

Incident Summary Page for the 100 Fires Project

Incident Name: Camp Fire	Incident Date & Time: 11/08/2018 @ 06:33
Incident Location: Paradise, Concow, and Magalia, California	Incident Size: 153,336 acres
Types of resources involved: Multiple local, state and federal agencies	# of Fatalities/injuries: 85 fatalities / 12 civilians and 5 firefighters injured
Reasons this fire was selected for the 100 Fires list: <ul style="list-style-type: none"> ➤ Fire made a notable impact within the wildland fire service ➤ Civilian mass casualty event 	
Conditions leading up to the event:	
<p>It was no surprise the summer of 2018 was another busy one for wildland fire in the western United States. Historic drought conditions plagued much of the west, creating extremely explosive and devastating fire potential. As the summer wound down and winter moisture was expected soon in Northern California, no one was expecting what the Camp Fire would bring in early November to the area in and around Paradise California. Pacific Gas & Electric (PG&E), a long time giant in the utility industry, supplies power to much of the area through an aging infrastructure, some being over 100 years old. Cuts in the number of scheduled onsite inspections performed on such aged infrastructure left this equipment susceptible to strong and erratic winds.</p> <p>Katabatic winds, which are caused by the downward movement of cold air, would cause transmission lines to fail and ultimately drive the fire's progression down valley/slope and into the communities. Though these communities had completed limited wildfire preparation with some residents working on defensible space, most residents did not have defensible space so much of the area was thick with brush and timber, readily available to feed a fire.</p>	
Brief description of the event:	
<p>On November 8 at 06:15, a nearly 100 year old PG&E electrical transmission line along the Feather River Canyon in Butte County failed due to strong winds, sparking a small vegetation fire. After a long dry summer, and still in a critical historical drought condition throughout Northern California, strong katabatic winds quickly fanned the flames rapidly through the abundant tinderbox fuels. By 06:51, with firefighters still trying to make access, the fire was roughly 10 acres. With winds pushing to the southwest, the fire began picking up steam as it barreled towards the towns of Concow, Paradise, and Magalia. The fire traveled roughly 7 miles from its point of origin slamming into Paradise at 08:00. At this point calls were flooding the 911 dispatchers about multiple fires through the town of Paradise.</p> <p>Winds of 30-50 mph caused vast amounts of ember wash to blow through the town ahead of the main front causing multiple spot fires. These spot fires rapidly grew and converged, adding to the size, force, and devastation of the inferno; eating up houses, out buildings, and vehicles which only added more fuel to the now unstoppable force. To the credit of Paradise Dispatch, they responded to 132 calls on their 911 line between 06:30 and 08:20 before calls were forwarded to another call center.</p> <p>After 45 minutes of the fire slamming into Paradise, the IC gave the command to abandon all firefighting efforts and <i>"save lives, keep evacuations moving."</i> By 10:45 satellite imaging shows fire engulfing 20,000 acres and beginning to burn the Ridgewood Mobile Home and Retirement Park on the edge of town. In all the chaos and devastation evacuations quickly became a deadly gridlock as escape routes were either physically blocked by downed powerlines, trees, abandoned and/or burned cars, or had walls of fire scouring over them. There was a total of 19 reported burn overs throughout Concow and Paradise resulting from evacuation routes being cutoff and/or blocked. Some individuals were lucky enough to just barely make it out of those situations, while other individuals succumbed to the power of the blaze, terrified and trapped. The vast majority of those who lost their lives were 60 years or older.</p> <p>The first four hours of the fire were the most devastating. By 18:00, less than 12 hours after the start of the incident, the Camp Fire had travelled 17 miles and burned nearly 55,000 acres. It would take more than 5,000 firefighters 17 days to finally get the 153,336 acre fire 100% contained. In its totality the fire would destroy 18,000 structures and displace 30,000 people from their homes and businesses. Work continues to this day to rebuild after one of California's most deadly wildfires.</p>	
Fire behavior factors that were present during the event:	
<p>Drought conditions Extremely dry fuels (1000 hour fuels at 5%) Favorable topography for fire spread with canyons aligned to the wind Hot, dry, sustained and gusty katabatic winds RH lowered due to wind event Winds pushed vast amounts of ember wash causing numerous spot fires to form and converge</p>	

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Operational lessons available for learning from this incident:

Not applicable

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

PG&E was found in court to be responsible for the faulty powerline which caused the fire. These findings led to:

- PG&E filing for bankruptcy due to facing liabilities of \$30 billion from the fire.
- PG&E agreeing to a settlement of \$1 billion with state and local governments.
- PG&E agreeing to a settlement of \$11 billion with insurance carriers and hedge funds.
- PG&E establishing the Fire Victims Trust, funded with \$5.4 billion in cash and 22.19% of PG&E stock.

On June 16, 2020 PG&E plead guilty to 84 counts of involuntary manslaughter.

This event led to significant reconsiderations on the standards of emergency notification, evacuation plans, refuge areas, and traffic issues within WUI areas.

In order to avert liability, more power companies have begun to shut down power to entire areas during wind events that could cause transmission lines to fail and spark a fire.

Links to more information on this incident:

- [‘Hell on Earth’: The First 12 Hours of California’s Deadliest Wildfire - The New York Times \(nytimes.com\)](https://www.nytimes.com/2018/11/18/us/california-camp-fire.html)
- <https://youtu.be/dyfJYOZgiyA?si=R5JOVdXqve8090KD> (Simulation of Camp Fire)
- [A Case Study of the Camp Fire—Notification, Evacuation, Traffic, and Temporary Refuge Areas \(NETTRA\) \(nist.gov\)](https://www.nist.gov/research/special-reports/a-case-study-of-the-camp-fire-notification-evacuation-traffic-and-temporary-refuge-areas-nettra)
- [Fire - Power - Money | Secrets of the Camp Fire: Revealed | abc10.com](https://www.abc10.com/news/local/camp-fire-power-money-secrets-revealed/)
- [Remembering the Camp Fire | CAL FIRE](https://www.calfire.ca.gov/news/remembering-the-camp-fire/)
- [New Timeline of Deadliest California Wildfire Could Guide Lifesaving Research and Action | NIST](https://www.nist.gov/research/special-reports/new-timeline-of-deadliest-california-wildfire-could-guide-lifesaving-research-and-action)

The Wildland Fire Lessons Learned Center offers an excellent site which provides information on many wildland incidents:

[Wildland Fire Lessons Learned Center’s Incident Review Database \(IRDB\) \(wildfire.gov\)](https://www.wildfire.gov/)

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