

Incident Summary Page for the 100 Fires Project

Incident Name: Yellowstone Fires of 1988	Incident Date & Time: 06/14/1988
Incident Location: Yellowstone National Park, Wyoming	Incident Size: 793,000 acres within the park 1.2 million acres total including surrounding park area
Types of resources involved: Numerous wildland fire agencies and military personnel	# of Fatalities/injuries: Not applicable
Reason this fire was selected for the 100 Fires list: ➤ Fire made a notable impact within the wildland fire service	
Conditions leading up to the event:	
<p>From 1982 to the spring of 1988, Yellowstone National Park experienced more precipitation than normal. It was assumed the park would receive a normal amount of precipitation during the summer months of 1988, but instead the park experienced the driest summer on record. Storms that did arrive produced a lot of dry lightning and very little precipitation.</p> <p>Up until this point, the park followed more of a fire use policy regarding wildfires. Lightning started fires were closely monitored and usually allowed to burn until going out on their own. In sixteen years, the park allowed over two hundred fires to burn, with only fifteen of them growing over a hundred acres. Human caused fires were suppressed immediately. Even with allowing lightning started fires to burn, Yellowstone still had very high fuel loading going into the summer of 1988.</p> <p>The park and surrounding area had a total of forty-two lightning starts and nine human starts throughout the summer. Only seven of the fires accounted for about 95% of the total burn acreage in the park. On July 21, the park made the decision to immediately suppress all fires once reported due the dry conditions.</p>	
Brief description of the event:	
<p>Lightning started fires in June, beginning with the Storm Creek Fire on June 14, from storms that produced no rain. The park knew of the fires and allowed them to burn, assuming rain would arrive later in the summer. Human ignitions were still found and suppressed immediately. In July, these lightening caused fires started growing rapidly due to the dry conditions. Additional storms started more fires in July and August, with many burning together to form complexes. On July 15, a total of 18,307 acres were already burned. Following the decision to suppress all fires on July 21, fire acreage grew to 99,000 acres in about week. By the end of the season total burn acreage was about 793,000 acres in the park, which is about 36% of the park area.</p> <p>Firefighters attempted to contain the flanks of the fires with aircraft and heavy equipment, as well as doing point protection around structures. Over 665 miles of handline and 137 miles of dozer line were constructed. Aerial resources were heavily utilized for retardant and water drops out of concern for how far the fires could send spots. Even with indirect lines, the fires spotted over them. As many as 25,000 firefighters worked to suppress the fires throughout the summer, with as many as 9,000 at one time. Many firefighters believed the only way the fires would stop was with significant rain or snow.</p> <p>Sixty-seven buildings burned, costing about three million dollars in damages. The total cost of suppression efforts was about \$120 million.</p> <p>No civilians died from the fires. Two firefighter deaths occurred fighting fires outside the park: one from a tree felling accident and another in an aviation accident returning from a crew shuttle.</p> <p>At the time the fires were labeled a “disaster” and became the largest firefighting effort in the country that year.</p>	
Fire behavior factors that were present during the event:	
<p>Fire behavior was influenced by dry conditions, high winds, and heavy fuel loading. Spot fires started as far as a mile and a half ahead of some of the main fires. Conditions on August 20, known as Black Saturday, grew the fires over 150,000 acres in one day due to high winds. Current fire models for the area were not relevant enough to predict the current fire behavior with the dry conditions. The fires were eventually slowed on September 11, when a quarter inch of snow fell. More winter storms eventually put out the fires in November.</p>	
Operational lessons available for learning from this incident:	
Not applicable	

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

These fires were significant due to the public and media's reaction to the fires and ecological impacts on Yellowstone National Park. The media coined the term "let it burn policy", implying the park didn't respond to fires in time and was doing nothing to suppress fires, even after the park changed its policy on July 21. Senators from Wyoming commented on there being no "sound science" behind decisions to let natural fires burn in the park. Both the public and media believed Yellowstone would not recover for over a hundred years. The fires gained so much public attention that President Reagan sent the Secretary of Interior, Donald Hodel, to Yellowstone in response to public outcry.

Five years after the fires, the park was doing well from an ecological standpoint. The fires burned in a mosaic on the landscape, creating natural fuel breaks and benefiting vegetation and wildlife. Lodgepole pine has serotinus cones, requiring high severity fire to release seeds. A high density of lodgepole seedlings sprouted up. Less than 0.1% of soil received intense enough heat to kill roots, so white bark pine and aspen trees regenerated. Wildlife populations adjusted quickly to the new landscape. There were statistically insignificant wildlife deaths (mostly due to smoke inhalation), as most animals simply moved out of the way when fires came through.

Yellowstone's fire policy and management was reviewed and found to be scientifically sound. Yellowstone continues to allow natural ignitions to burn with close monitoring because of the ecological benefits to the landscape. These fires helped set the stage for managing fire to achieve resource objectives, in addition to protecting lives and property.

Links to more information on this incident:

<http://www.npshistory.com/publications/yell/newspaper/fires-2008.pdf>
<https://www.nps.gov/articles/wildland-fire-yell-1988-25th-anniv-retrospective.htm>
<https://www.yellowstonepark.com/park/history/1988-fires-yellowstone/>
<https://www.wyohistory.org/encyclopedia/yellowstone-ablaze-fires-1988>
<https://www.nps.gov/media/photo/gallery.htm?id=7C845477-1DD8-B71B-0B88403F4F00C0B1>
<http://www.npshistory.com/publications/yell/1988-fire-qa.pdf>
<https://home.nps.gov/yell/learn/nature/1988-fires.htm>

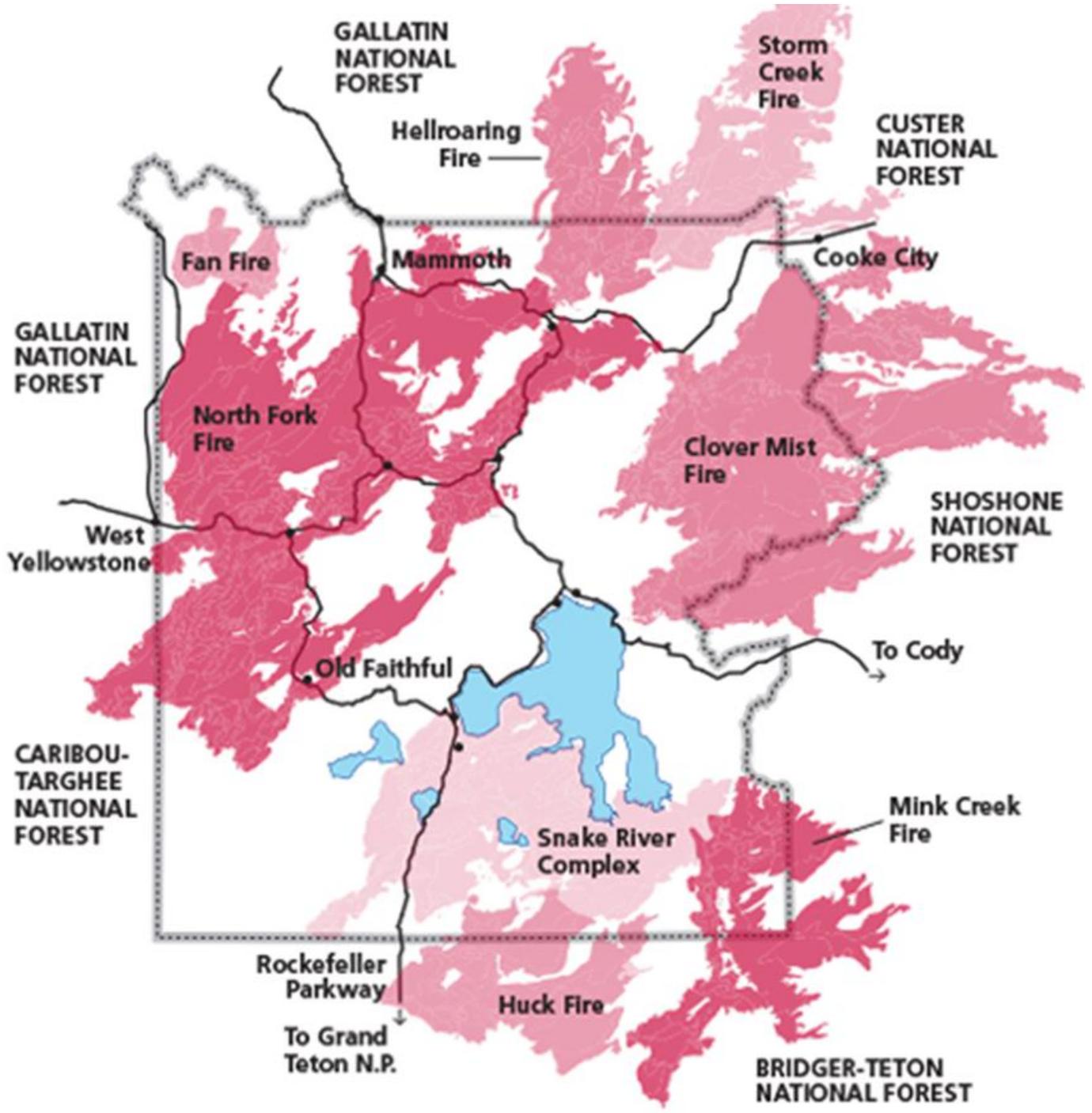
Video:

➤ <https://youtu.be/CAgP9fo3f7s>

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Map shows all major fires in Yellowstone National Park during 1988

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Fire activity on the Clover Mist Fire



President Reagan receiving a briefing on the Yellowstone Fires