

tudes are generally similar to the results of the 1990 Society for Range Management survey. This indicates that an increased environmental awareness would be

welcomed. This could come in form of formal classroom education, guest speakers, camps, and other activities where young people can learn and experience.

Fire and the Changing Land

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Editor's Note:

This paper was the third place winner in the High School Youth Forum presentations at the 1992 SRM Annual Meeting in Spokane, Washington.

In 1988, 58,300 acres of the Long Pines Forest near Ekalaka, Montana, were burned in the Brewer Fire. This fire was very devastating as it was an unusually dry summer. The Brewer Fire was the most catastrophic fire ever recorded in this forest. Over 88% of the 66,010 acre forest was consumed in the ravaging blaze.

The Long Pines Forest is not unfamiliar to fire. It lies in the path frequently followed by thunder and lightning storms, many unaccompanied by rain. The last major fire in this area, however, was in 1908.

On June 20, 1988, a thunder storm started two fires relatively close to each other. A local rancher reported the fires and the Forest Service sent out two pumper trucks and 12 fire fighters. The fires joined together and the fire crew realized it was too large for them to handle. Smoke jumpers, 3 bulldozers, an interagency management team, and a slurry bomber were called in.

The drought, temperatures of over 90 degrees, low humidity, and winds gusting to 40 miles an hour from various directions caused the fire to spread very rapidly.

On Tuesday, June 21, the heated pine fumes began bursting into flame. This reaction is called blow out. According to Dave Aicher, who was District Ranger at that time, blow out can send burning material as much as a half of a mile over the fire line. This made the fire impossible to contain. By Wednesday, 4,700 acres had been burned, by Thursday the fire had consumed 12,000 acres, and by Friday the total acreage was increased to 27,000 acres.

At the time the fire was declared contained, eight days after it started, at 4 o'clock on June 28 there were 1,148 Federal, 113 State and 300 local fire fighters, 40 pumper trucks and 5 bulldozers on the line. A total of 58,300 acres of grassland and ponderosa pine were burned.

Before the fire, the Forest Service had been quickly putting out all fires in the area, to protect the resources

used for livestock and wildlife grazing, timber production and recreational use. This policy contributed to a build up of burnable material. There were many young stands of doghair pines and a thick layer of needles, twigs, pine cones, and dead trees on the ground. The area had not received a normal amount of moisture since 1982, and all it took was a single lightning strike to turn the forest into a blazing inferno.

The aftermath of the fire brought some stark realities to light. The good wildlife habitat was gone for a few years. The beautiful forest with its old trees would take hundreds of years to regenerate. But the most pressing factor at the time was the loss of grassland. A good rain or two would bring back some of the grass, but area ranchers weren't very optimistic. A rainy day in eastern Montana is cause for celebration.

On July 9, 17 ranchers who had grazing permits for the Long Pines Forest met with the Forest Service and the Bureau of Land Management (BLM) to organize rehabilitation efforts. Ranchers were very concerned about how long they were going to have to keep cattle out of the forest. Most of them use the grazing land during the summer months.

Grassland that burned at low to moderate intensity should recover in about 1–2 years. But since 34% of the forest was burned at high intensity, it would take longer for the grass to come back. To help with recovery efforts, the Forest Service prohibited livestock grazing in the forest until May 1989. When grazing was permitted in the forest, the stocking rates were reduced by 40–60%, depending on the intensity of the burn.

Nineteen hundred acres of the forest that experienced high intensity burn was reseeded back to native grass and yellow sweet clover at 14 pounds per acre. All the reseeding was done by helicopter. In most areas, experts believed native grasses would regenerate themselves.

The Forest Service also began to plant ponderosa pine in the area. Seeds from undamaged trees were collected

and sent to a nursery in Oregon. Then the young trees were sent back to be planted in the forest. This was done to preserve the hardiness of the Long Pines. Approximately 1,000 trees were planted in 1988 and the planting effort is still underway.

The Brewer Fire was very devastating to the area and caused economical hardships for all the local people. Ranchers were hit the hardest. Many had to sell cattle because they didn't have enough feed to last them through the summer and the winter. But now, due to good management and a couple wet seasons, the forest is coming back nicely. With the tree overstory decreased, the litter removed from the ground, and the extra nitrogen in the soil from the ashes, grasses and plants of various kinds have begun to cover the charred earth. Stream beds were cleared of dead trees and shrubs. The water sources are more abundant and of better quality.

But the best thing to come out of this catastrophic experience was the knowledge the Forest Service, the BLM and the local people gained. Some practices used after the Brewer Fire include the reduction of stocking rates, deferred and rotational grazing and the replanting of natural vegetation. The Forest Service also planned to

use prescribed burning every 7–15 years to reduce the amount of litter and doghair pines to a minimum while increasing the total amount of vegetation.

All the hard work and money put into the rehabilitation of the forest is paying off. Last fall, some local ranchers said they hadn't seen grass that tall in the forest for a very long time, and their calves were coming out of the forest 50 pounds heavier than they did before.

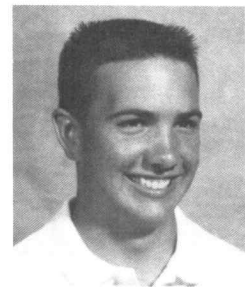
I think this case definitely proves that fire is the ignition key that gives life in the forest a chance to start over and improve itself, and I hope the things we learned from this experience will help people in other areas deal with fire and the changing land.

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Thorn Creek—The Fire, Its Effects, and the Rehab Plan

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On August 8, 1990, an arsonist ignited 4 fires on the west side of the Thorn Creek Area near Shoshone, Idaho. With an afternoon high temperature of 103 degrees and a slight breeze from the west, the weather provided no resistance for the development of a significant wildfire.

The typical native range vegetation included an overstory of mountain big sagebrush and an understory of perennial grasses, with patches of quaking aspen and related vegetation throughout. The several streams that originate in this area contained lush riparian habitat on their banks that included numerous vegetative species. In August, the grasses in this area were as dry as at any time during the year. The area was nearing an ecological state of potential natural community, which indicates an overly

adequate fuel load in the understory to supply a range fire.

On the day of the blaze, fire crews had nearly contained the fire. Unfortunately, the unpredictable Southern Idaho weather refused to cooperate. The winds struck with a strong force and combined with the heat from the fire produced powerful fire whirlwinds. These firewhirls carried the fire over fire lines and backfire lines. In less than one hour, the winds had carried the fire several miles. At this time firefighters concentrated mainly on avoiding danger and finding roads ahead to start backfires from. Fixed wing aircraft were used to apply fire retardant, and helicopters were used to make water drops on the blaze.

The fire was controlled four days after it was started. It left behind a path of extensive destruction, damaging many resources and facilities. The blaze consumed nearly 70,000 acres, damaging or eliminating everything in its path, including various resources, as well as fences, powerpoles, pipelines, and pumphouses. The estimated cost of the damage exceeded 1 million dollars.