



Wildfire: Nature's Wildlife Habitat Renewal

As the number of acres burned by wildfires adds up, many people wonder what will be left when the smoke finally clears and the last embers burn out.

Charred stumps and ashen landscapes appear devastated, incapable of recovery and unable to support wildlife.

But unless the fire is unusually intense, forest wildfires do not leave the situation as bleak as it first appears. Fire has been part of Idaho's landscape ever since there has been vegetation to burn. Our plants and animals have adapted to the changes brought by wildfire.

While forests tend to recover quickly from all but the most intense fires, sagebrush grasslands, vital to sage-grouse and other upland species, can take decades to recover. Many grasslands also suffer from increasing frequency of fires.

Fire begins a sequence of events in the plant community that affects all creatures. After the fire, nutrients in the ash, especially nitrogen and phosphorus, become available to seeds, roots and shoots. Seeds from fire-dependent species, such as lodgepole pine, are dispersed widely and take advantage of those nutrients. Loss of forest canopy allows plenty of sun to reach the ground, allowing an explosion of plant growth. Over a short time the forest floor becomes covered with a variety of grasses, wildflowers, shrubs and seedlings.

Wildlife readily take advantage of this new growth. Because of the way most wildfires burn, a patchwork of burned areas, partial burns and unburned areas is created. Such areas provide ideal forage and shelter for a variety of wildlife from birds and small mammals to big game species. In fact, burned areas often create the forage and food combinations preferred by elk.

Bighorn sheep benefit from both the plant growth as well as the openness of the new habitat. Until the forest canopy closes over the area again, the succession of plants will continue to provide excellent habitat conditions.

Strangely enough, aquatic systems also gain long-term benefits from wildfire. While an intense fire can result in the temporary loss of riparian vegetation, sedimentation, loss

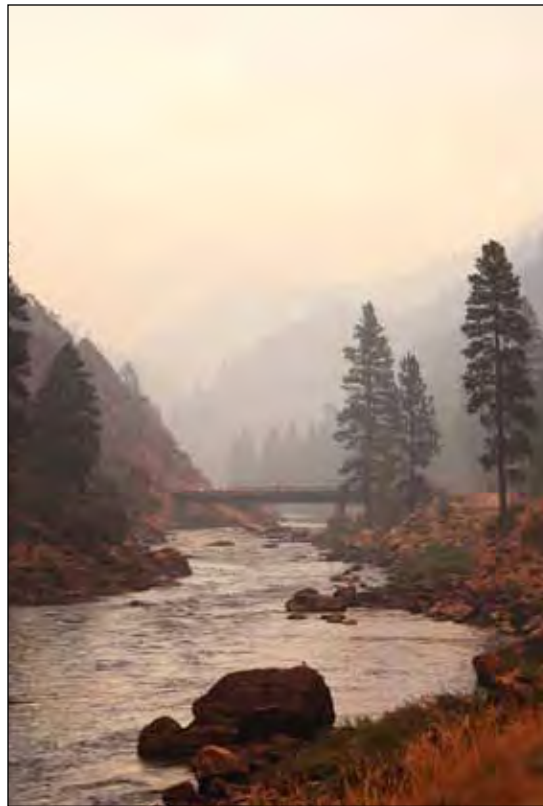
of shading and water temperature increases, fires of low to moderate intensity release nutrients into the water. These nutrients are initially taken up by aquatic plants and eventually work their way through the food chain to benefit many aquatic animals. In more sterile alpine lakes, nutrients added as a result of fire can have significant long-term benefits to fish production. Along with the addition of nutrients, fires bring down timber into water bodies. These submerged trees provide important shelter for fish and other aquatic animals.

In this day and age, part of the ability of wildlife to survive the aftermath of large wildfires depends upon human behavior. Intense fires that remove large areas of cover often leave big game animals vulnerable to disturbance particularly in areas where fires burn along roads and trails as well as along fire lines.

Travel restriction may be necessary to protect wildlife from human disturbance. Forest

rehabilitation may include re-seeding of wildlife forage species; erosion control measures; trail work; and restoring habitat in fire breaks.

Intense fires can cause short-term damage to habitats, but most fires benefit forest ecosystems and their wildlife.



Smoke from the Mustang Fire complex hangs in a mountain valley. Photo courtesy U.S. Forest Service

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Wildfires Take a Toll on Sage-Grouse Populations



Range fire burns in Southern Idaho in summer 2012.

Photo courtesy U.S. Forest Service

In July 2007, the Murphy Complex Fire burned more than 652,000 acres of sagebrush rangeland in southern Idaho and northern Nevada.

The fires included more than 274,000 acres of important sage-grouse habitat in eastern Owyhee County, and they cast a cloud over sage-grouse seasons in Owyhee and western Twin Falls counties.

The burned area was one of the few remaining places with large areas of unfragmented sagebrush habitat. After the fire, there were still 41 known active leks, but the number of sage-grouse males counted was down 66 percent.

Sage-grouse depend on large areas of sagebrush-grassland habitats. In winter, sagebrush leaves make up about 99 percent of their diet.

The sage-grouse season has been closed east of the Bruneau River in Owyhee County since 2007 and in western Twin Falls County since 2010

because of sage-grouse declines within the burned area.

For the past 30 years, wildfires fueled by nonnative annual grasses, such as cheatgrass, and drought have been the leading cause of sagebrush habitat loss in Idaho. Native perennial bunch grasses are spaced far enough apart that they don't carry a fire well, except under extreme conditions. The invasion of cheatgrass has increased the number and frequency of fires. Cheatgrass fills the spaces between bunchgrasses and helps spread the fire. It also dries out earlier, providing fuel for early season wildfires.

Fires kill sagebrush, which regenerates from seed and takes decades to recover, while cheatgrass recovers immediately.

Sage-grouse, once a symbol of the wide open spaces of the West, have declined across much of its range.

The decline is mostly the result of loss of critical sagebrush habitat from many causes, including rangeland fire, invasive plants, and climate change, as well as land uses such as energy development, suburban expansion, inappropriate livestock grazing management and agriculture. These and other developments can cause fragmentation or degradation of sagebrush ecosystems.

Sage-grouse has been a candidate for listing under the federal Endangered Species Act since 2010.

Online Fire Closure Data

As the summer's fires continued to burn and hunting seasons get under way, 15 closures were still active in Idaho.

Fires have left substantial portions of our state – areas bigger than a couple of states – closed to access.

Fish and Game is compiling the latest fire activity and closures from www.inciweb.org and making them available on the Fish and Game website.

Interactive Closure Maps Online

To view closures in real-time online, Fish and Game has added fire closures and fire activity to two applications:

Hunt Planner Map Center at <http://fishandgame.idaho.gov/ifwis/huntplanner/mapcenter/>.

Fish and Game Fire Map (for mobile) at <http://fishandgame.idaho.gov/ifwis/maps/realtime/fire/>.

Fish and Game has added “fly-out” information to each closure with links to the full closure order on InciWeb.

New Fire Perimeter Layer in the Huntplanner Map Center

An additional overlay of active fire perimeters added to the Hunt Planner Map Center is from infrared flight photography and is not available for all the fires in Idaho. These perimeters are finer detail than the MODIS satellite imagery updated every two hours.

In Your GPS and Offline

Download the closure layer as a Google Earth(KMZ) or Shapefile(SHP) at <https://fishandgame.idaho.gov/ifwis/portal/opendata/fire-emergency-closures> for offline viewing. If your GPS unit requires GPX, a conversion utility to transfer KMZ to GPX is available.

This layer was digitized by USFS fire incident teams and the Idaho Fish and Wildlife Information System team at Fish and Game. This layer will be updated regularly through the hunting season.

Descriptions of all fire closures in Idaho are available on InciWeb. For maps and information about Idaho's hunt boundaries, visit the Idaho Hunt Planner Map Index at <http://fishandgame.idaho.gov/ifwis/huntplanner/mapindex.aspx> and the Idaho Fish and Wildlife Information System Open Data Downloads at <https://fishandgame.idaho.gov/ifwis/portal/opendata>.

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Prescribed Fires Improve Forest Health

By Miles Benker

Thick, white smoke is seen high above the ridge. The fire crew walks along the freshly dug fire line, watching carefully as the brush snaps and crackles.

Far different than wildfires burning out of control, prescribed fires are set intentionally by fire experts.

In some areas where fire has been prevented from conducting its natural role, state and federal agencies have set prescribed fires to mimic natural fire and improve landscape health and community safety. These managed fires are timed to occur in the spring and late fall, when conditions are favorable and fire danger is low.

There is a need, and a place for allowing fire to play out its historical role on the landscape. The Forest Service has allowed some lightning-ignited fires to burn for habitat benefits. Many of these fires occur in rugged areas that are very remote, inaccessible and have low risk to people and property.

During the hot, dry summers, some fires need to be attacked aggressively, especially those near forest communities and private property.

But many fires now are larger and more damaging than in the past. Much of this is due to past campaigns to exclude fire entirely from the landscape.

Decades of forest management practices that have eliminated fire have caused many forests to become choked with thick undergrowth and smaller trees that naturally occurring fires would normally weed out. After years without fire, these forests become tinder boxes prone to hotter burns that are harder to control and pose a greater risk to communities. Intense fires can also damage plant and wildlife species.

This is evident in the Clearwater Region where fires returned expanses of the forest to early succession that favored elk tremendously. The way the fire burned some areas and skipped other areas created a mosaic of habitat types across the landscape. The results were openings in a dense forest, creating



Photo courtesy U.S. Forest Service

habitat and food for a diversity of wildlife.

Other evidence of long-term fire suppression is the fact that fire dependent species such as Ponderosa pine and aspen are diminishing in their distribution range throughout the western United States

They depend on fire for their existence and future regeneration of the site. These habitat types struggle with competitive shade-tolerant species and increased fuel-load buildup, making them susceptible to fire loss. Many species of wildlife rely on these fire-dependent habitat types, and they are also being affected by this trend.

Fish and Game supports finding the balance between fire suppression, wildland fire use and prescribed fire. Fire plays an important role in forest health and wildlife habitat.

Miles Benker is a regional wildlife biologist in the Panhandle Region.

Fish and Game Fire Policy

Idaho Fish and Game does not recommend closing hunts or altering season dates in response to fire closures.

Most fires are not large enough to affect an entire hunt unit.

Hunters affected by a fire closure can adjust their schedule to hunt later during the already established season or exchange general tags to hunt in a different area. But tags must be exchanged before the season begins.

Hunters with controlled hunt tags may exchange them for general season tags before the controlled hunt begins. But controlled hunt fees would not be refunded.

Fish and Game will consider requests for rain checks or refunds in the event that all access to a hunting unit is blocked by fire. Hunters requesting a rain check will be required to submit their tags and permits with a letter describing the conditions of their request.

Rain checks will be evaluated case-by-case at the end of the hunting season. Rain checks would be valid in 2013 and offered only for the same species and hunt area as the hunter held in 2012.

Written requests should be sent to the license section at Fish and Game, P.O. Box 25, Boise ID 83707 when the season is over.

Hunters and anglers, and anyone else heading into the back country, are advised to check with Forest Service ranger district or Bureau of Land Management offices or county sheriffs' offices before heading out. Fire updates can be found online at: <http://www.inciweb.org/state/13/>.

Idaho Fish and Game Policy

Idaho wildlife management policy is set by seven volunteer commissioners. The Idaho Fish and Game Commission's policy decisions are based on research and recommendations by the professional staff of the Idaho Department of Fish and Game, and with input from the governor's office, the state Legislature, hunters, anglers and the public.



Recovering the Rocking M has Taken Time and Cooperation

By Anna Owsiak

In the summer of 2005, the Snake One Fire left 25,000 acres of burned rangeland within the Rocking M Ranch Conservation Easement Area along the Idaho-Oregon border.

This area is familiar to many because of its chukar and mule deer hunting and Brownlee Reservoir fishing access.

After the fire, federal and state agencies, private landowners and conservation and hunting organizations pooled their resources to seed parts of the burn with grasses, forbs and sagebrush.

Bitterbrush and other shrubs were planted in key mule deer winter range and riparian areas, and plans were made for weed control in the following years.

In the years since the fire, bunch grasses, lupines and other native plants have come back and now cover the formerly blackened hillsides. Most of these plants escaped the high intensity fire, and survived to regrow.

Many shrubs, however, had a different fate. Today, small pieces of blackened wood are all that remain of the burned sagebrush and bitterbrush. Most dry-land shrubs – like sagebrush and

bitterbrush – do not re-sprout after a fire; they rely on seeds to be re-established.

If soils are not damaged by the fire, seeds can sprout the following spring if temperature and moisture levels are just right, otherwise it can take decades, even centuries for shrubs to return on their own. In areas where the sagebrush was once thickest and the fire burned the hottest, no shrubs remained and the soil itself was altered, making it difficult for seeds to germinate and survive. In these areas, shrubs still have not returned, and it may be many years before they do.

Cottonwoods, alders and other shrubs along creeks, draws and springs within the Rocking M were also killed by the

fire. Their blackened trunks and limbs still stand in many areas, casting shadows across the ground. But in most of these areas the fire was not hot enough to kill their roots, allowing them to re-sprout. In the first growing season after the fire, many of these new sprouts were more than three feet tall.

To help speed recovery and reduce soil erosion along creeks after the fire, willow cuttings were planted. Burned tree trunks and large branches were also used to catch and hold sediment from nearby eroding hillsides. It will still take many



Wildfire left a blackened landscape on the Rocking M.

Photo by Anna Owsiak

years for plants to recover in these areas, even with rehabilitation efforts.

This wildfire also created ideal conditions for noxious weeds to establish or expand their presence. Acres of bare soil and little competition for water, nutrients and living space from other plants allowed noxious weeds an easy chance to move in and take over. Surveys conducted within the burn reveal mostly noxious weeds in areas that burned the hottest, and some weed patches that expanded into areas that were relatively weed-free prior to the burn. Weeds will always be an issue in any area burned by wildfire, requiring annual treatment to keep them under control.

Walk anywhere in the burn area and you'll see that wildlife is still there. Deer and elk tracks are found along creeks and in burned timber patches. Chukars can be found throughout the burned area where they now enjoy plenty of grass cover in which to hide. Song birds and insects are heard from any vantage point. Red-tailed and Swainson's hawks are seen soaring across the landscape or resting on a burned branch.

Evidence of pocket gophers and other small burrowing animals is found throughout the area. Coyote tracks are seen in the roadside dust, a favorite travel lane for these consumers of mice, insects and berries.

But habitat within the burned area does not yet meet the needs of all wildlife. Most of the shrubs that once provided winter browse for mule deer and nesting cover for birds are gone. It will be many years before replanted shrubs are tall enough to provide adequate food and cover, and many more years before patches of sagebrush and bitterbrush are capable of supporting large numbers of wintering mule deer.

Berry-producing shrubs also need time to grow and mature before they can provide food for bears, ruffed grouse and wintering sharp-tailed grouse. It will take time for plant roots to stabilize creek banks, and tree branches to once again provide shade and cooler water temperatures for native trout.

Over time, as plants mature and missing habitat components return to the Rocking M, wildlife will respond to the better living conditions. Winter survival of big game will improve, nesting success will increase and detection by predators will decrease because of better hiding cover.

Anna Owsiak is a regional wildlife biologist in the Southwest Region.