Post-Fire Stabilization and Rehabilitation Urban Areas FAQ

Grass/Turf and Perennials

What do I need to know when I return to my property?

Grasses and perennials were dormant when the fire occurred so what burned is the debris from this years' growth. Unless you have been periodically watering, the plants went into the fire drought stressed which may allow more damage to the plants. Having the snow fall right after the fire provides valuable moisture for the plants. Once water is restored and you have access, consider watering periodically depending on the natural precipitation we receive. The debris burned by the fire provides readily available nutrients for the plants. Continued drought may be more of a problem for grasses and perennials than the fire.

Be very careful when cleaning up around your landscape. Debris may have been blown in by the wind or from the firefighting efforts. Be sure to wear protective equipment to protect yourself. See tree removal hazards in the section below.

As you work on your landscape next spring, consider making it a more fire-resistant landscape by planting fire resistant plants and using non-combustible materials directly next to the home.

More information on fire-resistant landscaping can be found in the Colorado State University Extension fact sheet Fire-Resistant Landscaping (https://extension.colostate.edu/topic-areas/natural-resources/fire-resistant-landscaping-6-303/)

Trees and Forest Stewardship

Do I need to cut down all the trees on my property?

No. There is no need to cut down all fire-damaged trees on your land, only the ones that are dead or will not recover. See information below on determining potential tree survival.

Are fire-killed trees a falling hazard?

They can be. After the fire, you should focus on removing severely burnt trees along roads, driveways, near your home, and in areas where you spend a lot of time. Fire-killed or partially burned trees are at high risk for falling unexpectedly. You are encouraged to not cut larger-sized burned trees on your own. Burned trees are significantly more dangerous to cut due to their

compromised stability and potential for limbs higher up in the tree to fall unexpectedly. It is recommended that property owners and affected communities as a whole look to hire bonded and insured contractors who have extensive experience in safely cutting hazardous burned trees.

For a list of contractors see the Colorado State Forest Service website. Choosing a Forestry Contractor PDF (https://static.colostate.edu/client-files/csfs/pdfs/Choosingaforestrycontractor.pdf)

Colorado State Forest Service Contractor Directory (https://csfs.colostate.edu/wp-content/uploads/2020/02/CSFS_DD_Contractor-Directory.pdf)

How can I tell if my trees are dead or alive? What should I do about the burned trees on my land?

If the trees do not pose an immediate falling hazard, you can monitor the trees over the winter and into the spring to see which trees survive. Not all burned trees will die. Ponderosa pines, for example, are a fire-adapted species. If a tree has any green needles left on its branches, it has a chance for survival. The tree can be monitored to see if new needles emerge or if the tree grows new buds, needles and branches in the spring. If a tree is a blackened stick with no needles remaining, the tree is dead and should be removed.

What do I do with burned trees I've cut down?

They can be taken to your local limb diversion center. Consider first if the tree can be salvaged for something useful on-site or in your neighborhood. One of the best uses for dead trees is to chip them and broadcast the chips back onto your landscape. You might consider a neighborhood chipping event and picnic.

You can hire a certified arborist to evaluate trees. You can find information on finding an arborist at the International Society of Arboriculture (https://www.isa-arbor.com/)

Do I need to replant trees and when do I need to replant?

The best time to plant is in the early spring. The worst time is the summer. Seedling trees come from a greenhouse environment where their every need is met. Good planting techniques, such as establishing proper root zone contact (no large air pockets in the root zone) and keeping roots straight in the ground (roots extending fully downward), in addition to mulching, creating wind and weed barriers, and providing frequent small volume watering provides the very best chances for survival. If you will have construction on your property, wait until all the construction is complete to prevent damage to trees. Waiting until you have water available on the property makes it easier to water the trees to get them established.

As you're replanting, think about planting different species of trees than you had before. This not only provides variety in the neighborhood and lowers the risk of disease and insect infestations such as the emerald ash borer but can lower future fire vulnerability. Conifers such as spruce, junipers and pines contain resins that make them torches in a wildfire. Watering the trees for at least one growing season improves the

survivability rate. Additionally, to not re-create the problem, you should plant native trees in a spatial arrangement that can effectively break-up the fuels for potential future fires, but also provide for visual and audio screening for privacy.

Front Range Tree Recommendation List (https://extension.colostate.edu/docs/pubs/garden/treereclist.pdf)

Are my partially burned trees at risk from attack by insects?

Yes, trees that survived the fire are now highly susceptible to insect attack. After a fire, there is a tremendous amount of chemicals released into the air by the weakened trees. Insects can “smell” the chemicals that these weakened trees are producing, and they may attack trees within the fire perimeter.

How do I put a value on trees I've lost?

First, you need to check your homeowner’s policy to see if it includes a monetary cap on tree damage per tree or per property or if they include an allowance at all. The Internal Revenue Service (IRS) also has a cap on the amount you can deduct for losses.

Please refer to the IRS website (www.irs.gov) or your tax preparer for this information.

Most insurance companies only cover the loss of specific specimen trees and specialty items (i.e. sculptures) in a landscape, not all the trees, grasses and shrubs on the property. You can hire a professional tree appraiser (there is a certification program to appraise trees), to give you an estimate. International Society of Arboriculture Website

(https://www.isa-arbor.com/)

Erosion Control

The importance of erosion control cannot be overemphasized. The destructive nature of a wildfire stresses soils to the point where they can no longer contain or minimize runoff from rain and drainage water in the same way they did before the fire. If care is not taken to adequately stabilize and rehabilitate damaged soils, the risk of debris flows, and flooding can endanger people and property within and around the burn area.

For the purpose of this guide, we will primarily address the strategies that individual property owners can take to rehabilitate the soils on their own lands. For urban property owners, your danger from erosion will most likely come from drainage areas upstream from your property.

Grasses should regrow next spring and hopefully will prevent most land erosion events that might occur during heavy rain events next spring and summer.

What treatments are recommended to help reduce erosion and runoff?

Mulching is one of best treatment options available to help limit the amount of soil erosion and runoff after a fire. If your land is on relatively steep slopes (about 20-60% slope) and was moderately-to-severely burned by the fire (with a high amount of ground cover consumed), then it would probably be beneficial to apply mulch to your land. Determining if your land needs to be mulched can be tricky and often depends on your individual site.

What type of mulch should I use and what is the best way to apply it?

The two mulch types that are commonly available in our area are certified weed-free straw and wood chips. Each type has its advantages and disadvantages. Certified weed-free straw is the easiest type of mulch to apply by hand and can be very effective at reducing runoff. Its biggest downside is that it is light and can blow around in high winds. Straw mulch should be applied to a depth of one or two inches and ideally cover 70-80% of the ground. If you live in a wind prone area, securing the straw is critical to keeping it in place. Laying the straw down prior to a snow fall can help secure it or using netting over the straw also secures it in place. Wood chip mulch can be created on-site by chipping burned dead trees or obtaining them from your neighbors. Chipping is often the best use of burned trees and has proven to be very effective in reducing erosion after a fire. After chipping is done with a machine chipper, you generally need to hand rake the chips to an even depth. It is critical that chips are spread evenly to a depth of no more than one inch and ideally cover 70- 80% of the ground. If chips accumulate in deep piles, they inhibit native plant re-growth, exacerbating erosion concerns.

There are also erosion control mats that can be used. Explore Effective Erosion Control Products | Granite Seed (https://graniteseed.com/erosion-control/)

Re-establishing sod in these areas also acts as erosion control.

When should mulch be applied?

Mulching should be completed in early spring before the rainy season starts. If possible, it is beneficial to apply straw mulch and wood mulch in the early spring right before a spring snowstorm. This helps bond the straw to the ground. Wood chip mulch can be applied at any time from now until the first big spring rains.

Where do I get certified weed free straw?

The Colorado Department of Agriculture has an interactive Hay Directory (it contains both hay and straw) available at Weed Free Forage | Department of Agriculture (https://ag.colorado.gov/conservation/weed-free-forage)

The directory does not separate hay and straw producers so look for straw producers. Bales come in different sizes. For hand mulching, smaller bales

are easier to handle. Larger bales require lifting equipment to move them and are too large for a single property. Local farmers might be able to deliver directly to your property if several people purchase a whole load together. Consider delivery to a central, easily accessed (both by you and the delivery equipment) location. Try to purchase Colorado certified weed free straw as other states do not have the same standards for weed free certification and you run the risk of purchasing straw with weed seeds.

Why does mulch help reduce erosion?

Mulching is effective at reducing erosion after a fire because of its ability to reduce the impact of raindrops before they impact bare soil. Each time a raindrop impacts bare soil, it creates a micro-explosion of sorts that dislodges soil particles allowing them to move downhill. Mulch slows the incoming raindrops' velocity and helps to slow the rain runoff as precipitation gains velocity and runs down slope. The first year after a fire, when vegetation has not regrown, is the most likely time that major erosion occurs. Erosion will continue to be a concern in subsequent years but will likely be the worst the first and second rainy season after a fire.

Do I need to reseed? When do I need to reseed?

In most cases, no, you won't need to reseed. Even in the most severely burned areas research suggests that post-fire, grasses and flowers reestablish on their own. Lessons learned from past Front Range fires show that based on experience from recent nearby area fires, noxious weeds are expected to establish and expand in the burned area. Weed infestations are highly probable, particularly along roads and driveways and riparian areas, and in high to moderate burn intensity areas.

When is the best time to reseed? What type of seed should I use and where do I get the seed?

Reseeding can be done from approximately mid-October to mid-May. The top ½" of soil must be thawed enough to incorporate the seed into the soil with no snow on the ground. Springtime prior to spring snows and rain is a very good time to seed if there is not snow on the ground. A light (1" maximum) mulch layer after seeding can protect the seed from the wind and maintain soil moisture for germination. Local seed companies will have mixes for urban areas. Contact information for local seed companies is found on the last page of this guide. Sodding should be done in the spring.

What techniques give my seeding the best chance for success?

One of the keys to successful reseeding is good seed. It is important to obtain your seed from a reputable seed company. They can provide the test information (germination rate, purity, weed seeds present, etc.) for the lots

used to make the mix. Always purchase seed on a pure live seed (PLS) basis. Pure live seed tells you how many seeds per pound of seed are viable and will germinate. Not all seed germinates the first year, so be patient. No seed lot is without a few weed seeds in it, but you should strive for the cleanest seed mix possible. Purity is based on a sample of each of the lots used, not the entire lot used. Not all weeds, like cheatgrass, are considered noxious weeds, but you want to make sure to avoid them. Always ask if there is cheatgrass in the seed lot, and do not purchase any seed with cheatgrass in it, if possible. The next key for success is good seed to soil contact. You will want to broadcast (by hand or with a spreader) about 50 seeds in a square foot (you can count out 50 seeds and spread it over a measured square foot area to calibrate your eye). Once the seed has been spread, lightly rake the seed into the soil parallel with the land contour. Raking perpendicular to the contour (down the slope) will only add to erosion problems. At least part of the planted seed needs to be between ¼ to ½" in depth. Raking the seed in deeper than ½" prevents the seed from emerging. The seed may germinate but not have enough energy to emerge. You will still be able to see some seed at the soil surface and this is not a problem. Mulching after seeding is recommended to hold the soil and seed in place and retain soil moisture for germination. Mulch should be 1" in depth or less and in this case should be straw over wood mulch.

I still have questions about erosion control or reseeding. Who do I call?

The CSU Extension Boulder County are available to answer your erosion control and reseeding questions. CSU Extension 303-678-6238, Master Gardeners mggpa@bouldercounty.gov

Noxious Weed Management

What do I need to do with the weeds?

Weeds will likely sprout in the spring and summer following a fire. If you had known infestations of noxious and nuisance weeds prior to the fire, they will be there post fire. The fire in most cases did not burn hot enough to destroy the root systems or weed seeds. Weeds take advantage of the disturbance and may spread farther or increase the population due to the lack of competition from native vegetation. You can call the CSU Extension office for identification and management recommendations.

Flash Flood/Debris Flow

What do I need to do to protect myself?

There is increased potential for flooding and debris flows in the area of the fire due to vegetation loss and bare slopes. All residents should be aware of the increased risks.

Spring/Summer thunderstorms produce highest risk for flooding

- Flooding and debris flows can block roads and leave you stranded.
- Power outages and loss of phone service are possible, resulting in isolation.
- Flash flooding can occur at any time including at night.

Get Ready

- Gather emergency supplies to take with you if you need to leave quickly. If your home is located on high ground and it is NOT in danger from debris flows, you may choose to shelter in place.
- Plan to be on your own without water, gas and electricity for at least three days.

During a Flash Flood

- Move to high ground immediately. Stay out of floodwaters. Swift moving water and debris can be deadly.
- Stay away from power lines and electrical wires.
- Leaving the area can pose significant dangers, as road washouts and landslides can occur along escape routes. If you plan to try to leave the area, give yourself as much time as possible, and know that it still may not be enough.

Safety Routes and Locations

- Plan to go to a safe location and practice moving along your previously identified safety routes.
- Talk with family members and neighbors and plan where you will meet and how you will check in with each other at your safety locations.
- Have a plan for your pets and livestock so you won't be delayed in reaching higher ground.

Stay Informed

- Stay informed through local radio (e.g. KOA – AM 850), television alerts and your own observations. Monitor a NOAA Weather Radio.
- Sign-up to receive emergency alerts on home, work and cell phones, text messages and e-mail. Office of Disaster Management website (https://www.boulderodm.gov/) to register your phone number(s) and/or e-mail address(es).

Vehicle Safety

- Never try to drive your vehicle through flood water. Nearly one half of all flash flood fatalities are auto related. As little as 18" of water will float most vehicles.

Flood Insurance

- If you live in an area that may experience flooding or debris flow post fire, consider purchasing flood insurance. Visit FEMA website Flood Insurance (https://www.fema.gov/flood-insurance)

For assistance in emergency planning or if you have questions, call the Boulder Office of Disaster Management at (303) 441-3390 or visit website Boulder ODM (https://boulderodm.gov/)

CSU Extension Boulder County can also provide emergency planning information.

Contacts

Colorado State University Extension Boulder County
After the Disaster Guidebook (https://boulder.extension.colostate.edu/wp-content/uploads/sites/7/2024/08/Boulder-Ext-After-the-Disaster-Guidebook-8-2024.pdf)
Main Office 303-678-6238
CSUExtension@bouldercounty.gov

Boulder Valley & Longmont Conservation Districts
(office) 720-378-5521
(cell) 720-815-8842
(email) bldrvalleyandlongmontcds@gmail.com
(website) www.longmontcd.org

Colorado State Forest Service, Boulder District
(office) 303-823-5774
(email)
CSFS_Boulder@mail.colostate.edu

Natural Resources Conservation Service, Longmont Field Office
(office) 720-378-5533

Local Seed Companies

Arkansas Valley Seed
4300 Monaco St.
Denver, CO 80216
303-862-3590
Fax: 303-862-3596
http://www.avseeds.com/

Pawnee Buttes Seed, Inc.
P.O. Box 100
605 25th Street
Greeley, CO 80632
1-800-782-5947
www.pawneebuttesseed.com

Sharp Brothers Seed Company
101 E. 4th Street
Greeley, CO 80631
970-356-4710
http://www.sharpseed.com/

Granite Seed (seed, erosion control products)
490 East 76th Ave. Unit A
Denver, CO 80229
888-577-5650
http://www.graniteseed.com/

Western Native Seed (native grasses, wildflowers, shrubs)
P.O. Box 188
Coaldale, CO 81222
719-942-3935
http://www.westernnativeseed.com/