Incident Summary Page for the 100 Fires Project

Incident Name:	**Incident Date & Time:**
Decker Fire	08/08/1959 @ 18:00
Incident Location: Ortega Highway, 3 miles west of Lake Elsinore Village, Riverside County, California	**Incident Size:** 1391 acres final size
Types of resources involved: US Forest Service Hotshot Crew, tankers, and district personnel California Division of Forestry tankers and inmate crew	**# of Fatalities/injuries:** 6 fatalities / 12+ injuries Unable to verify exact number of injuries from investigation report

Reasons this fire was selected for the 100 Fires list:

- Fire is historically significant
- 3 or more firefighter fatalities by entrapment

Conditions leading up to the event:

On the day of the incident, a group of teenagers were partying in a campground on the Cleveland National Forest. In the late afternoon, a fight broke out and two of the partiers decided to leave. They headed east on the Ortega Highway towards Elsinore. They lost control of their pick-up on a steep, twisting section of the highway and plunged 200 feet over an embankment and burst into flames, igniting the tinder dry brush. The driver died in the accident and the passenger was critically injured but survived.

A passing motorist saw the fire and stopped by the nearest fire station at the top of the grade and reported the vehicle burning in the brush below the highway at approximately 18:00. Within minutes, three US Forest Service units were responding towards the fire, three miles east of their guard station.

The first size up from the US Forest Service tanker (engine) responding to the fire was made through the local lookout to Cleveland Dispatch and was logged at 18:16. All US Forest Service resources approached from the west and stopped on the highway above the accident. The initial attack units attempted to run a hoselay down to the vehicle, search for victims, and stop the downward spread of the fire. When it was apparent that the downward spread could not be contained with this hoselay, all efforts were then concentrated on keeping the fire below the Ortega Highway.

California Division of Forestry (now known as CalFire) resources approached the fire from the Elsinore side with the first tanker taking on the lower, southeast flank of the fire, burning around the Stinson Ranch. Other California Division of Forestry tankers attacked the lower side of the fire.

In 1959 wildland firefighters did not have fire resistant clothing nor fire shelters. The US Forest Service and California Division of Forestry used different radios frequencies and could not communicate by radio. The "10 Standard Firefighting Orders" and "13 Situations That Shout Watch Out" had been implemented only a one year earlier in 1958.

Brief description of the event:

There were three burn-over incidents within the first two hours of fire suppression actions:

The first incident occurred at 18:40. A California Division of Forestry tanker with a Tanker Foreman and 5-man crew pulled into a turnout along a hairpin turn. The Tanker Foreman exited the cab and went over the embankment to get a better look at the fire burning below. Almost immediately he came scrambling back, yelling for the crew to get in the cab and move the truck. Before they could move the truck, the fire burst upon them and engulfed the truck. Two crewmen received serious burns to the arms and hands while three others received lesser injuries. The Tanker Foreman was burned over 85% of his body, he would later succumb to these critical burns.

The second incident occurred at 20:00 in an assembly area (staging) along the Ortega Highway below the fire. The Puerta la Cruz inmate crew were in their 2 ½ ton stake-side truck with a canvas tarp covering the top waiting for an assignment. A California Division of Forestry tanker was parked behind them. The California Division of Forestry Tanker Foremen would later recount "*We heard what sounded like a very loud freight train. It looked like a huge dust devil coming down slope straight towards us. It looked like it was 1000 feet across at the base and was moving fast and it was all fire."* The flames engulfed the Puerta la Cruz crew truck, the tarp was burning, and men were screaming and jumping over the sides and out of the back. They were taking cover under the crew truck and running through the nearby field tearing off burning shirts and pants as they ran. The Tanker Foreman and his crew were trapped in the cab of their tanker as the fire burned past and they sustained no injuries. There were numerous burn injuries to the inmates but no fatalities.

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The third incident occurred at 20:10 on the upper reaches of the Ortega Highway where the US Forest Service had initiated their initial attack. Resources included the El Cariso Hotshot Crew, several tankers, a Fire Prevention Technician, and the District Ranger who was coordinating suppression activities. Early attempts at direct attack had failed. The decision was made to attempt to hold the fire below the road by firing the road towards the Gough Fire that had burned 3 weeks earlier. There was an urgency to get this done before the wind shifted from downslope to upslope. The resources were split into three groups. The plan was put into action and appeared to be progressing well. A short time later, the wind abated and then switched to upslope. The flames quickly increased in length and made a rapid uphill run engulfing the resources working on the highway. The lower group was able to drive and walk down the highway to safety. The middle group ran through smoke and flames and suffered burn injuries. The upper group was overrun by flames, some in vehicles and others fully exposed, with numerous burn injuries from minor to critical. Five of the firefighters in the upper group would succumb to their critical burns. These included the District Ranger, a Tanker Foreman and three crewmen from the hotshots.

Fire behavior factors that were present during the event:

Hot dry summer day.

Fuels in the fire area were flashy, consisting primarily of chamise with ceanothus, rabbit brush, and some buckwheat and sumac. The ratio of dead to live was extremely high with areas of 75% dead material.

Steep terrain, averaging 50% slope.

The fire started approximately 200 feet below the road, in a bowl, bounded by steep ridges and was burning with a downslope wind and backing slowly uphill against the wind. The fire burned downhill for approximately 2 hours prior to the wind shift.

The Elsinore Effect – a local weather factor that is a combination of topography, proximity to the Pacific Ocean to the west, and to the hot dry inland valleys and deserts to the east. This convergence zone causes marine air to flow eastward over the crest of the Santa Ana mountains and downslope during the day through the northeast facing canyons and drainages of the Elsinore Front. In the summer of 1959 "Lake" Elsinore was a completely dry, barren mud flat about five miles long by two miles wide. On a clear day this flat acts as a giant heat engine warming the air above the dry lakebed. This heated air rises vertically and is replaced by cooler air flowing from the west, over the main divide ridge. This downslope wind starts early in the afternoon and stops shortly after sundown, as the lakebed cools off. This means, that during the heat of summer, fires burning in the afternoon along the Elsinore Front would typically burn downslope during the day, contrary to most normal fire behavior. This downslope movement of air would generally abate around sundown as the areas to the east cooled, at which time fires would likely reverse direction and begin to burn upslope.

Operational lessons available for learning from this incident:

Knowledge of local weather and its effect on fire behavior.

Validation for the concepts of dedicated lookouts, designated escape routes and safety zones found in the new (at that time) "10 Standard Firefighting Orders."

It is important to have inter-agency communication and to keep all personnel informed on significant events.

Paved roadways, especially mid-slope may not be a good safety zone depending on fuels, wind and slope.

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

The *Decker Fire Investigation Report* reenforced the findings of the *1957 Task Force Report* which were designed to enhance firefighter safety:

- The report emphasized the importance of clearly designating escape routes. Specifically, that *"… avenues of escape be covered as item number one in all fire assignments irrespective of the stage of the suppression job … and regardless of how or where the fire is burning."*
- It was noted that many fatal burns are a consequence of the easily flammable clothing worn by firefighters. The report called for accelerated development of garments of heat-reflecting material that are light, easily carried, and easily put on.
- Addition to the "13 Situations That Shout Watch Out" was recommended that would read: *"You are working on a fire downslope from you. Remember the slope is constant while the wind is variable and can change with little warning."* (Note: Downhill line construction standards were not adopted until after the 1966 Loop Fire fatalities).
- The report recommended that the Bureau of Employees Compensation compile a state-wide list of those medical facilities and specialists best equipped to treat burn victims. That information would be made available to personnel of each National Forest so that they could identify those medical facilities and personnel closest to them.

- Finally, it was recommended that where inter-agency response to wildland fires is common, top priority be given to studying the feasibility of installing multi-frequency radios in key vehicles to facilitate inter-agency radio communication.

The Decker Fire memorial at the crest of the Ortega Highway became the inspiration to establish the California Wildland Firefighter Memorial at the same location. This memorial site, established in 1995, now pays tribute to every wildland firefighter fatality that has occurred in the state.

Links to more information on this incident:

https://wildfiretoday.com/tag/decker-fire/
https://wildfiretoday.com/documents/Decker_Fire_Lee-report.pdf
https://wildfiretoday.com/documents/Decker_Fire_official_report_1959.pdf
https://www.pressenterprise.com/2021/08/05/how-the-1959-decker-fire-near-lake-elsinore-led-to-changes-in-firefighting/
https://www.sandiegouniontribune.com/sdut-decker-canyon-fire-killed-six-firefighters-in-2001aug12-story.html
https://wlfalwaysremember.net/1959/08/08/decker-fire
https://cwfm.info/

This summary page was proudly provided by:
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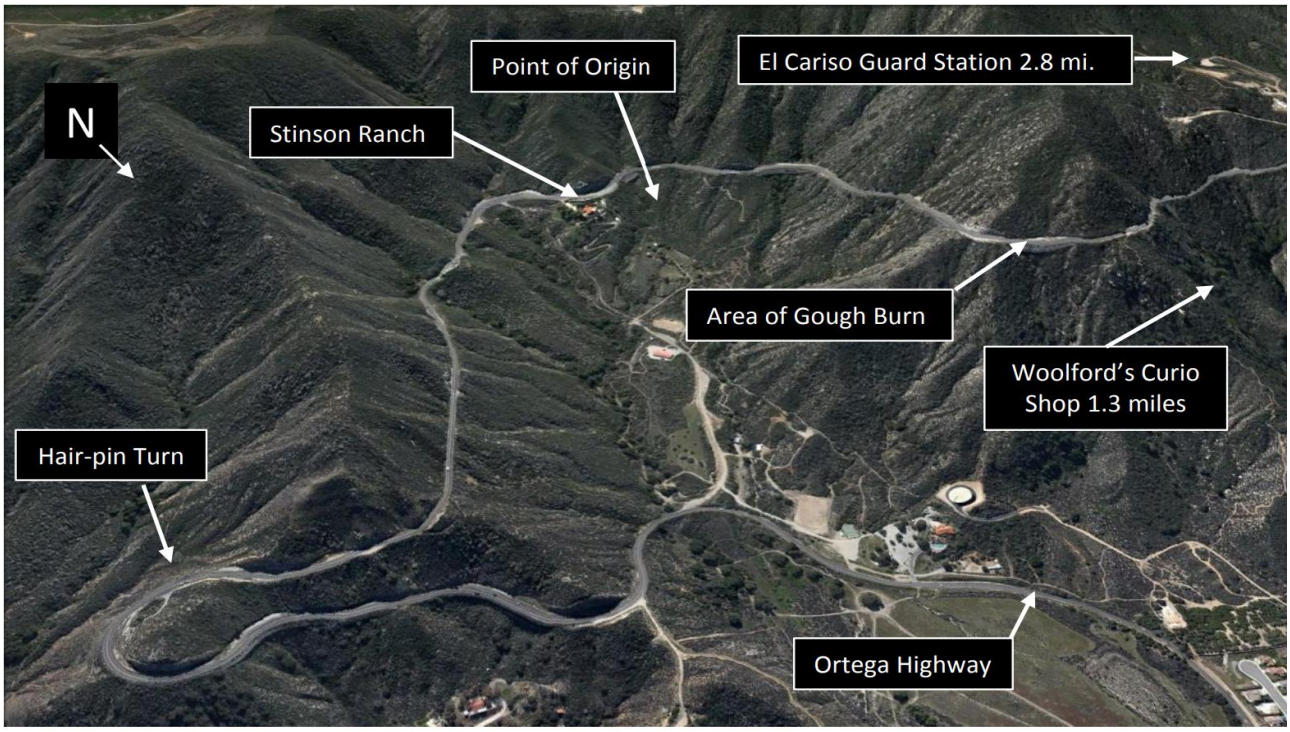

Figure 1. Google Earth satellite image of the mouth of Decker Canyon showing the fire's point of origin and the location of features mentioned in the text.

Figure 2. Google Earth satellite image of the mouth of Decker Canyon showing approximate location and timing of the fire's origin and the three burn-over events.

These photos are from a paper written by Julian C. Lee, Professor of Biology, Emeritus at The University of Miami
THE DYNAMICS OF A CATASTROPHY – THE DECKER WILDLAND FIRE OF 1959