

Santa Fe National Forest Climate Report: September 2026

Highlights

- The current average 3-month (July-September) Standardized Precipitation Index (SPI) for Santa Fe National Forest is **0.77** (Near Normal).
- Average July-September precipitation was 10.11 inches, which was **+1.72 inches** different from the long-term average. This value ranks 27th out of 132 years in total precipitation (Rank 1 is the wettest year).
- Average July-September temperature was 66.2 degrees F, which was **+4.9 degrees F** different from the long-term average. This value ranks 1st out of 132 years in average temperature (Rank 1 is the warmest year).
- The 1-month outlook for October predicts **equal chances of above, below or normal precipitation** and a **33-40% chance of warmer-than-average temperatures** . The 3-month seasonal outlook for October-December predicts a **40-50% chance of wetter-than-average precipitation** and **equal chances of above, below or normal temperatures** . (More information at [NOAA Climate Prediction Center](#)).

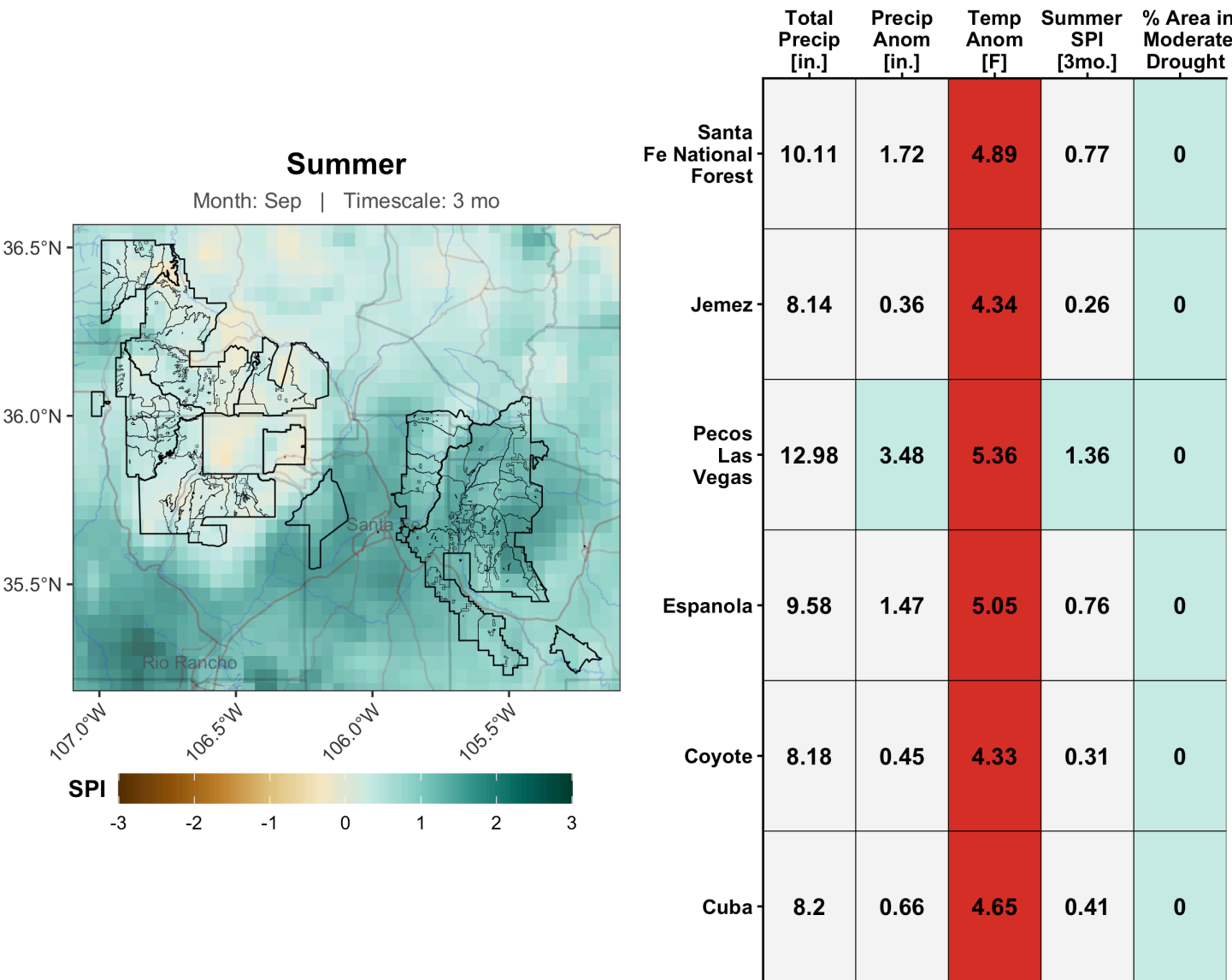


Figure 1: [Left] Santa Fe National Forest Standardized Precipitation Index (SPI) values for Summer 2026 (September 3mo. timescale). [Right] Summary climate statistics for Summer 2026 (July - September).

Seasonal Progression Summary

This section contains seasonal drought information for the Santa Fe National Forest. Season lengths are based on historical climatology and typical land management schedules (see *Climatology and Trends* section). **Season lengths for the Santa Fe National Forest are: Winter (Jan-Mar); Spring (Apr-Jun); Summer (Jul-Sep); Fall (Oct-Dec).** Note: Current season statistics may be partial if season is in progress. Summer 2026 values are currently summarized from Jul-Sep.

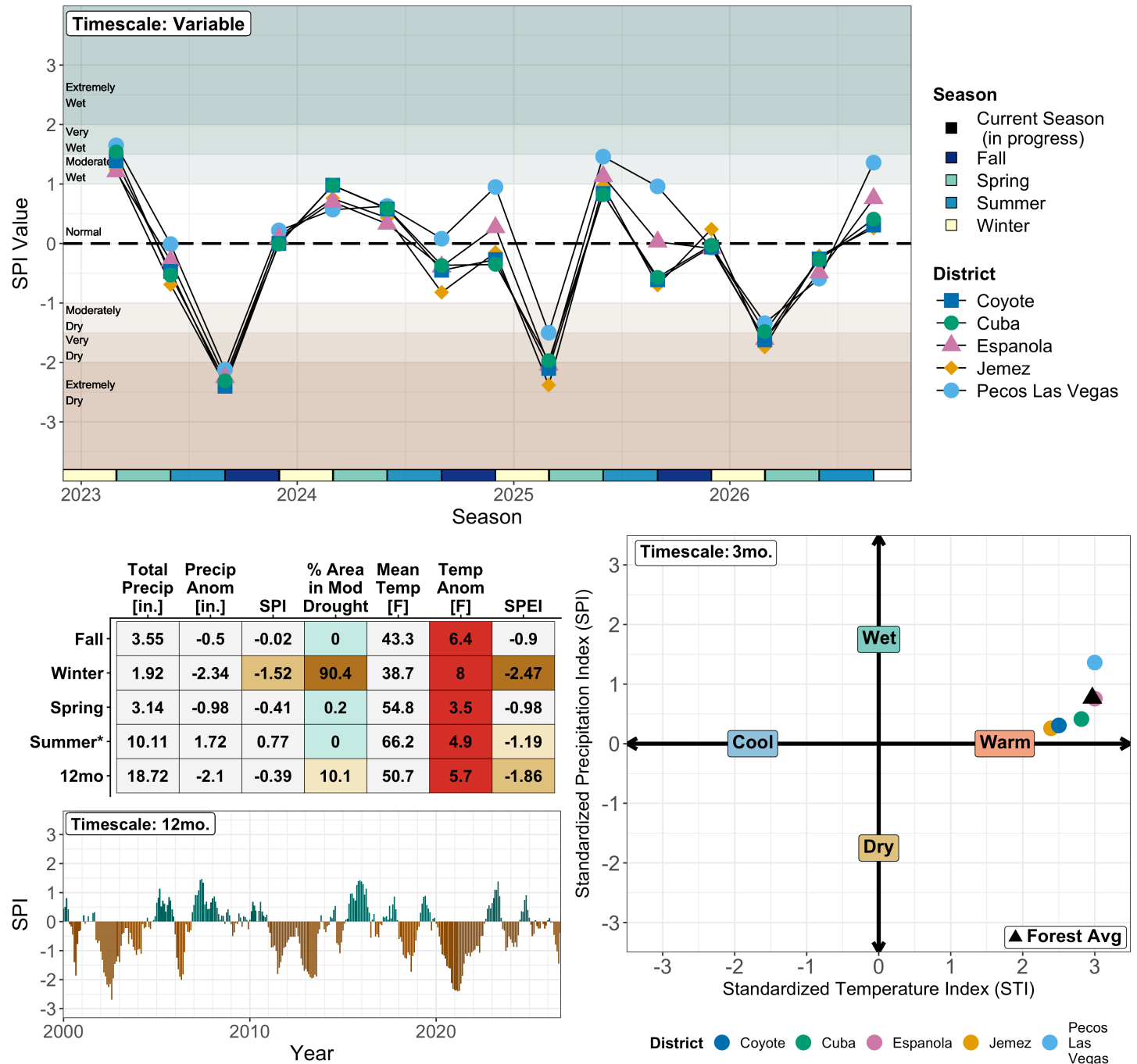


Figure 2: [Top] Variable-timescale seasonal SPI time series from **2023-2026**. Displayed values represent the final SPI value for each season at a timescale equal to the defined season length. [Center-Left] Seasonal and 12-month climate statistics. Asterisk indicates current season. [Bottom-Left] 12mo. SPI time series from **January 2000 - September 2026**. [Bottom-Right] Drought classification quadrant showing standardized precipitation (SPI) vs standardized temperature (STI).

Temperature Impacts on Drought

This section explores the impacts of temperature on drought development for different time length intervals. The drought quadrant in the top-left shows the relationship between the Standardized Precipitation Index (SPI) and Standardized Temperature Index (STI) at a 12-month timescale for the entire Forest and at each District. The table in the bottom-left shows precipitation and temperature-based climate statistics at 3-, 6-, and 12-month timescales. Time series plots on the right show SPI and Standardized Precipitation-Evapotranspiration Index (SPEI) values at 3-, 6-, and 12-month timescales. Note – the Hargreaves method is used to estimate potential evapotranspiration for the SPEI calculation.

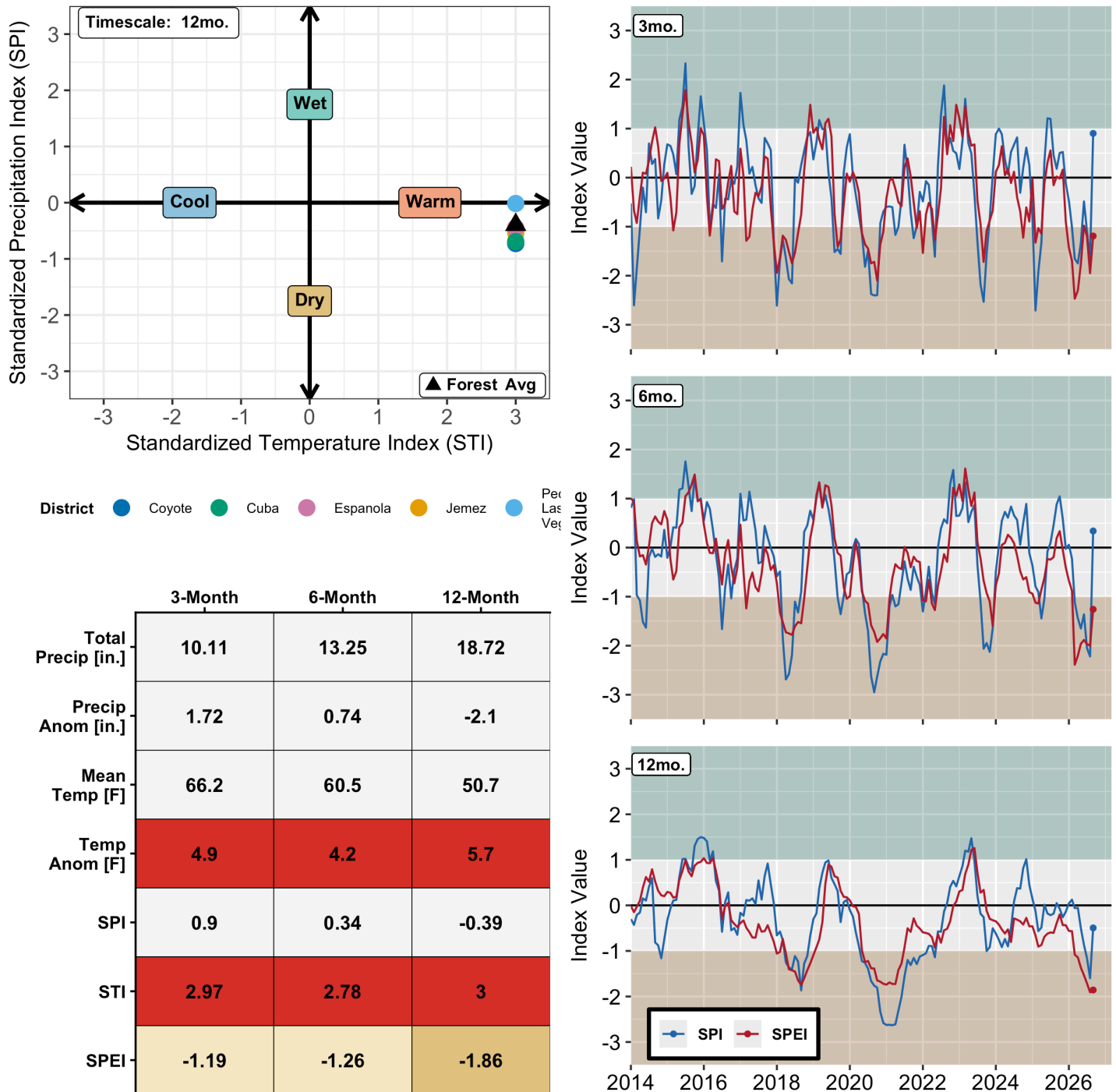
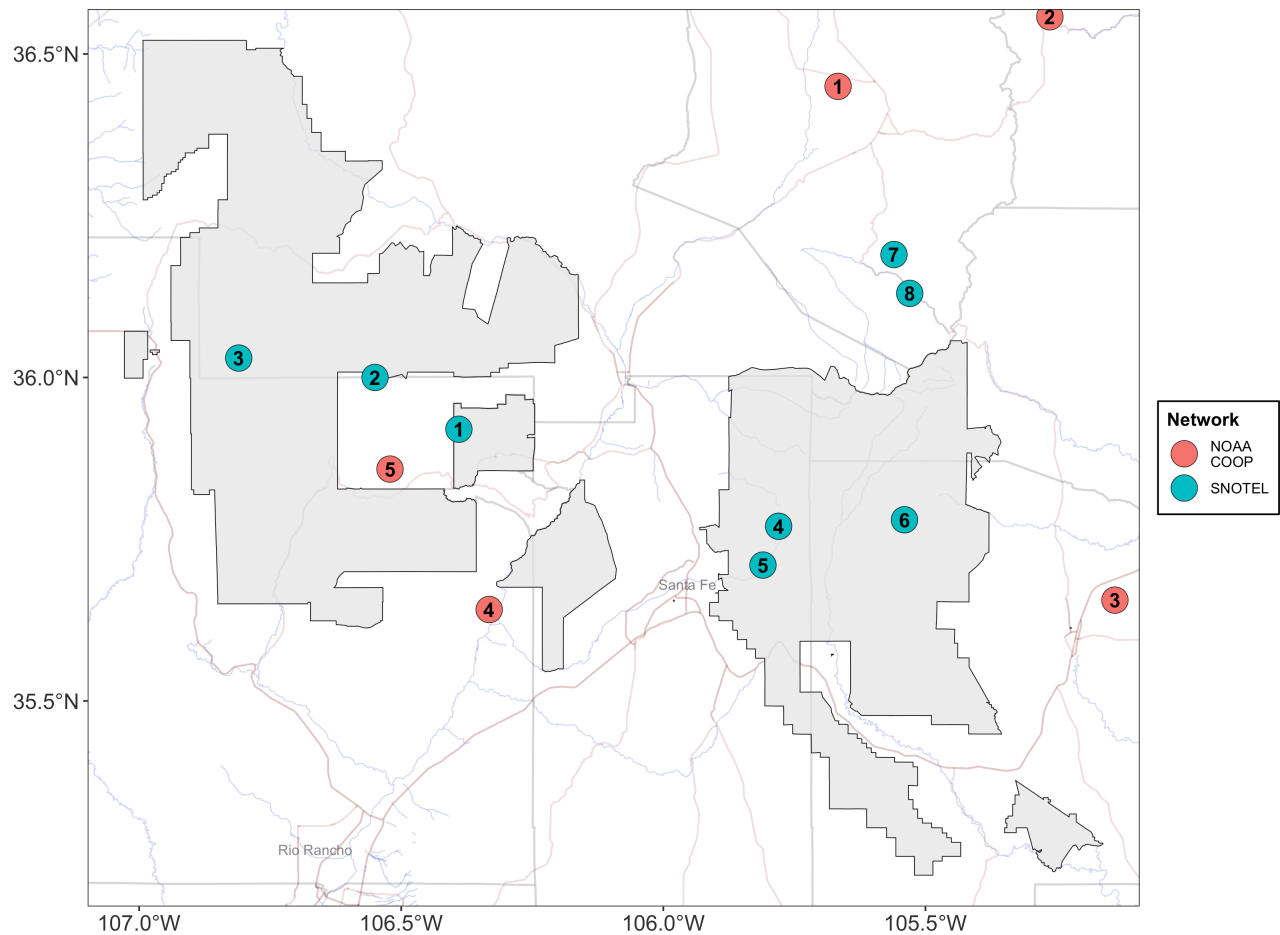


Figure 3: [Top-Left] Drought classification quadrant for the 12-month SPI and STI (Standardized Temperature Index). [Bottom-Left] Table showing 3-, 6-, and 12-month climate statistics for the Santa Fe National Forest. [Right] Time series plots of the 3-, 6-, and 12-month SPI and SPEI.

Station Climate Summaries

Summaries from climate stations with relatively long periods of record, minimal missing data (<10% of days), and within the area boundary are presented in the following tables as reference locations. These stations are a select subset of stations that contribute to the gridded climate maps. Red points on map indicate locations of NOAA COOP stations and blue points locations of SNOTEL stations (if available).



	NOAA COOP Station	Elev (ft)	Anomaly Baseline	Total Precip (in)	Precip Anom (in)	Precip Days	Total Snow (in)	Avg Temp (F)	Temp Anom (F)	Freeze Days
1	Taos Municipal Ap	7091	2018-2025							
2	Eagle Nest	8280	1991-2020	8.96	1.86	34	0	62	4.23	2
3	Las Vegas Municipal Ap	6870	1991-2020	10.43	2.04	32		70	3.69	0
4	Cochiti Dam	5560	1975-2025							
5	Los Alamos 13 w	8716	1991-2020	10.61	0.47	46		60	3.66	2

Figure 4: [Top] Map of NOAA COOP and SNOTEL station(s) located within the report area boundary. [Bottom] Table of NOAA COOP station statistics from 2026-07-01 to 2026-09-30.

Station Climate Summaries (continued)

Summaries from climate stations with relatively long periods of record, minimal missing data (<10% of days), and within the area boundary are presented in the following tables as reference locations. These stations are a select subset of stations that contribute to the gridded climate maps. Red points on map indicate locations of NOAA COOP stations and blue points locations of SNOTEL stations (if available).

	SNOTEL Station	Elev (ft)	POR	Max SWE (in)	Max SWE Anom (in)	Total Precip (in)	Precip Anom (in)
1	Quemazon	9501	1979-2026	0	-0.01	14.4	4.27
2	Garita Peak	10098	2016-2026	0	0	10.3	3.49
3	Vacas Locas	9350	2001-2026	0	-0.03	10.7	3.4
4	Santa Fe	11480	1996-2026	0	-0.06	15.3	4.23
5	Elk Cabin	8219	1996-2026	0.2	0.19	15.9	6.13
6	Wesner Springs	11109	1988-2026	0	-0.04	17.9	4.86
7	Gallegos Peak	9459	1979-2026	0	0	11	2.88
8	Tres Ritos	8740	2006-2026	0	-0.03	10.3	2.72

Figure 5: Table of SNOTEL station statistics from 2026-07-01 to 2026-09-30.

NASA SPoRT Soil Moisture Estimates

Modeled soil moisture estimates are provided by the NASA Short-term Prediction Research and Transition Center. This program uses a land surface model to integrate surface weather conditions (e.g. precipitation, temperature, wind, etc.) with surface and soil properties like vegetation cover, soil depth and type to track and make near real-time estimates of soil moisture on a 3km by 3km grid. This map displays how unusually wet or dry the relative soil moisture (based on local soil properties) is for the integrated amount from the surface to 2 meters deep. More information can be found at: <https://weather.ndc.nasa.gov/sport/modeling/lis.html>

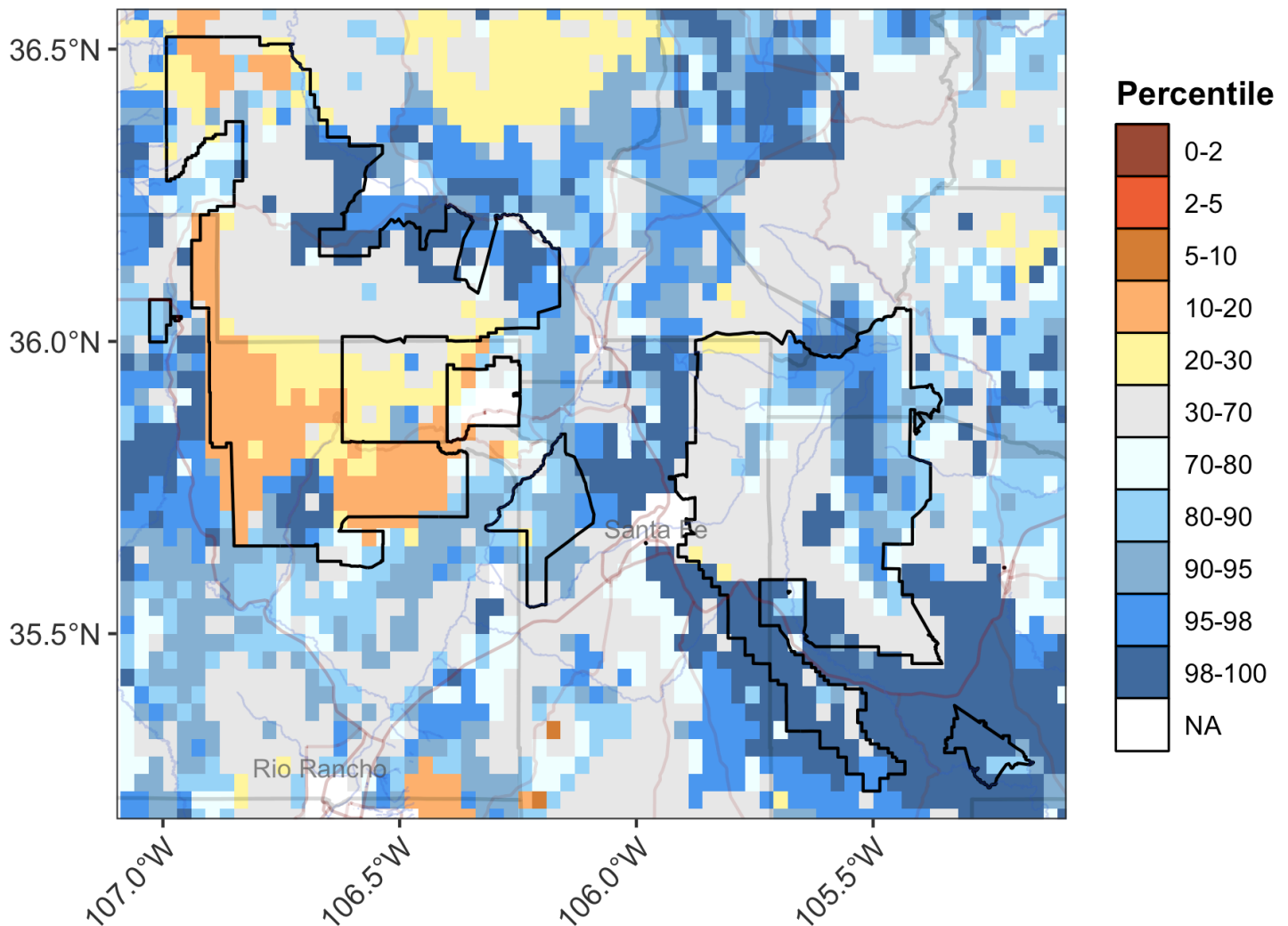


Figure 6: SPoRT integrated 0-2m relative soil moisture estimates for the Santa Fe National Forest. Data valid through 09-30-2026.

Climatology and Trends

This section shows local climatology and trends for the Santa Fe National Forest. Evaluating local climatology is important for accurately defining an area's season lengths and understanding how local climate has changed over time. By observing historical monthly average precipitation and temperature, along with long-term trend analysis, an area's season lengths can be more accurately determined outside of traditional definitions. These more climatologically-aligned seasons can be used to better summarize climate statistics and portray season-to-season changes. Using this methodology can help land managers more effectively manage resources, aid decision making, and be better prepared for extreme weather events.

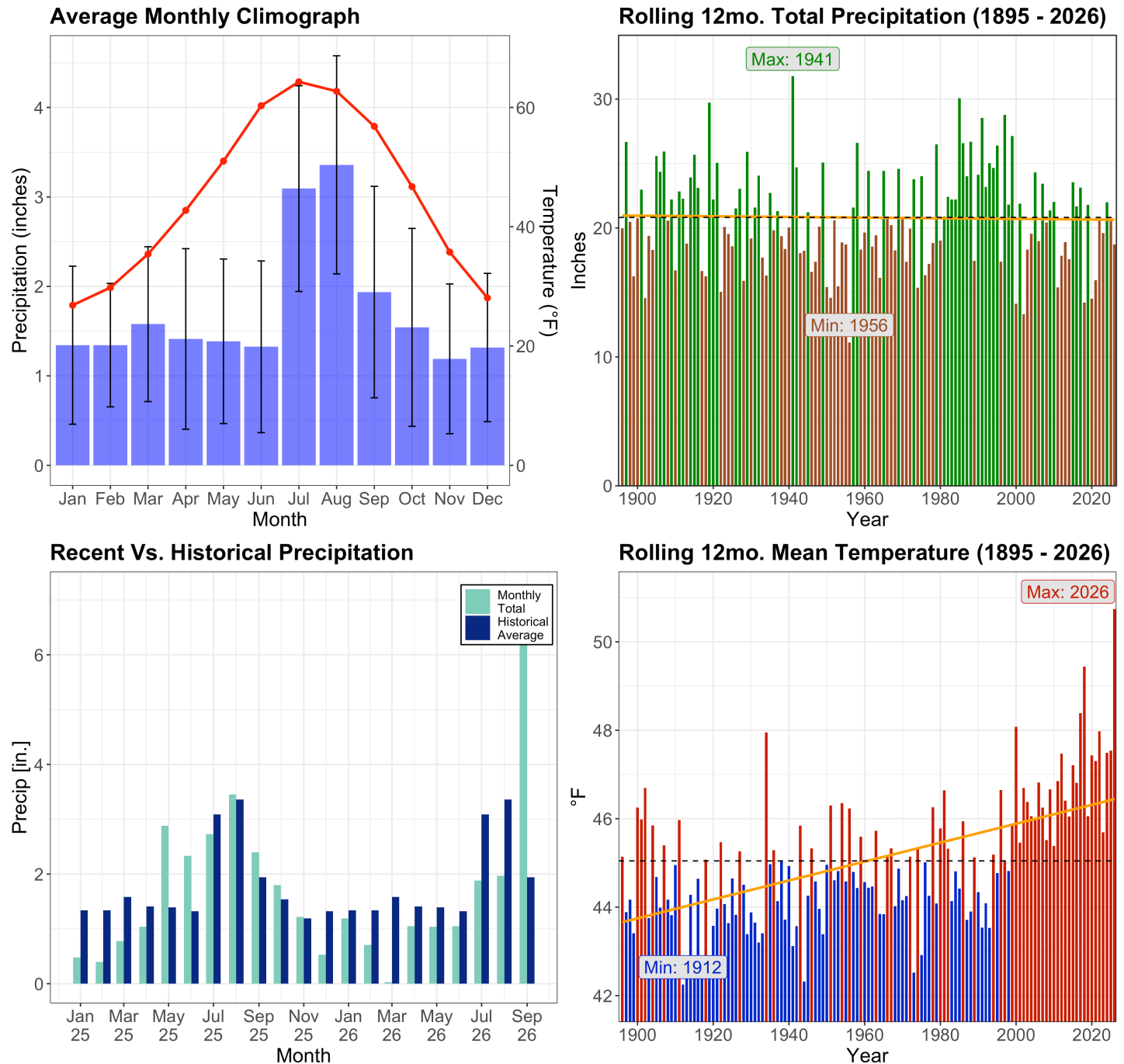


Figure 7: [Top-Left] Local climograph showing monthly average precipitation and temperature (1895 – 2026). Precipitation error bars represent the range of 1 standard deviation based on the full historical record of data for each month. [Bottom-Left] Previous 12-month precipitation totals compared to the monthly average. 12-month rolling total precipitation [Top-Right] and mean temperature [Bottom-Right] from the previous 12-months (October - September) from 1895 - 2026. The long-term trend line (yellow), and minimum and maximum years are highlighted.

Understanding the Standardized Precipitation Index (SPI)

The Standardized Precipitation Index (SPI) is a meteorological drought index that describes how unusual precipitation has been relative to the historical record. To calculate the SPI, precipitation totals are compared with the long-term record for the same location and time of year. Because precipitation typically does not follow a symmetric, bell-shaped distribution, the historical precipitation values are first fitted to an appropriate statistical probability distribution and then transformed into standardized values. The resulting SPI values indicate how unusually wet or dry current precipitation conditions are compared with the historical record. Positive SPI values represent wetter-than-normal conditions, while negative values represent drier-than-normal conditions. Values near zero are relatively common, while increasingly large positive or negative values represent progressively less common wet or dry conditions (Table 1).

Table 1: SPI Drought Categories

SPI Value	SPI Category
≥ 2	Extremely Wet
1.5 to 1.99	Very Wet
1 to 1.49	Moderately Wet
-0.99 to 0.99	Near Average
-1 to -1.49	Moderately Dry
-1.5 to -1.99	Very Dry
≤ -2	Extremely Dry

Note:

Table adapted from <https://drought.unl.edu/Monitoring/SPI/MapInterpretation.aspx>

An important feature of the SPI is that it can be calculated over a variety of monthly timescales, allowing precipitation conditions to be evaluated over both shorter and longer periods. For example, a 3-month SPI compares total precipitation over the most recent three months with the historical distribution of precipitation for those same three calendar months. Land managers can assess SPI values across multiple timescales to help identify short- and long-term precipitation deficits or surpluses and monitor the development and persistence of drought conditions.

SPI values are calculated using parameters derived from the long-term historical PRISM precipitation record. These parameters describe the historical precipitation distribution and are calculated independently for each PRISM grid cell, calendar month, and SPI timescale. The parameters are pre-calculated and stored so that current precipitation totals can be evaluated relative to the historical record without refitting the historical distribution each month. The parameters are recalculated every two years to incorporate recent observations into the historical record while maintaining a consistent reference framework between updates.

Data Sources and Methods

- **PRISM Climate Data:** The data used in this report is provided by the PRISM (Parameter elevation Regression on Independent Slopes Model) statistical mapping system. This system uses a weighted regression scheme to interpolate station data while accounting complexities like topography and rain shadows. PRISM relies on a high density of stations to account for small variations in temperature and precipitation. Use caution in interpreting fine-scale patterns (or lack thereof) in regions with low station density. More information on PRISM can be found at prism.oregonstate.edu and climatedataguide.ucar.edu.
- **Climate Stations:** Station-level data used in this report consist of [NOAA Global Historical Climatology Network](#) (NOAA-GHCN) stations and USDA NRCS Snow Telemetry sites which include Cooperative Observer sites, Airports, and CoCoRAHS volunteer observations and also [USDA NRCS Snow Telemetry](#) (SNOTEL) sites. NOAA-GHCN stations consist of Cooperative Observer sites, Airports, and CoCoRAHS volunteer precipitation observations. SNOTEL sites are automated stations located in key snow monitoring locations, often in forested locations. NOAA-GHCN data were accessed through the [Regional Climate Center-Applied Climate Information System](#) (RCC-ACIS) and SNOTEL data were downloaded using the 'snotelr' package. Precipitation and temperature anomalies for NOAA-GHCN stations are calculated relative to a historical anomaly baseline. The 1991–2020 period is used when at least 15 years of valid station observations are available within that period. For stations without sufficient

observations during 1991–2020, the available station period of record is used as the baseline after screening for missing data. The anomaly baseline used for each station is shown in the station summary table.

- **Table Color Coding:** Colors provide a quick visual indication of how unusual current precipitation and temperature conditions are compared with the historical record. Neutral gray indicates relatively typical conditions, while increasingly darker colors indicate progressively more unusual conditions. Brown/teal shading represents drier/wetter conditions, and blue/red shading represents cooler/warmer conditions. SPI, SPEI, and STI use standardized index thresholds of ± 0.99 , ± 1.49 , and ± 1.99 , corresponding approximately to 1, 1.5, and 2 standard deviations from the mean of a normal distribution. Precipitation and temperature anomaly colors are based on historical rank, with thresholds of 15.9%, 6.8%, and 2.3% selected to represent approximately the same levels of statistical rarity. This rank-based approach allows anomaly colors to reflect what is unusual for a specific location and time period rather than relying on fixed anomaly amounts.

Additional Report Information

- This report was generated on October 05, 2026 .
- Current and past climate reports can be found on our [website](#).
- Other climate-related tools can be found [here](#).
- For tutorial videos explaining features and content in this report, see: [Climate Report Tutorial Videos](#).

Contact information

Please direct any questions, comments, or suggestions to:

- Trevor McKellar, Research Scientist (tmckella@arizona.edu)
- Mike Crimmins, Professor and Extension Specialist (crimmins@arizona.edu)

Appendix A

This appendix contains additional climate statistics for area's within the Santa Fe National Forest.

Table 2: Current Drought Conditions

District	Minimum SPI	Mean SPI	Maximum SPI	Total Precip [in.]	Anomaly [in.]
Jemez	-0.16	0.26	0.58	8.14	0.36
Pecos Las Vegas	0.64	1.36	2.12	12.98	3.48
Espanola	-0.16	0.76	1.84	9.58	1.47
Coyote	-0.3	0.31	1.19	8.18	0.45
Cuba	-0.37	0.41	1.22	8.20	0.66

Note:

Santa Fe National Forest SPI and climate statistics for Summer 2026 (July-September). Statistics are calculated based on the average of all PRISM grid cells lying within a District boundary.

Table 3: Area Seasonal SPI and Climate Statistics

District	2026 Summer SPI*	2026 Spring SPI	2025 Winter SPI	2025 Fall SPI	12mo. SPI	2026 Summer Precip [in.]*	2026 Spring Precip [in.]	2025 Winter Precip [in.]	2025 Fall Precip [in.]	12mo. Precip [in.]	12mo. Precip Anom [in.]
Jemez	0.26	-0.21	-1.74	0.24	-0.54	8.14	2.84	1.45	3.78	16.21	-2.39
Pecos Las Vegas	1.36	-0.59	-1.34	-0.07	-0.02	12.98	3.48	2.00	3.51	21.98	-0.85
Espanola	0.76	-0.49	-1.61	-0.08	-0.45	9.58	2.94	1.71	3.26	17.49	-2.33
Coyote	0.31	-0.26	-1.62	-0.06	-0.73	8.18	3.03	2.00	3.56	16.77	-3.12
Cuba	0.41	-0.27	-1.48	-0.03	-0.69	8.2	3.06	2.42	3.81	17.50	-3.34

Note:

Santa Fe National Forest seasonal SPI and climate statistics by District. Asterisk (*) signifies season in progress - currently partial Summer (Jul-Sep). Values are calculated based on the average of all PRISM grid cells lying within a District boundary.

Appendix B

This appendix contains additional 12-month SPI information for the Santa Fe National Forest.

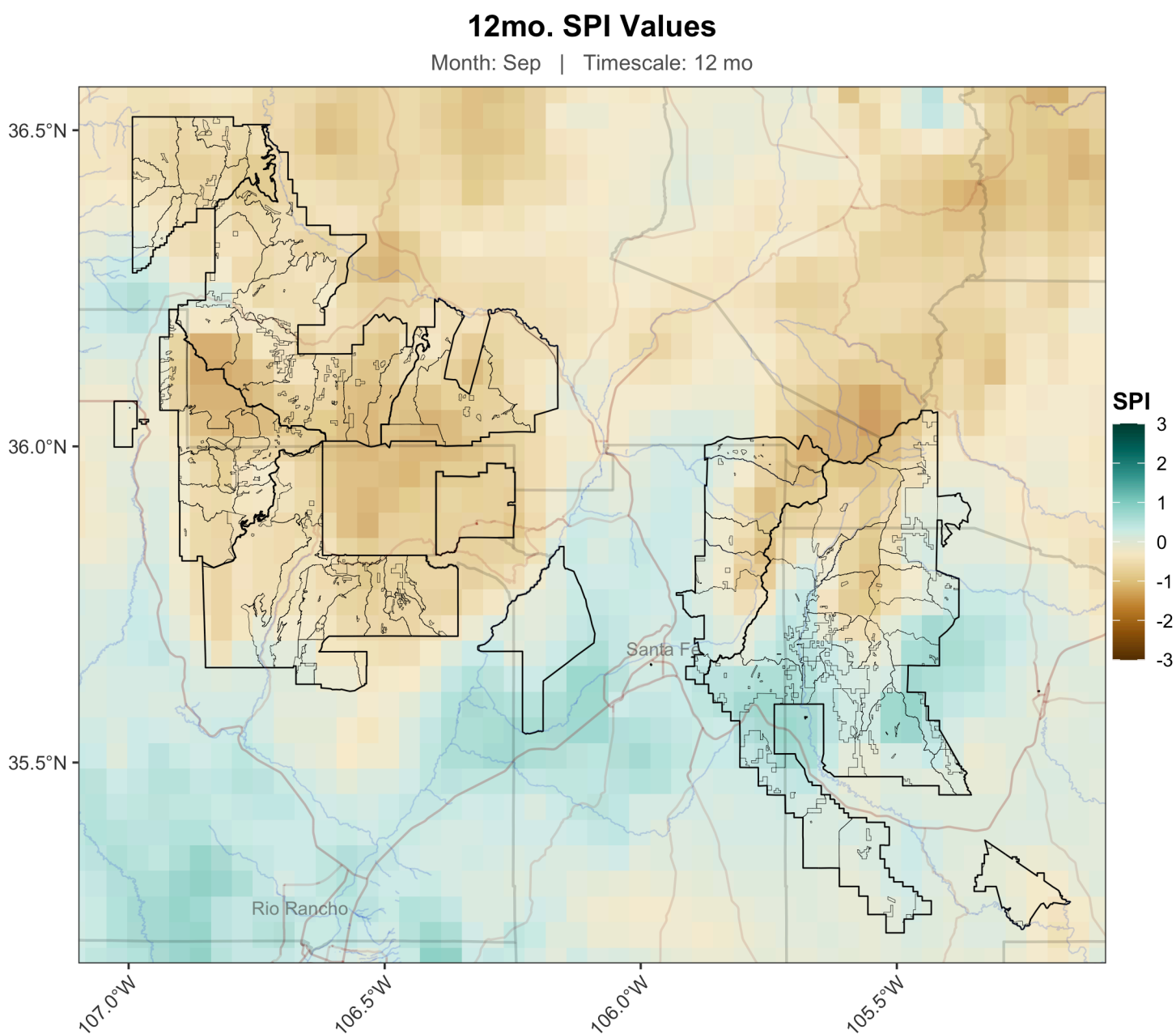


Figure 8: Map of 12-month SPI values for the Santa Fe National Forest.

Appendix C

This appendix shows location ID's for the Santa Fe National Forest.

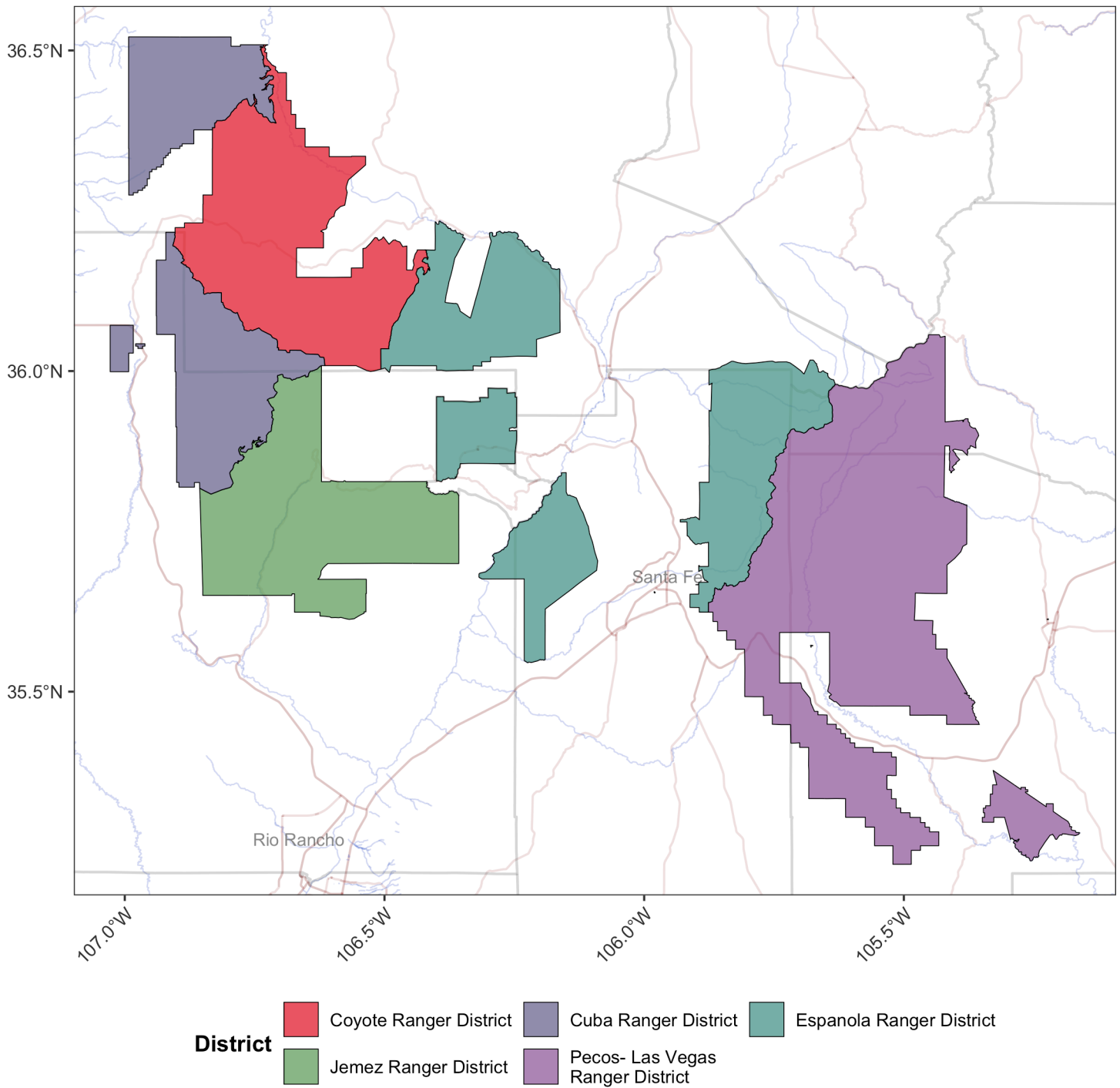


Figure 9: Location ID's for the Santa Fe National Forest.