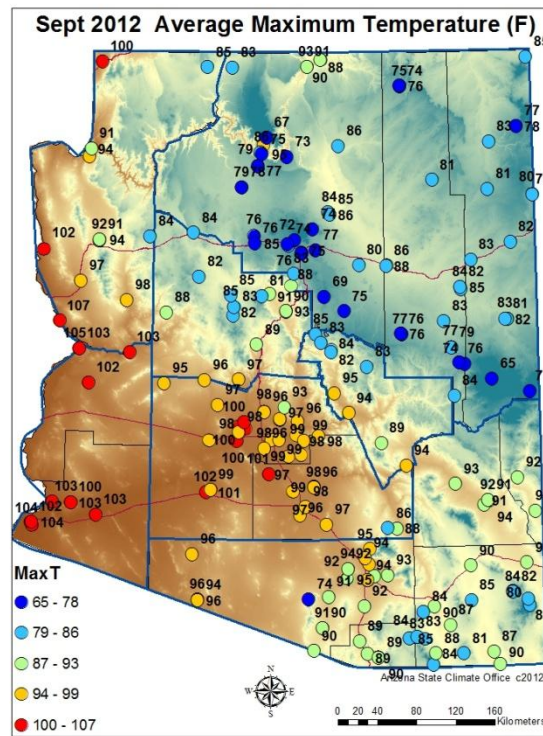
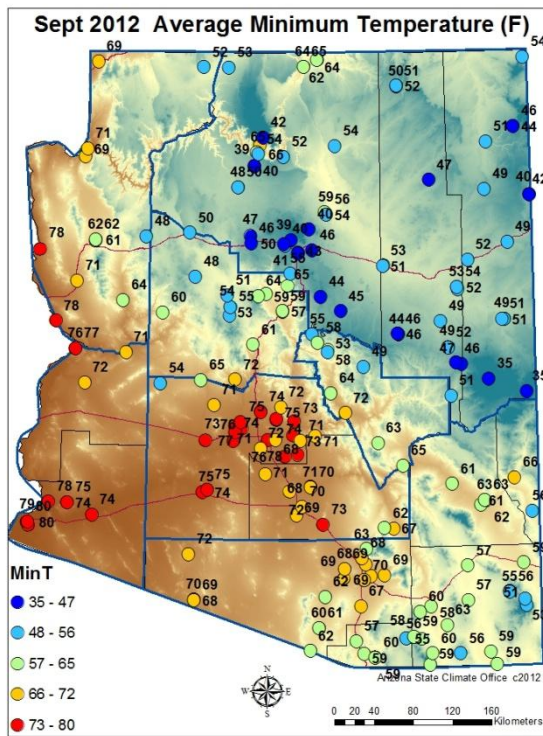
**Winds for September:**

| Day | Phoenix |     | Flagstaff |     | Tucson |     |
|-----|---------|-----|-----------|-----|--------|-----|
|     | Avg     | Max | Avg       | Max | Avg    | Max |
| 1   | 6.6     | 21  | 2.5       | 20  | 5      | 23  |
| 2   | 5.5     | 23  | 3.7       | 21  | 5.2    | 44  |
| 3   | 7.1     | 22  | 3.1       | 28  | 8.8    | 35  |
| 4   | 9.1     | 36  | 3.4       | 25  | 7      | 22  |
| 5   | 11      | 23  | 1.9       | 21  | 6.3    | 22  |
| 6   | 8.1     | 31  | 4.7       | 21  | 5.2    | 29  |
| 7   | 4.9     | 25  | 3.9       | 17  | 7.8    | 21  |
| 8   | 8.8     | 23  | 5.4       | 24  | 11.6   | 32  |
| 9   | 11.5    | 32  | 3.7       | 20  | 12.2   | 31  |
| 10  | 5.8     | 36  | 5.5       | 29  | 5.8    | 43  |
| 11  | 4.5     | 16  | 7.2       | 22  | 2.9    | 35  |
| 12  | 3.5     | 22  | 3.2       | 23  | 6.3    | 20  |
| 13  | 6.2     | 28  | 13.6      | 35  | 7.2    | 31  |
| 14  | 10.8    | 32  | 8.3       | 30  | 15     | 37  |
| 15  | 6.7     | 31  | 2.6       | 23  | 9.5    | 30  |
| 16  | 5.5     | 18  | 4.1       | 24  | 7      | 22  |
| 17  | 5.2     | 17  | 3.1       | 22  | 5.4    | 21  |
| 18  | 4.3     | 13  | 2.5       | 18  | 4.7    | 18  |
| 19  | 3.9     | 13  | 3.7       | 23  | 5.7    | 24  |
| 20  | 5.4     | 17  | 2.2       | 20  | 5.8    | 22  |
| 21  | 4.2     | 17  | 1.9       | 24  | 5.1    | 26  |
| 22  | 4.4     | 18  | 3.7       | 25  | 6.1    | 43  |
| 23  | 4.3     | 16  | 4         | 30  | 5.6    | 18  |
| 24  | 6.1     | 22  | 8.8       | 36  | 5.6    | 21  |
| 25  | 7.7     | 24  | 9.1       | 35  | 6.3    | 24  |
| 26  | 5.7     | 21  | 4.4       | 25  | 6.6    | 29  |
| 27  | 5       | 18  | 1.6       | 15  | 5.3    | 18  |
| 28  | 4.5     | 21  | 3.3       | 20  | 10.2   | 31  |
| 29  | 4.7     | 17  | 2.3       | 20  | 6.6    | 59  |
| 30  | 5.3     | 18  | 3.8       | 26  | 6.2    | 23  |

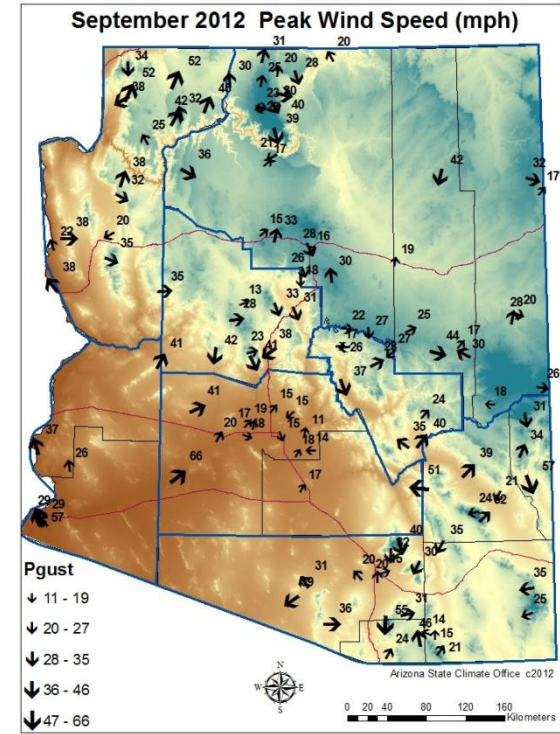
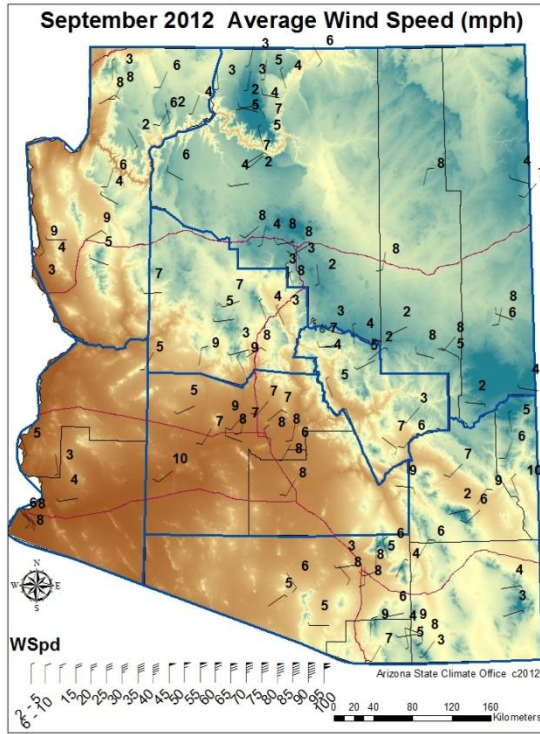
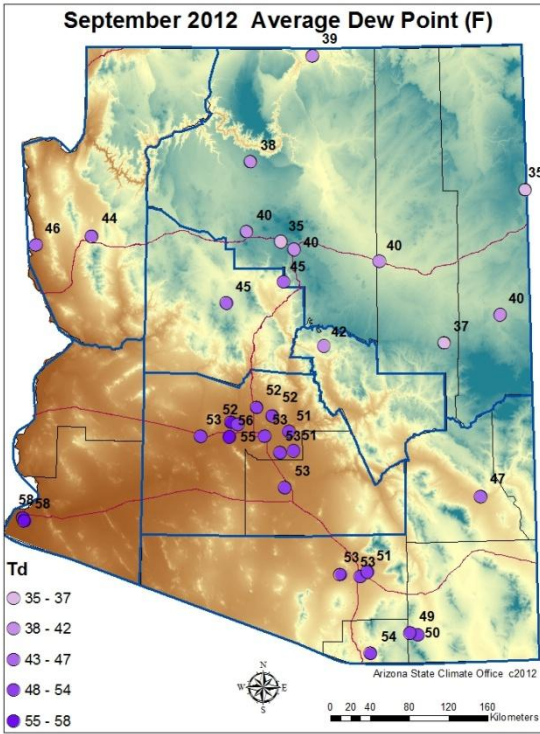
**Dew Points for September:  
Daily Average Dew Point (°F):**

| Day | Phx | Tuc | Flg |
|-----|-----|-----|-----|
| 1   | 63  | 61  | 53  |
| 2   | 61  | 62  | 52  |
| 3   | 63  | 64  | 51  |
| 4   | 64  | 65  | 48  |
| 5   | 65  | 67  | 49  |
| 6   | 68  | 67  | 53  |
| 7   | 68  | 66  | 47  |
| 8   | 61  | 59  | 45  |
| 9   | 63  | 62  | 49  |
| 10  | 65  | 63  | 52  |
| 11  | 64  | 65  | 51  |
| 12  | 60  | 62  | 46  |
| 13  | 51  | 53  | 40  |
| 14  | 45  | 48  | 34  |
| 15  | 45  | 45  | 32  |
| 16  | 50  | 48  | 30  |
| 17  | 50  | 49  | 29  |
| 18  | 47  | 42  | 29  |
| 19  | 43  | 43  | 30  |
| 20  | 42  | 40  | 30  |
| 21  | 41  | 39  | 30  |
| 22  | 42  | 39  | 33  |
| 23  | 44  | 42  | 34  |
| 24  | 43  | 43  | 32  |
| 25  | 42  | 45  | 30  |
| 26  | 42  | 45  | 31  |
| 27  | 53  | 47  | 31  |
| 28  | 48  | 47  | 32  |
| 29  | 46  | 45  | 29  |
| 30  | 49  | 45  | 36  |

September 2012 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.



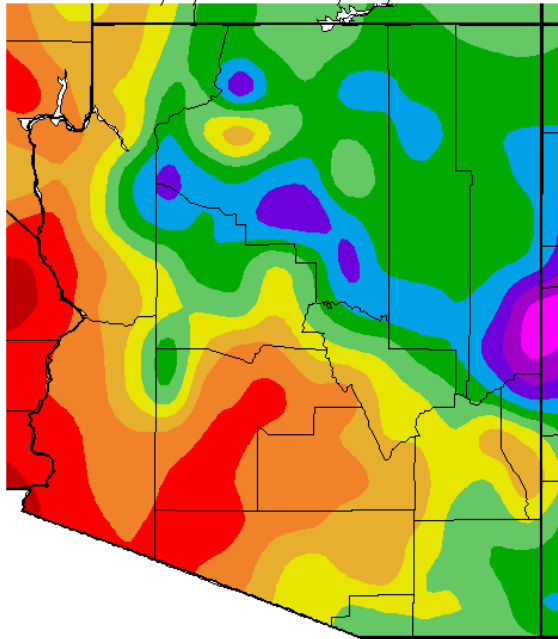
Average nighttime temperatures ranged from 35°F at Sunrise Mountain, to 80°F at Yuma. Average daytime temperatures ranged from 65°F at Sunrise Mountain in eastern Arizona, to 107°F at Lake Havasu City. Precipitation values ranged from 0.02” at Lake Havasu in western Arizona to 5.21” in Ajo. The last wave of the monsoon occurred between the 1<sup>st</sup> and 15<sup>th</sup> of September. During that time temperatures were near normal and thunderstorms were widespread. The second half of the month was dominated by a large ridge of high pressure that allowed temperatures to rise well above normal statewide. Freezing temperatures arrived to the high elevations on the 14<sup>th</sup> of September. Very few temperature records were set in September.



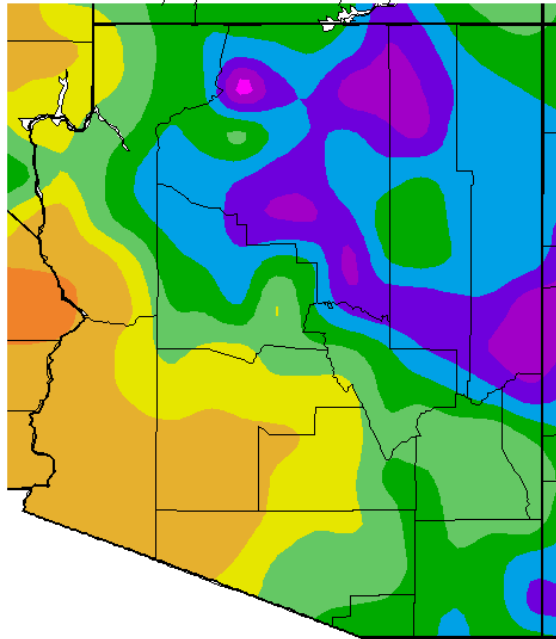
Average monthly dew points ranged from 35°F at Flagstaff and Window Rock northern Arizona, to 58°F at Yuma. Average winds were light, with 10 mph as the highest average at Oatman and Guthrie. The highest peak wind gust was 66 mph at Oatman. Peak wind gusts blew in all different directions, which is typical as the high winds are generally attributed to thunderstorm outflows, which have no dominant direction unless the storms are steered by upper level winds. The arrows point to the direction the winds blow from. Most of the high wind gusts came from the southwest.



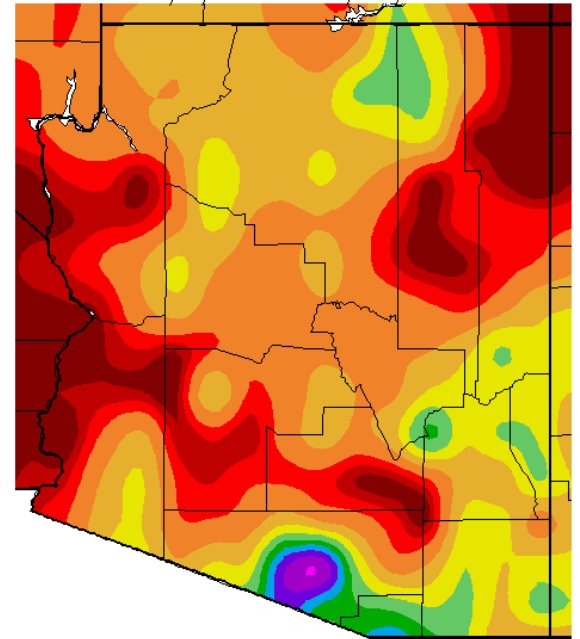
Av. Min. Temperature (deg. F)  
9/1/2012 - 9/30/2012



Av. Max. Temperature (deg. F)  
9/1/2012 - 9/30/2012



Total Precipitation (in.)  
9/1/2012 - 9/30/2012

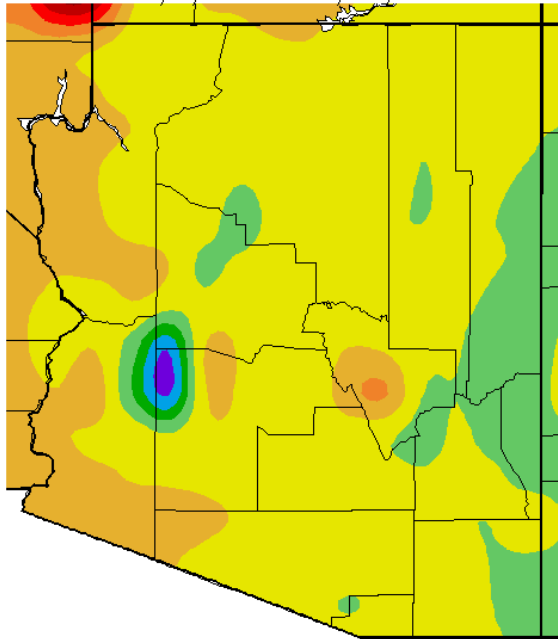


35 40 45 50 55 60 65 70 75 80 85  
Generated 10/01/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

70 75 80 85 90 95 100 105 110 115 120  
Generated 10/01/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

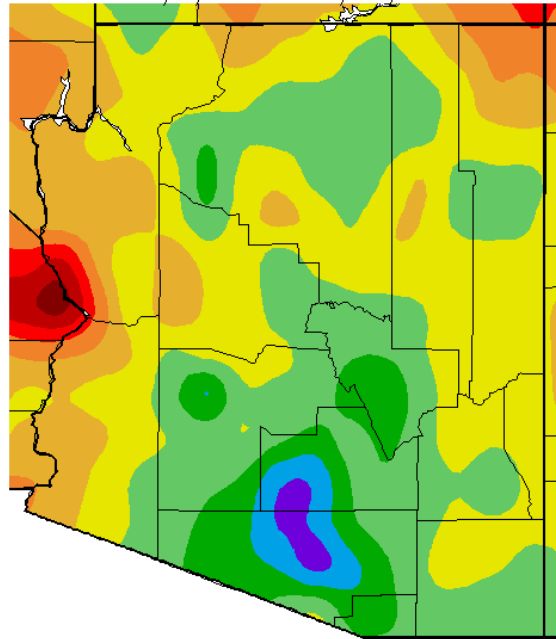
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NOAA Regional Climate Centers

Av. Min. Temperature dep from Ave (deg. F)  
9/1/2012 – 9/30/2012



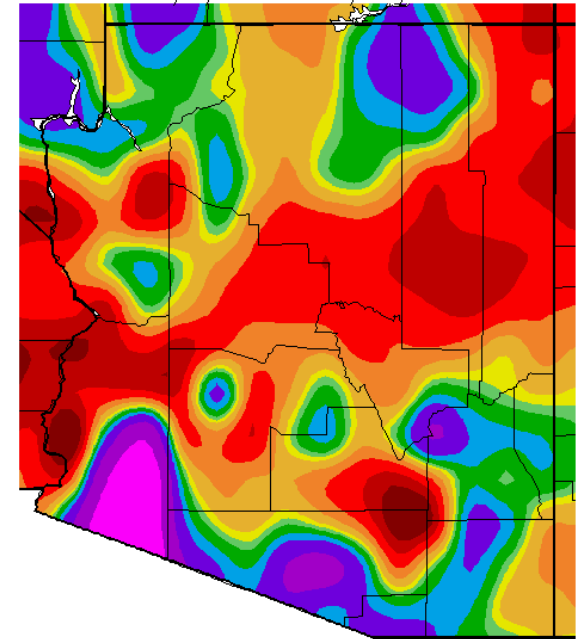
Generated 10/01/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

Av. Max. Temperature dep from Ave (deg F)  
9/1/2012 – 9/30/2012



Generated 10/01/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

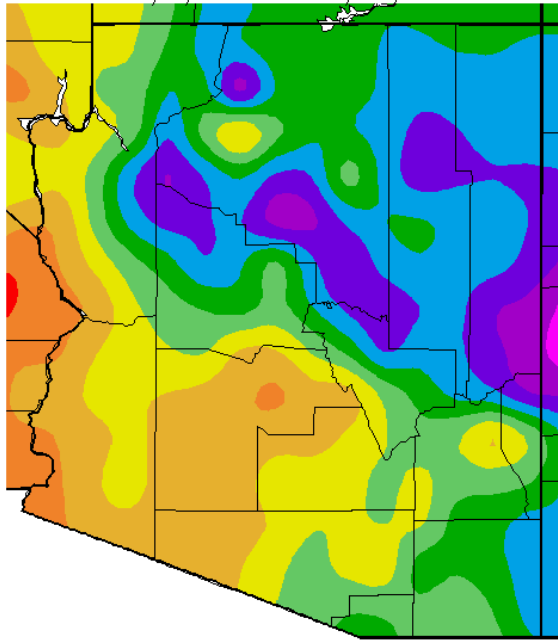
Percent of Average Precipitation (%)  
9/1/2012 – 9/30/2012



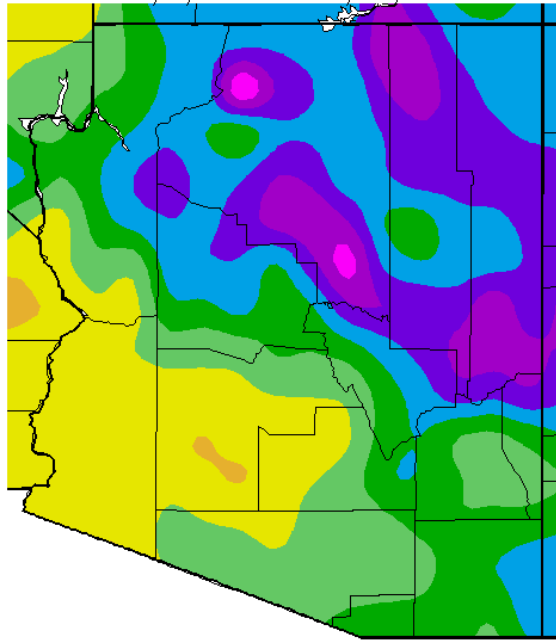
Generated 10/01/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

September minimum temperatures were as much as 3°F warmer than normal statewide, with even warmer temperatures along the western border and cooler than normal temperatures along the eastern border. The western border was between 3 and 6°F warmer than normal. Daytime temperatures were within 1°F of normal through most of the state, with warmer temperatures along the western and northern borders, and much cooler temperatures (2-4°F) in south central Arizona, particularly Pima and western Pinal counties. Rainfall was well below normal across a large swath running through the center of the state from the southwest corner to the northeast corner. The northwest corner and some southeastern and southern border counties had much greater than normal rainfall, ranging from over 300% of normal in Yuma County to 130-200% of normal in Cochise, Graham, and Mohave counties. The Tucson area had a particularly dry September.

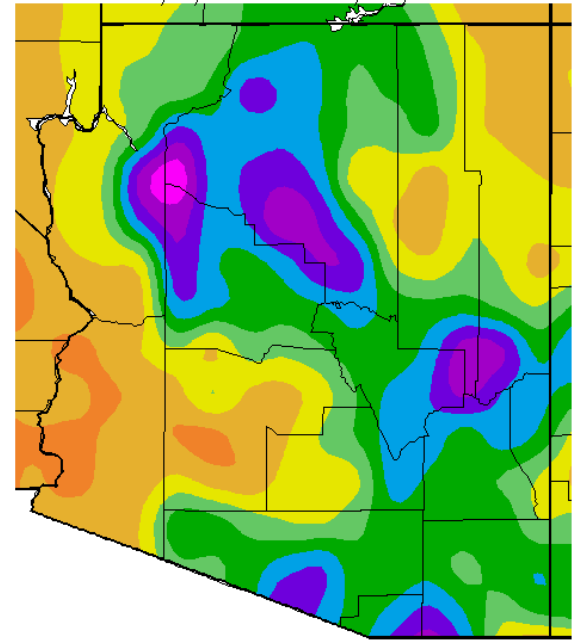
Av. Min. Temperature (deg. F)  
1/1/2012 - 10/10/2012



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



Total Precipitation (in.)  
1/1/2012 - 10/10/2012

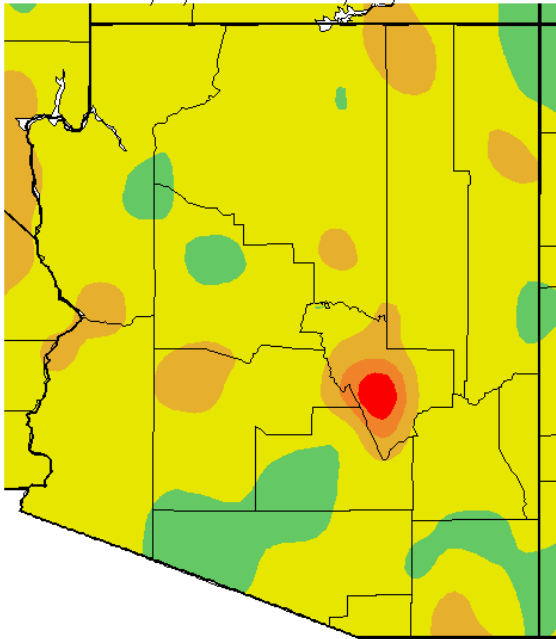


Generated 10/11/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

Generated 10/11/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

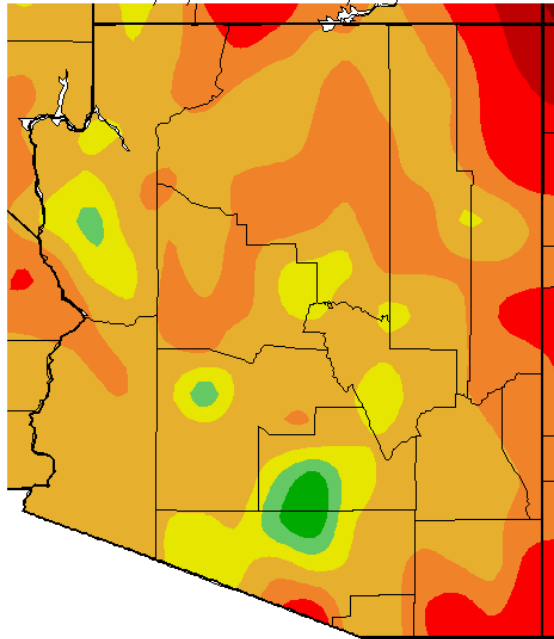
Generated 10/11/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

Av. Min. Temperature dep from Ave (deg. F)  
1/1/2012 – 10/10/2012



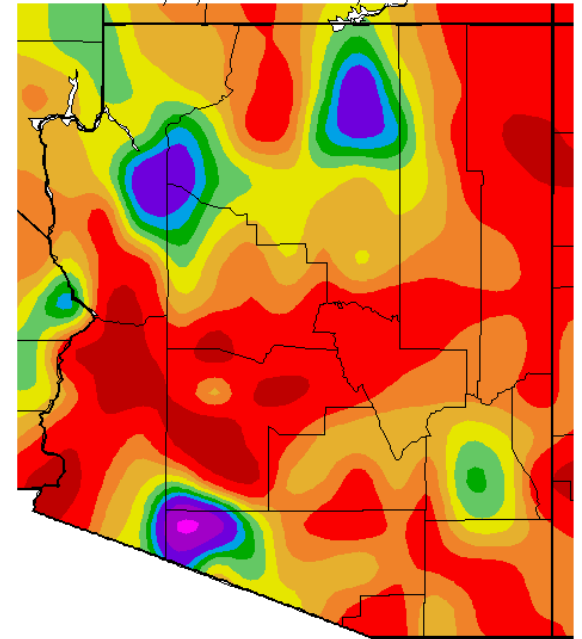
Generated 10/11/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

Av. Max. Temperature dep from Ave (deg F)  
1/1/2012 – 10/10/2012



Generated 10/11/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

Percent of Average Precipitation (%)  
1/1/2012 – 10/10/2012

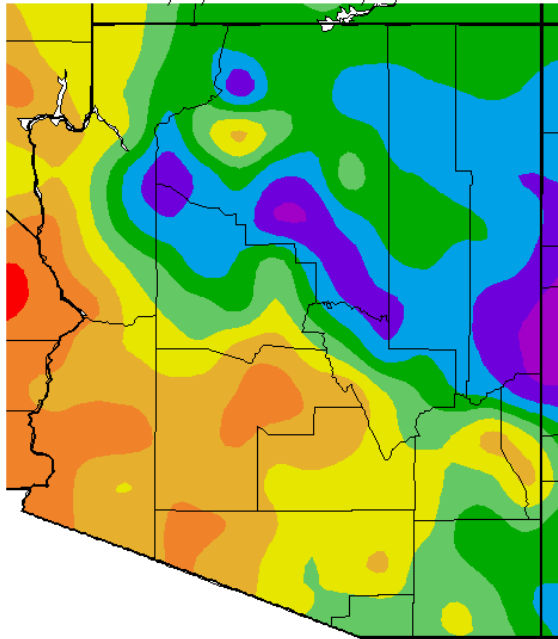


Generated 10/11/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

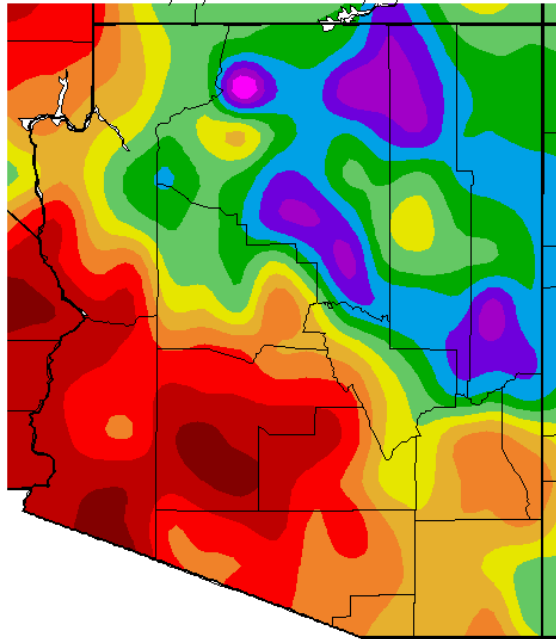
### Calendar Year 2012

Since January 1<sup>st</sup>, nighttime temperatures have been 0 to 2°F warmer than average statewide. Only Gila County was warmer, at 4-6°F above normal. Western Pima and parts of Cochise and northeastern Apache County were slightly cooler than normal. The heat has all come in the daytime with the southwest deserts 1-2°F warmer than normal, and the eastern border counties have been 2-4°F warmer than normal. Southern Pinal and north central Pima counties were 0-2°F cooler than normal. Precipitation for the calendar year is less than 70% of average in a slash from the southwestern border to the northeast border. The winter storms managed to bring rain and snow to the northern third of the state and the monsoon activity brought precipitation to the southern third. Both winter and summer storms were localized, and the deficits from the dry winter were not made up by the spotty summer precipitation.

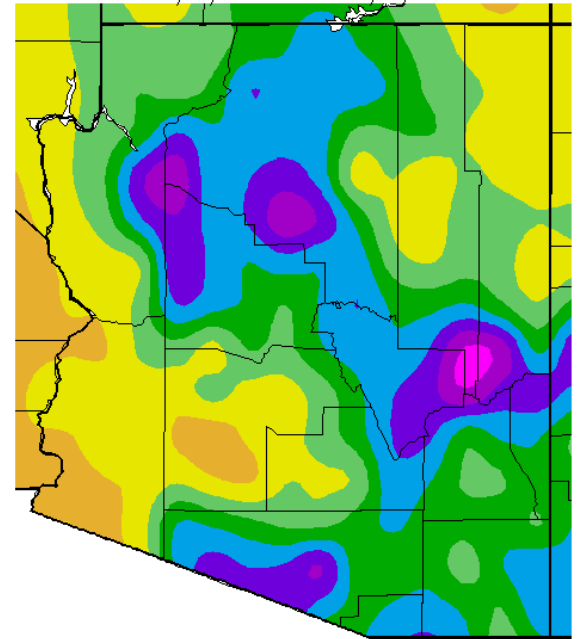
Av. Min. Temperature (deg. F)  
10/1/2011 - 10/1/2012



Av. Max. Temperature (deg. F)  
10/1/2011 - 10/1/2012



Total Precipitation (in.)  
10/1/2011 - 10/1/2012

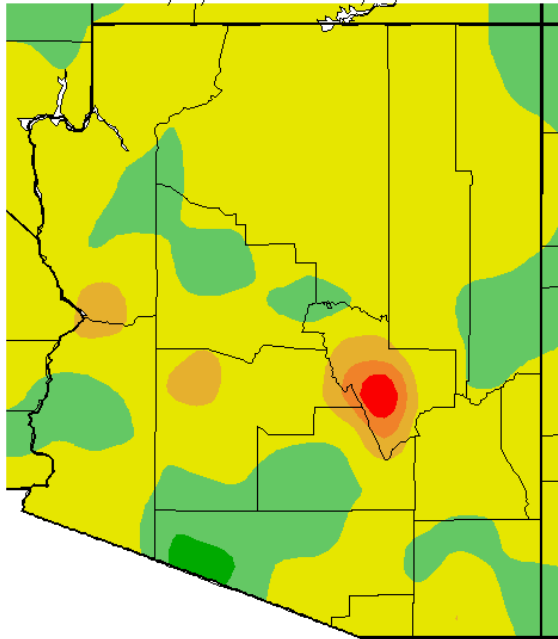


25 30 35 40 45 50 55 60 65 70 75  
Generated 10/05/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

60 63 66 69 72 75 78 81 84 87 90  
Generated 10/05/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

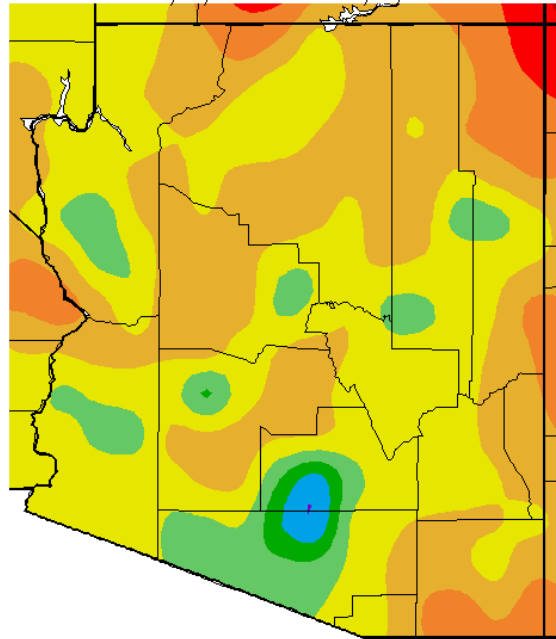
0.1 0.5 1 2 4 7 10 13 16 19 22  
Generated 10/05/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

Av. Min. Temperature dep from Ave (deg. F)  
10/1/2011 – 10/1/2012



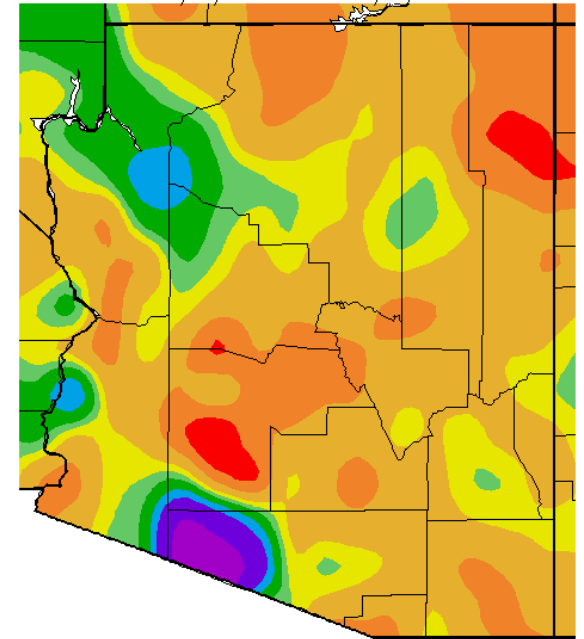
Generated 10/05/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

Av. Max. Temperature dep from Ave (deg F)  
10/1/2011 – 10/1/2012



Generated 10/05/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

Percent of Average Precipitation (%)  
10/1/2011 – 10/1/2012

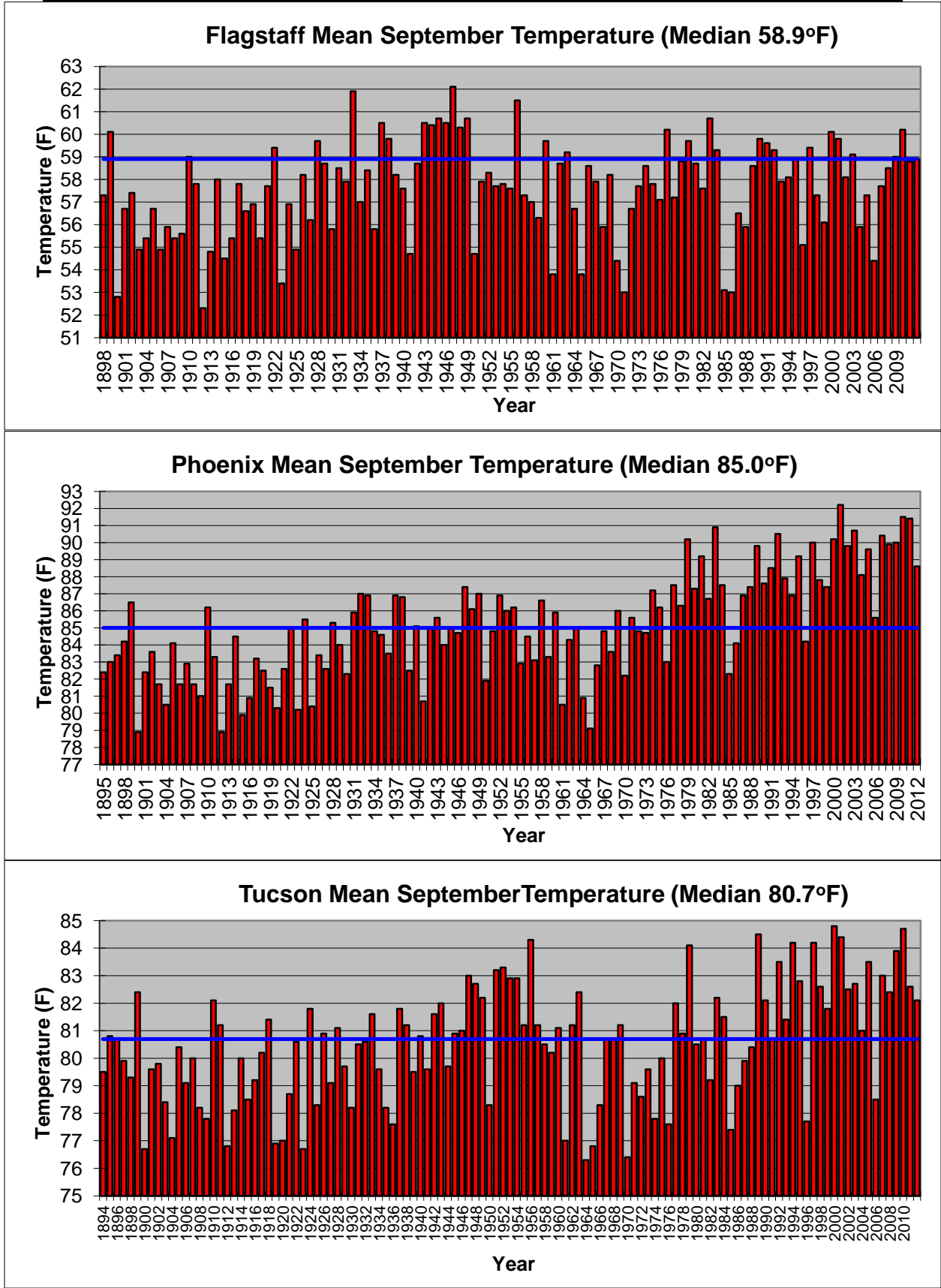


Generated 10/05/2012 at WRCC using provisional data.  
NOAA Regional Climate Centers

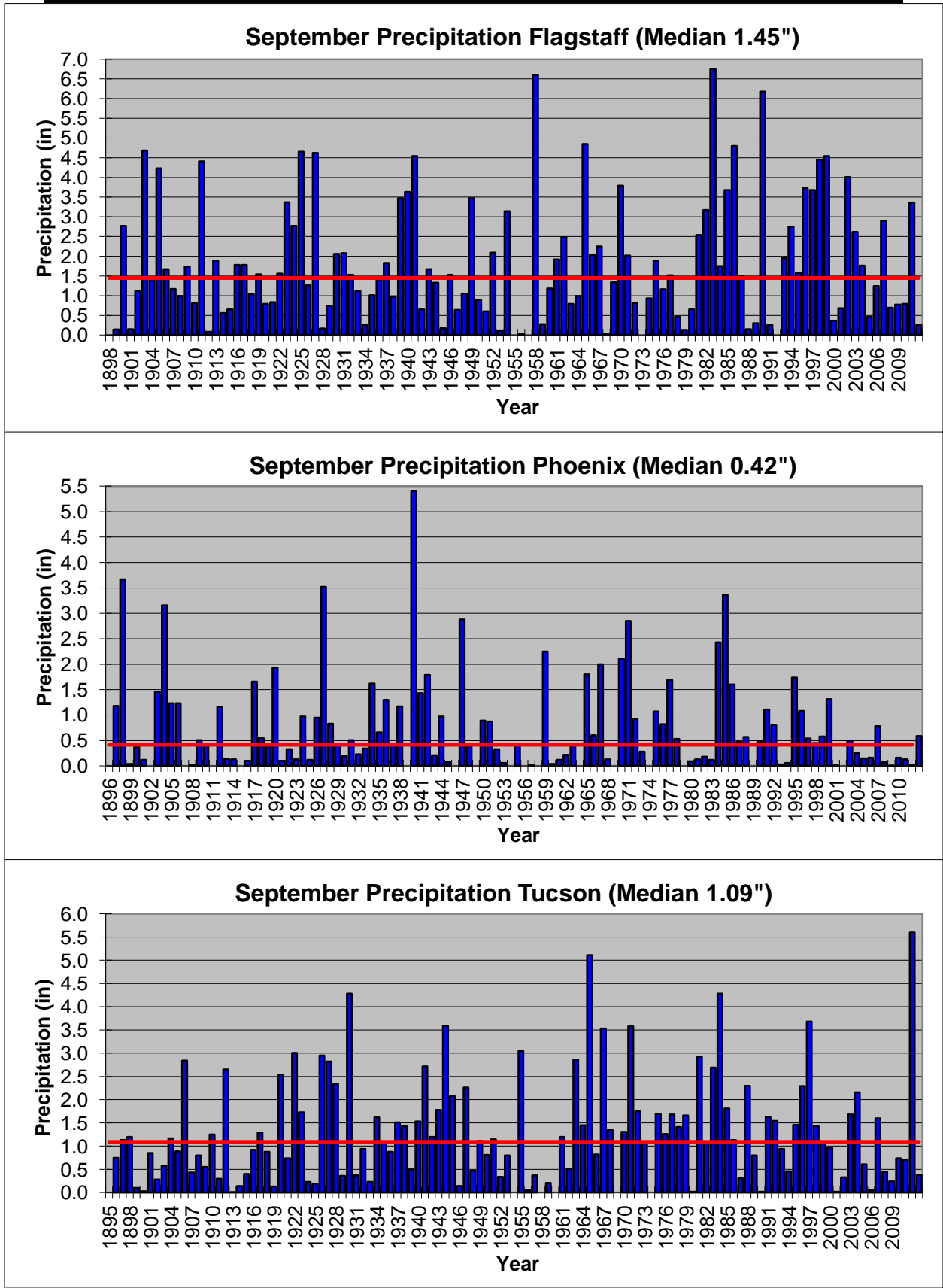
### 2012 Water Year (Since Oct 1, 2011)

The water year wrapped up with warmer than normal nighttime temperatures and daytime highs were much cooler than normal in the southern half of the state and warmer than normal in the northern half. This followed the same pattern as the water year nighttime temperatures which were between 0 and 2°F warmer than normal across most of the state with a few cooler than normal spots in the southwest, and in east central Arizona. Daytime temperatures were also 0-2°F warmer across most of the state, with the warmest conditions on the Colorado Plateau and along the eastern border. The coldest area was in southern Pinal and western Pima counties, 0-3°F cooler than normal. Precipitation was well below normal across most of the state with a few important exceptions in western Pima County 150% to over 300% of normal, and central Mohave, western Coconino and northwestern Yavapai counties. This was the second consecutive La Niña winter, which explains much of the precipitation deficit. The current outlook is for a neutral winter which theoretically could have normal precipitation, but the lack of an El Niño or La Niña signal means we don't know whether it will be drier or wetter than normal.

**September Mean Temperature Graphs – Flagstaff, Phoenix, and Tucson 1895-2012:**



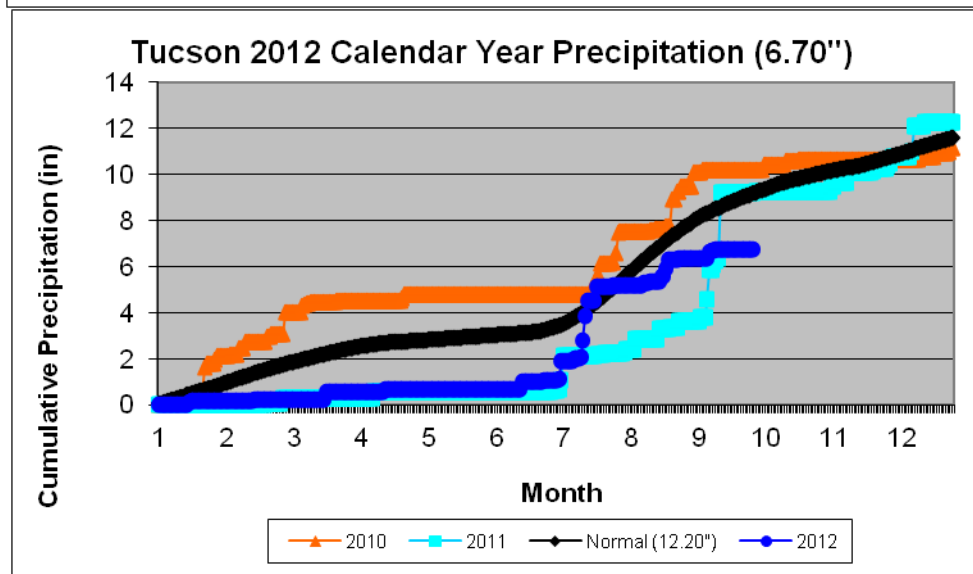
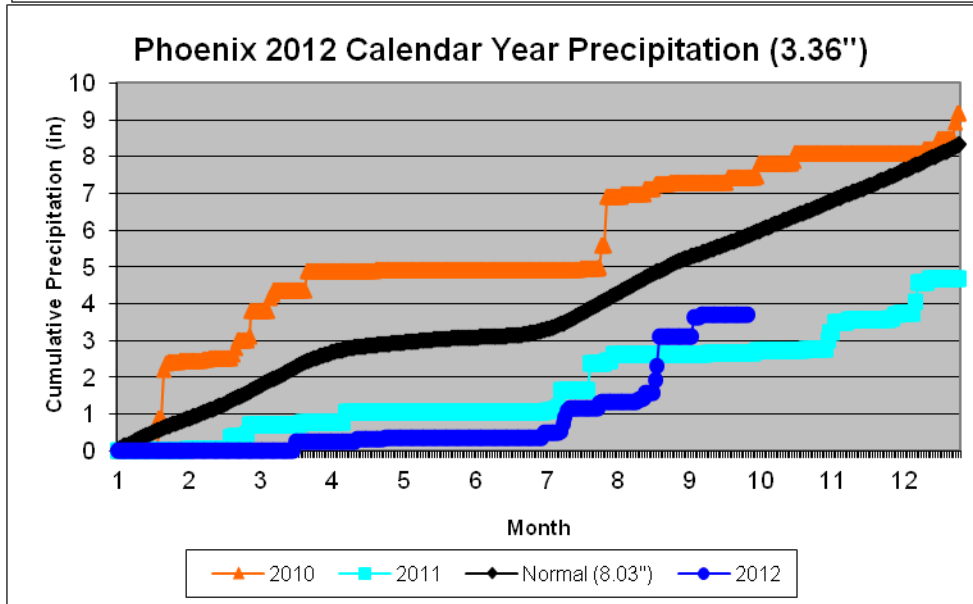
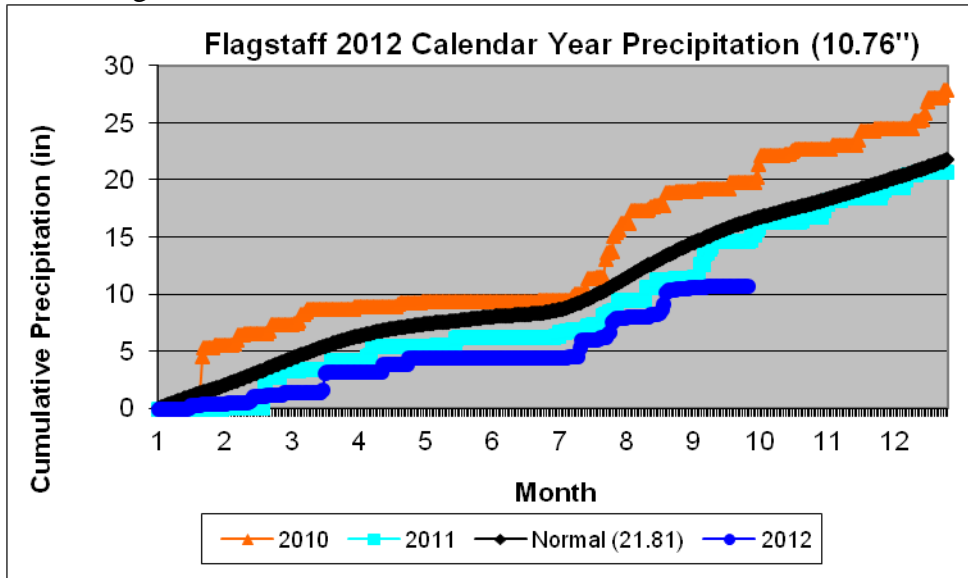
**September Mean Precipitation Graphs – Flagstaff, Phoenix, and Tucson 1895-2012:**



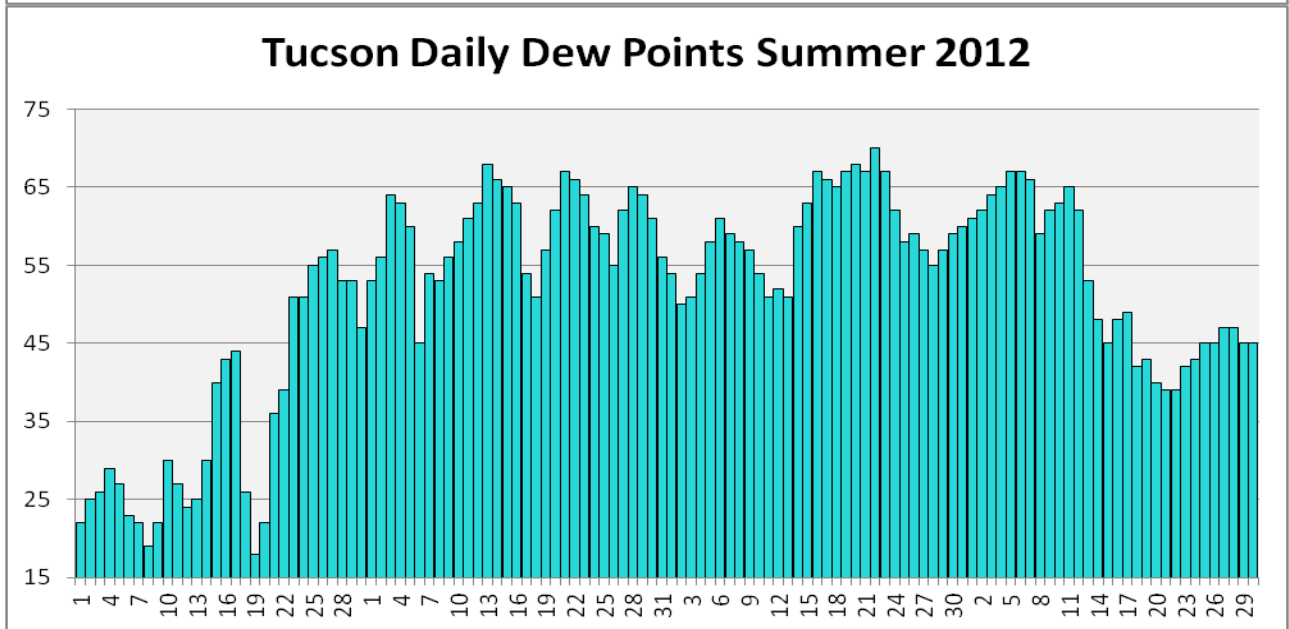
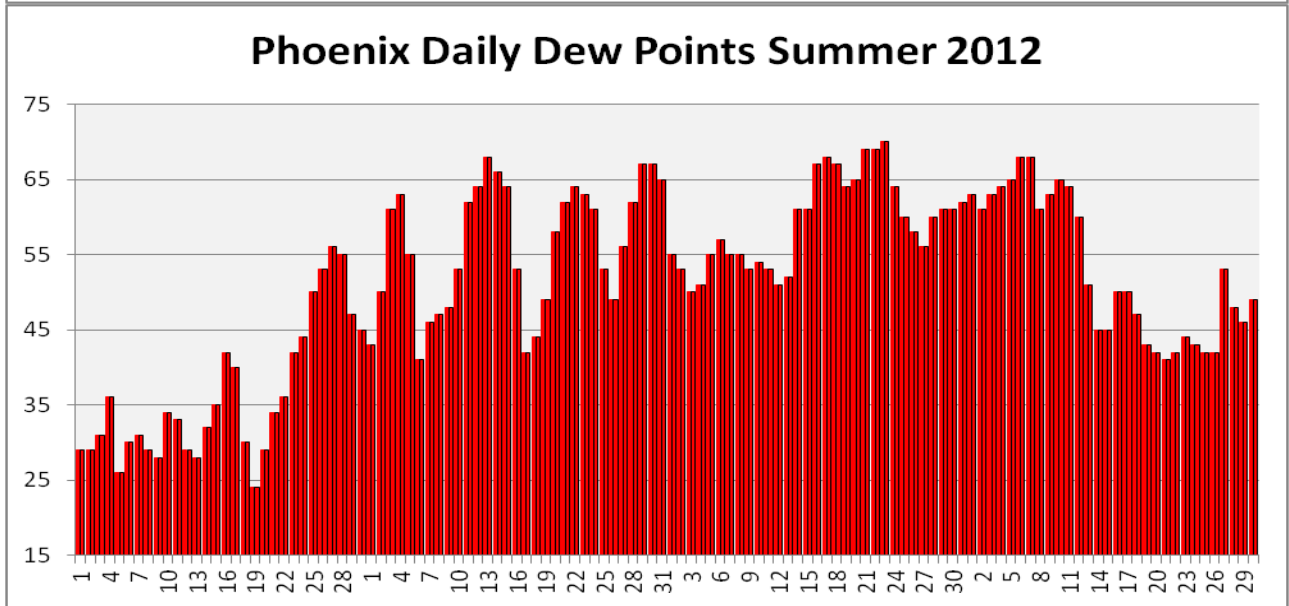
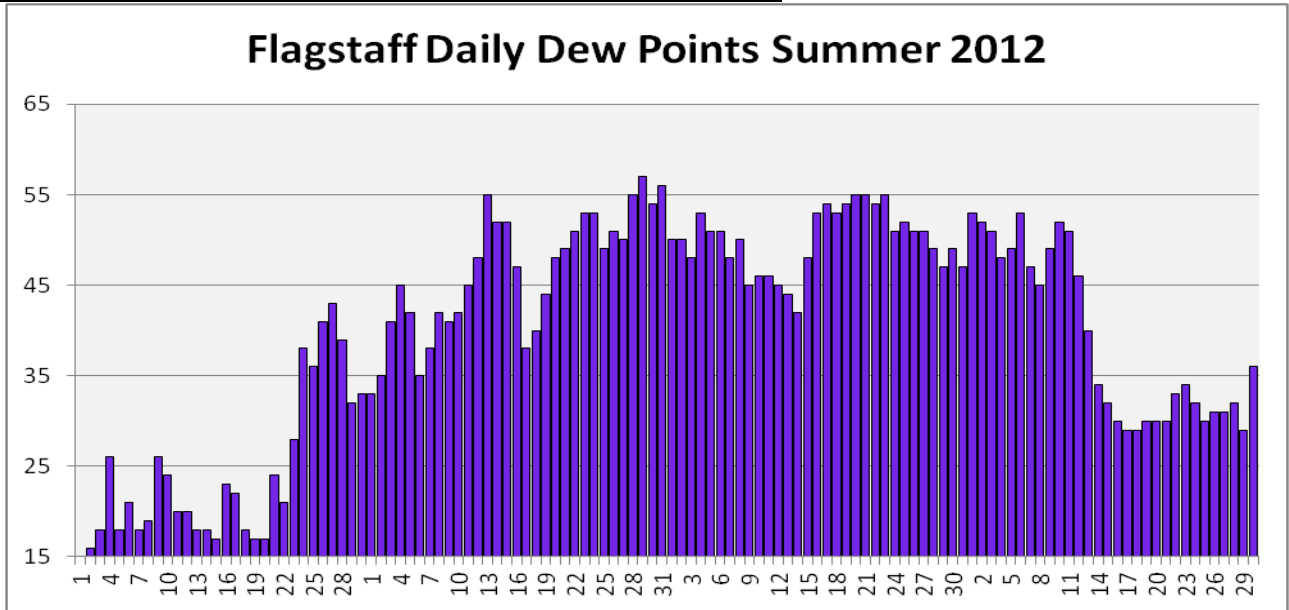


## 2012 Cumulative Precipitation Graphs – Flagstaff, Phoenix and Tucson:

Precipitation is well below average in all three cities.



**2012 Monsoon Dew Point Graphs – Flagstaff, Phoenix and 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)

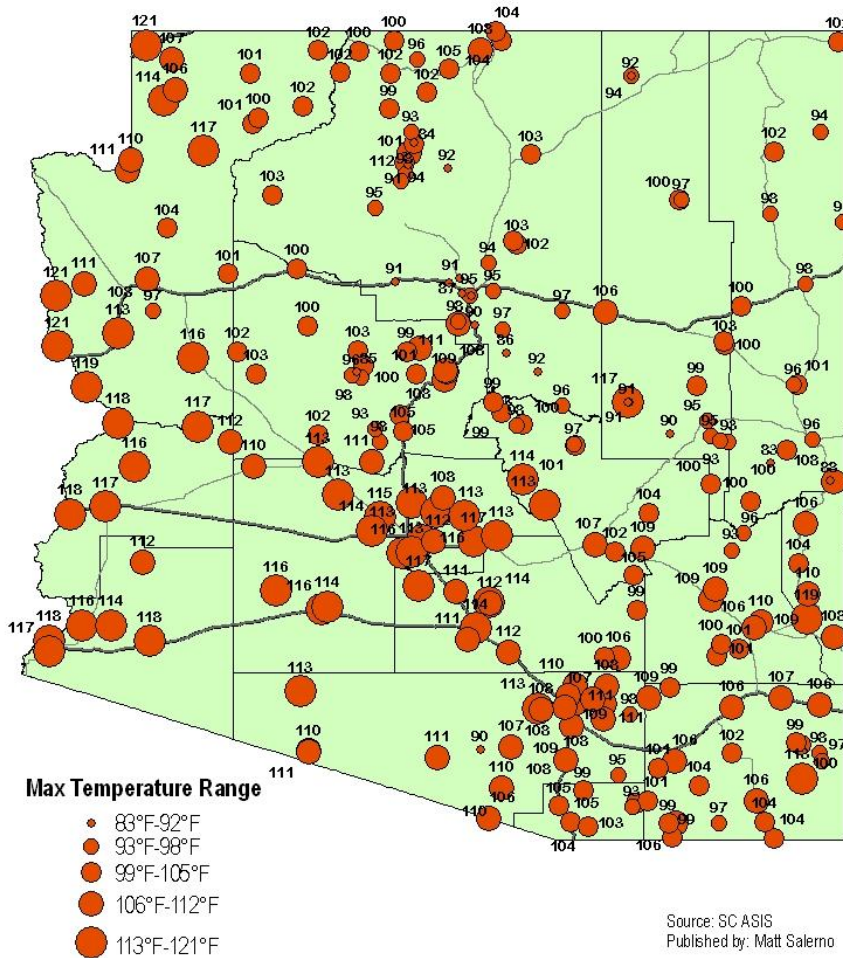
HI MIN = Highest minimum temperature for that day (F)

Mx PCP = Maximum precipitation for that day (inches)

Mx SNO = Maximum snowfall for that day (inches)

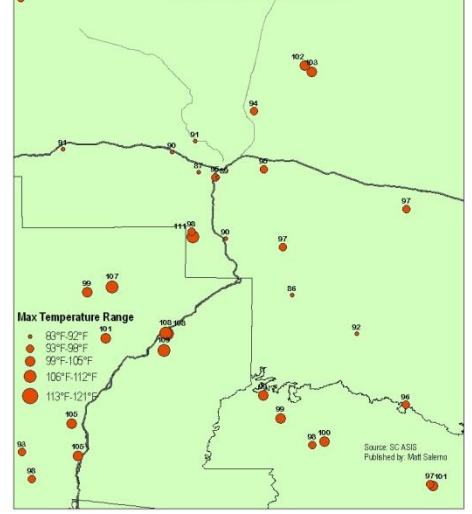
# Arizona Summer 2012 (June-September)

## Highest Max Temperatures



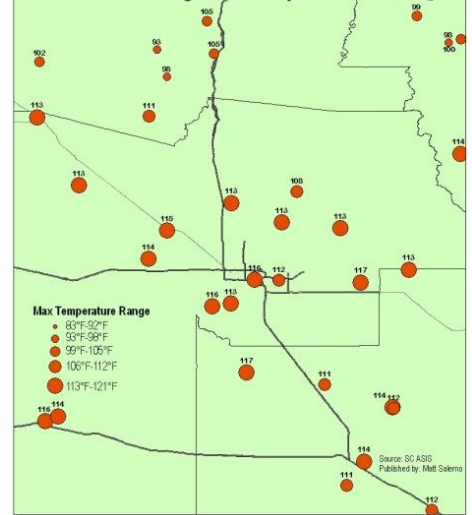
# Arizona Summer 2012 (June-September)

## Highest Max Temperatures



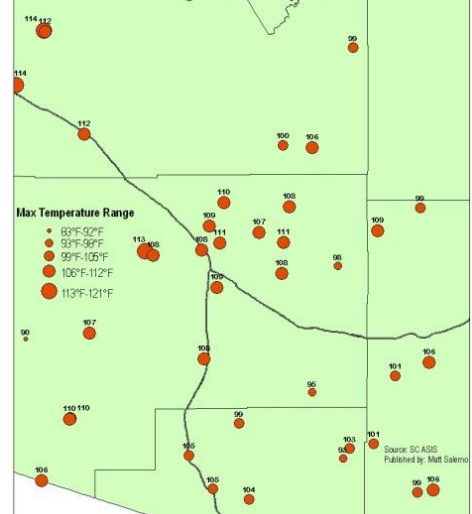
# Arizona Summer 2012 (June-September)

## Highest Max Temperatures



# Arizona Summer 2012 (June-September)

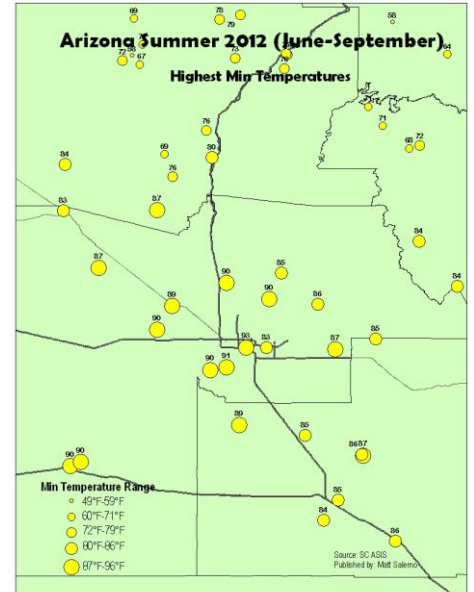
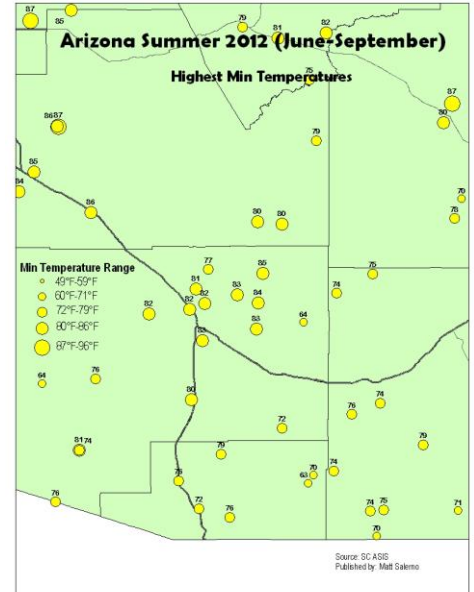
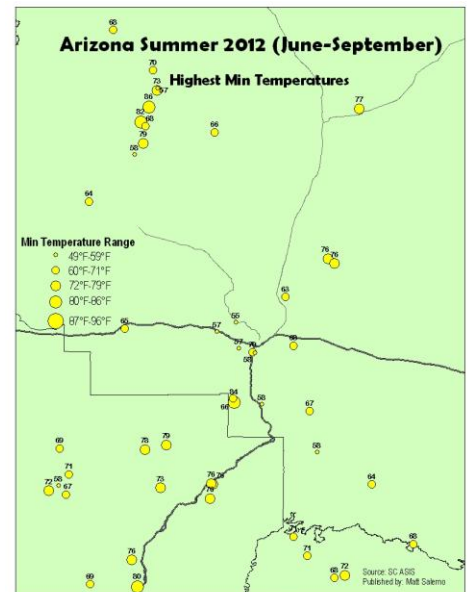
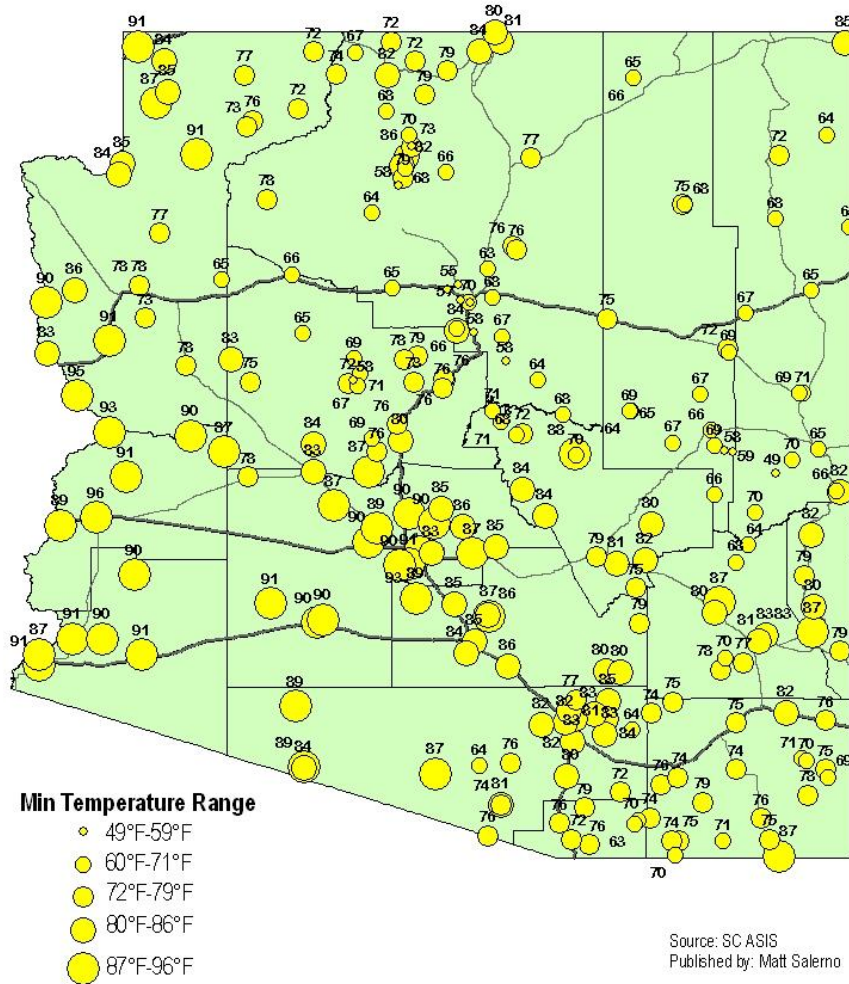
## Highest Max Temperatures



The Highest temperatures this summer occurred in the lowest elevation desert areas of Arizona along the western border of the state. Stations in Yuma, La Paz, and Mohave counties recorded the most extreme temperatures including 3 locations with maximum above 120° F (Havasu, Bullhead City, Beaver Dam). According to the stations shown, the second highest temperature this summer was recorded in Guthrie. The high in Guthrie was 119° F which seems unusual for the station's elevation (3000+ft) and location in the state (Greenlee County). In most instances, locations that experienced lower max temperatures were higher in elevation. For example, Coconino County had only one station that recorded a high temperature above 110° F. Also, Apache and Navajo counties which contain mostly high elevation desert plains and forests included max temperatures around 100° F besides an anomalous high of 117° F recorded in Heber. Overall, max summer temperatures ranged greatly from 83° F to 121° F statewide.

# Arizona Summer 2012 (June-September)

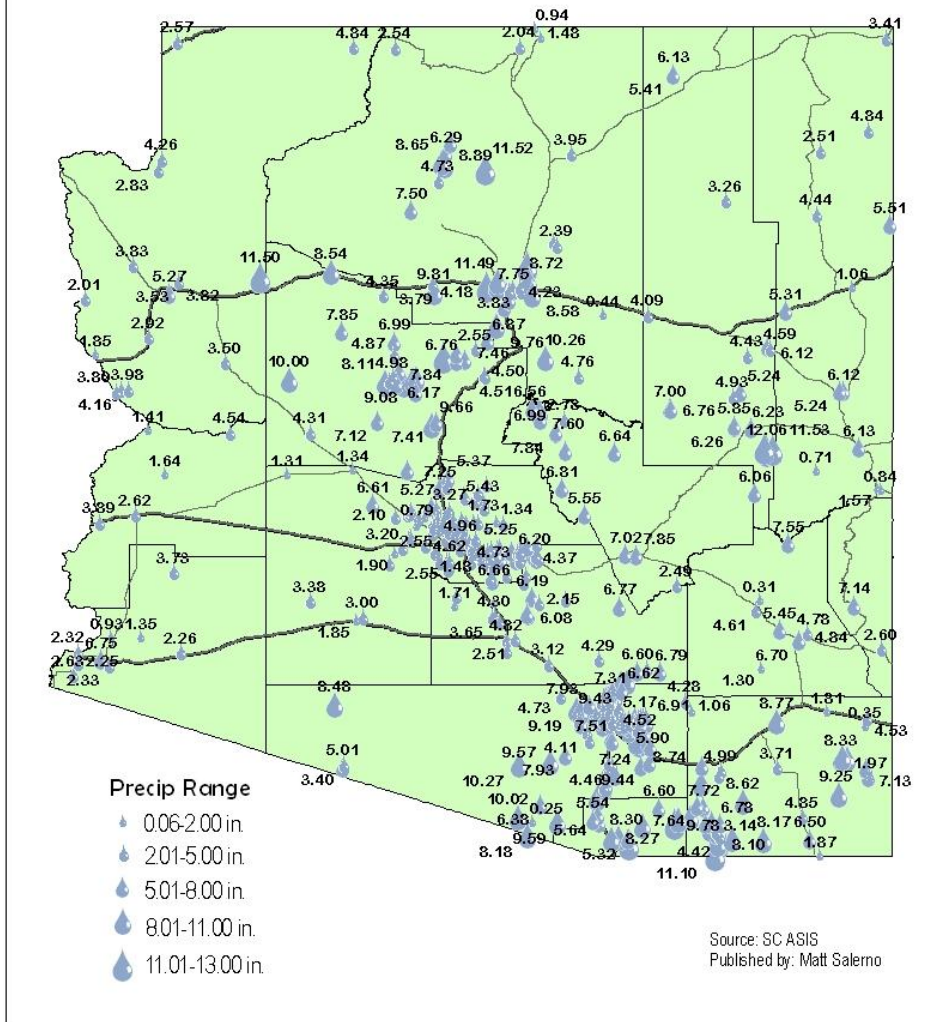
## Highest Min Temperatures



This summer's highest minimum temperatures exceeded 90° F at many locations. Maricopa County experienced many overnight temperatures above 90° F especially in the greater Phoenix area where a few 90° F + overnight temperatures during the summer are common in conjunction with the urban heat island. Stations at the low western desert areas including Yuma, Bullhead City, and Havasu City also recorded low temperatures exceeding 90° F. The station that recorded the highest overnight temperature this summer was located at Quartzite (96° F). It is interesting to note that low temperatures did not exceed 90° F in the lower desert areas of Pima, Santa Cruz, and Cochise counties based off the stations mapped. Tucson, located in Pima County, is the second largest city in the state was not able to reach overnight temperatures exceeding 90° F. Even though Tucson is a large city, the urban heat island and daily maximum temperatures are not extreme enough to produce 90° F lows. The rest of the state experienced maximum overnight temperatures that were mainly below 80° F.

# Arizona Summer 2012 (June-September)

## Precipitation Totals



The total summer precipitation ranged greatly across the state from 0.06" just outside of Tucson to 12.98" near Sierra Vista. The greatest summer precipitation around the Phoenix area mainly occurred in the east valley, especially in Apache Junction and East Mesa with totals over 6.50". Southern Arizona experienced some of the greatest precipitation totals especially in Pima, Santa Cruz, and Cochise counties. Tucson had many stations that recorded summer rainfall amounts over 5.00" and locations outside of Tucson recorded totals over 9.00". Northern Arizona also received a decent amount of precipitation this summer especially in Yavapai and Coconino Counties. The Bellemont Forecast Office near Flagstaff received 12.79" which was the second highest total in the state. Jerome received 11.51" and stations near Prescott Valley received around 9.00" of precipitation respectively. However, not all locations experienced impressive rainfall totals, and the map depicts variability across the state.

