



# WILDFIRE RECOVERY TIPS

## SOUTHEASTERN WASHINGTON

Slopes left denuded by range or forest fires are especially prone to accelerated soil erosion, flash flooding, and debris flows because of the absence of desirable vegetation and roots to bind the soil. These same slopes can be rapidly invaded by noxious weeds when a healthy stand of desirable vegetation is lacking.

This booklet contains some techniques that homeowners and land managers can use to avoid or reduce these hazards.

The Natural Resources Conservation Service and your local Conservation Districts are available to answer your questions and provide assistance as you recover from the aftermath of a wildfire.

The content of this document were largely borrowed from the Idaho NRCS. Their help in preparing this document are greatly appreciated.

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## Revegetation

Vegetation is one of the most important factors influencing soil erosion. It helps control erosion by shielding the soil from the impact of raindrops, maintaining a soil surface capable of absorbing water, and slowing the amount and velocity of runoff.

Some plant species are quite resilient to fire and will resprout in the spring. Some plants might grow from seed that survived the fire. The decision to seed or not seed a burned area needs to be made soon after a fire.

Your first step is to inspect the burned area and map out areas that have burned intensely and thus have very little live plants and/or live seed under the ash.

White ash shows where the fire was very hot, and plants & seeds most likely were destroyed. Areas burned that were in thick brush without a grass understory will not have enough seed. Areas around burned farm buildings tend to burn very hot for long periods of time, and will need revegetation. Soils in these areas might be temporarily altered by the fire and resist water infiltration (hydrophobic soil condition).

Areas that had mainly crown fires or rapid running fires probably did little permanent damage to grasses. Seeding these areas should be of low importance.

The second step is to inspect the access routes into the burned area. Roads, jeep trails, and firebreaks are "weed arteries". If the routes are weedy outside the burned area, the routes inside the burned area probably have weed seed contaminating the soil. Seeding these areas should be considered because the desirable plants will compete with weeds that will eventually sprout. Areas that have exposed soil such as fire equipment staging sites should also be planted.

Desirable plants are generally grasses and forbs. The MINIMUM amount of seed is an aggregate of 50 viable seeds per square foot drilled and 100 viable seeds per square foot broadcast. *Aggregate totals exceeding 300 seeds per square foot do not buy much more plant cover.* Rather than spending more money on additional seed, focus on doing a better job of seedbed preparation and seeding.

## Recommended Grasses

These plants are recommended for use on burned areas in southeastern Washington. They are adapted to the soils on the region, climatic conditions, availability of seed, and the amount of cover produced.

Wheat has commonly been added to seeding mixes. Observations show that winter wheat is very competitive with seedling grasses and should not be used. If rapid cover is needed, 15 pounds per acre of spring wheat or spring triticale is recommended to be added to your mix. Spring grains grow rapidly in the fall, winterkill, and do not compete with grass and legumes the following spring.

Rhizomatous grasses such as intermediate wheatgrass and pubescent wheatgrass should not be planted in areas planned for reforestation. These grasses have proven too competitive and tree survival will suffer.

Hard and Sheep fescue are fine-leaved fescues that do not produce much above-ground growth. They are less of a fire hazard than most grasses. Heavy seeding rates (15-25 pounds/acre) will produce dense, weed-resistant cover. Neither species is palatable and will reduce wildlife use around buildings.

### Species Recommendation for a Durable, Forage-type Cover: 15-25" rainfall

<b>Species</b>	<b>Seeding Rate LB/ACRE</b>
Alpowa Spring wheat	15
Slender Wheatgrass	2
Streambank or Thickspike Wheatgrass	6
Secar Snake River Wheatgrass	6
Idaho Fescue	2
Sandberg Bluegrass	2
Sherman Big Bluegrass	4
Mountain Brome	4

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All rates in PLS and Certified seed.

### Species Recommendation for Fire Control around Buildings

<b>Species</b>	<b>Seeding Rate LB/ACRE</b>
Durar Hard Fescue or Covar Sheep Fescue	15

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All rates in PLS and Certified seed.

## Methods of Seeding

Seeds can be broadcast, hydroseeded, drilled or distributed by aircraft. Most homeowners and small landowners will find broadcasting to be the most economical method. Hydroseeding requires roads for equipment access and a nearby water supply. Aerial seeding is most applicable for large areas and areas that are very difficult to access such as excessively steep slopes. Drill seeding is the preferred method but it is largely restricted to cropland.

High-traffic bare areas such as fire equipment staging areas and jeep trails are usually highly compacted and especially prone to weed invasion. Breaking the surface crust is frequently required in order for desirable vegetation to establish. Disks or shanks set to cut 2-4 inches are effective tools for obliterating compacted traffic areas prior to seeding.

### When to Seed

The best time to seed after a fire is between September 15 and October 15. Late fall seeding is not preferred because the plants will not grow large enough to protect the soil and many seedlings will winterkill. Seeding prior to September 15 generally offers little extra benefit unless rain is expected. However, it is better to seed early than late. This is especially true if the amount of ground to be seeded is large and manpower is limited.

Spring seeding dates vary. Aerial and broadcast seeding can begin much sooner than other seeding methods. Broadcasting seed on the snow is discouraged. Hydroseeding must be postponed until the ground will support the weight of the equipment and not tear up the existing vegetation. Drill seeding must be postponed until the soil is dry enough to farm properly.

### Seed Specifications

Total amount of seed purchased should equal the acres burned multiplied by the recommended seeding rate per acre. Include any roads, jeep trails, firebreaks, and other bare areas in the burned acreage.

The total amount of seed is based upon PURE LIVE SEED. Your seed dealer will sell you seed based upon PURE LIVE SEED. Check seed tags for species and the percent germination and purity. If purity and/or germination for a species are less than 90%, discuss this with the seed dealer. Low quality seed should never be used.

The best means to ensure that you are purchasing quality seed is to insist on Certified Grade seed. Certified seed has been inspected by the Washington State Department of Agriculture and meets several important quality criteria.

If you are unfamiliar with seed purchasing, contact your USDA Natural Resources Conservation Service or County Extension Service office. They can assist you with determining your seed needs.

### **Equipment and Materials Needed for Hand Operated Cyclone Spreaders**

Equipment and materials should be ready before you start. This list of items will minimize disruptions and let you finish a small seeding in one day:

- 1 hand operated cyclone seeder for each person doing the seeding
- Weighing scale, at least 20 pound capacity
- At least 2 plastic buckets
- Seed targets. At least 2 pieces of 2'x2' soft cloth or cardboard with corrugations exposed

### **Seeding Specifications**

Adjust cyclone seed spreader to the manufacturer's instructions. Add approximately 1 quart of seed to the spreader. Set out 2 seed targets 10 feet apart and offset 10 feet. Walk past the targets while broadcasting seed. Stop and check the seed counts on each target. Adjust the opening on the spreader until you acquire a minimum of 50 seeds per square foot (200 seeds/target).

Broadcast the seed such that it is uniformly distributed. This might take some trial and error depending on terrain, wind and how fast you crank the handle on the spreader. Areas that are prone to concentrated flow such as gullies need special attention. Seeding gullies should be done with 2 passes to ensure thorough seed distribution.

Wild oats, mustards, and tarweed are very problematic in moist draws. A dense stand of grass is one of the most cost effective means of controlling these weeds. Many producers will double-seed draws to obtain a dense stand of grass.