

# Land Management After Wildfire

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## What can landowners do to manage property after a wildfire?

*Has your property been affected by wildfire? Are you unsure about what to do now and who to turn to for help?*

Recent wildfires have been devastating to people, homes, barns, fences, livestock, hay bales, or standing grass that was needed for winter forage. In the areas burned by wildfires, it may look like the flames destroyed all the vegetation.

"Wildfires can affect the vegetation in ways that are very similar to the effects of prescribed fire and can provide valuable control of brush species," states Susan Baggett, State Resource Conservationist for NRCS in Texas. "Loss of vegetation not only affects forages for livestock and wildlife habitat, but it can lead to increased soil loss due to erosion by wind and water."

Many landowners may be left with the fear that vegetation will not return unless it is re-seeded. Even though the initial appearance on the land may be that of a moonscape, in most cases native plants evolved with fire and are still alive. They can recover with a management plan. Factors that affect recovery time include types of plants and their adaptation to fire, fire intensity, precipitation (before and after the fire), soil type, previous history of grazing and fire, presence of weeds (competition), season of fire, and management after the fire.

Burned vegetation still provides protection from soil movement due to remaining plant roots and plant parts. Instances where erosion could occur include areas where active erosion occurred prior to the wildfire, on very steep slopes, in very sandy soils, and along drainages until the vegetation recovers. Usually within two years, the erosion rates return to pre-burn conditions.

Most native trees, shrubs, forbs and grasses have mechanisms of coping with fire. Some will grow new leaves; some will re-sprout, while others have fire resistant seeds that will sprout following a fire. Bunchgrasses, like little bluestem, accumulate dead material above the root crown and the center of

the plant dies over time. After a fire, it sometimes appears that the plant was killed, when in fact the center of the plant was already dead. This can be observed by examining burned and unburned plants in the same area. In contrast, rhizomatous grasses, such as big bluestem or sideoats grama, have growing points below the soil surface and do not accumulate fuel next to the root crown.

Woody plants are adapted to fire by location of buds or protective bark. Most woody plants resprout if top growth is killed. Once top growth is lost, dormant basal buds below the soil surface begin growth. Plants such as Ashe juniper though, lack basal buds and do not resprout. Many woody plants have thick bark and are adapted to intense fire. Eastern cottonwood, post oak, and shortleaf pine are examples of fire tolerant woody plants.

Management prior to wildfire will affect recovery time. Plants that had a healthy root system at the time of the burn will recover the quickest. A flush of weeds could be expected the first season after a wildfire. However, these may be plants that benefit wildlife and typically within 2 years following a wildfire, will decline as grasses increase. The key point is to identify the weeds, understand their life cycle, evaluate their impact on recovery, then make a decision regarding weed control.

It is important to recognize three distinct growth stages of plants to plan for recovery.

1. During the "green-up" or early stage of the growth, perennial grasses can be defoliated rather intensively without permanent damage to the plant; *as long as the growing point remains below the point of defoliation and is unharmed.*
2. As soon as the grasses shift from the short-shoot growth stage to the early reproductive or long-shoot stage excessive grazing can be detrimental, but not necessarily "life threatening" to perennial grasses.
3. *It is the period between post-reproduction and dormancy during*

*which perennial grasses periodically must be rested to insure their long-term survival and vigor.*

Management considerations following a wildfire include:

- Some areas may need to have grazing deferred until plant growth is adequate to support grazing. This will be dependent on precipitation.
- Stocking properly.
- Avoiding grazing the same areas and plants at the same time each year.
- Rotate livestock between pastures to allow plant recovery. Additional practices such as temporary fencing and new water facilities may be needed.
- With adequate precipitation, areas can be grazed with intensive early stocking (IES). The key is to remove cattle by July 1 if using IES and not graze the area again until after frost.
- Apply fertilizer according to a soil test for introduced species.
- Utilize rotation of salt, mineral and feeding locations to better distribute grazing.
- Weed control may be necessary. Types of weed control include herbicides, flash grazing or intensive early stocking with livestock.
- Monitor to ensure management decisions are restoring desired plants.

Fire has been and still is an essential part of maintaining healthy native grassland, rangeland, and forest lands and has positive impacts. In many cases, prescribed fire can reduce the potential for future wildfires. The information is meant to provide some guidance in helping landowners make decisions following wildfire events. The impacts of wildfire will vary in each situation as will the course of action and management needed following the wildfire.

For further assistance in evaluating your land and planning practices to address concerns following a wildfire, contact your local Natural Resources Conservation Service (NRCS) or Soil and Water Conservation District. Offices are located in almost every county and are listed in phonebooks under federal and state government.