The Forestry Source

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DEPARTMENTS

The Fires of 1910: Impacts of the "Big Blowup" Still Felt

Could Such Megafires Happen Again? Yes, and It Could Be Worse

By Steve Wilent

Some events are historic for their physical size or scope, others for the political or social impacts they engender. The Big Blowup of 1910 was a defining event for both reasons. Over two days in August of that year, more than three million acres burned in northern Idaho and western Montana, most of it US Forest Service land, and the fires killed 87 people, including 78 firefighters. Some estimates put the number of fires in the region at 1,700, others say it was as many as 3,000, but many smaller blazes surely joined to become the Great Fires of 1910, and no one really knows what the true number was. It was less the numbers than the "stunning ferocity" with which they struck, "most of it in one savage rush," writes Stephen J. Pyne in *America's Fires: A Historical Context for Policy and Practice*, a 2010 revision of his 1997 *America's Fires: Management on Wild Lands and Forests.*

Pyne, a noted author on the subject of fire, with works such as *Year of the Fires: The Story of the Great Fires of 1910* and *Tending Fire*, was among an all-star cast of speakers at the Inland Empire Society of American Foresters annual meeting, which was devoted to The Big Blowup. Other speakers included US Forest Service Chief Tom Tidwell; former chief Dale Bosworth; Deputy Chief Joel Holtrop; and other agency managers and leading researchers. Bob Sallee, a survivor of the infamous Mann Gulch Fire of 1949, gave an account of the fire and his escape from the flames.

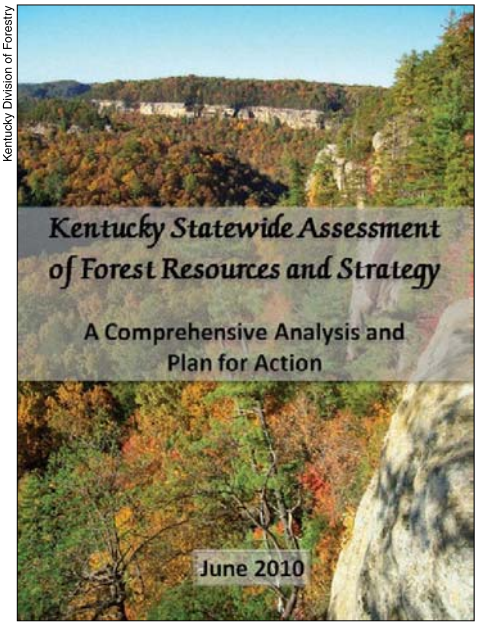
The meeting was held in May in Wallace, Idaho, which was among several communities completely or partially destroyed by the fires. Records show that about one-third of the buildings in Wallace were burned.

Photo by R.H. Mackay, 1910. Source: US Forest Service

Over two days in August of 1910, more than three million acres burned in northern Idaho and western Montana, most of it US Forest Service land. This photo shows acres of burned western white pine and Engelmann spruce on the upper St. Regis River in Montana.

*(See "**Megafires**" page 3)*

States Complete Forest Assessments to Qualify for Federal Funds



Kentucky Division of Forestry

The Kentucky Division of Forestry completed a statewide assessment of forest resources in June. The top five forestry issues identified in the assessment are forest health, water quality and quantity, forest loss and fragmentation, forest management, and funding.

The 2008 Farm Bill—officially, the Food, Conservation, and Energy Act of 2008—placed a significant hurdle before states seeking federal funding for programs established under the Cooperative Forestry Assistance Act of 1978, such as the Forestry Incentives Program, Forest Stewardship Program, and Forest Legacy Program. These programs direct tens of millions of dollars to states for carrying out a wide variety of activities. President Obama's fiscal year 2011 budget proposal included more than $100 million for the Forest Legacy Program alone, which helps conserve key forest areas such as those threatened by development.

The hurdle? To qualify for funding under these programs, states are required to conduct statewide assessments of their forest resources and develop strategies for addressing key issues. The Farm Bill gave them a deadline of June of this year. Hereafter, states must review and update their assess-

*(See "**Assessment**" page 4)*

LA SAF Outstanding Student Award Goes to Jason Mack

Like hundreds of forestry students across the United States, Jason Mack graduated in May with a degree in forestry—specifically, a bachelor's of science in forestry from Louisiana Tech University's School of Forestry. In April, the Louisiana Society of American Foresters presented Mack with the Outstanding Student Award for 2010, based on his exemplary academic and extracurricular work.

Mack, on a post-graduation visit to Yellowstone National Park, took time out for an interview. His visit to Yellowstone, he said, was educational: he learned about the fires of 1988 and the recovery from them, as well as park management in general and the super-volcano that lies beneath the park and the surrounding region that may be due for an eruption. His next stop: Grand Teton National Park.

You grew up in Milwaukee, Wisconsin?

Yeah, I'm very different from most forestry students, I have a much different background. I grew up in the city, an urban area, and as a kid I really didn't even know what a forester was. When I was growing up, we would get out to the state parks, so I knew about parks and rangers. But I didn't know that there was actually private land that people managed for timber. Most of the students in my

*(See "**Award**" page 6)*

Megafires

(continued from page 1)

Michael J. Wilson, program manager, and forester Larry DeBlander, both with the Forest Service's Interior West Forest Inventory and Analysis (FIA) Unit, headquartered in Ogden, Utah, presented the results of a recent analysis of the extent of the fires. Based on data from about 3,000 FIA plots on 24.2 million acres of federal and nonfederal land, including 440 plots in areas burned in 1910, they calculated that 3.6 million acres were burned in The Big Blowup. Of that, about two-thirds burned at high severity. Trees containing about 8.6 billion board feet of timber were killed: six billion board feet in Idaho and 2.6 billion board feet in Montana

"The fires didn't leave much behind," said retired wildland fire researcher Bob Mutch. "We certainly don't see any of the mosaics of burning patterns that we saw in Yellowstone National Park following the 1988 fires."

Carl Gidlund, a former smokejumper and retired public affairs officer, reported that just 300 million board feet of timber was salvaged after the fires. Harvesting of the second-growth in the area began in the 1970s.

The fires caused $13.5 million in property damage, said Gidlund, the equivalent of $314 million today.

In a report on the fires written in the early 1940s, Elers Koch, supervisor of the Lolo-Bitterroot National Forests in 1910, described the scale of The Big Blowup: "Set an airplane course from Clark Fork, Idaho, south 25 degrees east, approximately along the axis of the Bitterroot range, and fly on this course 160 miles to Moose Creek on the Selway River. On 70 percent of this flight you would be flying over 1910 burn, with the burned area extending an average of 25 miles on either side of the line. Even then you would have seen only three-quarters of the burned area, and would have to take a vast semicircle, through Montana, up the Big Blackfoot, through the South Fork and the North Fork of the Flathead, and westerly across the Kootenai and Kaniksu Forests, to see the rest of the fire-swept area. Three million acres of green forest burned, most of it in two terrifying days."

US Forest Service

Injured firefighters in Wallace, Idaho, 1910. The face of the man on the left appears to be badly burned. The hands of the man on the right are heavily bandaged. The fires took the lives of 87 people, including 78 firefighters.

The War on Fire

The fires had a profound effect on the fledgling Forest Service, which had been established just five years earlier. The battles between Gifford Pinchot and other political figures over the agency and larger national conservation policies are examined in fascinating detail by Timothy Egan in his 2009 book, *The Big Burn: Teddy Roosevelt and the Fire that Saved America* (look for a review of the book in an upcoming issue of the *Journal of Forestry*). The Big Blowup essentially ended what had been a vigorous debate between advocates of fire as a silvicultural tool, or so-called Indian burning, and those who saw fire only as an enemy to be vanquished. This set the agency on a path toward a policy of 100-percent suppression, the effects of which—altered fire regimes, overcrowded forests, and a decline in forest health—are dramatically apparent throughout the West a century later.

"Fire was a classic battle between good and evil," said retired chief Bosworth. "Even though the fires of 1910 occurred here in northern Idaho, western Montana, and eastern Washington, the whole agency had this passion about fighting fire that dominated the mindset of its people. We were judged by the public largely based on how we protected them from fire."

That public perception only added to the agency's zeal for its mission.

"The most far-reaching effects of the 1910 fires and subsequent fires have much to do with the public's perception of fire," Bosworth said. "It wasn't that the public developed this perception on its own—it was influenced by the Forest Service. So in a sense, the public and the agency worked together to develop the viewpoints that we still have today. Viewpoints like, 'It is the government's responsibility to protect us from fire and all other natural disasters. I have no personal responsibility, and it is your responsibility to protect my property.' That viewpoint, however, is now changing in some places."

For Mutch, the legacy of the war on fire is as much personal as it is professional. On his 10-acre parcel of lodgepole pine along the west fork of the Bitterroot River in Montana, he is losing 15 to 40 trees per year to the mountain pine beetle.

"What if we'd had free-burning fires in our northern Rocky Mountain forests since 1910, creating a mosaic of lodgepole pine forests of all age classes where the phloem thickness is not going to support viable egg galleries in the younger trees? My job as a landowner might be a lot easier now."

And, of course, so might the Forest Service's.

The Fruits of Research

David Cleaves, associate deputy chief for research and development, said that the 1910 fires were a defining event for the agency as a whole and an "epicenter of change" that has shaped fire research, especially the study of fire behavior and control.

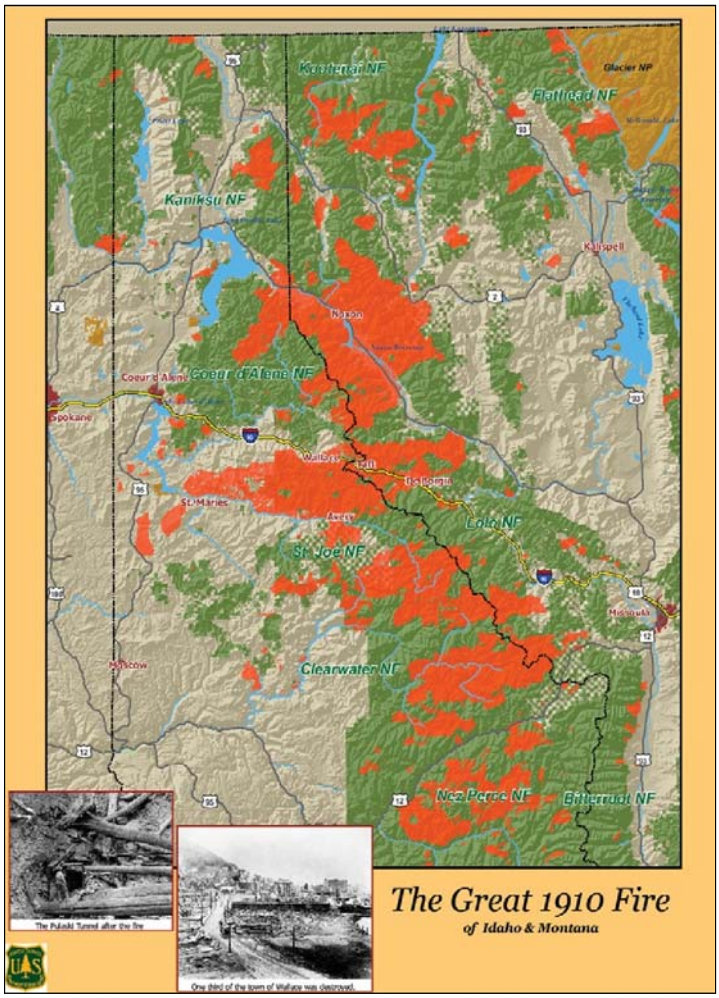
"After 1910, in many ways our fire research was the research of weapons development," Cleaves said. "We were developing ways to get at and predict what the enemy was going to do, so that we could allocate our resources in wise ways, because we were 'at war.'"

In the decades after 1910, scientists at the Forest Service's regional research stations and at universities and elsewhere developed methods for predicting fire danger, the probability of ignition, and spread; created the fire-danger rating system and fire spread models; and, more recently, studied the use of prescribed fire.

Today, research into wildland fire management must take new directions, said Cleaves.

"The fire-spread models that we now have are not serving us well in an age of megafires," he said. "In an age of extreme fire behavior, in an age of climate change, we have situations that we hadn't foreseen. We need to understand better the phenomenon we're dealing with, and we're going to need to develop a new and improved physical model of fire."

US Forest Service



A series of fires in 1910 burned about 3.6 million acres in Idaho and western Montana, according to a recent US Forest Service FIA estimate.

Megafires

Since 1997, 10 fires in the United States have exceeded a half million acres, according to the National Interagency Fire Center. The largest, the 2004 Taylor Complex in Alaska, burned more than 1.3 million acres. Can a fire or fires on the scale of The Big Blowup happen again? Some observers say no, not with our advanced fire-suppression tools and technology and roads and other infrastructure not available in 1910. Others say such fires not only are possible, but are likely to occur. Many of the conditions that influenced the 1910 fires can and do exist today: drought, high temperatures, strong winds, and multiple ignitions. Although there may be less logging slash as potential fuel than a century ago, fuel loadings are high across broad areas.

"We have unnatural fuel buildups all over the West due to fire exclusion and declining forest health after 1910, and that can lead to megafires. What's worse is that we have people living everywhere in our wildlands," said Mutch.

Based on his examinations of past large fires, Jerry Williams, former director of fire and aviation management for the Forest Service, now retired, agrees.

"We all hope [that a megafire will not occur], but there is reason to believe not only that it could, but that in some respects, it might even be worse," he said. "Global warming, the vulnerability of deteriorated fire-dependent landscapes, and growth at the wildland-urban interface have changed the calculus of wildland fire protection in the United States and elsewhere around the world. The trajectories that these factors are taking suggest that megafire numbers will grow, not diminish. If we are asking about the chance of catastrophe, these factors have changed the odds of wildfire disaster.

"If 1910 was about controlling fire," added Williams, "the next century needs to be a commitment to a more mature, more sophisticated land-management strategy in fire-dependent ecosystems."

Wilent is editor of The Forestry Source.

For more information about The Big Blowup, visit the US Forest Service's 1910 Fire Commemoration Information Site, www.fs.fed.us/r1/1910centennial/index.html; *or the Forest History Society's site, www.foresthistory.org/1910 fires.*