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Napa Wildfires Wipe Out Communications August 2018

During a fierce windstorm on October 8, 2017, several wildfires burned uncontrolled in Napa County in Northern California. Almost 11,000 firefighters from seventeen states and Australia worked to control the blazes.



More than 170 fires burned at least 245,000 acres. This is more than ten times the size of New York City's Manhattan Island in New York State (about 21,000 acres).

Communications Destroyed

A majority of Napa County residents lost landline, cell phone, and Internet services during the wildfires. 87% lost cell phone service, 67% lost landline service, and 73% lost Internet service. Many residents also lost power as power poles and power lines were consumed. As a result, they struggled to find the latest information. Many did not receive emergency alerts as the life threatening fire moved toward their homes.

Report Highlights Inadequate Communications

A report released by the North Bay/North Coast Broadband Consortium noted that the region lacked a well-designed telecommunications network that was resilient enough to survive wildfires. It concluded that investing in a resilient, reliable, redundant, and diverse telecommunications infrastructure should be a priority.

Communication approaches for emergencies should include everything from encouraging people to keep portable radios handy to having mobile cell-phone towers that could be quickly deployed. Radios proved invaluable during the wildfires to get information when cell-phone service was lost. The wildfires destroyed or damaged 340 cell-phone sites.

Old-fashioned corded landline phones also proved to be invaluable. These phones are connected by copper wire to the telephone central office, and they still functioned even if the house did not have power. These phones are less vulnerable to outages in disasters since the physical landline connecting the phone to the central office would have to be destroyed. Residents with corded phones were able to communicate with each other to track the progress of the wildfires.

AT&T owns most of the fiber infrastructure in the affected counties. They had recently completed upgrades to protect North Coast phone and internet service, but the severity of the wildfires was unpredictable. AT&T's upgrades did not take into consideration catastrophic wildfires.

The Cause of the Fires

Most of the fires were caused by trees or tree limbs being blown onto power lines operated by PG&E (Pacific Gas and Electric). Others were caused by the failure of power poles, allowing power lines to come in contact with the ground.

Examples of Fires

Some examples of the wildfires include the following:

The Redwood Fire in Mendocino County burned over 36,000 acres and destroyed 543 structures. There were nine civilian fatalities. It was caused by parts of a tree falling onto PG&E power lines.

The Sulphur Fire in Lake County burned a total of 2,200 acres and destroyed 162 structures. It was caused by the failure of a PG&E power pole consumed by the flames, resulting in power lines coming in contact with the ground.

The Cherokee Fire in Butte County burned 8,400 acres and destroyed six structures. It was caused by tree limbs coming into contact with PG&E power lines.

The 37 Fire in Sonoma County burned a total of 1,660 acres and destroyed three structures. It was associated with PG&E distribution lines in the area.

The Blue Fire in Humboldt County burned a total of 20 acres. It was determined that a PG&E power line conductor separated from a connector, causing the conductor to fall to the ground a starting the fire.

The Pocket Fire in Sonoma County burned over 17,000 acres and destroyed six structures. It was caused by the top of an oak tree breaking and coming into contact with PG&E power lines.

The Atlas Fire in Napa County started at two locations. At one location, a large limb broke from a tree and come into contact with a PG&E power line. At the other location, a tree fell on the same line. The wildfire burned over 50.000 acres and destroyed 783 structures.

The Norrbom Fire was caused by a tree falling and coming in contact with PG&E power lines.

The Adobe Fire was caused by a eucalyptus tree falling onto a PG&E power line.

The Patrick Fire was caused by an oak tree falling onto PG&E power lines.

The Pythian Fire was caused by a downed power line after PG&E attempted to reenergize the line.

The Nuns Fire was caused by a broken top of a tree coming in contact with a power line.

Eight of the wildfire investigations have been referred to the district attorney's office for investigation due to evidence of alleged violations of state law.

Acknowledgements

Information for this article came from the following sources:

Report details telecommunications meltdown during Napa County's October Wildfires, *Napa News*; May 19, 2018.

Cal Fire News Release, *California Department of Forestry and Fire Protection*; June 8, 2018.