



ARIZONA STATE
CLIMATE OFFICE

Arizona Climate Summary

Summary of conditions for February 2024

February 2024 Summary

February brought above average temperatures across much of the state. With a +2.1°F departure from the average statewide temperature of 44.9°F, February ranked as the 35th warmest on record. An atmospheric river event along with a series of low pressure systems led to a statewide average of 1.09 inches of precipitation. By February 29, snowpack was slightly above average in the Verde basin (105% median SWE), slightly below average in the Little Colorado basin (94% median SWE), and below average in the Salt basin (74% median SWE). For the water year to date (October-February), the state ranked the 7th warmest (since 1895), which was the warmest since 2018.

An atmospheric river streamed moisture into the state, which generated a series of storms that brought rain and high elevation snow from February 1-3. Natural Bridge State Park received 2.30 inches of precipitation, Apache Junction received 2.10 inches of precipitation, Payson received 1.72 inches of precipitation, Flagstaff received 1.04 inches of precipitation, Phoenix received 0.59 inches of precipitation, Tucson received 0.55 inches of precipitation, and Lake Havasu City received 0.42 inches. Heavy snow was observed in Coconino County, and strong thunderstorms occurred in portions of Yavapai, Pima, and Cochise counties.

Conditions were warm and dry across the state from February 4-5 due to a ridge of high pressure over the southwestern United States.

From February 6-10, a series of low pressure systems brought additional rounds of rain and mountain snow across the state and strong thunderstorms in portions of Yuma, La Paz, Pinal, and Maricopa counties. Bellemont received 3.02 inches of precipitation (33.5 inches of snow), Flagstaff received 2.95 inches of precipitation (36.1 inches of snow), Payson received 2.65 inches of precipitation (6.8 inches of snow), Carefree received 2.29 inches of precipitation, Coronado National Memorial received 1.31 inches of precipitation, Kingman received 1.30 inches of precipitation, Tempe received 0.84 inches of precipitation, Phoenix received 0.73 inches of precipitation, Tucson received 0.67 inches of precipitation, and Yuma Marine Corps Air Station received 0.32 inches of precipitation. On February 6, a peak wind gust of 59 mph was recorded at Tucson International Airport, which was their highest February peak wind gust in the last 50 years. On February 7, the National Weather Service in Phoenix issued a Flood Warning for Tonto Creek due to its rising waters from rainfall and upstream snow melt.

Conditions were tranquil across the state from February 11-20 due to a ridge of high pressure over Arizona.

A trough and weak attendant cold front passed through the state on February 21, bringing rain to Kingman (0.24 inches), Bullhead City (0.09 inches), Wikieup (0.08 inches), Seligman (0.06 inches of precipitation), and Phoenix (trace). Strong southwest winds created dust plumes from the Willcox Playa, which caused the visibility to drop between one quarter of a mile to one mile.

A ridge of high pressure built across the region from February 22-25, bringing above normal temperatures. On the 25th, Tucson reached 86°F, which marked their first day of reaching a high temperature greater than or equal to 85°F this year. This was 9 days earlier than the climatological normal date of March 5.

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ASU School of Geographical
Sciences and Urban Planning
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AASC
AMERICAN ASSOCIATION OF
STATE CLIMATOLOGISTS

An upper level low pressure system over southern California streamed moisture into Arizona from February 26-27, bringing rain to Alpine (0.45 inches), Bright Angel (0.41 inches), Willcox (0.06 inches), and Tucson (0.01 inches). This system moved through southern Arizona on February 28, affecting Bisbee-Douglas Airport (0.37 inches of precipitation), Robson Ranch (0.35 inches of precipitation), Tombstone (0.32 inches of precipitation), and Tucson (0.16 inches of precipitation). Safford Municipal Airport received 0.64 inches of precipitation, which broke the previous record of 0.08 inches that was set on 2/28/2018, and Nogales International Airport received 0.33 inches of precipitation, which broke the previous record of 0.31 inches that was set on 2/28/2010. Thunderstorms developed in areas throughout Pinal, Graham, and Greenlee counties, and a dust storm affected portions of Pinal and Maricopa counties (including the Phoenix Metro Area) due to an outflow boundary that brought blowing dust. On February 29, the low pressure system weakened and exited the region, leaving dry conditions behind.

Data are preliminary and are from NOAA/NCEI, the Midwestern Regional Climate Center, the Northeast Regional Climate Center, the Southeast Regional Climate Center, and the National Weather Service Forecast Offices in Flagstaff, Phoenix, Tucson, and Las Vegas.

Note: Weather stations across the state have different reporting times. Official daily temperature and precipitation values are recorded at the airports from midnight to midnight, while statewide observations are taken at varying times throughout the day.

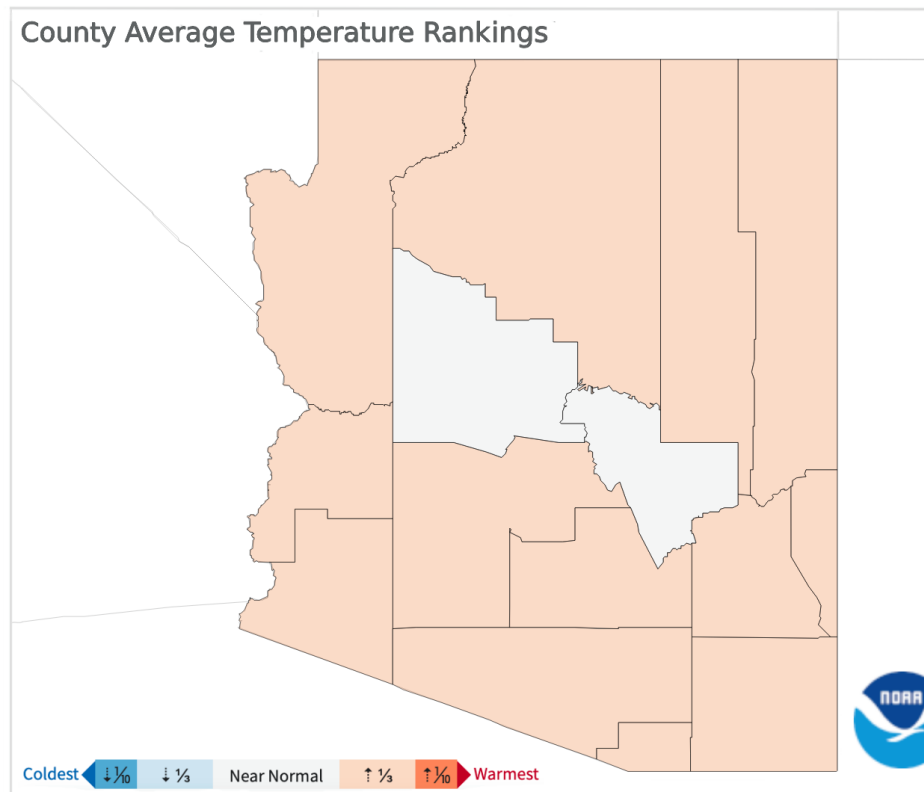
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Statewide Average, Maximum, Minimum Temperature and Total Precipitation, per County

February 2024



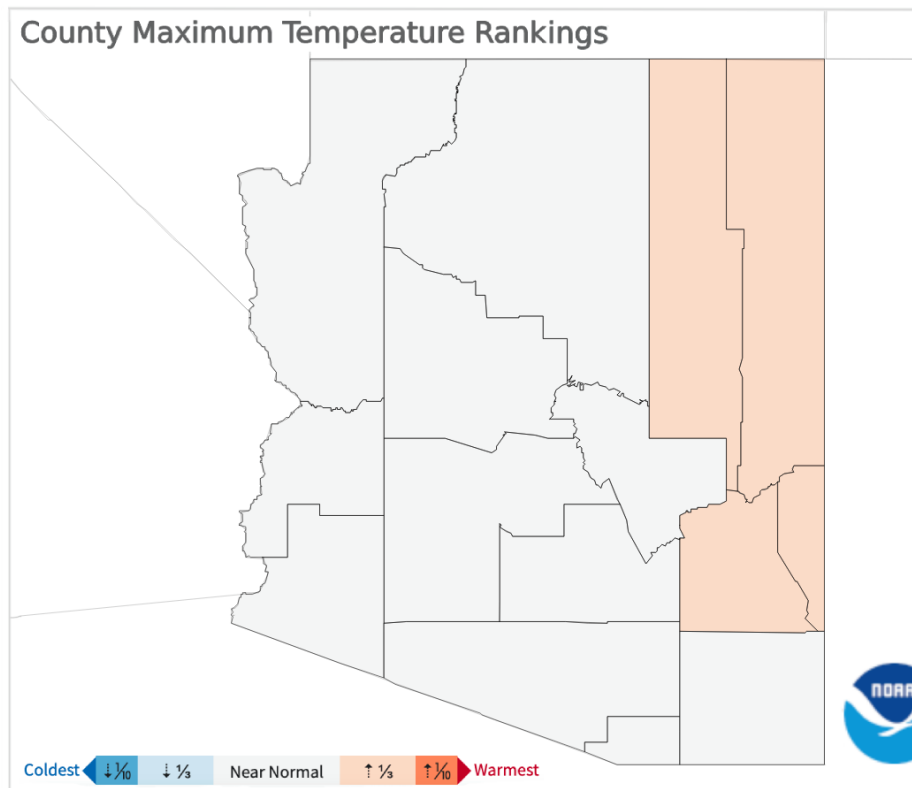
The average state temperature for February was 47.0°F, ranking as the 35th warmest February within the period of record. The 1895-2024 mean average state temperature for February was 44.9°F, resulting in an anomaly of +2.1°F.

County	Average Temperature	Rank (130 Years)	Anomaly From the 1895-2024 mean
Apache	37.6°F	25 th warmest	+3.0°F
Cochise	48.9°F	37 th warmest	+1.8°F
Coconino	39.1°F	33 rd warmest	+2.4°F
Gila	46.1°F	44 th warmest	+1.6°F
Graham	48.0°F	37 th warmest	+1.8°F
Greenlee	44.2°F	33 rd warmest	+2.0°F
La Paz	57.6°F	40 th warmest	+1.8°F
Maricopa	56.9°F	35 th warmest	+2.0°F
Mohave	48.5°F	40 th warmest	+2.1°F
Navajo	38.7°F	28 th warmest	+2.8°F
Pima	54.7°F	38 th warmest	+1.8°F
Pinal	55.1°F	41 st warmest	+1.8°F
Santa Cruz	49.2°F	29 th warmest	+2.0°F
Yavapai	45.8°F	44 th warmest	+1.4°F
Yuma	58.8°F	39 th warmest	+1.6°F

Period of record: 1895-2024

Statewide Average, Maximum, Minimum Temperature and Total Precipitation, per County

February 2024



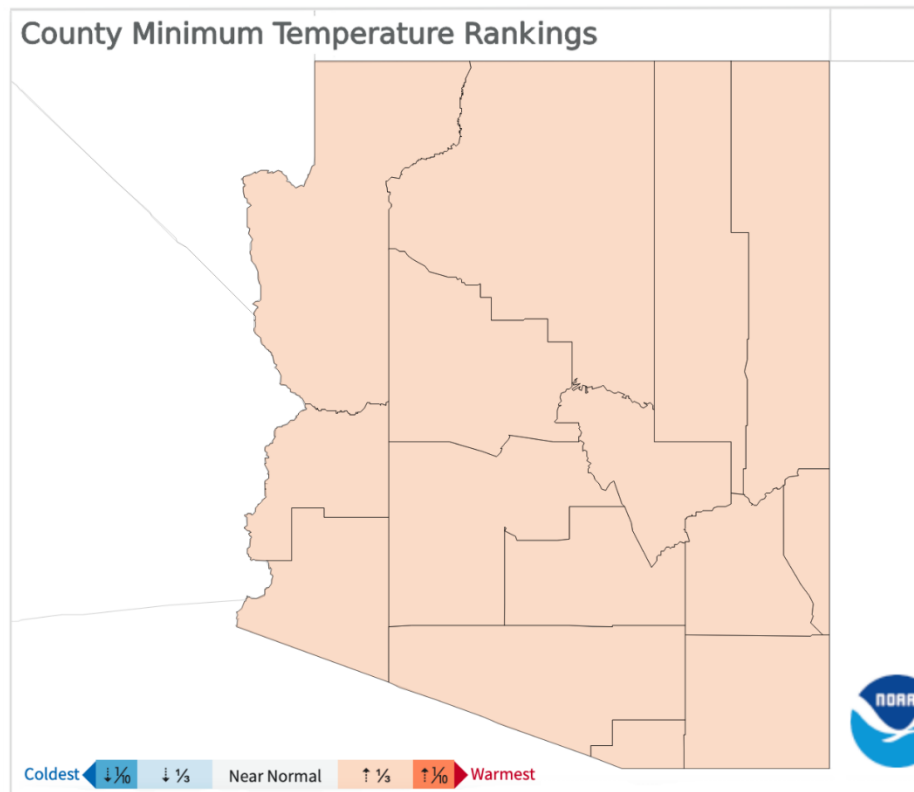
The average maximum state temperature for February was 59.1°F, ranking as the 50th warmest February within the period of record. The 1895-2024 mean maximum state temperature for February was 57.9°F, resulting in an anomaly of +1.2°F.

County	Maximum Temperature	Rank (130 Years)	Anomaly From the 1895-2024 mean
Apache	50.7°F	33 rd warmest	+3.3°F
Cochise	63.4°F	44 th warmest	+1.5°F
Coconino	50.8°F	47 th warmest	+1.6°F
Gila	57.9°F	55 th warmest	+0.7°F
Graham	60.5°F	41 st warmest	+1.7°F
Greenlee	56.6°F	42 nd warmest	+1.8°F
La Paz	68.8°F	66 th warmest	-0.2°F
Maricopa	69.0°F	59 th warmest	+0.6°F
Mohave	58.0°F	61 st warmest	+0.4°F
Navajo	51.8°F	35 th warmest	+3.1°F
Pima	67.8°F	52 nd warmest	+0.7°F
Pinal	67.4°F	52 nd warmest	+0.8°F
Santa Cruz	62.9°F	50 th warmest	+1.1°F
Yavapai	58.1°F	59 th warmest	+0.5°F
Yuma	70.2°F	69 th warmest	-1.1°F

Period of record: 1895-2024

Statewide Average, Maximum, Minimum Temperature and Total Precipitation, per County

February 2024



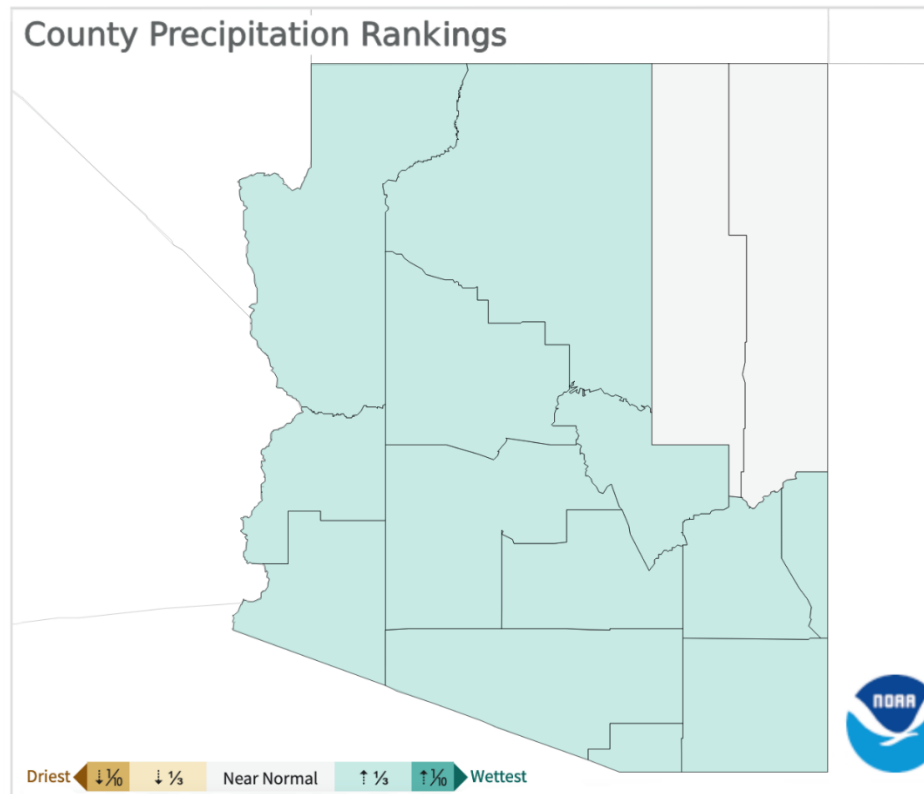
The average minimum state temperature for February was 34.9°F, ranking as the 23rd warmest February within the period of record. The 1895-2024 mean minimum state temperature for February was 31.9°F, resulting in an anomaly of +3.0°F.

County	Minimum Temperature	Rank (130 Years)	Anomaly From the 1895-2024 mean
Apache	24.4°F	28 th warmest	+2.5°F
Cochise	34.4°F	33 rd warmest	+2.2°F
Coconino	27.4°F	25 th warmest	+3.3°F
Gila	34.2°F	28 th warmest	+2.3°F
Graham	35.6°F	37 th warmest	+2.0°F
Greenlee	31.8°F	33 rd warmest	+2.3°F
La Paz	46.5°F	19 th warmest	+3.9°F
Maricopa	44.8°F	21 st warmest	+3.3°F
Mohave	39.0°F	16 th warmest	+3.9°F
Navajo	25.6°F	33 rd warmest	+2.6°F
Pima	41.7°F	24 th warmest	+3.0°F
Pinal	42.8°F	26 th warmest	+2.8°F
Santa Cruz	35.4°F	24 th warmest	+2.9°F
Yavapai	33.5°F	34 th warmest	+2.3°F
Yuma	47.3°F	17 th warmest	+4.2°F

Period of record: 1895-2024

Statewide Average, Maximum, Minimum Temperature and Total Precipitation, per County

February 2024



The average state precipitation for February was 1.64 inches, ranking as the 28th wettest February within the period of record. The 1895-2024 mean state precipitation for February was 1.09 inches, resulting in an anomaly of +0.55 inches.

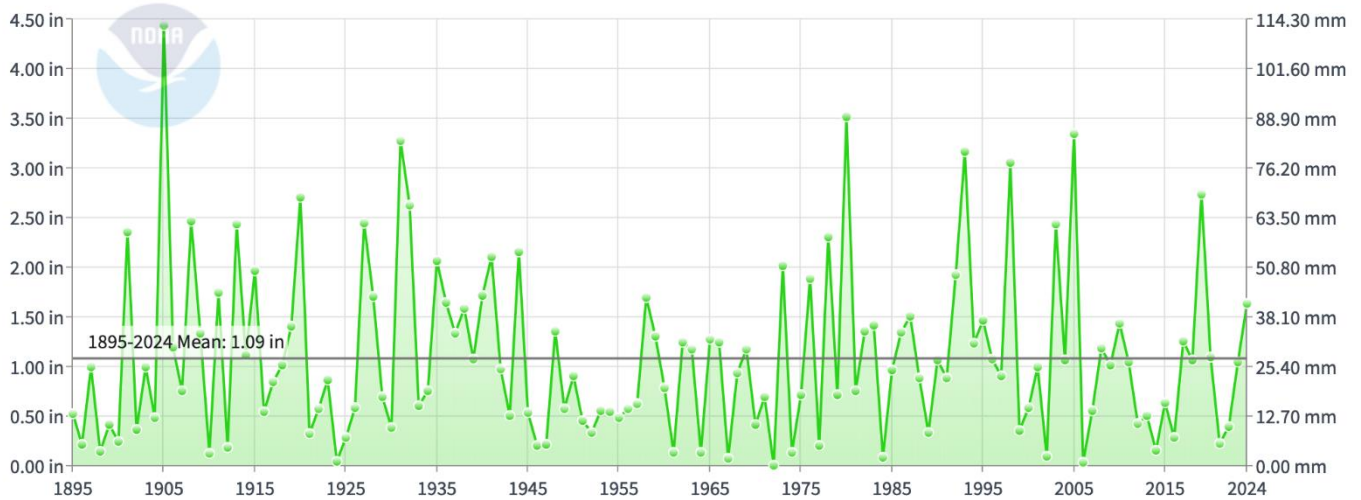
County	Precipitation	Rank (130 Years)	Anomaly From the 1895-2024 mean
Apache	0.94"	52 nd wettest	0.00"
Cochise	1.22"	36 th wettest	+0.33"
Coconino	1.65"	34 th wettest	+0.45"
Gila	3.28"	24 th wettest	+1.26"
Graham	1.84"	32 nd wettest	+0.67"
Greenlee	1.73"	36 th wettest	+0.54"
La Paz	1.00"	32 nd wettest	+0.32"
Maricopa	1.75"	21 st wettest	+0.80"
Mohave	2.08"	24 th wettest	+0.90"
Navajo	0.88"	60 th wettest	-0.04"
Pima	1.39"	31 st wettest	+0.48"
Pinal	2.10"	20 th wettest	+0.98"
Santa Cruz	1.94"	27 th wettest	+0.77"
Yavapai	2.66"	27 th wettest	+1.02"
Yuma	0.90"	28 th wettest	+0.36"

Period of record: 1895-2024

February Statewide Precipitation (1895 to date)

Arizona Precipitation

February



Period of record: 1895-2024

This chart shows average Arizona precipitation each February through the period of record (1895 to present). February 2024 ranked as the 28th wettest with an average of 1.64 inches, which is 0.55 inches above the 1895-2024 average of 1.09 inches. This was the wettest February since 2019.

Flagstaff Climate Statistics

February 2024

This ranked as the 52nd warmest February on record (1898-2024). With 4.06 inches of precipitation, it ranked as the 12th wettest February on record.

Avg Max Temp: 44.5°F Normal: 45.7°F
Avg Min Temp: 20.7°F Normal: 19.6°F
Avg Mean Temp: 32.6°F Normal: 32.6°F

Highest Monthly Avg Temp: 39.7°F in 2015
Lowest Monthly Avg Temp: 19.5°F in 1939

Highest Temp this month: 56°F on 25th
Lowest Temp this month: -2°F on 11th

Record High: 71°F on 2/26/1986
Record Low: -23°F on 2/1/1985

Temperature or precipitation records this month:
HiMin: 36°F on 2/26/2024,
ties record set on 2/26/1989

Snow: 13.1" on 2/7/2024,
previous record 12.4" on 2/7/1901

Flagstaff Number of Days of:
Minimum Temp 32°F or lower 27
Minimum Temp 0°F or lower 1
Maximum Temp 90°F or higher 0
Maximum Temp 32°F or lower 3

Heating Degree Days: 931 Normal: 906
Cooling Degree Days: 0 Normal: 0
Degree base 65°F

Total February Precipitation: 4.06"
Normal February Precipitation: 2.17"
Departure from Normal: +1.89"
Greatest 24-Hr Precip: 1.79" from 6th – 7th

Total Precipitation Year-to-Date: 5.59"
Departure from Normal: +1.37"
Total Precip Year-to-Date (Last Year): 8.99"

Total February Snowfall: 45.9"
Normal: 19.3"
Record February Snowfall: 84.3" in 1901

Greatest February Precipitation: 10.05" in 1993
Least February Precipitation: 0.00" in 1967

Number of Days:
Clear 17
Partly Cloudy 6
Cloudy 6

Average Wind Speed: 6.8 mph
Highest Peak Gust: 45 mph from 200° on 6th

Data are from NOAA, the Midwestern Regional Climate Center, the Northeast Regional Climate Center, and the Southeast Regional Climate Center and are **preliminary**.

Normals on this page are from 1991-2020

FEBRUARY 2024

FLAGSTAFF

AVERAGE DAILY TEMPERATURE

ABOVE

AVERAGE

BELOW

+/- 0.5°F

S	M	T	W	Th	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

*Data are from the National Weather Service office in Flagstaff and are preliminary.

@AZStateClimate

Flagstaff experienced 16 days of above average temperatures, 2 days of average temperatures, and 11 days of below average temperatures this month.

Phoenix Climate Statistics

February 2024

This ranked as the 13th warmest February on record (1895-2024). With 1.32 inches of precipitation, it ranked as the 24th wettest February on record.

Heating Degree Days: 130 Normal: 159
Cooling Degree Days: 31 Normal: 16
Degree base 65°F

Avg Max Temp: 72.1°F Normal: 70.8°F
Avg Min Temp: 50.7°F Normal: 49.0°F
Avg Mean Temp: 61.4°F Normal: 59.9°F

Total February Precipitation: 1.32"
Normal February Precipitation: 0.87"
Departure from Normal: +0.45"
Greatest 24-Hr Precip: 0.59" from 1st – 2nd

Highest Monthly Avg Temp: 66.0°F in 1991
Lowest Monthly Avg Temp: 48.5°F in 1939

Total Precipitation Year-to-Date: 2.05"
Departure from Normal: +0.31"
Total Precip Year-to-Date (Last Year): 1.41"

Highest Temp this month: 84°F on 25th
Lowest Temp this month: 40°F on 9th, 11th

Greatest February Precipitation: 4.64" in 1905
Least February Precipitation: 0.00" in 2016
and 14 other years

Record High: 92°F on 2/27/1986, 2/25/1921
Record Low: 24°F on 2/8/1933, 2/7/1899

Number of Days:

Clear 9
Partly Cloudy 17
Cloudy 3

Temperature or precipitation records this month:
HiMin: 58°F on 2/24/2024,
ties record set on 2/24/1982

HiMin: 63°F on 2/26/2024,
previous record 61°F on 2/26/1988

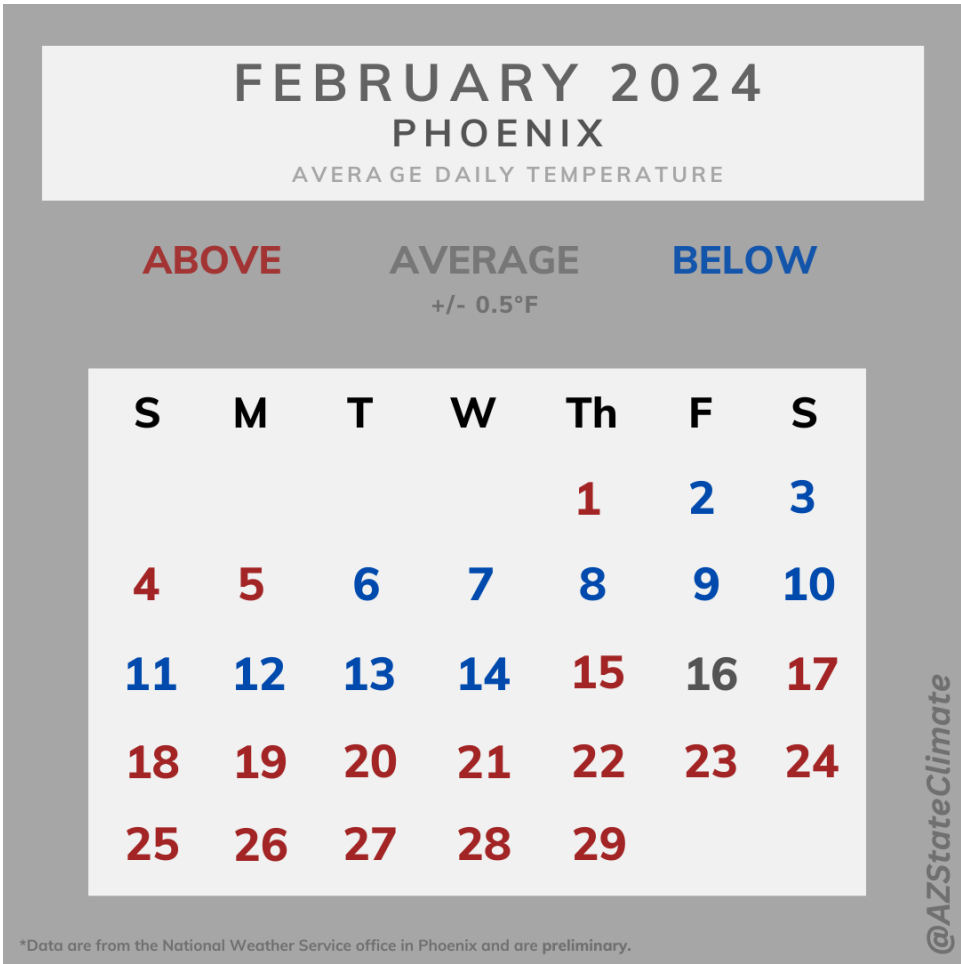
Average Wind Speed: 6.1 mph
Highest Peak Gust: 46 mph from 190° on 6th

Phoenix Number of Days of:

Minimum Temp 32°F or lower	0
Minimum Temp 0°F or lower	0
Maximum Temp 90°F or higher	0
Maximum Temp 32°F or lower	0

Data are from NOAA, the Midwestern Regional Climate Center, the Northeast Regional Climate Center, and the Southeast Regional Climate Center and are **preliminary**.

Normals on this page are from 1991-2020



This month, there were 17 days of above average temperatures, 1 day of average temperatures, and 11 days of below average temperatures in Phoenix.

Tucson Climate Statistics

February 2024

This ranked as the 26th warmest February on record (1894-2024). With 1.39 inches of precipitation, it ranked as the 24th wettest February on record.

Heating Degree Days: 231 Normal: 251
Cooling Degree Days: 9 Normal: 5
Degree base 65°F

Avg Max Temp: 69.5°F Normal: 69.2°F
Avg Min Temp: 44.7°F Normal: 43.2°F
Avg Mean Temp: 57.1°F Normal: 56.2°F

Total February Precipitation: 1.39''
Normal February Precipitation: 0.84''
Departure from Normal: +0.55''
Greatest 24-Hr Precip: 0.54'' from 2nd – 3rd

Highest Monthly Avg Temp: 62.1°F in 2015
Lowest Monthly Avg Temp: 45.3°F in 1903

Total Precipitation Year-to-Date: 3.16''
Departure from Normal: +1.48''
Total Precip Year-to-Date (Last Year): 2.35''

Highest Temp this month: 86°F on 25th
Lowest Temp this month: 35°F on 12th

Greatest February Precipitation: 4.15'' in 1905
Least February Precipitation: 0.00'' in 2021
and 10 other years

Record High: 92°F on 2/14/1957
Record Low: 17°F on 2/7/1899

Number of Days:
Clear 15
Partly Cloudy 7
Cloudy 7

Temperature or precipitation records this month:
HiMin: 61°F on 2/26/2024,
previous record 59°F on 2/26/1921

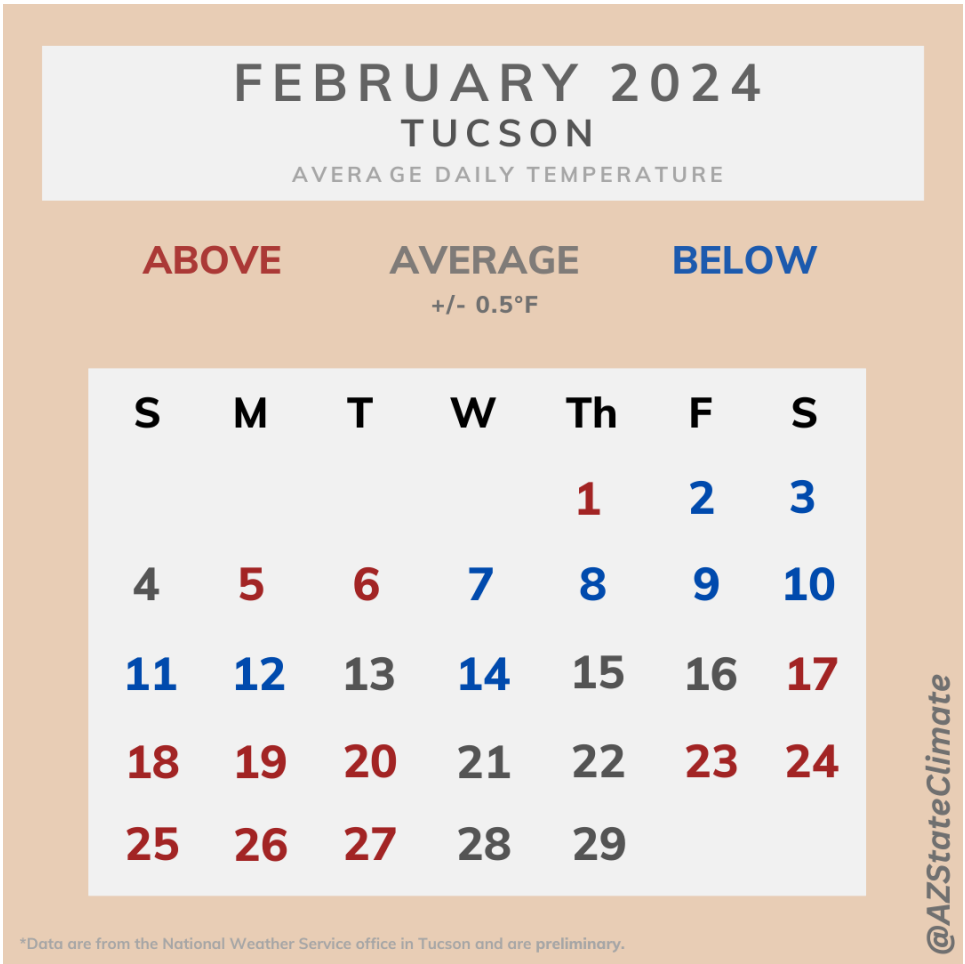
HiMin: 57°F on 2/27/2024,
previous record 54°F on 2/27/1968

Average Wind Speed: 6.5 mph
Highest Peak Gust: 59 mph from 180° on 6th

Tucson Number of Days of:
Minimum Temp 32°F or lower 0
Minimum Temp 0°F or lower 0
Maximum Temp 90°F or higher 0
Maximum Temp 32°F or lower 0

Data are from NOAA, the Midwestern Regional Climate Center, the Northeast Regional Climate Center, and the Southeast Regional Climate Center and are **preliminary**.

Normals on this page are from 1991-2020

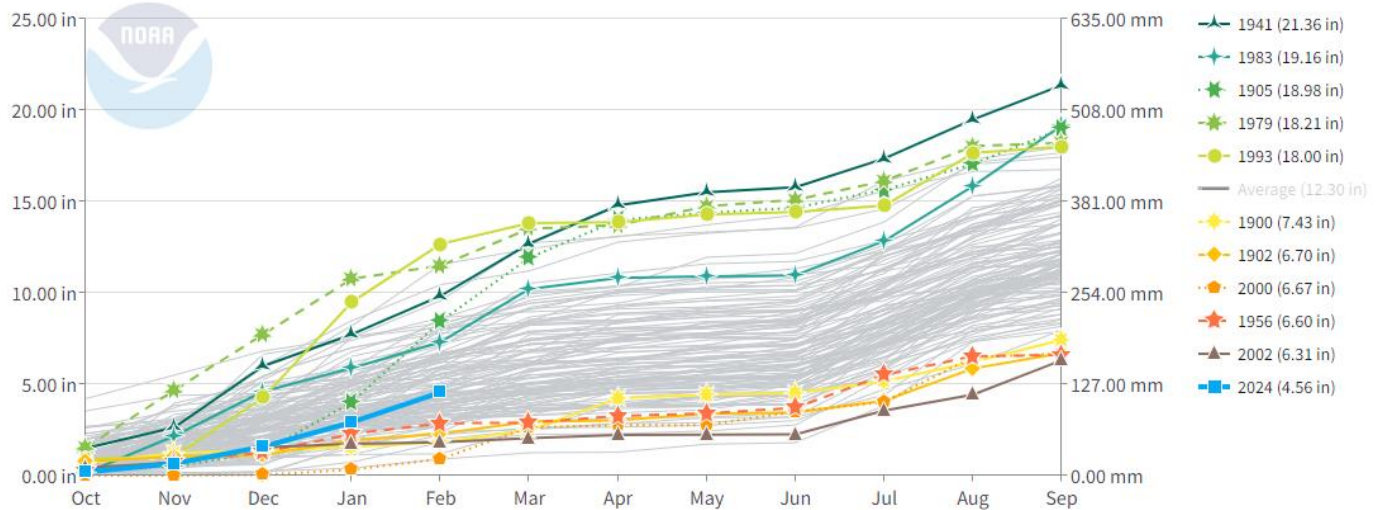


Compared to Flagstaff and Phoenix, Tucson experienced a greater number of days with average temperatures (8) and a fewer number of days with above average temperatures (12) and below average temperatures (9).

Cumulative Statewide Precipitation per Water Year (Oct 2023-Sept 2024)

Arizona

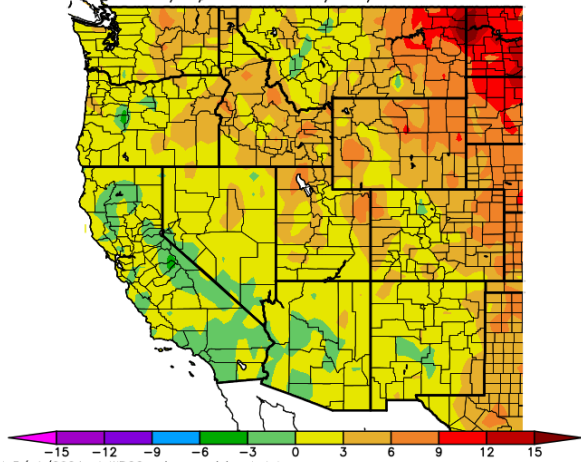
October-September Precipitation



The 5 wettest Water Years are shown with green lines and the 5 driest Water Years are shown with brown lines. The current Water Year is the blue line, and the average annual precipitation per Water Year (period of record) is the black line. The average state cumulative Water Year precipitation was 4.56 inches at the end of February, which is 0.51 inches below the October-February average of 5.07 inches.

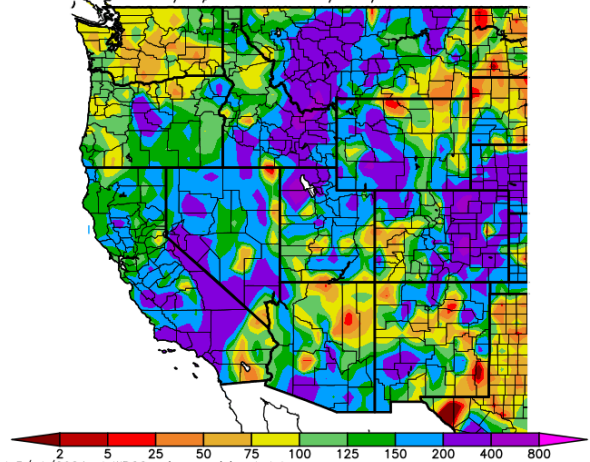
Data are from the National Centers for Environmental Information and are **preliminary**.

Ave. Temperature dep from Ave (deg F)
2/1/2024 – 2/29/2024



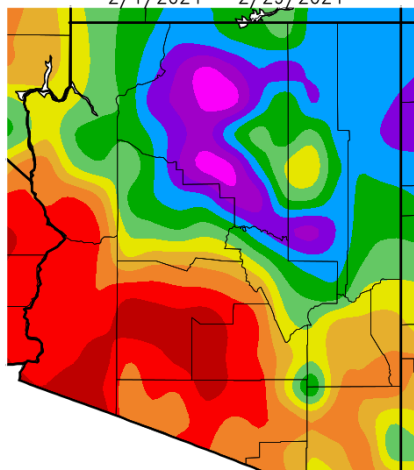
Generated 3/ 1/2024 at WRCC using provisional data.
NOAA Regional Climate Centers

Percent of Average Precipitation (%)
2/1/2024 – 2/29/2024



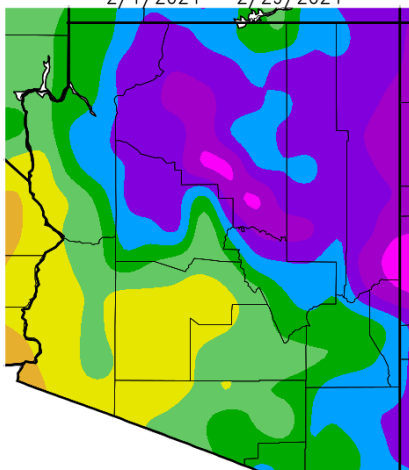
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NOAA Regional Climate Centers

Av. Max. Temperature (deg. F)
2/1/2024 – 2/29/2024



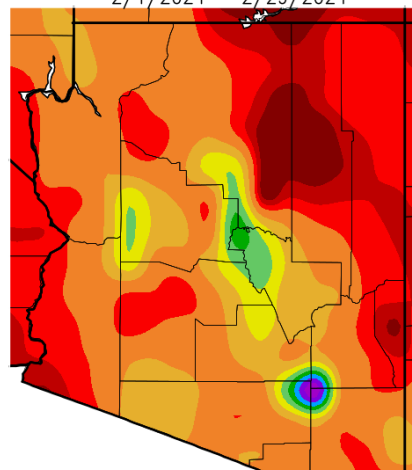
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NOAA Regional Climate Centers

Av. Min. Temperature (deg. F)
2/1/2024 – 2/29/2024



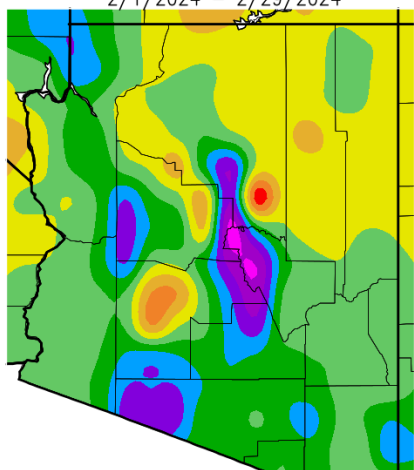
Generated 3/ 1/2024 at WRCC using provisional data.
NOAA Regional Climate Centers

Total Precipitation (in.)
2/1/2024 – 2/29/2024



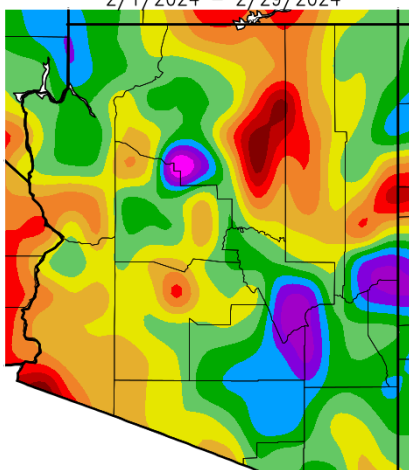
Generated 3/ 1/2024 at WRCC using provisional data.
NOAA Regional Climate Centers

Precipitation Departure from Average (in.)
2/1/2024 – 2/29/2024



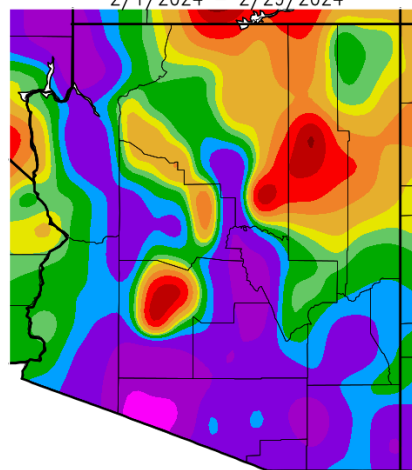
Generated 3/ 1/2024 at WRCC using provisional data.
NOAA Regional Climate Centers

Precipitation # Days > 0.01"
2/1/2024 – 2/29/2024



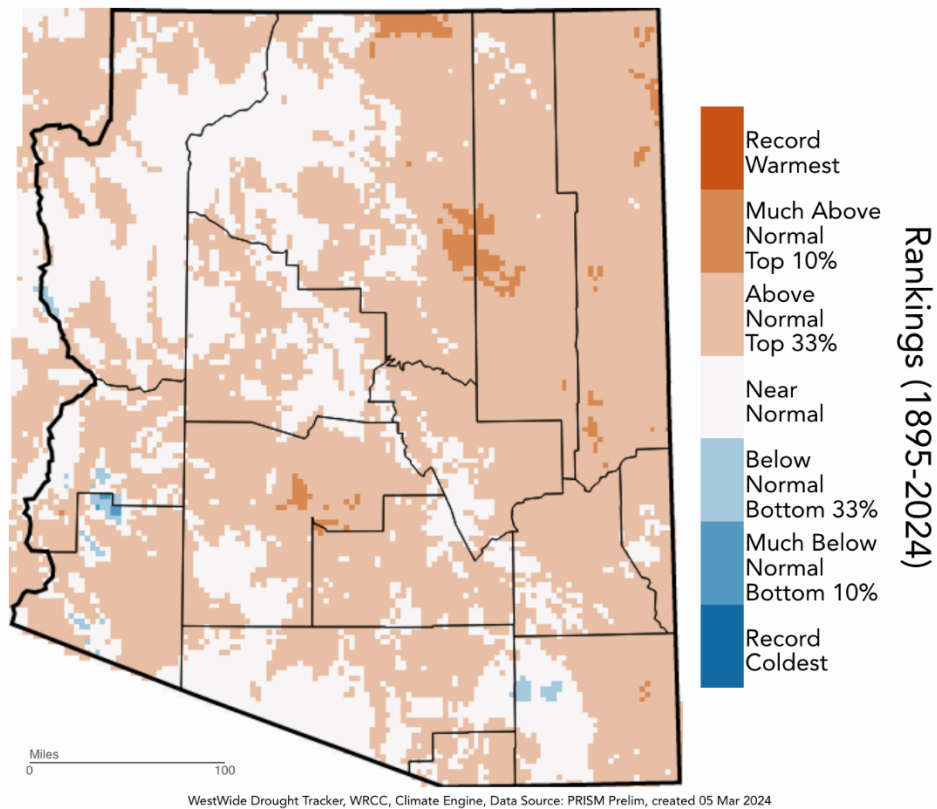
Generated 3/ 1/2024 at WRCC using provisional data.
NOAA Regional Climate Centers

Percent of Average Precipitation (%)
2/1/2024 – 2/29/2024



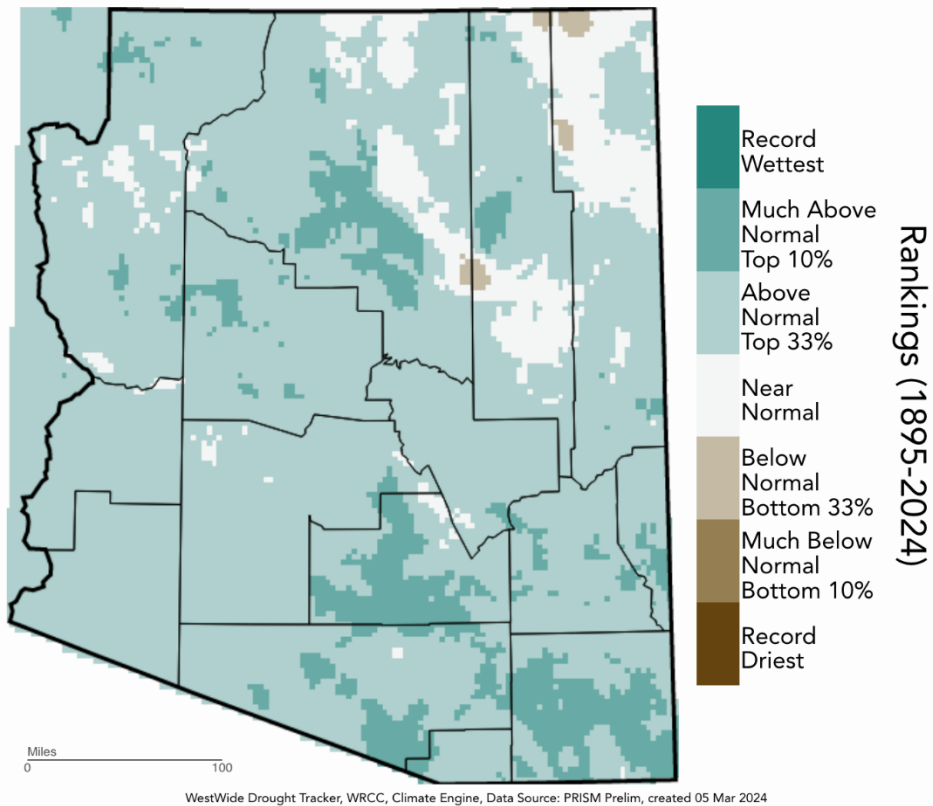
Generated 3/ 1/2024 at WRCC using provisional data.
NOAA Regional Climate Centers

Arizona - Mean Temperature February 2024, Percentile

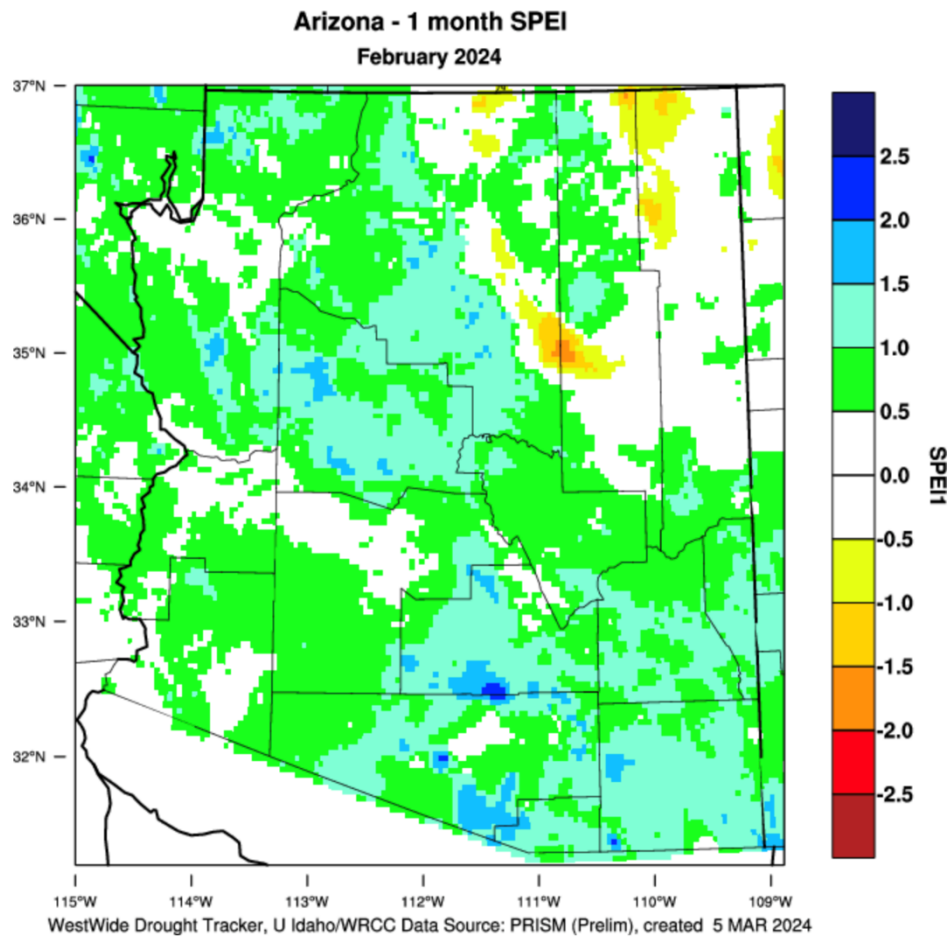


Near normal to above normal temperatures were observed across the state, with small portions of Coconino, Navajo, and Maricopa counties with much above normal temperatures.

Arizona - Precipitation February 2024, Percentile



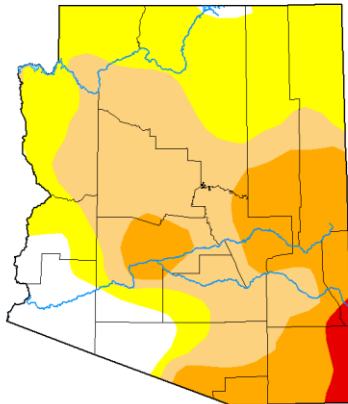
Portions of northern and southeastern counties received much above normal precipitation, while the rest of the state recorded near normal to above normal precipitation.



This map shows the standardized precipitation evapotranspiration index (SPEI) across Arizona. February precipitation and evapotranspiration totals are measured across the state and are compared to previous February precipitation and evapotranspiration totals through the period of record (1895-present). Positive values represent wet conditions, while negative values represent dry conditions.

Short-term Drought

U.S. Drought Monitor Arizona



February 6, 2024
(Released Thursday, Feb. 8, 2024)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	10.24	89.76	57.83	23.19	1.83	0.00
Last Week	10.24	89.76	62.65	30.23	1.83	0.00
3 Months Ago	8.18	91.82	57.19	34.84	6.09	0.00
Start of Calendar Year	5.62	94.38	53.37	33.54	5.75	0.00
Start of Water Year	8.12	91.88	47.06	22.74	5.34	0.00
One Year Ago	42.37	57.63	21.33	1.19	0.00	0.00

Intensity

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

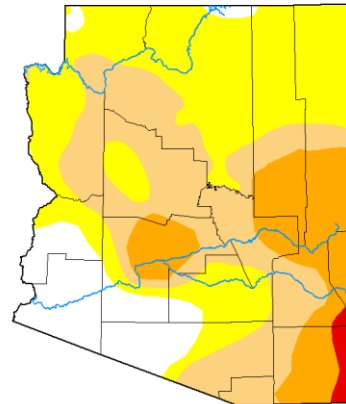
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:
Deborah Bathke
National Drought Mitigation Center



droughtmonitor.unl.edu

U.S. Drought Monitor Arizona



February 27, 2024
(Released Thursday, Feb. 29, 2024)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	13.53	86.47	48.58	18.12	1.83	0.00
Last Week	13.53	86.47	48.58	18.12	1.83	0.00
3 Months Ago	8.18	91.82	57.19	34.97	6.09	0.00
Start of Calendar Year	5.62	94.38	53.37	33.54	5.75	0.00
Start of Water Year	8.12	91.88	47.06	22.74	5.34	0.00
One Year Ago	67.64	32.36	13.09	1.19	0.00	0.00

Intensity

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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While Extreme (D3) short-term drought remained in Cochise, Graham, and Greenlee counties (2% of state), other parts of the state improved. The majority of the state (52%) was without drought or was Abnormally Dry (D0). Moderate (D1) and Severe (D2) short-term drought decreased to 46% of the state, largely in central and eastern counties.