Incident Summary Page for the 100 Fires Project

Incident Name: Santiago Canyon Fire	**Incident Date & Time:** 09/24/1889
Incident Location: Orange County in Southern California	**Incident Size:** 300,000+ acres
Type of resources involved: Civilians	**# of Fatalities/injuries:** Unknown

Reason this fire was selected for the 100 Fires list:

- Fire is historically significant

Conditions leading up to the event:

A variety of factors combined to make the 1889 fire season particularly dangerous. 1889 was a La Niña year, causing California to be warmer and drier than usual. Less than ½ inch of rain was recorded in the area from March 1889 until the fire's ignition in late September. Ten days before the Santiago Canyon Fire, intense Santa Anna winds, which can reach over 70 miles per hour, further dried the area's fuels. On September 23, the temperature rose to 84 degrees Fahrenheit, continuing to rise until it peaked at 88 degrees on September 26.

Brief description of the event:

The morning of September 24, 1889, Santa Anna winds fanned the flames of a fire that accidentally originated "*in a sheepherder camp*" in Santiago Canyon. It quickly grew out of control, and ran up the side of the mountain within minutes. By the afternoon, volunteers over 15 miles away from the point of ignition had begun plowing firelines to defend the 100,000 acre San Joaquin Ranch. This ranch was to the southeast of the initial fire, and was thus threatened by erratic midday winds, not the predominant northeastern winds. The 50 foot wide fireline succeeded. The night of September 24, witnesses from a mountaintop vantage point reported that the fire progressed at a rate of two miles per hour during a period of "*comparatively light*" wind.

The winds remained intense and predominantly northeastern for three days after the initial ignition, which contributed to the rapid growth of the fire. The fire did not end until the winds subsided and it ran out of fuels. By then, it had burned through both the Santa Ana Mountains and Santa Rosa Mountains.

Other fires occurred across the region at the time of the Santiago Canyon Fire. It has been argued that the Santiago Canyon Fire was in fact a mosaic of smaller fires burning throughout the same area, rather than one megafire, and that the size of the fire was exaggerated. Whether the event was several fires covering a large area or one 300,000 acre fire is largely irrelevant.

Fire behavior factors that were present during the event:

The Santiago Canyon Fire's severity was largely attributed to the reportedly *"hurricane-force"* Santa Anna winds coming from California's Mojave Desert. These winds will sometimes eddy and swirl as they interact with terrain features causing erratic winds flowing in all directions, thus causing fire to spread in a number of directions simultaneously.

According to newspaper accounts, the fire made runs of up to 25 miles per day, exacerbated by steep topography. It was reported to have moved faster than cattle and sheep could run and overtook multiple people driving horses and wagons. In most cases, although the horses suffered fatal burns or burns severe enough to require euthanasia, those driving the wagons survived. Additionally, multiple structures were successfully defended by small groups of homeowners—including one house next to a shed containing *"about three tons of hay*." Although the fire moved quickly and inflicted considerable destruction, it was apparently not so intense as to render structure defense impossible.

Operational lessons available for learning from this incident:

Not applicable

Notable impact or historical significance for the wildland fire service from this incident:

This fire is an early historical example of a major wind-driven chaparral fire occurring in Southern California and may be among the largest chaparral fires in that part of the state.

The National Park Service cites the Peshtigo Fire of 1871, the Santiago Canyon Fire, and the Great Fire or "Big Burn" of 1910 as events that influenced the U.S. Forest Service's embrace of full-suppression policies in the 20th century.

The Santiago Canyon Fire is occasionally cited in debates over fire prevention policy in Southern California, especially in chaparral country, as it occurred before the full-suppression policy was enacted. As with many fires from the Relic Era, much of the debate

centers around the question of whether or not the historical record is reliable. This is a rather difficult question. There is some debate about the size, intensity, and even fuel mixture of the 1889 Santiago Canyon Fire. Although the debate's participants disagree on which records are reliable and how fire history is best studied, they seem to agree that the nature of the fire holds major implications for fire policy in Southern California. The main takeaway here may well be the importance of keeping accurate records and making sure the media doesn't get too excited, because these misunderstandings could have effects long after all witnesses and participants have passed.

Links to more information on this incident:

About: Santiago Canyon Fire (dbpedia.org)

Large, high-intensity fire events in southern California shrublands: debunking the fine-grain age patch model - Keeley - 2009 - Ecological Applications - Wiley Online Library

See Appendix A for a compilation of newspaper reports about the fire, which were instrumental to the creation of this report. https://figshare.com/articles/dataset/Appendix_A_Transcripts_of_newspaper_articles_or_book_sections_describing_large_high-intensity_fires_from_the_19th_century_in_California_counties_from_Santa_Barbara_south_/3514022?backTo=/collections/_/3294140

For an alternative account of the fire, see the following articles. Note that the authors of "Large, high-intensity fire events in southern California shrublands" dedicate considerable space to criticizing this approach to understanding the fire.
EVIDENCE, EXAGGERATION, AND ERROR IN HISTORICAL ACCOUNTS OF CHAPARRAL WILDFIRES IN CALIFORNIA - Goforth - 2007 - Ecological Applications - Wiley Online Library

https://www.ochistoryland.com/1889fire

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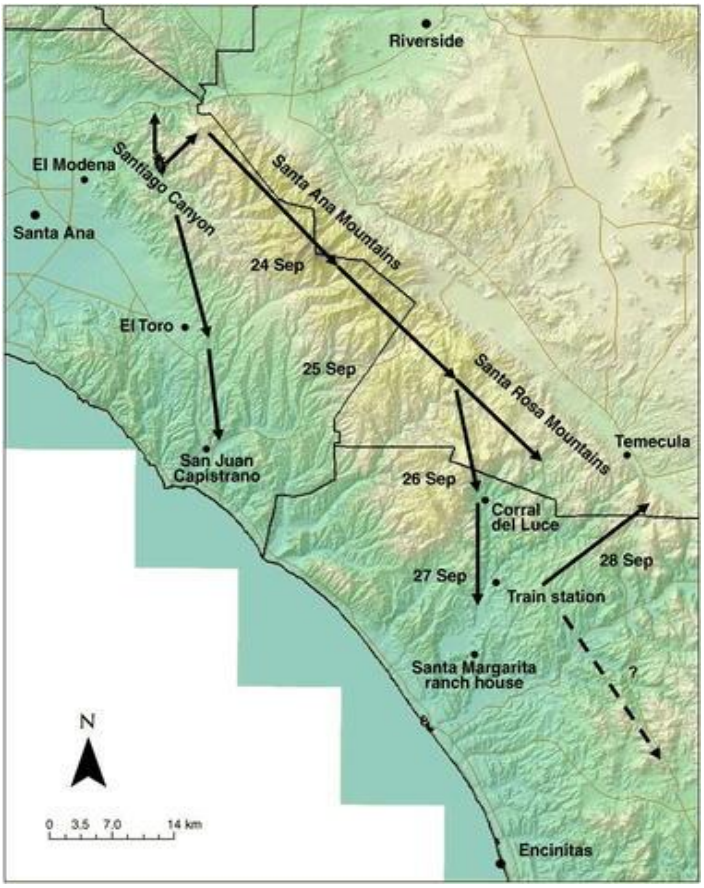

Jon Keeley and Paul Zedler's proposed map of the fire's spread, including landmarks cited in contemporary newspaper accounts.