



Reforestation: Tools for Renewal

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Foresthill High School senior Joe Vigarino prepares to plant trees as part of his “Fish, Wildlife and Forestry” class’s reforestation project.

Forestland Steward

Forestland Steward is a joint project of CAL FIRE, Placer County Resource Conservation District, UC Cooperative Extension and USDA Forest Service to provide information on the stewardship of private forestlands in California.

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Reforestation offers many benefits



Site prep on this eastern Fresno County forestland is complete and ready for the next step—planting seedlings.
Credit: Jane Kleinkramer

After a major forest disturbance—wildfire, drought, insect infestation—the process of recovery can seem overwhelming.

Fortunately, there are forestry experts and funding resources available to help California's private forestland owners recover.

Forests regenerate naturally but, natural regeneration may not result in the species mix or type of forest you want.

Guiding your forest towards a desired forest type and accelerating the pace of recovery calls for developing a reforestation plan.

Reforestation is a decades-long process and a solid plan can help avoid costly mistakes. To support decisions about what's best for your land, get the advice of a Registered Professional Forester (RPF) before developing your plan

Evaluate your situation

Prioritize areas on your property for reforestation based on your management goals. Reforestation actions for timber production may be very different than reforestation for recreation, aesthetics or wildlife habitat.

When making the decision to invest in reforestation, consider current and potential vegetation communities, climate variables, slope, aspect and soil attributes.

In many cases, there are still surviving trees even in the hardest hit tree mortality or burn areas. These trees can be made more resilient with active management.

Consider thinning the remaining stands to promote healthier individual trees that have proven to be more resistant to insects, disease,

fire and drought.

Set the stage

Good site preparation ensures seedlings will be able to survive the stress of initial planting and the first years of growth.

- It may be helpful to reduce competition by removing brush and grass from within and immediately surrounding the planting sites.
- Timing is critical. Planting in the fall or late winter will secure adequate water supply for growing trees.
- A healthy forest includes a diverse mix of tree species adapted to the growing site.
- Select seeds from your seed zone. Using seeds from near your planting site will help ensure seedlings are best adapted to the planting site.
- Consider inter-planting within your existing stand to increase species diversity.

Plan for the long haul

After seedlings are planted, you will need to continue caring for them. Reforestation requires careful oversight in the first few years.

Minimize competition: Seedlings will need to be protected from animal damage, competition for moisture and light from grass and brush.

For landowners there are several options for obtaining cost-sharing grants and assistance from forest management programs.

See page 9 for information about CFIP funding and cost-share grant opportunities.

Tree stocking rule changes help lower reforestation costs on private land

Beginning January 2020, important changes to tree stocking standards under California's Forest Practice Rules go into effect. The amended rules reduce the required minimum number of trees per acre (TPA) that need to be planted after timber operations on specific forest sites.

For example, the new stocking requirement will be 125 TPA in the state's northern forests, compared to 300 TPA under the previous standard. Stocking standards for southern and coastal forests have been similarly reduced.

How will these changes impact me?

The changes are intended to improve forest health and make post-harvest forest management more economical for landowners, said Rachelle Hedges, project and policy analyst for Berkeley Forests at the University of California's Center for Forestry, Fire Research and Outreach.

Hedges was part of the team that helped craft and present to the state Board of Forestry the proposed changes to tree stocking standards.

"The current trees-per-acre stocking standard was established nearly 50 years ago, and did not take into account changing ecological conditions in California's forests nor the drastic improvements in planting practices and seedling survival rates," she said.

"Under the previous standards, plantings that were not thinned would grow into overstocked, often suppressed mature stands, which presented

challenges to land managers and dangers to human and ecological health," she said.

Can I expect cost savings?

The rule change may make post-harvest forest management less costly for private forestland owners because the former stocking standard often required landowners to purchase and plant nearly double the number of seedlings for many sites.

"Landowners then had to expend further funds to conduct pre-commercial thins to maintain forest health and vigorous growth," she said.

"Small forestland owners feel these costs more acutely than other groups managing forestland.

"Our hope is that these amendments to the state Forest Practice Rules will help ease some financial burden for private timberland owners in California," Hedges said.

At the same time the addition of sections §912.7, 932.7, 952.7 (see sidebar for link) to the state Forest Practice Rules gives land managers and RPFs more flexibility over how to best manage forestlands based on landowner objectives and the conditions specific to their sites.

What's next?

Excluded from the "Stocking and Silvicultural Standards Amendments, 2019" rule package are proposed amendments to the stocking standards for special districts within the state, including the Southern Subdistrict of the Coast Forest District and Marin County), which have their own distinct stocking rules.

Basal Area stocking standards also weren't addressed in the new TPA amendments.

While making revisions to the Forest Practice Rules, a key change was made to the Fuelbreak/Defensible Space part of the Special Prescriptions sections (913.4, 933.4, 953.4) to include the word maintain ("...create or maintain a shaded fuel break or defensible space...").

This small change will be critical as landowners and communities work together to not only build new fuel breaks, but also maintain those already in place. See the September 2019 Board of Forestry Management Committee board binder materials for details, online at <https://bof.fire.ca.gov/business/>



Rachelle Hedges, project and policy analyst at Berkeley Forests, University of California, Berkeley, Center for Forestry, Fire Research and Outreach. Source: Rachelle Hedges

Quick list of tree stocking rule changes

Under newly adopted amendments to California Forest Practice Rules, the following sections have been revised or impacted:

SECTIONS

§912.7, 932.7, 952.7 - Under Resource Conservation Standards for Minimum Stocking
 §913.2, 933.2, 953.2 - Regeneration Methods Used in Unevenaged Management
 § 913.3, 933.3, 953.3 - Intermediate Treatments
 §913.4, 933.4, 953.4 - Special Prescriptions (Rehabilitation of Understocked Area Prescription; Fuelbreak/Defensible Space)
 §916.9, 936.9, 956.9 - Protection and Restoration of the Beneficial Functions of the Riparian Zone in Watersheds with Listed Anadromous Salmonids
 §1080.1 - Stocking Requirements for Substantially Damaged Timberlands
 Find all new stocking rule changes online at: <http://bit.ly/2PtrUAW>

Invasive plants cost California millions

Invasive plants cost California at least \$82 million each year.

This represents the state's current expenditures on control, monitoring, and outreach. Totalling expenditures, however, only provides an estimate of actual ecosystem impacts.

Management programs are able to address only a portion of the many invasive plant challenges in the state, but experts say funding invested in these programs repays itself many times over. A number of authors have tried to put a dollar value on the damage caused nationwide by invasive species but impacts remain estimates.

Cornell University researchers, however, estimate invasive species cause \$120 billion a year in damage in the U.S. (Pimentel et al., Ecological Economics, 2005), online at: <http://bit.ly/2oXN3NL>.

Source: California Invasive Plant Council

Researchers find invasive, non-native Bromus "cheatgrass" fuels wildfires



Bromus tectorum spikelets taper nearly imperceptibly into the non-native, invasive grass' apical awn.

Photo Source: Wikimedia Commons, Matt Lavin

When wildfires burn in California, people often call them forest brush fires, but invasive weeds also contribute a critical fuels component.

"We have all the nasty non-native Bromus species here in California, and the ubiquitous weeds are key drivers of increasing fire frequency," said Travis Bean, University of California Cooperative Extension weed scientist at UC Riverside.

Invasive, non-native Bromus species aggressively out-compete native plants, forming dense grass stands that grow fast and dry out quickly, becoming highly flammable.

Fire can move rapidly through these dense patches of dry grass, especially during windy conditions or on slopes and quickly spread into chaparral and timberland.

Research funded by Pew Charitable Trusts finds a clear link between cheatgrass, which covers more than 100 million acres across the West, and rangeland megafires.

"I'm convinced that if we committed the resources to fighting and addressing the invasives issue, we would see a lessening in the size [of fires]," said Ken Mayer, formerly of the Nevada Department of Wildlife, who's working on an invasive species action plan for the Western Association of Fish and Wildlife Agencies.

"When you have an understory of dry Bromus or other weedy grasses, their ease of ignition can be the key link that allows fire to spread from areas like roadsides where ignition sources are plentiful to more pristine native plant communities," UCCE's Bean said. "Additionally, these fast-moving fires can throw embers that allow fire to jump long distances, igniting

structures."

Bean would like to see the fuels in wildfire areas identified before they burn so landowners have a chance to manage these factors and help reduce the increasing frequency of wildfire across the state.

Many ranchers say the federal government should let livestock handle the cheatgrass. Cows, sheep and goats will eat cheatgrass in the spring, when it's fresh and green, though they avoid it later in the year.

Herbicide applications followed with seeding of native grass species has also had some success in reducing cheatgrass in infested areas.

Citizen Scientists can help

With training, citizen scientists such as California Naturalists can help cities, counties, utilities and government agencies identify the invasive plant species that fuel wildland-urban interface wildfires.

"On a landscape scale, I would focus on managing Bromus anywhere human-caused ignitions occur," Bean said. "Resources for management are scarce, and these species are widespread and can't be controlled everywhere they occur.

"Roadsides, hiking trails and campgrounds are critical areas where people can start fires that spread, so it makes sense to concentrate management there."

In California, cheatgrass (*Bromus tectorum*) is widespread at higher elevations, while ripgut brome (*B. diandrus*) and red brome (*B. madritensis* spp. *rubens*), also called "foxtail brome," are pervasive at lower elevations.

Along with other invasive winter annual weeds, these species have successfully replaced large areas of native vegetation in Southern California.

State and federal response

The Western Governors' Association is forming a cheatgrass working group and has agreed to address the issue with the U.S. Department of Agriculture.

Mayer's fish and wildlife group has been rallying government agencies, associations and nonprofits to support an invasive species action plan they will present to members of Congress and federal officials this fall.

"When I talk to land managers about these species, they recognize some areas will have to be sacrificed and it may not be possible to eliminate these species from the landscape," Bean said.

"They are prioritizing areas with smaller populations of these invasives, where there is an actual chance to eliminate them, or are managing larger populations for containment so they don't spread."

Timing is everything

The key to reducing the spread of invasive, non-native Bromus species or any annual weed is preventing the plants from producing seeds, Bean said.

"Whatever control method you choose, if deployed too early or too late, you gain nothing for considerable expense."

Herbicide can be an effective and inexpensive means of control. Hand pulling can be effective in small areas, but is discouraged for large patches due to the sheer amount of labor required and risks of spreading the weed seeds.

Other treatment approaches include: mowing, targeted grazing and prescribed burning.

Bean said using livestock can require more intensive management and proper timing is critical.

"For mowing and grazing, the key is to wait until the plants have started to flower, but the seeds are not mature," Bean said. "If you mow when there's mature seed, you'll just spread the seed and make the problem worse. And once the seedheads mature, grazing animals won't eat it."

Prescribed fire is another option for containing invasive grasses, but is generally discouraged as there's a high chance of exacerbating the problem.

Climate change also plays a role

Bromus species are very fire-adapted, researchers found, and tend to increase following burns. Prescribed fire should only be used with professional guidance and trained land managers.

"Timing is everything," Bean said, explaining the temperature difference between the plant and soil surface.

"The grass has to be dry enough to carry fire, but not so dry that the seeds have fallen from the plant to the soil surface, where temperatures are much cooler than just a few inches up in the air where the seedheads are.

Some research has shown this strategy to have been successfully used for certain invasive grasses like barb goatgrass (*Aegilops triuncialis*), but is not recommended for Bromus species."

He expects the changing climate to lead to more invasive plant species and more detailed plans for a variety of species eradication or control efforts.

"Invasive plants can be more resilient during drought and can quickly bounce back when rain returns, overwhelming natives," Bean said. "And invasive species are often key drivers of wildfires and increasing fire frequencies and intensities, which prevents the recovery of native plants."

The Pew Charitable Trust article on the environmental impact of bromus and other invasive weeds is online at <http://bit.ly/34syFf8>.

Wildfire burn scars invite cheatgrass

Cheatgrass, also called broncgrass, downy brome, downy chess and soft chess, is most prominent and invasive in the Inter-mountain West, extending west from the Rockies into the Cascades and Sierra Nevada ranges. It's especially invasive in sagebrush (*Artemisia* spp.) steppe and bunchgrass regions. The number and size of infestations in these regions has increased dramatically over the past 20 years. In California, areas of infestation are found in forests and grasslands that include Douglas-fir and pines, as well as hardwood forests and chaparral. It has historically been uncommon in mature forest stands, and is usually found only after disturbances, such as wildfires, drought or on dry and exposed sites within forest zones.

Source: USDA Forest Service "Fire Effects Information System (FEIS)" <http://bit.ly/2W2SKpF>



Cheatgrass is highly adapted to California's regime of frequent fires. It has a very fine structure, tends to accumulate litter, and dries completely in early summer, becoming a highly flammable, continuous fuel in grassland, forests openings and oak woodlands, as well agricultural fields, roadsides and rural communities. Source: USDA Forest Service

Reforestation project becomes a living laboratory for Foresthill High School students



Foresthill High School student Rikki Littleragingwaters, left, prepares seedlings for planting by Joe Vigarino and Lily Lowery, center, while Lorelie O'Sullivan and Madelyn Vandegriff, right, map trees as they're planted in the school's reforestation area.

The town of Forest Hill sits on a mountain ridge that divides the North and Middle Forks of the American River. The area offers sweeping views of Sierra Nevada forestland. And wildfire in those forests has been a serious threat since the town's founding during the Gold Rush.

It's not surprising Foresthill High School's athletic teams are known as the "Wildfires." Foresthill students live in the woods and know local wildfire history and the impact it has had on their community.

When trees on the forestland next to the high school began to die several years ago from drought and bark beetle infestation, students noticed. So did Placer Union High School District, who owns the land, and the school's staff and the community.

Science teacher Katie Cantrell's "Fish, Wildlife and Forestry" class was asked to propose projects for a Watershed Improvement Competition. The winning student proposal included a reforestation project on the high school's adjacent forestland.

"This is an amazing project," Cantrell said. "We got grants to do the work and found volunteers to help with the project. Volcano Creek Enterprises, Inc. removed dead trees, masticated the slash and conducted pruning to remove lateral fuel.

"The forest was way over stocked and by tree thinning and removal we also lowered the intensity of future fires, which will also help protect the seeds needed to regrow trees in the future," said Amanda Godon, president at Volcano Creek Enterprises, Inc., and mother of environmental science student Luke Godon.

"Due to the mortality, we were able to get in and remove hazardous trees and create conditions that will promote better

management of the watershed and the regrowth of healthy trees," Godon said.

Treating and preparing the 20-acre reforestation area cost about \$24,000, funded through grants. Support from Placer County Resource Conservation District, Sierra Pacific Industries and experts at nearby University of California, Berkeley's, Blodgett Forest Research Station provided the expertise students needed to complete the project.

Future reforestation projects

About 62 acres of the forestland adjacent to Foresthill High School remains untreated, but students already are talking about doing another reforestation project there.

Cantrell said her students got help from 6th grade students at Foresthill Divide School. In all, students from both schools planted more than 300 seedlings.

"Reforestation is hard work," Cantrell said. "Some kids embraced the project immediately; others didn't take to the effort at first. But, by the end they all seemed committed to the project and they had fun doing it.

"More than that, they also seemed to understand the need to maintain the work, realizing that we choose to live in the forest and that decision comes with a responsibility to manage it," she said.

"The high school's reforestation project has become a living laboratory for students that will provide environmental learning opportunities for years to come."

She said students will continue studying tree mortality, growth rates of the new trees and exploring the role forests play in healthy watersheds.

Fuel reduction, reforestation projects planned for eastern Madera County

Plans for reforesting about 1,250 acres in the 2014 French Fire area in eastern Madera County are underway. Yosemite Sequoia Resource Conservation and Development Council has been awarded \$4.1 million for the project.

It's part of a larger effort—Southern Sierra All Lands Recovery and Restoration Project (Madera SSARR Project) – to address fuel reduction, reforestation and LIDAR acquisition and planning.

Fuel reduction treatments will take place on public lands in partnership with the U.S. Forest Service Bass Lake Ranger District in the Shuteye Restoration area, which includes the French Fire burn area, Whiskey Ridge and the Kinsman Flat area in Eastern Madera County. Reforestation activities will take place on about 800 acres.

About 35,000 bone dry tons of woody biomass spanning an area of 300 acres will be removed from the Whiskey Ridge area. The North Fork Power Plant will use the removed biomass for power generation when it comes online.

Reforestation in the French Fire burn area will cover about 1,250 acres of tree planting. An estimated 400,000 mixed conifer seedlings, including Jeffery, ponderosa, sugar pines and incense cedar will be planted. The first trees will be put in the ground in the spring of 2020.

The LIDAR acquisition portion of this project will encompass over 1 million acres in Mariposa, Madera and Fresno counties. LIDAR, which stands for light detection and ranging, will be used on aerial flights by the United States Geological Survey (USGS) to collect data on the

forest landscape. The data will then be analyzed and mapped by the University of Washington's Forest Resilience Lab to plan for forest health and carbon sequestration.

The Madera SSARR Project will also include two environmental planning efforts. First, the North Fork Rancheria Environmental Protection Department will work with the Bureau of Indian Affairs to analyze the Mission Fire burn area for forest fuels reduction, prescriptive fire, pest management and reforestation.

Using the best available science

Then American Forests will develop a climate-informed framework and use the best available climate science to inform planned and future restoration treatments to create forests resilient to climate change.

The SSARR is an all-lands, coordinated adaptive management framework developed to improve the administration, health and resilience of the forests and watersheds of the southern Sierra Nevada. The SSARR is voluntary and composed of government, scientific, tribal and non-profit organizations, representing state and federal responsibility areas in Mariposa, Madera, and Fresno counties.

Funding for this project is provided by the California Department of Forestry and Fire Protection (CAL FIRE) as part of the California Climate Investments Program. Information about CCI is online at: <http://bit.ly/2PC9q5U>

Source: Yosemite Sequoia Resource Conservation and Development Council



Reforestation project on French Fire burn, Sierra Vista Scenic Byway May 2019 - Photo courtesy Y/S RC&DC

Plan ahead for seedlings

- Reforestation is a time-sensitive process.
- At least one year of lead time is required to procure seed and grow seedlings for late fall planting.
- There are hundreds of thousands of acres of potential forestland in California that require action to restore forest cover.
- There's concern seed to grow seedlings for reforestation may be limited in zones where cone collection is not systematic.
- The current ability of the state's nurseries to produce seedlings for reforestation appears adequate, but timing may be an issue.
- See information on how to order seedlings and plan a reforestation project on private forestland online at: <http://bit.ly/2PtApAL>

National Woodland Owner Survey

- About 98 percent of family forestland owners have parcels of 500 acres or less.
- This ownership makes up about 60 percent of all family-owned forest parcels.
- Private, nonindustrial entities own about 25 percent (8 million acres) of California's 33 million forestland acres.
- These owners include families, individuals, conservation and natural resource organizations, and Native American tribes.
- Only about 5 percent of owners surveyed had written management plans.
- Wildfire ranked as the leading concern of survey respondents.
- Of the 25 percent that had harvested trees within the last 5 years, the leading reason was to reduce fire hazard.
- Removing invasive plants was the second biggest concern.

Source: USDA Forest Service National Woodland Survey <http://bit.ly/32owY1g>

Stewardship Workshops offer forest owners tools for improving their land

Many forestland owners would like to improve forest health and protect their property against invasive pests and plants, while reducing wildfire risk. They face a number of challenges, but perhaps the biggest hurdle is knowing how to get started and where to find help.

A new, comprehensive education program is now being offered to specifically answer those questions and help meet the management needs of private forestland owners

The program provides education on forest restoration, fuels reduction project development, permitting and cost-share opportunities.

The biggest benefit to participants, however, is that the three-day course results in creation of a forest management plan designed by forestland owners specifically to meet the vision for their property.

When completed, the plans will be reviewed and verified by professionals and can be used when applying for state and federal funding programs.

"It's important for a forest landowner to have a management plan because it can really help them go from thoughts to action to shape their forest to be healthier and more resilient to wildfire," said Susie Kocher, University of California Cooperative Extension forestry advisor, who helped design the new in-person landowner education program.

"Workshops will help landowners learn about best management practices and connect them to others in a similar situation," Kocher said. "Also, once a plan is written, it can be used to apply for funding for cost-share programs."

And, for family forestland owners, it's a lasting way to communicate goals to family members and start to plan for a trouble-free transition of property to the next generation, Kocher said.

Because, like everything, Kocher said owning and managing small forest parcels is complicated. Good forest management increasingly requires tapping into a network of experts and using new tools and technology.

The Forest Stewardship Education Initiative is a program designed to help private forestland owners in California increase their ability to manage forests for resilience from wildfire, insect outbreaks and other disturbances. The program

provides education on forest restoration, fuels reduction project development, permitting, and cost-share opportunities.

The program's steering committee includes representatives from: CAL FIRE, University of California Cooperative Extension, Forest Landowners of California, the federal Natural Resource Conservation Service, USDA Forest Service Region 5, CalForests, Society of American Foresters, American Forest Foundation, California Association of Resource Conservation Districts, the California Licensed Forester Association, and other experts.

"We expect this project to increase landowner knowledge of forest management goals and practices, as well as increase the number of landowners with forest stewardship plans," Kocher said. "This is an important step to increasing the number of forest management projects completed by participating forest landowners."

Workshops include:

- Defining your forest management objectives
- Identifying forest health, insects and disease
- Enhancing forest and fire ecology, wildlife, watersheds
- Reducing fuels and protecting forest resources
- Introduction to mapping, inventory and silviculture
- Developing projects & permitting
- Getting professional help and accessing cost-share opportunities

What to expect

This three-day workshop will help participants develop a forest management plan for their property. In-classroom and field learning will help participants develop a better understanding of their forest goals and how to achieve them. Participants who develop their plans will be eligible for a free visit by a Registered Professional Forester to assess its content.

How to register

A \$60 fee is required. Register online at <http://ucanr.edu/forestryworkshops>. Contact Kim Ingram at kcingram@ucanr.edu for more information.

Update: CFIP — California Forest Improvement Program — adds funding

CAL FIRE recently issued an important funding update for the California Forest Improvement Program (CFIP). The program encourages private and public investment in, and improved management of California forestlands and resources.

Please share this information with other private forestland owners and forestry professionals. Find more details on CFIP web page at: <http://bit.ly/2C8FIh7>

How much money is available? CAL FIRE has been awarded \$6 million of Proposition 68 funding for the cost-share CFIP program during fiscal year 2019-2020. Additional funding also may be contributed from a variety of other sources.

What kinds of projects qualify? Projects may include forest restoration activities and forest management practices on privately owned forestland that promote forest resilience to severe wildfire, climate change, and other disturbances.

How much land is required? Cost-share assistance is provided to private and public ownerships containing 20 to 5,000 acres of forest land.

Is a forest management plan required? Yes. Preparation of a Forest Management Plan by a Registered Professional Forester (RPF) is needed.

For more information, check the CFIP User's Guide and CFIP 5-Year Strategic Plan

Contact a CAL FIRE Forest Advisor for CFIP Cap Rates. They also are available on the CFIP web page at: <https://bit.ly/2SSBpAS>

Funding:

“The California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018 (Proposition 68)” was passed



Late fall view from Georgetown Divide, El Dorado County.

by voters in June of 2018.

Proposition 68 funds are authorized through Public Resource code §80135(a) to the California Department of Forestry and Fire Protection (CAL FIRE) for projects that provide ecological restoration of forests.

Be sure to discuss project funding opportunities with your Forestry Assistance Specialist (FAS) at the CAL FIRE unit where your project is located or at the Regional FAS office.

Call the CFIP program manager in Sacramento if you need help finding a CAL FIRE expert. A directory of experts also is on page 10.

CFIP cost-share activities

CFIP pays for preparation of a Forest Management Plan by a Registered Professional Forester (RPF).

A RPF will help landowners with:

- Reforestation
- Site Preparation
- Tree Shelters
- Stand Improvement
- Pre-commercial thinning or release
- Pruning

CFIP can help with follow-up work, including mechanical treatment, herbicide application and slash disposal. And the program supports forestland conservation practices to benefit fish and wildlife habitat.

Application Update

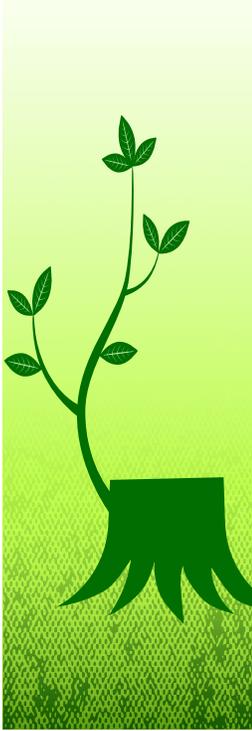
The CFIP grant application process is moving online to better serve landowners. Late fall view from Georgetown Divide. Look for announcements about how to apply using the new process on the CFIP web page at: <https://bit.ly/2SSBpAS>

What to expect from CFIP

The CFIP program typically covers up to 75 percent of project costs. However, a 90 percent cost-share rate may apply to:

- Lands substantially damaged by fire, insects and disease within 10 years prior to the execution of a contract.
- 90 percent cost-share rates for all Cooperative Forest Management Plans.
- 10 percent or more of the total cost of the project may apply if it is devoted to forestland conservation measures and/or fish and wildlife habitat improvement practices. Includes landowners with less than 500 acres of forestland in California.
- CFIP program participation is voluntary. In some cases, land use zoning may require a land use addendum with a 10-year requirement for maintenance of funded work
- Landowners decide who to hire and may do some of the work themselves.

Tips for preparing your forestland for winter — *after* a wildfire



Experts agree on some initial steps landowners can take to protect private forestland after a wildfire, including:

Placing straw wattles, hay bales, and mulch around burned areas helps reduce the chances of ashes and other material from washing into streams.

Remember that everything drains to creeks and streams. Don't use leaf blowers or hoses to wash down ash and debris.

Get help from professionals who are certified, registered and/or licensed before

selecting and installing large, permanent or semi-permanent treatment measures.

Wear protective gear whenever working in burned areas.

If your property is in a rural area or on a hillside, watch for unusual movement of water, land and debris during or after rain. Have an emergency plan and leave your property if it becomes unsafe during or after a storm.

Minimize soil and slope disturbance. Ash, leaf drop, downed trees and remnant burned

vegetation all play a role in protecting the soil and slopes following wildfire.

Work with your neighbors. Runoff, erosion and debris flows have no boundaries.

Private roads require more maintenance in the first few winters following wildfire.

Clear debris upstream of culverts as possible and check culverts for clogging after every storm. If culverts or other road drainage structures do not appear to be functioning properly, consult a professional.

These tips are provided by natural resource specialist Rich Casale, who is assisting local resource agencies in fire recovery efforts.

Other local resources with experts advising about forestland protection include: CAL FIRE, UC Cooperative Extension, Natural Resources Conservation Service (NRCS), Resource Conservation Districts (RCDs), U.S. Forest Service, Fire Safe Councils, and California Department of Fish and Wildlife.

Source: Sonoma County Resource Conservation District

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California Department of Forestry & Fire Protection (CAL FIRE)

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CAL FIRE Forestry Assistance Specialists (FAS)

(Find the FAS for your county at <https://www.fire.ca.gov/grants/california-forest-improvement-program/>)

Guy Anderson/Topher Henderson (Fresno, Imperial, ... Inyo, Kern, Kings, Los Angeles, Madera, Mariposa, ... Merced, Mono, Monterey, Orange, Riverside, San ... Benito, San Bernardino, San Diego, San Joaquin, San ... Luis Obispo, Santa Barbara, Tulare, Tuolumne, ... Ventura) 559-243-4109

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California Association of Resource Conservation Districts (RCDs)

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Amanda McAdams, Forest Legacy and Stewardship 530-233-8700; amcadmins@fs.fed.us

Calendar

March 21-26

International Association of Fire Chiefs

Wildland-Urban Interface (WUI) Conference

Details: IAFC's Wildland-Urban Interface (WUI) conference offers hands-on training to address wildland fire challenges. If you're one of the many people responsible for protecting local forests or educating landowners and communities about forestland management, this conference is for you.

Location: Peppermill Resort, Reno, NV

Information: Online at <https://www.iafc.org/events/wui>

April 6 – 8

AFTER THE FLAMES: Conference/Workshop

Details: Event is for property and business owners, local government officials, state and federal agencies and post-fire professionals. Workshops cover post-fire recovery aspects of the environment, communities, local economies and human health.

Location: 725 Granlibakken Road Tahoe City, CA

Information: Online at <https://aftertheflames.com/>

April & June

Forest Stewardship Workshops

Details: Three-day workshops to help landowners develop forest management plans to improve, protect their lands. Participants completing plans during workshops will be eligible for a free assessment by a Registered Professional Forester.

Dates & Locations: April 25, 26 and May 9 at Government Center, Mariposa; June 27, 28 and July 11 at Blodgett Forest, Georgetown

Register: Registration online. Cost \$60. Lunches and materials provided. <http://ucanr.edu/forestryworkshopregistration>

Coming Soon!

Reforestation workshops are being planned for wildfire and tree mortality areas. Contact Stewart McMorrow for details: stewart.mcmorrow@fire.ca.gov.

Board of Forestry and Fire Protection

2019–2020

Meeting Schedule

The California Board of Forestry and Fire Protection's mission is "to lead California in developing policies and programs that serve the public interest in environmentally, economically and socially sustainable management of forest and rangelands, and a fire protection system that protects and serves the people of the state." The public may attend meetings to learn about the background related to board decisions. Information about meeting times and locations is online at <http://bit.ly/2od0ogH>.

March	3-4	Resources Building, Sacramento
April	7-8	Resources Building, Sacramento
May	5-7	Travel Meeting
June	9-10	Resources Building, Sacramento

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Winter and spring offer ways to reduce wildfire risk

Every season provides opportunities to manage forestland and reduce wildfire risk. Here's a quick seasonal checklist of actions private forestland owners can take to make their homes safer and their forestland healthier:

Winter

Check property for dead or bark beetle-infested trees. Weather permitting, now is the best time to remove those trees and dense undergrowth.

Trim up trees for vertical clearance as part of your home's defensible space. If not feasible in winter then plan now to do so when weather permits.

If you're planting trees this spring, plan ahead now and order local native trees.

Spring

Prepare defensible space.

Remove dead and bark beetle-infested trees. Bark beetles are most active now and in summer—be careful not to damage remaining trees as fresh wood attracts beetles.



Red fox checks the property for needed actions, Yosemite National Park, Dec. 2014. The first Sierra Nevada red fox spotted in the park in nearly a century.

Source: *National Park Service*.

If possible, remove freshly cut wood. Otherwise, cover, lop or chip infested wood—and do not place near healthy trees.

Following an extended period of little to no rain, sparingly water high-value trees. Use best watering practices.

Now is the time to plant new trees, as long as irrigation is available.

Source: CAL FIRE <http://bit.ly/34e6GjG>