

THE GREAT FIRE OF 1910

How the Big Burn shaped the nation's fire-fighting policy and transformed a 4,700-square-mile landscape in northern Idaho and western Montana.

BY MICHAEL JAMISON

“Out of the underbrush dashed a man—grimy, breathless, hat in hand. At his heels came another. Then a whole crew, all casting fearful glances behind them,” wrote forest ranger Joseph Halm in a chapter of *I’ll Never Fight Fire With My Bare Hands Again*. “She’s coming!” the man cried. “The whole country’s afire! Grab your stuff, ranger, and let’s get out of here!”

Although Halm and his men had been battling wildfires for weeks, this breathless warning from the terrified arrivals was his first real

hint of the unimaginable hours to come.

It was mid-August 1910, and the heat was like a hammer. It hadn’t rained since May. Halm worked on Idaho’s Coeur d’Alene National Forest, and his crews were fighting fire in the high headwaters of the St. Joe River, not far from the Montana line. They’d spent days slashing their way into the remote wilderness, 65 miles from the nearest railroad, and by August 18 they finally had their blaze contained. But then came those terrified men, rushing out of the brush with hell at their heels. ▶▶

“For days,” Halm wrote, “an ominous, stifling pall of smoke had hung over the valleys and mountains. Crews of men, silent and grim, worked along the encircling fire trenches.” Even wild animals ventured close to camp, their fear of fire overwhelming their fear of men. “Birds, bewildered, hopped about in the thickets, their song subdued,” Halm wrote, “choked by the stifling smoke and oppressive heat.” The sun “rose and set beyond the pall of smoke. All nature seemed tense, unnatural and ominous.” And then, on the afternoon of August 20, the wind started to howl, the result of two powerful weather systems colliding over eastern Washington. The fire that Halm’s men thought was trenched rose and roared and rampaged into their camp.

“As if by magic,” Halm wrote, “sparks were fanned to flames, which licked the trees into one great conflagration.” The men dashing into camp “had dropped their tools and fled for their lives. A great wall of fire was coming out of the northwest.”

Halm’s men headed for a small gravel bar in a nearby creek, “an open space scarcely 30 feet across.” By the time they gathered there, fire had surrounded their tiny island and “the quiet of a few minutes before had become a horrible din. The hissing, roaring flames, the terrific crashing and rending of falling timber was deafening, terrifying.” A few tried to hide beneath wet blankets, but were flushed out as towering trees came crashing down around them. A downstream logjam ignited into “a threatening hell,” Halm wrote. “If the wind changed, a single blast from this inferno would wipe us out. Our drenched clothing steamed and smoked; still the men fought.”

They fought shovel by shovel, bucket by bucket—now not to control the blaze, but to survive it.

Dawn sneaked up slowly, filtered by thick layers of smoke. As the forest lightened, Halm saw for the first time that “the green, standing forest of yesterday was gone.” A crew member asked him what he’d do now, and Halm muttered something about calling in more men. But there were no more men. “Little did I

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UNIMAGINABLE DEVASTATION The 1910 fire, larger than any in U.S. history, burned 3 million acres, wiped out three towns, and killed 87 people. Above: Wallace, Idaho, on August 20, 1910. “People dashed through the streets, stumbling, bumping into each other,” wrote Timothy Egan in *The Big Burn*. “Some carried babies under wet towels.... It felt as if the town was under artillery fire, the mile-high walls of the Bitterroots shooting flaming branches onto the squat of houses in the narrow valley below.” Left: A U.S. Forest Service trail crew attempts to clear acres of burned timber after the fire.

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know, as I spoke, that our fire that morning was but a dot on the blackened map of Idaho and Montana,” the fire ranger wrote.

The 1910 fire—fanned by hurricane-force winds called Palousers and known variously as the Big Burn or the Big Blowup—scorched 3 million acres of Idaho and Montana, killed 78 firefighters and nine civilians, turned entire towns to cinder, and darkened sunsets all the way to New York City. But on the morning of August 21, Halm—like fire bosses throughout the region—had no way of knowing that. So he set out, surveying a landscape abruptly transformed by wind and flame. “On the ridges and slopes,” he wrote, “every tree was now uprooted and down.”

Halm and his men came across the remnants of their horses and supply camps and “saw the remains of an elk and several deer; also, a grouse, hopping about with feet and

feathers burned off—a pitiful sight.” They also found the body of a prospector, “burned beyond recognition,” one of many unable to outrun the firestorm. Halm knew then that nothing in these forests would ever be the same.

1,000-YEAR EVENT

“The fires of 1910 transformed forestry in the Inland Northwest,” wrote U.S. Forest Service (USFS) historian Hal Rothman in the introduction to *I’ll Never Fight Fire With My Bare Hands Again*, which he also edited. “The scope and scale of the fires, and the need for response, dramatically reshaped the way foresters assessed their obligations. The culture of the agency, the way in which foresters saw themselves, and nearly everything else about the agency at the grass roots changed in the aftermath of the fires of 1910.”



NEVER AGAIN The Big Burn and other deadly blazes so unnerved the American public that Congress afterward demanded total fire suppression from the fledgling U.S. Forest Service. Above: Firefighters train in the Umatilla National Forest, 1939, under the Forest Service’s new policy: All fires to be extinguished by 10 a.m. the next morning. Left: Smokey Bear, who first appeared in 1944, is the longest-running public service advertising campaign in U.S. history. The iconic ranger mascot helped convince Americans that every fire destroys forests and wildlife. That enduring public perception continues to put pressure on federal firefighters to suppress all fires at all costs.

US FOREST SERVICE PHOTO BY RAY M. FILLON; USDA; SMOKEY BEAR POSTER IMAGE BY THE AD COUNCIL AND USDA FOREST SERVICE

Some say the Big Burn and the roughly 1,700 other fires that summer were sparked by years of slash left by loggers. Others say fuels had built up following a century of dousing the Native American tradition of burning forests. Still others blame the railroad, whose coal-fired engines kindled

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many forest blazes. “But in reality,” says Steve Barrett, a fire ecology consultant in Kalispell, “it was a 1,000-year event, a perfect storm of long-term drought, lightning, high wind, and a total lack of trained people on the ground.”

The Big Burn, says Barrett, “was one of

the main drivers, if not the main driver, of the Forest Service getting deadly serious about fighting fire.” The horrific maelstrom produced a public outcry to suppress future forest fires at all costs. Previously the fledgling Forest Service, formed by conservationists Gifford Pinchot and President Theodore

Roosevelt, struggled to obtain even modest funding from Congress. After the Big Burn the agency was given carte blanche to battle blazes, and it invested heavily in roads, lookouts, and highly trained fire crews. Later the Forest Service introduced bulldozers, smoke-jumpers, and planes that dropped tons of

flame retardant—what some now call the wildfire-industrial complex. The policy, endorsed by lumber companies fearful of losing precious timber, called for extinguishing all fires on national forests by 10 a.m. the following morning.

The USFS has since revised its policy to allow some wildfires to burn and to use managed “prescribed” fires to reduce fuel buildup. But in the aftermath of the Big Burn, public pressure made any approach but absolute fire suppression untenable.

Dousing all fires may have been good public policy, but it weakened forests and allowed them to grow more flammable. Long adapted to cycles of fire and regrowth, “protected” forests grew thick and tight. As years passed they became increasingly choked with dead and downed trees—ripe for another big burn. Previous to the 20th century, American Indians and lightning produced low-heat fires, which were healthier for forests. But after 1910, says Pat Van Eimeren, a fisheries biologist with the Flathead National Forest, the USFS “started putting out [all] fires, and ultimately that resulted in more forest fuels and higher-intensity burns.”

Ironically, the nation’s response to the 1910 fire was to create a policy that created in future decades conditions for a new era of destructive fires. In 2000 the combination of dry conditions and fuel buildup caused more than 7.2 million acres to burn, primarily in western states, nearly double the ten-year average. Six years later, almost 10 million acres burned nationwide. Fire experts warn that high-intensity fires have become unavoidable. “We’ve interrupted the natural cycle of low-intensity, high-frequency fire,” Barrett says. And in an ecosystem historically cleansed and shaped by periodic flame, he adds, “when you change the fire interval, you change everything.”

HEALTHY FLAMES

Fires can destroy property, threaten human life, and transform a lush woodland into a charred netherworld. But fires also can revitalize forest ecosystems. FWP fisheries biologist Mark Deleray says trout streams have long evolved in a landscape periodically set aflame. Fires release carbon and nitrogen,

which wash through the system and nourish aquatic vegetation. Aquatic insects thrive, providing more food for trout. Van Eimeren adds that fires also create habitat by toppling big trees that dam streams and create waterfalls and deep pools. “That large, woody debris is what fish need,” he says. “It’s cover, shade, a place for bugs to live.”

But exceedingly hot fires can do more damage than good. Soon after the 1910 fire, rain washed scorched, powder-dry soils off bare hillsides into streams, suffocating trout, aquatic insects, and fish eggs. Landslides of cobble formed dams that block fish migration to this day, isolating and weakening populations. Abundant sunlight warmed mountain tributaries beyond what trout, especially bull trout, could tolerate. Because snow in brushlands doesn’t last as long as in shady, timbered areas, where it can remain well into June, streams were deprived of trickling snowmelt that keeps water temperatures cool throughout summer.

Another result of the Big Burn was construction of a vast transportation system within national forests to get firefighters and their equipment deep into forests and allow logging companies to reach timber. “By far the greatest impacts we have to fisheries today are from forest roads,” Van Eimeren says. He explains that dirt roads bleed fine sediment into streams, clogging the gravel in stream bottoms where trout spawn. And metal culverts built a half century ago where forest roads cross streams prevent fish from moving to and from historic spawning waters.

The Big Burn and its aftereffects on forest policy have also shaped western Montana wildlife habitat. When Mike Thompson, FWP regional supervisor, drives west from his Missoula office toward St. Regis, he sees scars of the 1910 fire still visible along the I-90 corridor. “The whole way you think you’re looking at mature forests,” he says. “But then, all of a sudden, it’s ‘holy cow.’ Sticking up about two times higher than the rest of the forest is this old remnant stand that the 1910 fire somehow missed. That’s when you realize that the forest you’ve been looking at is 100-year-old lodgepole, and it’s butting up against these huge, ancient larch. The forest that’s here now bears very little resemblance to the one that was here



UNINTENDED CONSEQUENCES Decades of total fire suppression following the Big Burn extinguished low-intensity fires that had shaped forest ecosystems for millennia. Ironically, the policy enhanced forest fuel buildup that eventually led to more high-intensity fires. Though fires usually benefit forest systems, extremely hot ones sterilize soils—causing severe erosion and retarding plant regrowth—while threatening human property and life.

before the big fire of 1910.”

After the Big Burn, hillsides were opened to sunlight, prompting the growth of huckleberry, willow, and other shrubs. Over the next half century, mule deer populations burgeoned as the animals browsed emergent

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shrubfields. Elk benefited years later, as forests grew and expanded to abut open grassy winter range. Moose, also shrub eaters, initially thrived in the newly opened landscape, while lynx lost the dense forests that held their main food source, snowshoe hares. Then, as trees shaded shrubs and the forest canopy closed

again, mule deer numbers declined, elk numbers tapered off, and populations of white-tailed deer—a species that prefers denser cover—increased.

The complexity of old-growth forests was largely replaced by the relative homogeneity of

lodgepole pine. In many areas between I-90 and the Idaho border, decades of fire suppression created dense stands of aging lodgepole that has become weak and susceptible to attack by pinebark beetles.

When Thompson talks to seasoned hunters about the wildlife populations and landscape

of 30 or 50 years ago, he’s reminded of the tremendous change the region has undergone after the historic fire. “They say, ‘This is how it was when I grew up,’ and I think, ‘It’s a whole different forest now.’”

DESCENDENTS OF FIRE

The 1910 fire indirectly ushered in modern wildlife management practices that have led to healthier game populations and better hunting. Retired FWP wildlife biologist John Firebaugh explains that the logging and fire-fighting roads constructed up many drainages gave hunters in the mid-20th century more access to backcountry areas, increasing deer and elk harvest beyond sustainable levels. That forced wildlife managers to devise stricter harvest regulations, which later led to

today’s finely tuned management of big game populations in dozens of different hunting districts. Adds Thompson, “I guess you could say today’s wildlife populations are descendants of that fire.”

The Big Burn also created vast tracts of near-wilderness. While some of the 3 million acres scorched in 1910 retained healthy trees, many large tracts were so devastated the timber could not be salvaged. Long since recovered, those areas are now secure wildlife habitat containing no roads. “These factors helped maintain one of the largest backcountry complexes in the lower 48,” wrote Whit Fosburgh, president and CEO of the Theodore Roosevelt Conservation Partnership, a national conservation organization, in an editorial published in the

Missoulian on the 100-year anniversary of the 1910 fire. “Between the North Fork Clearwater and Lochsa drainages of Idaho and the middle and lower Clark Fork drainages of Montana, more than 1 million acres of roadless areas remain today.”

The centenary of the Big Burn offers opportunities to examine both the horrors of fire and its value. A blackened tree stump or smoldering building makes the devastation obvious. But the seeming paradox of beneficial fire remains difficult to grasp. The old message was simple: “Only You Can Prevent Forest Fires.” The new message is more complicated and harder to comprehend. “We’ve finally gotten around to talking about fire management rather than just fire suppression,” says retired USFS fire ecologist Stephen Arno of Florence. “But by the time we started that conversation it was already pretty late in the game, and the public had already been brought up on Smokey the Bear.”

Federal agencies have learned much about fire over the decades. By the 1980s many forest managers were endorsing the reintroduction of wildfire into ecosystems. In 1995 the USFS officially revised its fire-fighting policy to allow some wildfires to burn themselves out. A report by the Departments of Interior and Agriculture following the 2000 fire season noted, “While the [old] policy of aggressive fire suppression appeared to be successful, it set the stage for the intense fires that we see today.”

For years Kalispell writer Ben Long has been pondering the relationship between humans, forests, and fire, especially in the aftermath of the Big Burn. “A century after that horrific fire, we are still trying to shape forests to our designs,” he says. “We’re squandering huge amounts of money—and sometimes firefighters’ lives—in the process, but still we’re never really satisfied with how the tinkering turns out. It seems that how we view our relationship with fire and forests has for too long been blurred by fear, by economic interests, and by a lack of understanding of ecological processes.

“Maybe 100 years later the haze and smoke is finally clearing,” Long adds. “Maybe now we can see what it is we’re doing to forests—and to ourselves in the process—a bit more clearly.” 🐻

EAST FORK OF THE BITTERROOT RIVER, AUGUST 2000. BY JOHN MCCOIGAN, USDA