SIGNIFICANT FIRE WRITEUP: NO. 1

FEDERAL FIRE COUNCIL - COMMITTEE ON FIRE LOSS EXPERIENCE

Washington, D.C. 20405

August 1967

The following is a fire analysis which may be of interest to agencies in evaluating and/or improving their fire protection programs. Names, places, and assignment of responsibility are not included.

I. KEY WORDS:

FOREST FIRE: 1 DEAD; 226 INJURED; 67,000 ACRES BURNED; 188 STRUCTURES DESTROYED OR DAMAGED; $22,000,000 IN DAMAGES; SUPPRESSION COSTS $2,700,000; FUEL BREAKS; ACCESS ROADS; BRUSH CLEARANCE; AIR ATTACKS.

II. ABSTRACT:

This fire started at approximately 2:00 p.m. on September 22 and was controlled on October 1. Probable cause was a vehicle spark in dry grass near a road. It originated near a residential area and threatened both urban and natural resources. The fire was discovered and reported almost immediately. Sufficient manpower and equipment were mobilized, but inadequate access delayed attack forces and precluded proper distribution on the perimeter. Air attack was initially dispatched but approach to the fire was hampered by powerlines and dense smoke forcing planes to fly too high and at wrong angles to be effective.

The fire was nearly controlled at three different times during the early stages but fire brands from a large live oak tree and flying debris from a burning house started spot fires beyond the perimeter. In another instance only 1,650 feet of line was needed to establish control when strong gusty winds caused the fire to spread rapidly and outflank the line.

Topography was extremely steep and rough. Much of the fireline was steep and inaccessible to equipment, even bulldozers, and much line had to be constructed by hand.

The natural fuels consisted of light to heavy stands of mixed brush or chaparral with grass and scattered scrub oak trees. Wildland fuels were at their maximum dryness. The grass was dead and cured and the moisture content of living fuels was at the minimum. Urban fuels consisted of residences and outbuildings scattered among the brush and grass-covered hills.

The weather that prevailed during the fire was generally unfavorable from the standpoint of fire behavior and fire suppression. Santa Ana winds (hot, low humidity winds on the West Coast) began to appear early on September 22, a few hours before the fire started, and subsided on September 24. Winds were strong, frequently gusty and changeable. The reversible winds caused the biggest problems in fire suppression. Temperatures were generally high and the humidity was extremely low (ranging from 10 to 15 percent). Fire danger had remained consistently high throughout the fire season.

Rate of spread was at times extreme. During one 12-hour period (6:00 p.m. to 6:00 a.m.) the fire spread 10 miles. Spot fires were reported 1/4 mile ahead of the main fire.

The combined effects of hazardous rural and urban fuels, steep and rough topography, and adverse weather conditions was largely responsible for the fire escaping initial control and for its subsequent spread.

III. SIGNIFICANT FACTORS: 1. Pumping water directly on the roof and walls was the most effective tactic used in saving structures. This has to be done just ahead of the fire and before the structure becomes too heavily involved.

2. Air attack was successful in protecting key areas, structures and, in one case, trapped firefighters.

3. Fire weather and fire behavior forecast teams provide a vital service to the fire command in fire emergencies.

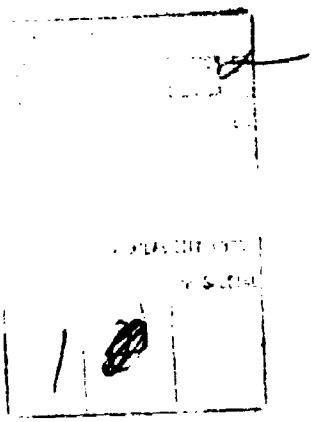
4. Pre-emergency arrangements should provide for: mutual aid, command assignments, evacuation measures, and other details for emergency operations.

IV. LESSONS LEARNED: 1. Adequate access for equipment and personnel is vital in order to suppress fires promptly. Narrow roads, insufficient road access and lack of traffic control contribute congestion and hinder evacuation and control efforts.

2. Fuel breaks which are not built to standards are ineffective in stopping or materially slowing a running fire.

3. Good roadside hazard reduction will aid in preventing fires from starting in grass fuels.

4. Prevention measures that are effective in saving structures are brush clearance around structures, use of fire resistive roofing and adequate access roads and turn arounds in brush areas.



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