# Santa Cruz Basin Seasonal Climate Bulletin

## October 2026

Data Available as of October 20, 2026

Given increasing climate variability in recent years, including weather patterns distinct from that of our ancestors, our team gathered around a question raised by basin leaders, **“how do we get the best climate data to inform our water management and agricultural decisions?”**. The climate information in this report was tailored to inform the water management decisions being made in the Santa Cruz basin by acequias and Santa Cruz Irrigation District (SCID) with as much geographically specific data as possible.

Highlights—October 2026

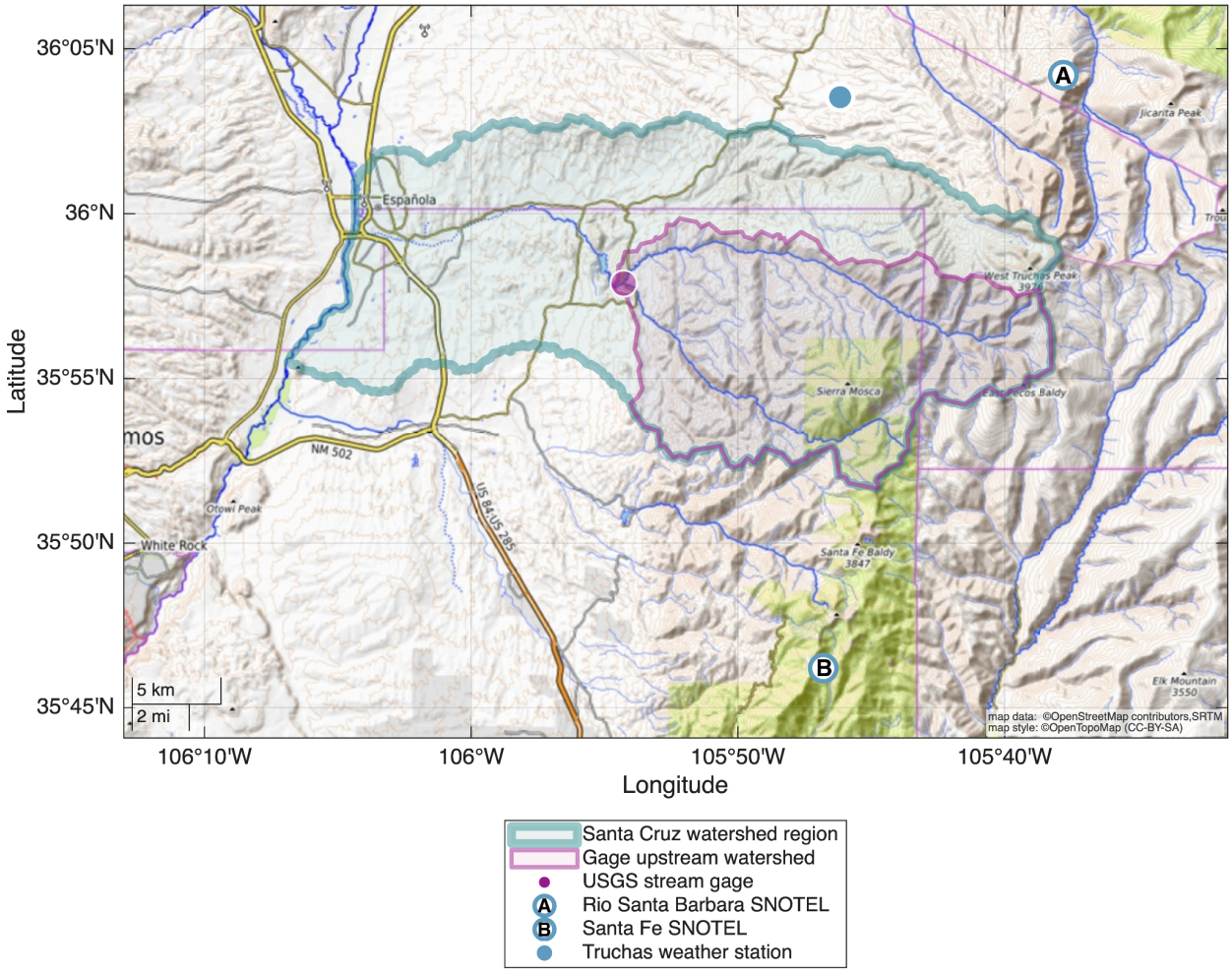
- **Precipitation in September was much above normal—**in some areas, September totals were the highest on record. Nearby precipitation gauges recorded as much as 10.8 inches, or 568% of normal September precipitation.
- **Santa Cruz River streamflow volume was above normal in September—**about double the expected volume.
- **Seasonal forecasts for the upcoming months lean toward wetter-than-normal conditions, November–January**.
- **Longer-term forecasts** indicate El Niño conditions are very likely to persist through winter and into spring, which would mean increased chances of above-normal precipitation into spring 2027.

This report is brought to you through the collaboration of:

A special thanks for the leadership and insights of the:
**Santa Cruz Irrigation District,**
**Rio Quemado, Rio en Medio, Rio Frijoles, Rio Santa Cruz Stream Systems Acequia Association, and Greenroots Institute**
These entities shared the relevant questions, data points and feedback to make this report viable.

# Santa Cruz Region

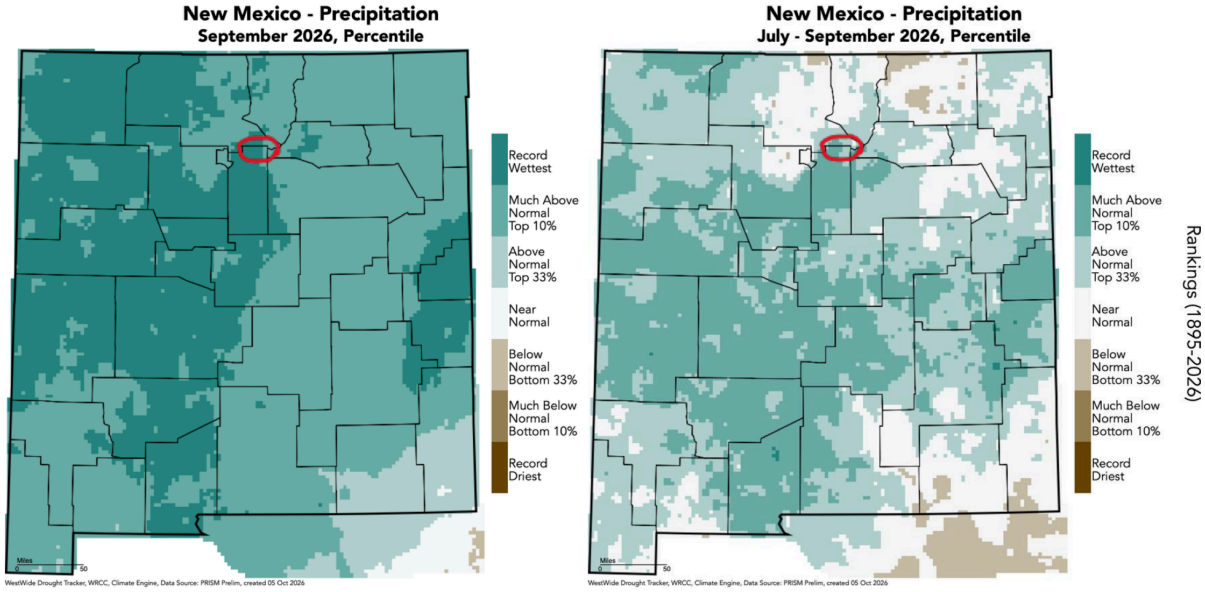
*The map below shows the extent of the Santa Cruz watershed region and the locations of stations providing data for this bulletin: USGS stream gauge (contributing watershed also shown); snow telemetry (SNOTEL) stations at the Rio Santa Barbara, Santa Fe, and Tres Ritos sites; and the Truchas weather station.*




The Truchas weather station, and the Santa Fe and Rio Santa Barbara snow telemetry (SNOTEL) stations are located outside of the Santa Cruz catchment area, but they are close enough to capture information that reflects conditions within the catchment.

# Precipitation

*Recent precipitation influences expected flow into the Santa Cruz reservoir, availability for releases, streamflow, and soil moisture. The maps below show how recent monthly and three-month precipitation totals compared against past years in the climate record.* ***Areas colored white had near-normal precipitation*** *(totals ranking among the middle third the rankings),* ***areas colored brown had below-normal precipitation*** *(in the bottom third of the rankings),* ***green areas indicate above-normal precipitation*** *(in the upper third of the rankings),* ***and darker shades indicate totals closer to either extreme of the rankings.*** *The table below lists the monthly and three-month totals measured at nearby stations, and also lists the total for the current water year (October–September) in progress.*



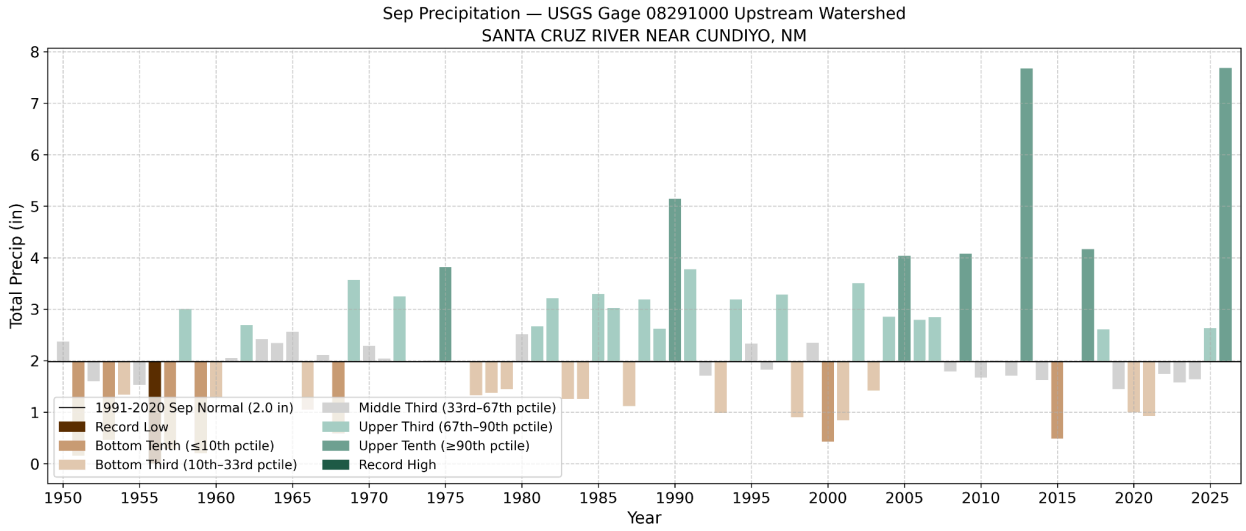

Station Observed Precipitation

| Station | September total | September % of normal | July–September total | July–September % of normal | Water year (Oct 2025–Sep 2026) total | Water year % of normal |
|---|---|---|---|---|---|---|
| Truchas | 6.0 in. | 367% | 9.2 in. | 125% | 17.5 in. | 87% |
| Santa Fe SNOTEL | 10.8 in. | 568% | 15.3 in. | 166% | 30.3 in. | 91% |
| Rio Santa Barbara SNOTEL | 7.5 in. | - | 12.2 in. | - | 25.1 in. | - |

**September:** 6.0 inches of rain at the Truchas weather station—367% of normal for September.
**September precipitation within the Santa Cruz region ranged from much-above normal to the highest on record,** depending on location, with precipitation at nearby gauged sites ranging from 367% of normal to 568% of normal September totals.
**Water year to date:** 17.5 inches of rain at the Truchas weather station.
Total precipitation for the water year so far is 87% of normal at the Truchas weather station and 91% of normal at the Santa Fe SNOTEL site.

## Historical context: precipitation

*The chart below shows September precipitation totals for each year, 1950–2026. The values are plotted relative to the long-term (1991–2020) median. Colors highlight whether precipitation was near normal, below normal, above normal, much-below normal, much-above normal, a **record low,** or a **record high**. Values represent a spatial average of precipitation within the Santa Cruz catchment area above the streamgage.*

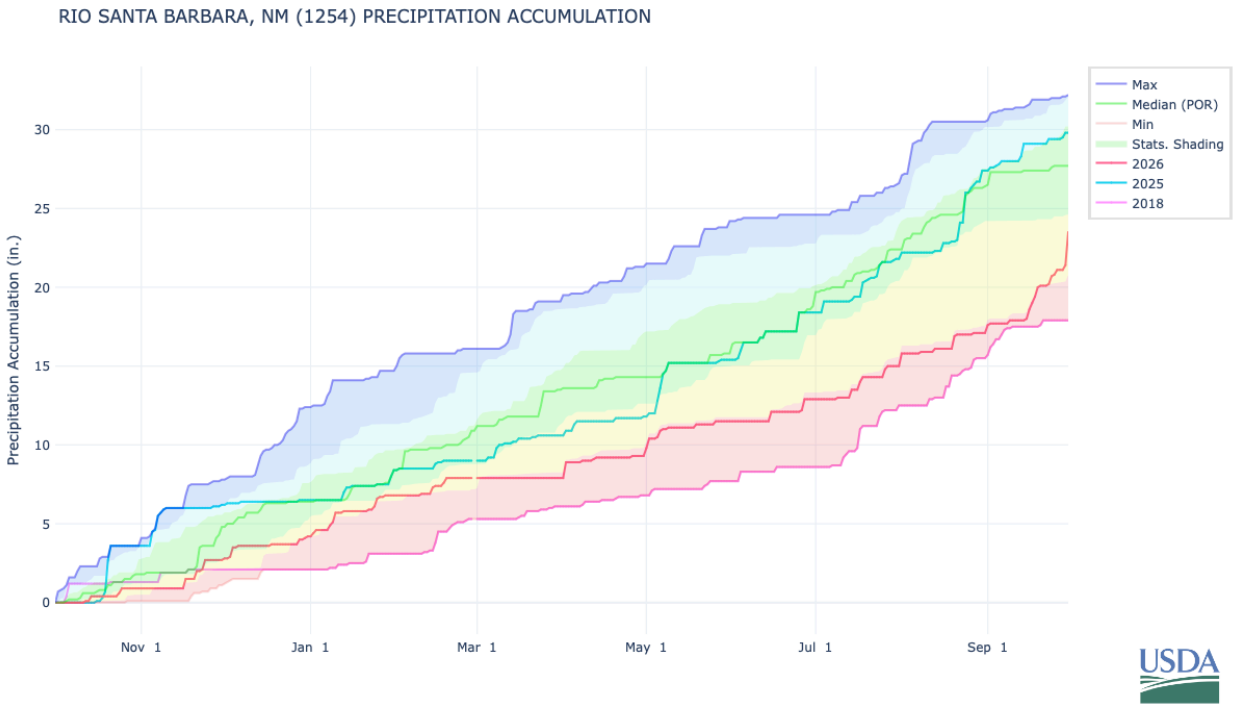



**Santa Cruz regional-average total precipitation in September was much above normal.** Normal (median September total across all years 1991–2020) is about 2 inches, but this September's total was more than 7.5 inches.

This amount of precipitation in September is not unprecedented, but it is rare. A similar amount of precipitation fell in September 2013, but the next-highest total since 1950 was only about 5 inches in 1990.

## Precipitation progress over the water year (SNOTEL)

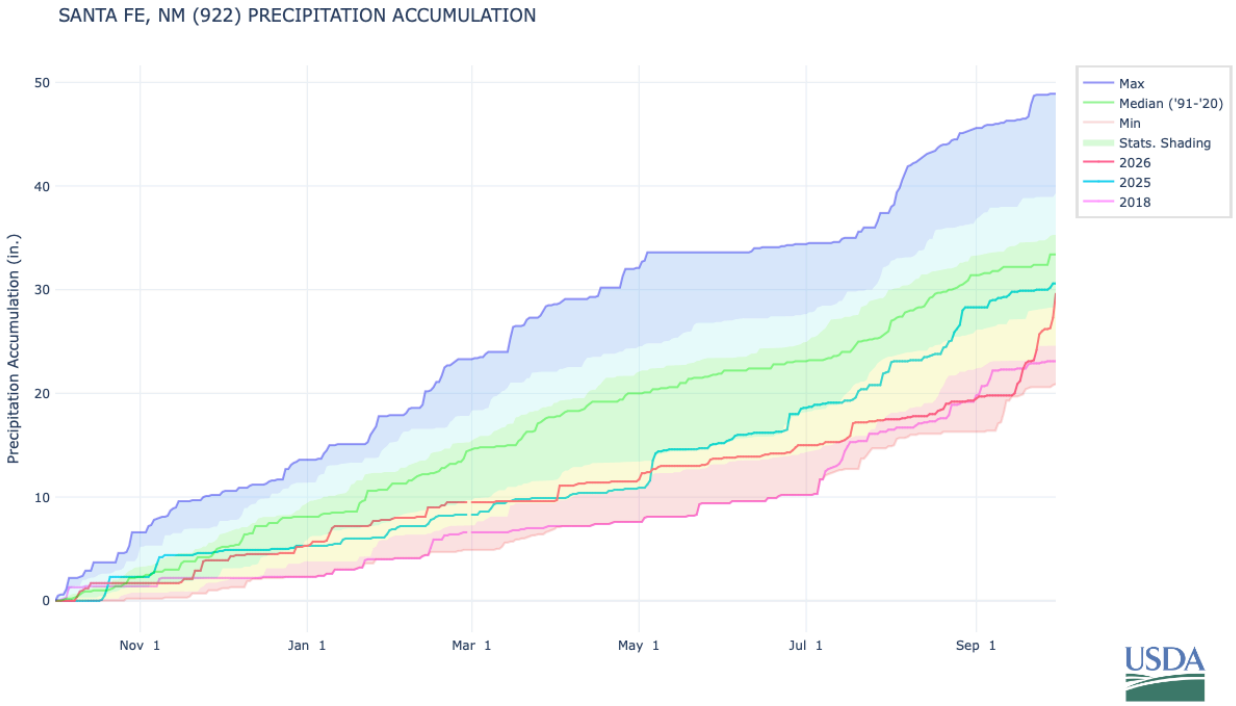
*The Rio Santa Barbara and Santa Fe SNOTEL stations are the nearest snowpack-measurement sites relative to the Santa Cruz watershed. SNOTEL sites record precipitation year-round, in addition to tracking snowpack over winter. The plots below show daily precipitation accumulation over the course of the water year (beginning in October), and how it compares to the range of values for daily accumulated precipitation for all years in the record of observations—from the* ***record minimum (pale red line)*** *to the* ***record maximum (dark blue line)****. The* ***green line shows the median, or normal, accumulated precipitation****, and* ***values falling within the green shading are considered near normal****.*




**Total precipitation since October 2025 at the Rio Santa Barbara SNOTEL site ended the water year below normal (red line), despite the high September precipitation.** Water-year total precipitation was 85% of normal.

2018 (magenta line) was the driest water-year total on record at the Rio Santa Barbara SNOTEL, and this year's total was very close to 2018's in early September. Late September rainfall nearly brought this year's total into the near-normal range.

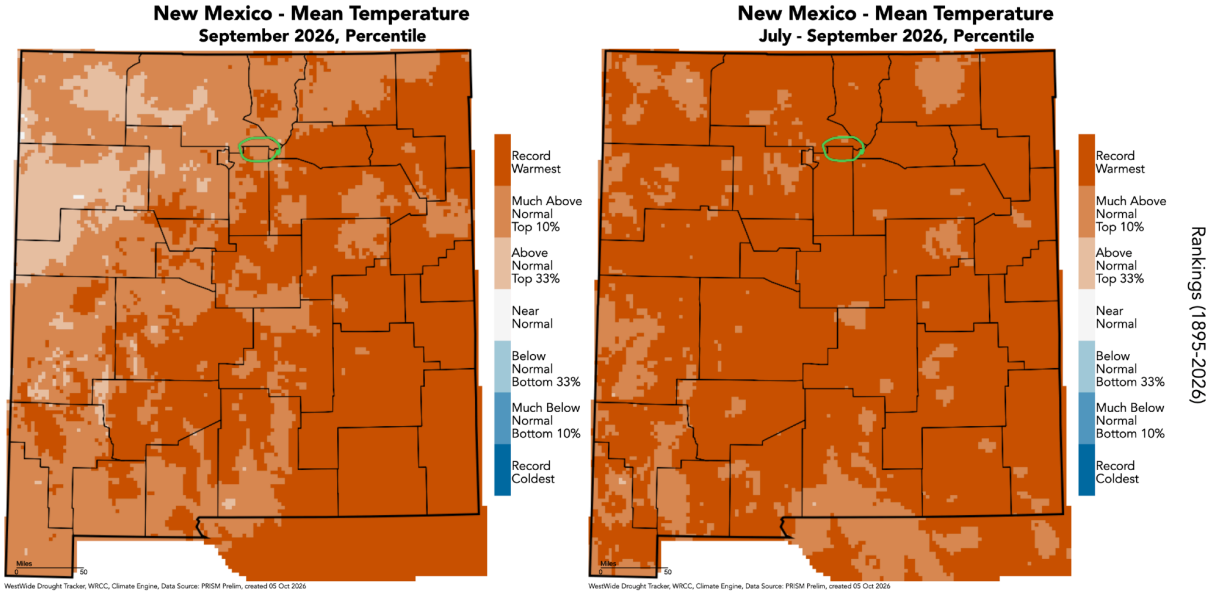
The chart also shows that last year (teal line), water-year total precipitation ended up above normal after tracking close to normal over most of the previous 12 months.




Precipitation at the Santa Fe SNOTEL station ended the water year at 89% of normal 12-month October–September total precipitation.

# Temperature

*Seasonal temperature can influence water availability in several ways—greater evaporation and plant water use in the upstream watershed can mean less water makes its way into streams; evaporation, in the form of increased atmospheric water demand, also affects irrigation efficiency. In winter, temperatures influence the persistence of snowpack and the timing of snow melt. The maps below show how recent monthly and water-year average temperatures compare against past years in the climate record—**areas colored white had near-normal temperatures** (ranking among the middle third the rankings), **areas colored blue had below-normal temperatures** (in the bottom third of the rankings), **orange-red areas indicate above-normal temperatures** (in the upper third of the rankings), and **darker shades indicate temperatures closer to either extreme of the rankings.***

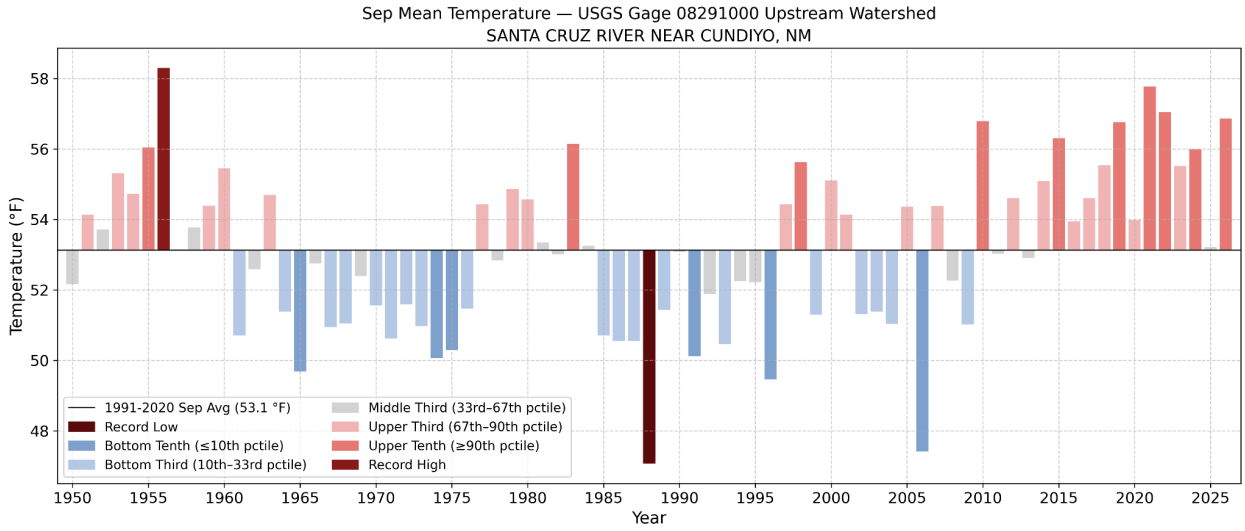



**Average temperatures in September (left) were much above average** in the Santa Cruz region, and for some areas September was **warmer than in any past year on record**.

The recent three-month average temperatures (right; July–September) were **the warmest on record.**

## Historical context: temperature

*The chart below shows September-average temperature for each year, 1950–2026. The values are plotted relative to the long-term (1991–2020) average. Colors highlight whether temperature was near normal, below normal, above normal, much-below normal, much-above normal, a **record low,** or a **record high**. Values represent a spatial average of temperature within the Santa Cruz catchment area above the streamgage.*

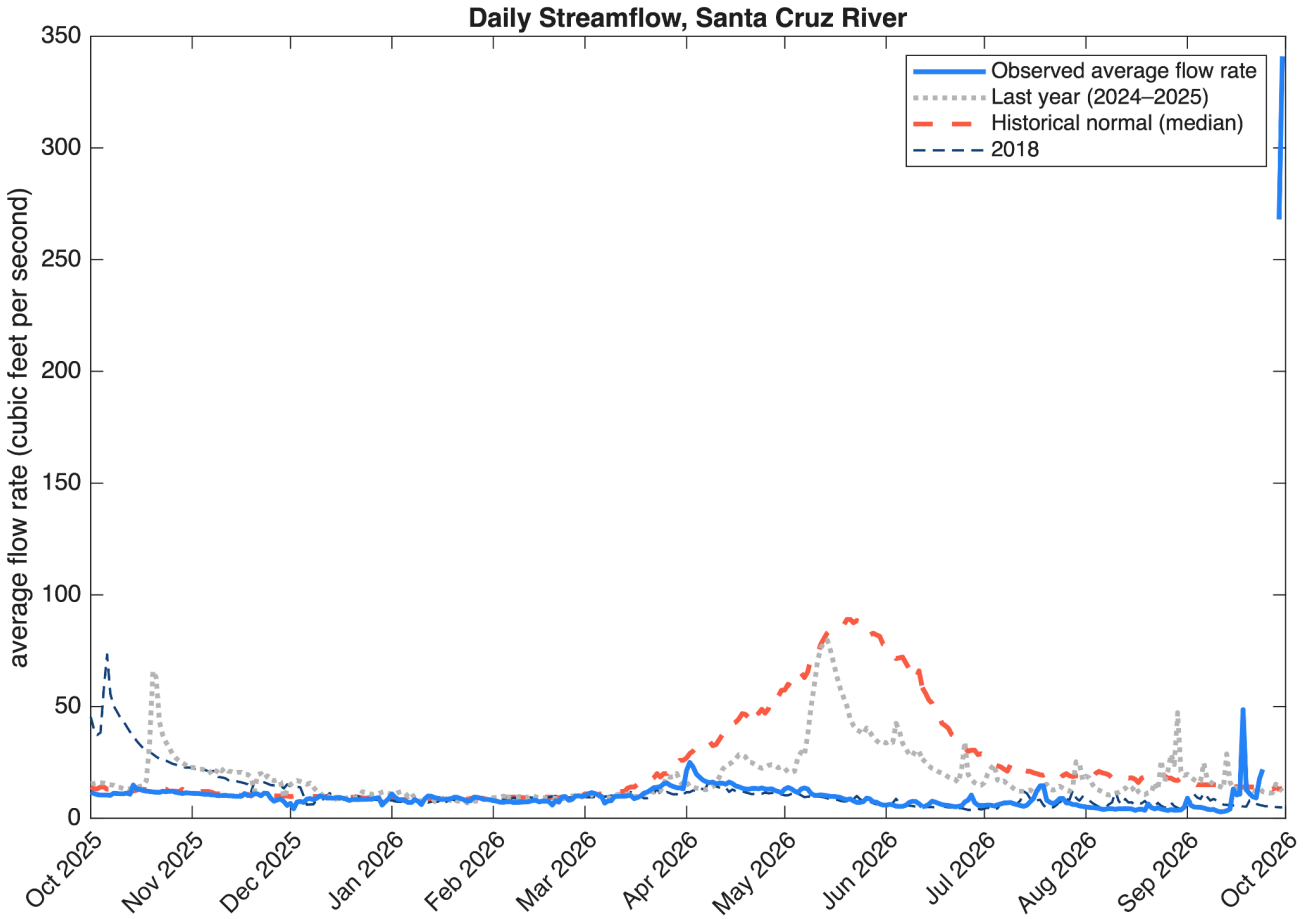



**September temperatures averaged much above average**—more than 3°F warmer than the 1991–2020 August long-term normal. The coolest September on record was in 1988, which was around 6°F below the 1991–2020 normal.

# Streamflow

*The USGS stream gauge on the Santa Cruz river at Cundiyo measures the water flowing into the Santa Cruz Lake reservoir, the combined flow of Rio Medio and Rio Frijoles. It does not account for downstream inputs like Rio Quemado. The figure plots the daily average instantaneous rate of flow in* ***Cubic feet per second (cfs)****.*

Since October 2025 (Water Year 2026 so far)

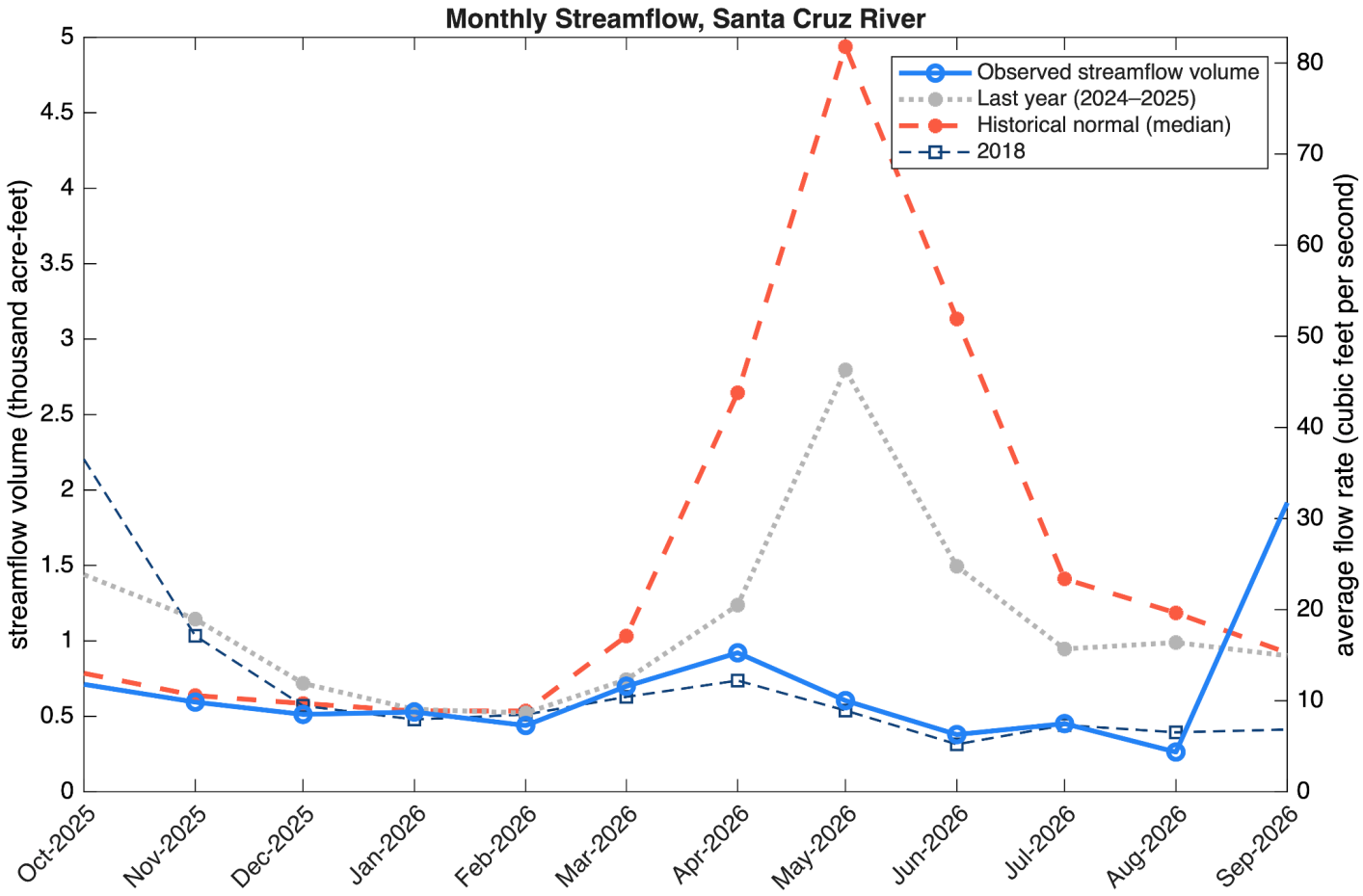



**Santa Cruz streamflow was below normal in early September, but rose above normal in the latter half of September**, with daily-average flow rates peaking near 350 cubic feet per second (cfs) on September 30th—which is more than three times the flow rates that normally occur during the spring runoff peak. Instantaneous flow rates during this flood event, and others in September, were higher than the daily averages—over 1,200 cfs on the morning of September 29th.

https://waterdata.usgs.gov/monitoring-location/USGS-08291000/#dataTypeId=continuous-00060-0&period=P365D&showMedian=true&showFieldMeasurements=true

## Monthly Streamflow Volume

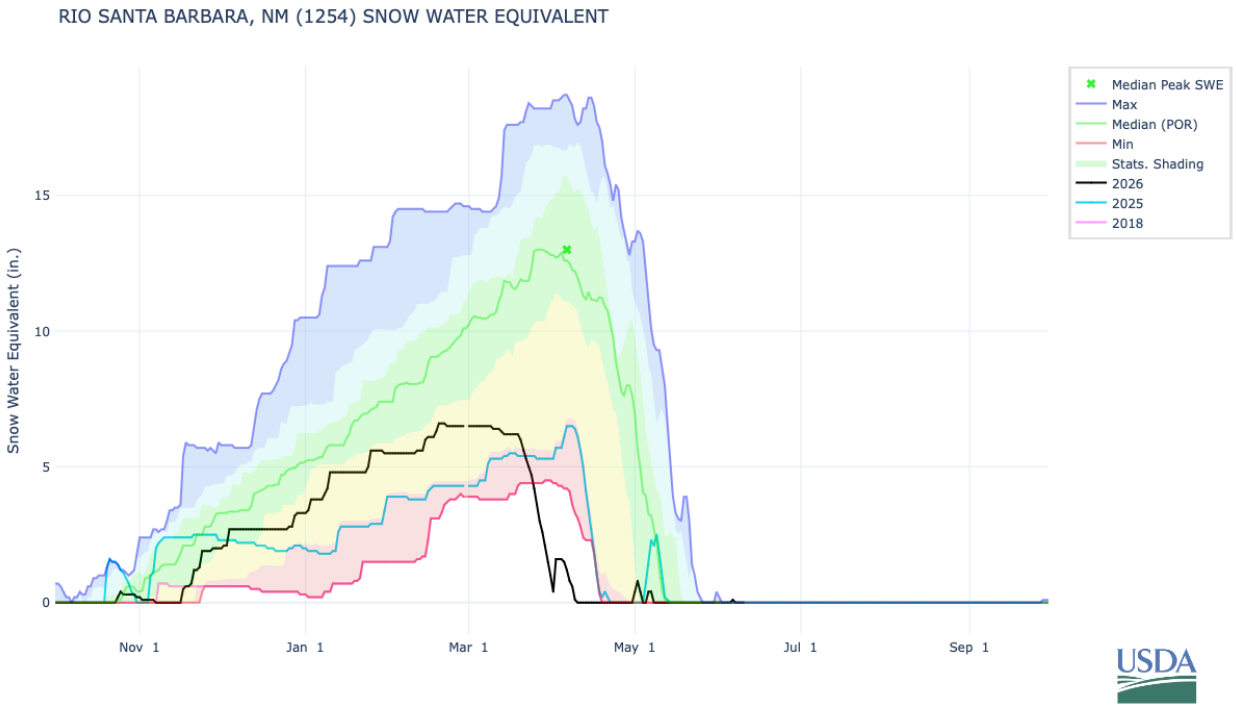
*In the plot below **this year's streamflow volume for each month of the water year is represented by the blue line** and is compared to the **historical median streamflow volume (red line)**—the normal streamflow volume for each month. Streamflow volume is the total amount of water that has moved past a point over a given duration*




**September monthly-total streamflow was more than double normal September volume**. But the surplus volume from September—about 1,000 acre-feet—is small compared to the over-9,000 cfs combined deficit of April–August.

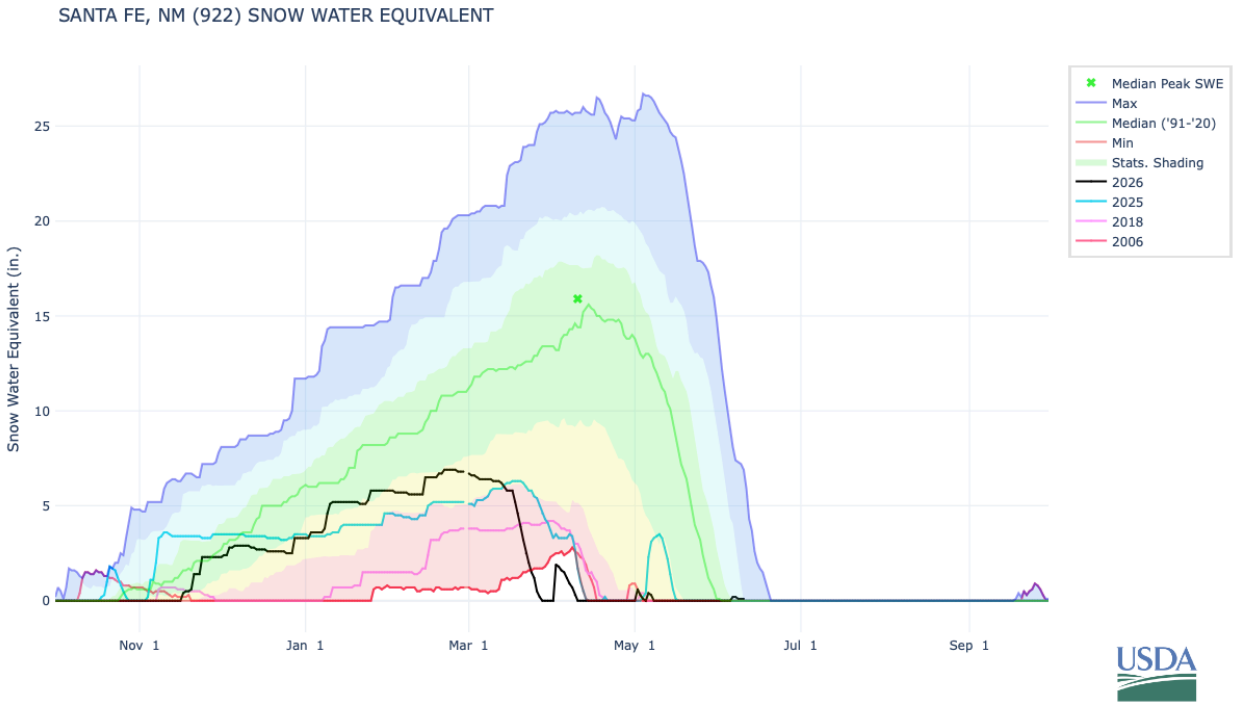
# Snow (Snow Water Equivalent)

*Rio Santa Barbara is the closest SNOTEL site to Santa Cruz. Winter snowpack is the leading factor determining streamflow and surface water availability; it provides useful context for how much water will be available long after it has melted. The plot below shows snow water equivalent (SWE) over the course of the water year (beginning in October), and how it compares to the range of values for daily SWE for all years in the record of observations—from the* ***record minimum (red line)*** *to the* ***record maximum (dark blue line)****. The* ***green line shows the median, or normal, accumulated precipitation,*** *and values falling within the green shading are considered near normal.*




https://nwcc-apps.sc.egov.usda.gov/awdb/site-plots/POR/WTEQ/NM/Rio%20Santa%20Barbara.html?state=NM

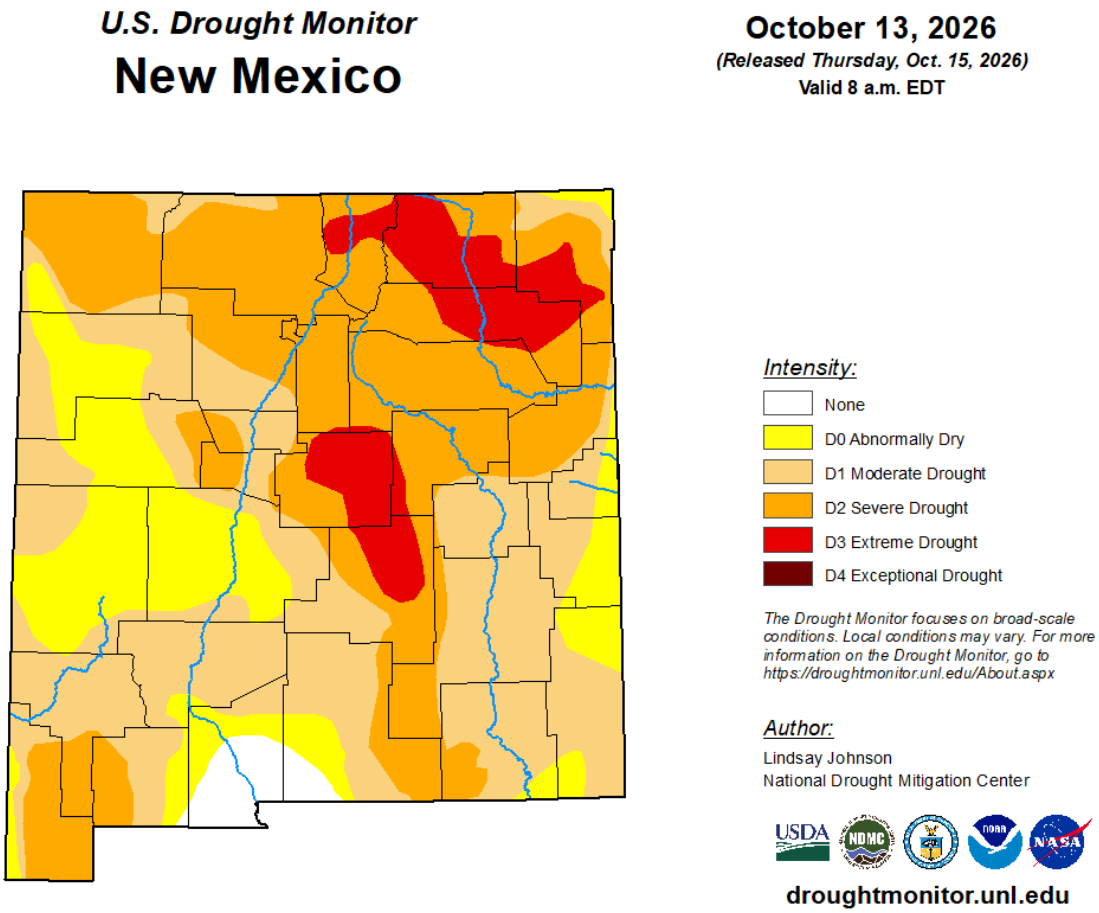
**This past winter's snowpack was below normal, and melted earlier than in any past years on record at the Rio Santa Barbara SNOTEL site**. Peak SWE was similar to in 2025, but the date of peak SWE this year (February 21) was over a month earlier than in 2025, when SWE peaked on April 8. 2018 had the lowest snowpack at Rio Santa Barbara, but melting occurred later than this year.




The Santa Fe SNOTEL station record is longer than the record at Rio Santa Barbara; the lowest snowpack on record at the Santa Fe SNOTEL station was in 2006, with less than one-half of this year's peak SWE.

# Drought Status

*The Drought Monitor classifies drought status by incorporating information from relevant data sources, including precipitation, temperature, soil moisture, surface water flows, groundwater levels, vegetation greenness, and local insights from field observations of experts.*

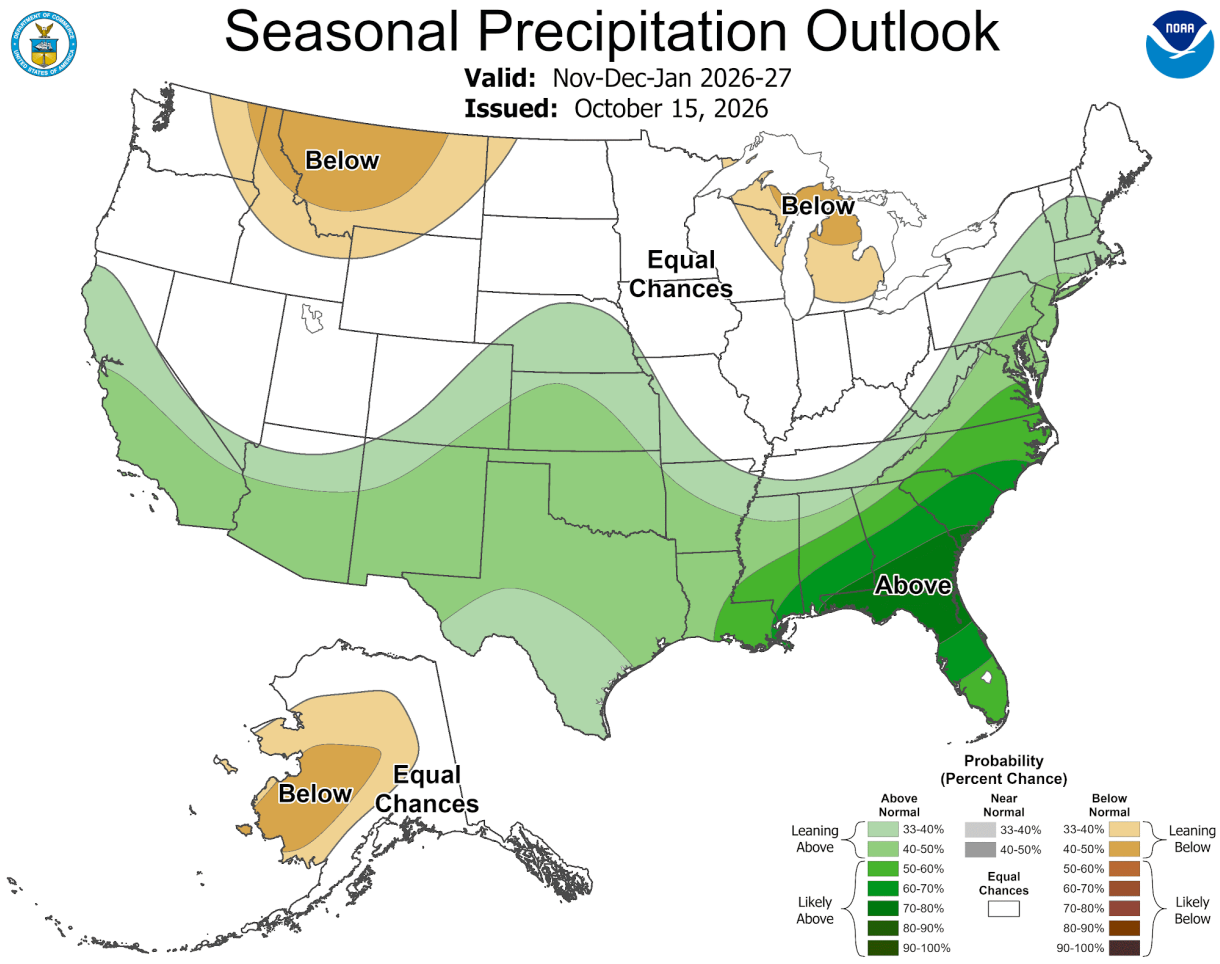



https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?NM

As of early October, much of the Santa Cruz region was considered to be in **severe drought (D2)**—an improvement of drought conditions compared to the previous month, when drought in the Santa Cruz region was classified as exceptional, the highest category of drought intensity. Severe (D2) drought corresponds to conditions that historically occurred on average once every 10–20 years.

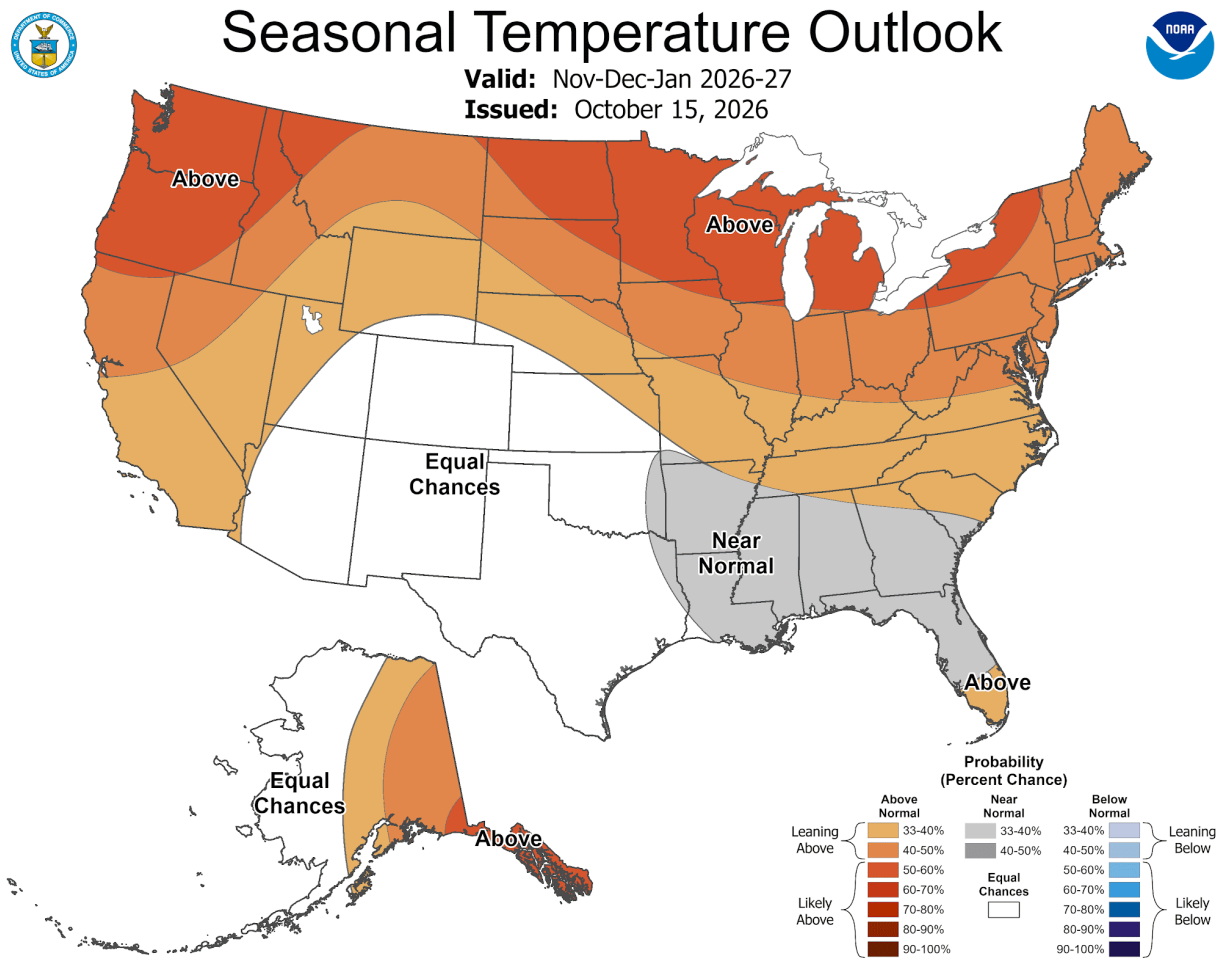
# Seasonal Outlook

*NOAA Climate Prediction Center (CPC) produces seasonal forecasts for different time scales (one week to 3-month), and a range of lead-times (Day 8-14 to next year). The seasonal climate outlooks are not predictions for the upcoming months, but are estimates for the probability of the precipitation or temperature falling within the top, middle, or bottom third of the historical climate record for a given location.*




https://www.cpc.ncep.noaa.gov/products/forecasts/month_to_season_outlooks.php

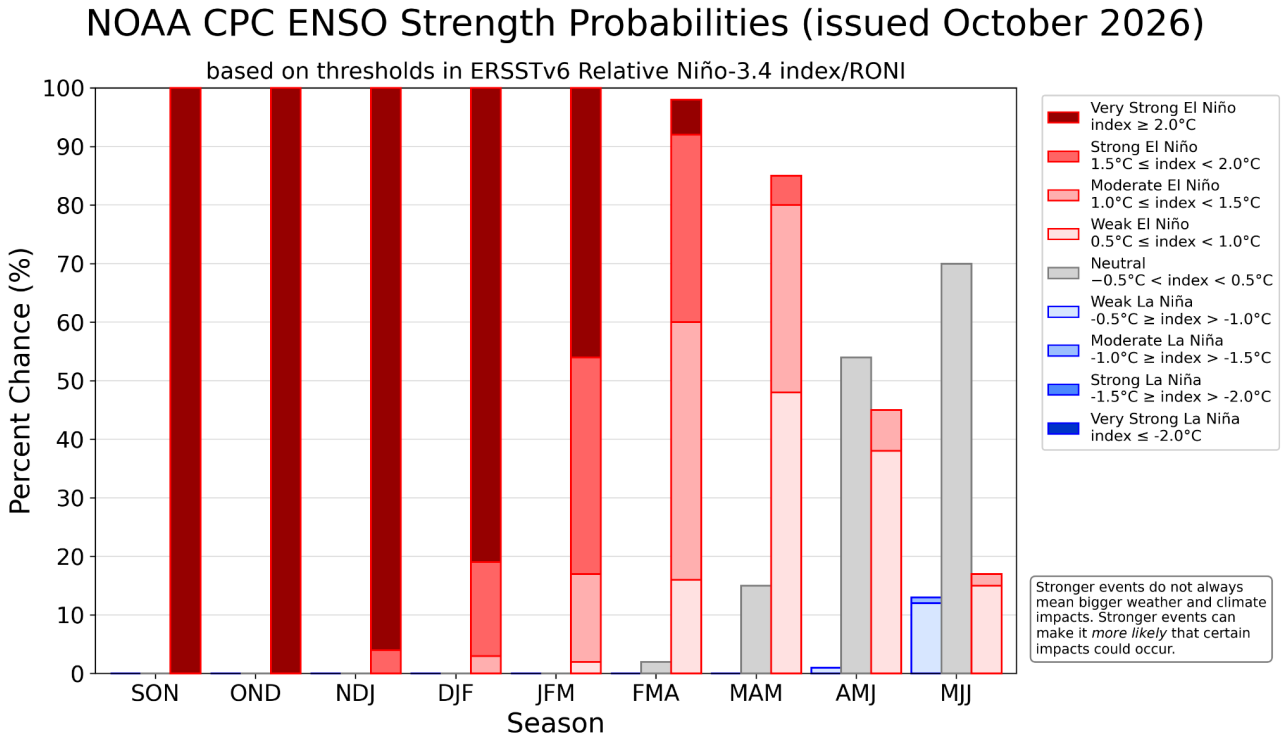
**The seasonal precipitation forecast for November–January indicates chances lean toward above-normal precipitation for the Santa Cruz region** (40–50% chance precipitation totals will rank in the upper one-third of records for the season).




The November–January seasonal temperature forecast **indicates equal chances of temperatures averaging above normal, below normal, or near normal** for the three-month season.

# ENSO (Forecast for Next Season)

*The El Niño-Southern Oscillation (ENSO) is relevant to the climate of the Southwest because it consistently affects cool-season (fall, winter, spring) climate;* ***El Niño*** *typically means wetter and cooler conditions during fall, winter, and spring;* ***La Niña*** *typically means dry and warmer conditions during that season.* ***"ENSO-neutral"*** *refers to conditions somewhere in-between La Niña or El Niño, and typically means we have less indication of which way seasonal climate will end up going. The months of the year are shown on the horizontal axis of the map in groups of three (i.e., DJF = December, January, February).*



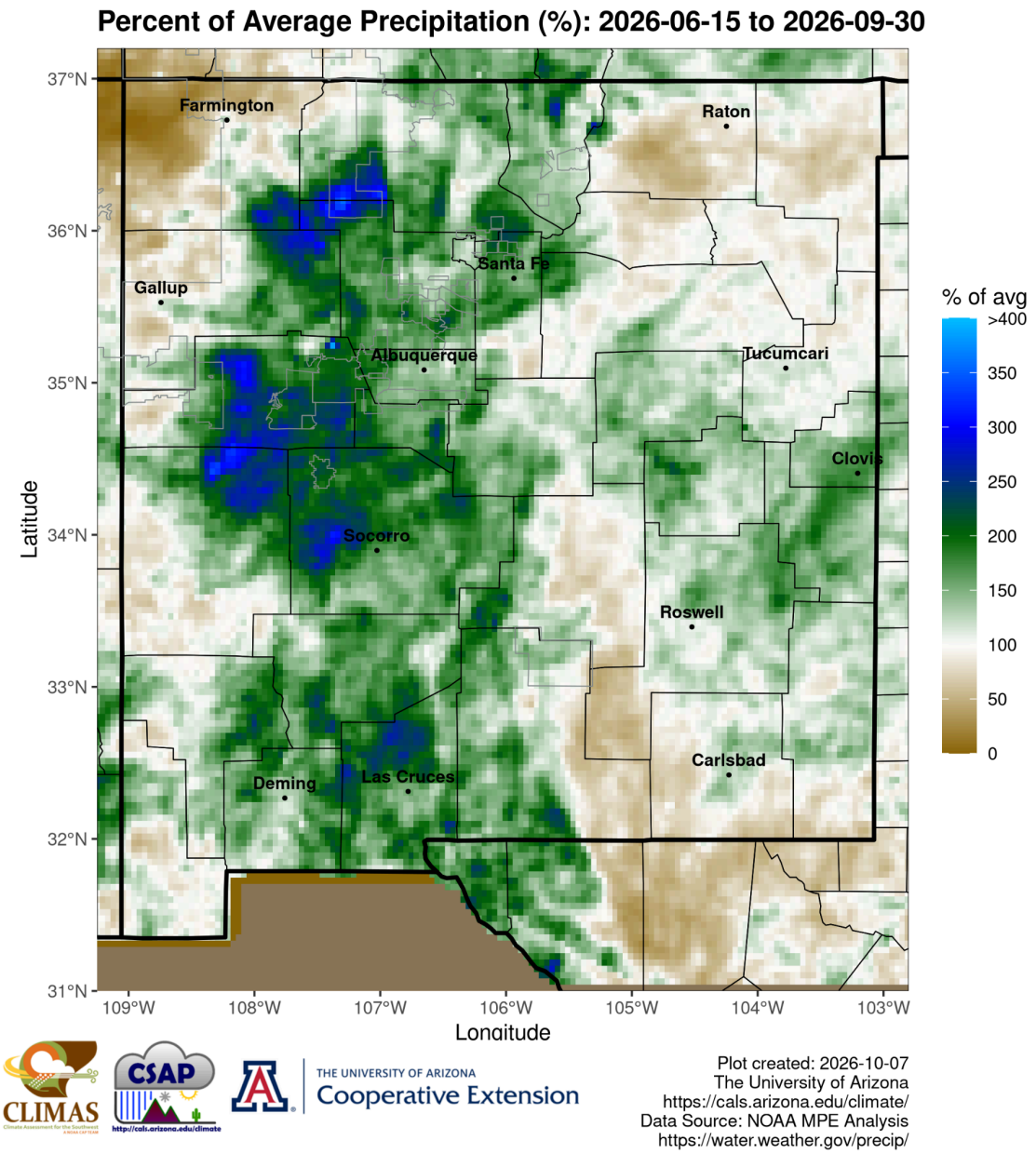

https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.shtml

Forecast models are indicating **El Niño** conditions are **almost certain to persist through fall and winter, into the coming spring**. Greater than 95% chance probabilities of El Niño conditions are indicated for 3-month seasonal forecast windows for September–November (SON), through to February–March (FMA).

Models are also indicating very likely chances this El Niño event will be a "Very Strong El Niño", which is the most extreme category of the four levels of classification applied to El Niño events. Very Strong El Niño conditions are most likely during the September–November season through the November–January season, with over 95% chance probability, and may persist until February–April. A stronger El Niño historically corresponds to greater chances of above-normal precipitation in the Southwest, fall–spring.

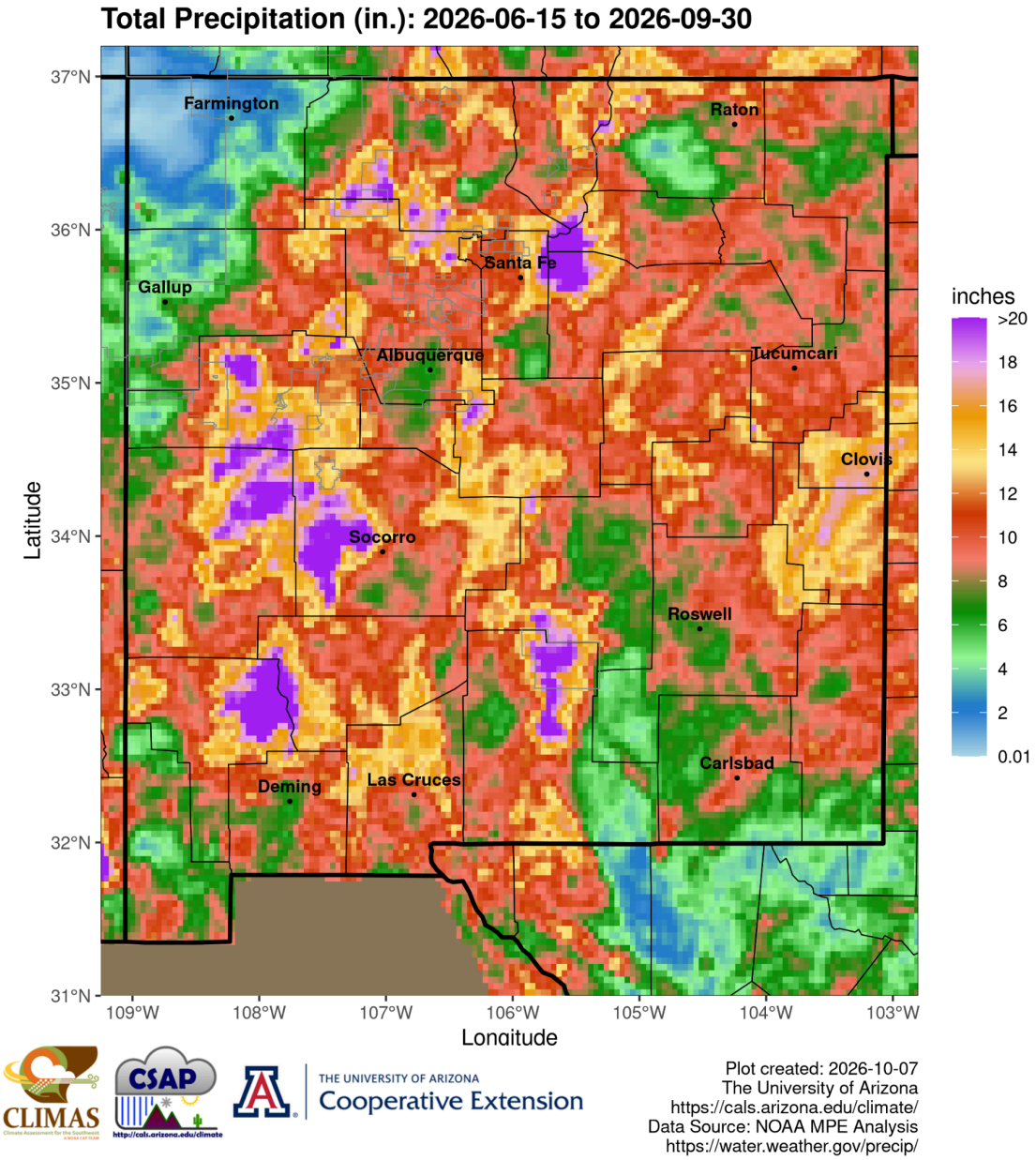
# Monsoon

*The map below from [University of Arizona] shows monsoon season (June 15–September 30) precipitation as a percentage compared to historical average monsoon season total.*



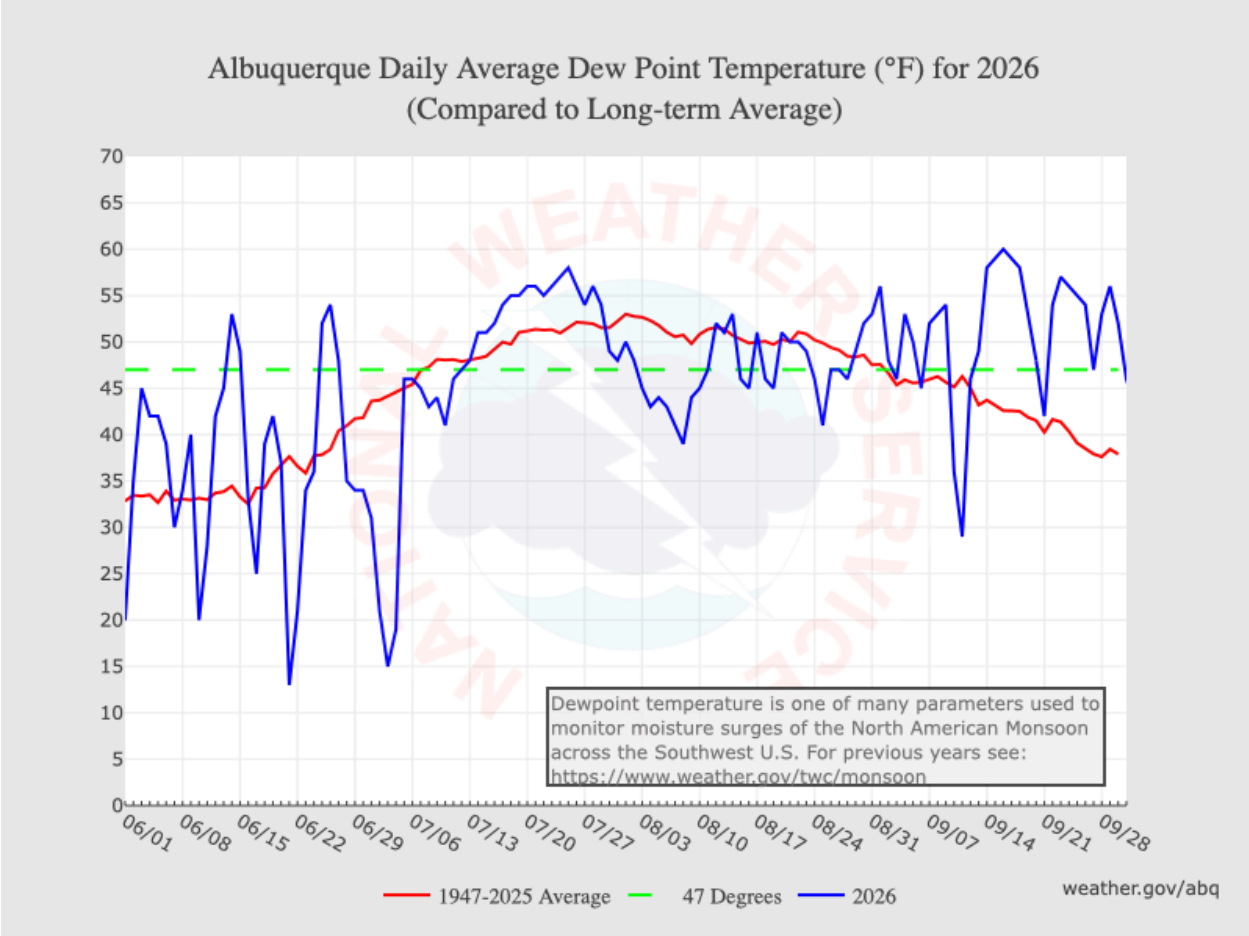

Precipitation totals for the monsoon season, June 15–September 30, were above average across the Santa Cruz region, in part because of the contribution of late-September extreme rainfall events.

*The map below from University of Arizona shows monsoon season (June 15–September 30) precipitation totals.*




Monsoon season precipitation totals for areas in the Santa Cruz region range from around 10 inches in the lower parts of the Santa Cruz region, to over 20 inches in some higher elevation locations.

*Dew point temperature is a useful measure of atmospheric moisture during the Monsoon season. The chart below shows this season's daily dew point temperature observations at Albuquerque compared to the long-term average daily dew point temperature. Also highlighted is the 47°F dew point temperature threshold, which serves as a good rule-of-thumb reference level for moisture levels sufficient to support widespread thunderstorms.*




**Moisture levels were well above the "monsoon baseline" 47° F daily-average dewpoint temperature most days in September, and were especially high during the latter half of the month.**

**Thank you for reading the Santa Cruz Climate Bulletin - please send any general feedback for questions to Steph (smladinich@ou.edu).**

# Background on the Santa Cruz Climate Bulletin

Two key decisions targeted here are:
1) Information and context supporting the decisions of the SCID board and to increase preparedness for weather events and changing patterns (an additional tool in the SCID tool box).
2) help inform parciantes for their short and long-term planting and irrigation strategies and the regional acequia association on watershed health planning and potential policy development. We also aspire to create a system where we can inform mayordomos/as for flood response actions, e.g. when to close head gates or be aware of potential flooding occurrences.

Our plan is to share this report seasonally. *We request your ongoing feedback* on the relevant questions, decision factors, clarity of explanations we are offering, and any other feedback that could help improve this report.

Both the relevance and limitations of this report were highlighted on August 29, 2025 when a massive cloud burst dumped approximately 1.25 inches of hail and rain over the course of an hour in our watershed, creating damaging and dangerous flooding in our communities. This weather was not in the forecast. This report captures trends, patterns and predicted weather. We hope that creating more conversations and awareness around changing and unpredictable patterns will enable all of us in our basin to be better equipped to adapt and respond to changing conditions. We will create additional avenues to continue sharing these strategies.

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For feedback / requested revisions to report:

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For support with adaptation strategies: Serafina Lombardi, NMAA

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For questions about management decisions in the basin: Ron Gallegos, SCID

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For questions about watershed planning: Don Bustos, Greenroots Institute, Santa Cruz Land Grant and the Rio Quemado, Rio en Medio, Rio Frijoles, Rio Santa Cruz Stream Systems Acequia Association

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