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The Tehipite Fire: a Lesson in Adaptive Management

When lightning ignited the Tehipite Fire on July 14, 2008, fire managers faced a challenge. The fire was burning in some of the steepest, most remote wilderness terrain in Kings Canyon National Park – a dangerous place to put firefighters on the ground. At the same time, the state was facing some of its worst air quality in recent times. Numerous large fires in northern California, plus the usual pollution problems, made air quality a concern for state residents.

Tehipite Fire on August 14th. NPS Photo

Sequoia & Kings Canyon National Parks had just been selected to test modifications to the federal wildland-fire policy. That change allows professionals to manage fire to achieve more than one objective. The same fire may be controlled on one flank for safety and permitted to spread elsewhere for its ecological benefit. Other factors, like cost-effectiveness, can influence fire response.

In an effort to limit smoke production, fire managers attempted to confine the Tehipite Fire where it was most active – along its northern flank. However, the treacherous terrain made this difficult. Burning material rolled down cliffs, igniting fires that would burn back upslope and compromise hard-won fire lines. More critically, seven firefighters on that flank got hurt in just five days.

Managers determined that the risk was not worth it; firefighter and public safety are *always* the number-one priority. Fortunately, the firefighters' actions did slow fire growth and prevent significant spread for almost a month. That helped California get through the worst of its air-quality episode.

When it became clear that the fire would grow beyond park boundaries, park fire managers began to work with the Sierra National Forest. Together they planned for managing this fire. A new document, the Wildland Fire Decision Support System (WFDSS), was put to use. WFDSS directs agencies to look for guidance first from existing land- management plans (wilderness plans, fire management plans, etc.). From this starting point, they can then consider a diverse array of possible objectives to manage a fire.

The park and the forest took into consideration firefighter safety, cost-effectiveness, smoke impacts, and any other values threatened by the fire such as structures, cultural resources, or sensitive habitat. Based on these, the plan they implemented involved routine monitoring with pro-active efforts to protect a handful of backcountry cabins. This flexible, successful response was consistent with previous plans and land management objectives, minimized risks to firefighters, reduced tax-payer costs, and maximized ecological benefits.

The Tehipite Fire burned 11,646 acres from July 14 through the last days of October. Data gathered by satellite imagery indicates the majority of the fire burned with low to moderate fire intensity. Its behavior typified fire in the Sierra Nevada – creeping surface fire with occasional pockets of torching. For the most part, this area missed more than five natural fire cycles during the decades of unquestioned fire suppression. From an ecological point of view, the Tehipite Fire begins the process of restoring fire to an ecosystem and returning the forest to a more natural condition. Fire cleaned the forest floor of accumulated dead and down vegetation and opened the forest canopy in places. The results: new growth, greater biological diversity of plants and animals in the area, and reduced chances of large, expensive, and even more difficult-to-control fires here in the near future.

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