January 2015 Temperature and Precipitation Summary

January 1st – 14th: January started off with a very strong low pressure system over the state bringing in arctic air. The warmest temperature in the state was 58°F at Pinnacle Peak. Yuma was only 51 and Bullhead City was 50. The warmest nighttime temperature was 35°F at Phoenix Sky Harbor Airport. Most of the state and much of the Phoenix metropolitan area had freezing nighttime temperatures through the 3rd of January. Many southern cities had a hard freeze. Scottsdale was 29°F on the 2nd. On the 3rd, Davis Monthan was 27°F, Nogales was 19°F, Safford had 16°F, Sonora Desert Museum was 23°F, Tucson was 25°F, and Douglas was 22°F. Precipitation was widespread on the 1st, but totals were low, with 0.47” at Lost Dutchman State Park in Apache Junction as the highest total reported. Snowfall totals included 4.4” in the Midwest and east coast. The high pressure and warm, dry conditions continued over the southwest until the 11th when another low pressure system pushed across the state, bringing some moderate precipitation the 12th through the 14th. Snowfall totals included 4.4” at Bellemont, 4.0” at Grand Canyon North Rim, 3.0” at Williams, and 0.4” at Prescott. Rainfall totals included 0.62” at Canyon de Chelly, 0.50” at Douglas, 0.53” at Petrified Forest, 0.77” at Alpine, 0.82” at Winslow, 0.14” at Sky Harbor and 0.25” at Deer Valley, 0.80” at Flagstaff and 0.06” at Tucson. Warmest areas had daytime highs in the upper 60s during this storm, while the coldest areas had daytime times in the mid 30s.

January 15th – 31st: By the 16th the storm system had passed and dry conditions returned to the southwest and over the next week high pressure once again formed over the southwest, pushing daytime temperatures back to the upper 70s and lower 80s by the 19th. On the 21st a weak shortwave moved through the state bringing isolated showers to central and northern Arizona with Prescott receiving 0.22”, Show Low 0.13”, Williams and Cottonwood 0.08”, Window Rock 0.16”, and Bellemont 0.03”. High pressure returned for another 4 days until a strong low pressure system moved in which had a lot of subtropical moisture associated with it. Virtually the entire state received light to moderate rainfall from the 26th through the 31st. The only completely dry day was the 28th. The storm was very warm with snow levels above 9000 feet, and rainfall rates were relatively low with a steady soaking rain crossing the state from the south to the north. In the warmest areas high temperatures remained in the mid to upper 70s and lows remained in the mid to upper 50s throughout the storm. Rainfall totals on the 30th included 2.03” at Coronado, 1.95” at Castle Hot Springs, 1.11” at Elgin, 0.97” at Flagstaff, 1.00” at Nogales, and 1.04” at Safford. On the 31st, 1.20” at Douglas, 0.75” at Payson, 0.78” at Organ Pipe National Monument, 1.51” at Coronado National Monument, 1.03” at Carefree, and 1.41” at Bisbee and Tucson Airport, 1.21” at Davis Monthan, and 0.81” at Nogales. The only snow reported was 6.0” at the north rim of the Grand Canyon.

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

January 2015 Daily Temperature, Precipitation, & Dew Point for Flagstaff, Phoenix, and Tucson
This January was the 9th warmest and had no significant ranking for precipitation.

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<th>Flagstaff Climate Statistics January 2015</th>
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Temperature or precipitation records this month:
30th HiMin, 36 set, previous record 33 in 1963

Flagstaff Number of Days of:
- Minimum Temp 30°F or higher: 4
- Minimum Temp 20°F or lower: 12
- Maximum Temp 50°F or higher: 14

Maximum Temp 32°F or lower: 3
- Heating Degree Days: 954 Normal 1088
- Cooling Degree Days: 0 Normal 0
- Degree base 65°F
- Total January Precipitation: 2.19”
- Normal January Precipitation: 2.05”
- Departure from normal: +0.14”
- Greatest 24-Hr Precipitation: 1.00” on 1/29-30
- Total Precipitation Year-to-Date: 2.19”
- Departure from Normal: +0.14”

Number of Days:
- Clear: 20
- Partly Cloudy: 5
- Cloudy: 6

Greatest January Precipitation: 9.55” in 1993
Least January Precipitation: 0.00 in 1972

Average Wind Speed: 5.2 mph
Highest Peak Gust: 38 mph from 60° on 22nd

This January was the 7th warmest and had no significant ranking for precipitation.

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Temperature or precipitation records this month:
3rd HiMax, 58 set, previous record 56 in 1978

1st LoMax, 46 set, previous record 47 in 1906
7th HiMax, 81 set, previous record 79 in 1948
12th HiMin 56 tied, first set in 2003
29th HiMin, 58 set, previous record 56 in 1978

Phoenix Number of Days of:
- Minimum Temp 40°F or lower: 5
- Minimum Temp 50°F or higher: 15
- Maximum Temp 60°F or lower: 5
- Maximum Temp 75°F or higher: 9
- Heating Degree Days: 188 Normal 269
- Cooling Degree Days: 0 Normal 2
- Degree base 65°F
- Total January Precipitation: 0.81’’
- Normal January Precipitation: 0.91’’
Departure from normal -0.10”
Greatest 24-Hr Precipitation 0.59” 1/29-30
Total Precipitation Year-to-Date 0.81”
Departure from Normal -0.10”

Number of Days:
Clear 12
Partly Cloudy 15
Cloudy 4

Greatest 24-Hr Precipitation 1.91”
Total Precipitation Year-to-Date 2.54”
Departure from Normal +1.60”

TUCSON CLIMATE STATISTICS
January 2015

This January tied with for 7th warmest with 1969 and was the 4th wettest since 1895.

Avg Max Temp(F) 67.0 Normal 65.5
Avg Min Temp(F) 43.8 Normal 39.8
Avg Mean Temp(F) 55.4 Normal 52.6
Departure from Normal (F) +2.8

Highest Monthly Avg Temp (F) 58.6 in 1986
Lowest Monthly Avg Temp (F) 41.2 in 1937

Highest Temp this month (F): 79 on 7th
Lowest Temp this month (F): 29 on 3rd

Record High (F): 88 on 1/04/1927
Record Low (F): 6 on 1/7/1913

Temperature or precipitation records this month:
1st LoMax 41 set, previous record 43 in 1960
30th Precip 1.39” set, previous record 0.83” in 1983

Tucson Number of Days of:
Minimum Temp 40°F or lower 8
Minimum Temp 50°F or higher 6
Maximum Temp 60°F or lower 6
Maximum Temp 70°F or higher 14

Heating Degree Days 290 Normal 383
Cooling Degree Days 0 Normal 1
Degree base 65°F

Greatest January Precipitation 5.22” in 1993
Least January Precipitation 0.00” in 2014, 2006, 1972 and 8 other years

Average Wind Speed 4.7 mph
Highest Peak Gust 29 mph from 60° on 22nd

Total January Precipitation 2.54”
Normal January Precipitation 0.94”
Departure from normal +1.60”
Greatest 24-Hr Precipitation 1.91”
Total Precipitation Year-to-Date 2.54”
Departure from Normal +1.60”

Greatest January Precipitation 4.81” in 1993
Least January Precipitation 0.00” in 1972, 1928, 1924, and x other years

Number of Days:
Clear 20
Partly Cloudy 8
Cloudy 1

Average Wind Speed 7.6 mph
Highest Peak Gust 36 mph from 120° on 7th

Data are from the National Weather Service and the National Climatic Data Center and are preliminary.
### Wind Speeds:

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### Dew Points for January:

**Daily Average Dew Point (°F):**

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The lowest minimum temperature was -15°F at Mormon Lake and the highest minimum was 42°F at Bartlett Dam. The lowest maximum temperature of 47°F was recorded at Snowslide Canyon, while the highest maximum temperature of 83°F was reported at Tempe ASU. The lowest rainfall amount was 0.00” at a few locations and the highest was 14.38” at Natural Bridge and second was 12.23” at Sunrise Mountain. The lowest dew point was 24°F at Grand Canyon National Park Airport and the highest was 41°F at Luke Air Force Base. The highest average wind speed was 16 mph at Laughlin-Bullhead City Airport. The highest peak wind gust was 37 mph at Mohave Airport.
January 2015

The highest average minimum temperature was 51°F at Yuma and the lowest average minimum temperature was 13°F at Sunrise Mountain. The highest average maximum temperature was 74°F at Yuma and lowest average maximum temperature was 36°F at Snowslide Canyon.
January minimum temperatures were generally 0 to 6°F warmer than average, with a few colder than average spots in southern Gila, southeastern Cochise and western Pima counties. Daytime temperatures were 0 to 4°F warmer than average, with the warmest areas in western Yavapai and southern Coconino counties. Southern Gila County was much colder than average as was western Pinal, central Apache, and much of Yuma County. January precipitation was widely variable, from 300% of average in eastern Yavapai and Coconino counties to less than 50% of average in Gila, northwestern Coconino and southern Mohave and Maricopa counties. Generally south central and northeastern Arizona were wetter than average.
Calendar Year 2015

Calendar year minimum temperatures were generally 0 to 6°F warmer than average, with a few colder than average spots in southern Gila, southeastern Cochise and western Pima counties. Daytime temperatures were 0 to 4°F warmer than average, with the warmest areas in western Yavapai and southern Coconino counties. Southern Gila County was much colder than average as was western Pinal, central Apache, and much of Yuma County. January precipitation was widely variable, from 300% of average in eastern Yavapai and Coconino counties to less than 50% of average in Gila, northwestern Coconino and southern Mohave and Maricopa counties. Generally south central and northeastern Arizona were wetter than average.
The water year minimum temperatures have continued 0-4°F warmer than average statewide. Central Gila County has been over 5°F warmer than average, while the Maricopa-Pima County border and the Cochise-Graham County border have been 0 to 2°F cooler than average. Daytime temperatures have been 0-4°F warmer than average with the warmest conditions across northern Arizona. Western Pinal and southern Gila counties were cooler than average. The January precipitation has improved conditions across parts of the Colorado Plateau and into western Yavapai County and all of Pima and Cochise counties. Unfortunately the areas with the highest percentage of average precipitation are not the high elevations along the Mogollon Rim where the snowpack will run off into the reservoirs. The winter storm that moved through the state at the end of January was a very warm storm with snow above 9000 feet. The rain did lead to some increased streamflow and recharge in some basins and will improve the soil moisture, at least temporarily.
January Mean Temperature Graphs – Flagstaff, Phoenix, and Tucson 1895-2015:

Flagstaff Mean January Temperature (Median 28.7°F)

Phoenix Mean January Temperature (Median 53.7°F)

Tucson Mean January Temperature (Median 50.9°F)
January Mean Precipitation Graphs – Flagstaff, Phoenix, and Tucson 1895-2015:

January Precipitation Flagstaff (Median 1.54”)

January Precipitation Phoenix (Median 0.54”)

January Precipitation Tucson (Median 0.65”)

Year

Precipitation (in)

Year

Precipitation (in)

Year

Precipitation (in)
2015 Cumulative Precipitation Graphs – Flagstaff, Phoenix and Tucson:
Flagstaff and Phoenix are near average while Tucson is beginning the year well above 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)