



## Assisting Private Forestland Owners with Reforestation after Wildfires

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High severity wildfires are affecting Californians throughout the state, whether through burning or wildfire smoke. Regrowth of forests severely burned by wildfires is essential but cannot be taken for granted. Active reforestation is needed in some areas to assure continuation of forests. About one-fifth of forested land in California is held by small owners, and these individuals need assistance to carry out successful reforestation. UC Agriculture and Natural Resources offers post-fire outreach and education to help landowners reforest in a timely manner and equip small forest owners to successfully manage their own lands in a post-fire environment.

**Reforestation is needed to ensure the continuation of forests in high severity fire areas.** Most California forests are made up primarily of trees adapted to frequent low severity fires, after which patches of live trees remain to provide seed to regenerate the next forest. However, the current trend of high severity wildfires leaves wide areas covered with large patches of dead trees and few live trees to contribute seed (North et al 2019). Dead trees fall creating a fuel load which is vulnerable to re-burning (Coppoletta et al. 2016) and vigorous shrubs often outcompete seedlings that may reestablish. In combination, these further reduce forest cover and regeneration. Active reforestation practices ensure regeneration of forests after wildfire. In addition to expanding seed collection and seedling production (Fargioni et al. 2021), education on post-fire reforestation best practices is sorely needed.

**Non-industrial private forestland owners need assistance to carry out successful reforestation.**

Of the 33 million acres of forestland in California, 7 million acres is owned as relatively small holdings by 75,000 private individuals and families. Of these, 90% own parcels of 50 acres or less (Butler et al 2021). Many of these landowners face barriers to reforestation including lack of expertise, contractors, permitting, and cost. Only 15% of California landowners with over 10 acres of forest land have received advice or information about care, management or protection of their woodland in the past five years. Researchers studying reforestation decision making (Waks et al 2019) by landowners with forests severely burned by a 2014 wildfire found that 1/3 would have taken no reforestation action without assistance from a local non-profit.

**Post-fire assistance needs to be timely to be effective.**

Successful reforestation requires multiple steps taken in a timely fashion, including ordering tree seedlings to be grown in a nursery, removing dead trees and woody debris to reduce fuels on the planting site, and planting and controlling vegetation that may compete with trees (Stewart et al. 2021). Most state and federal forestry assistance programs, including the California Forest Improvement Program and the Environmental Quality Improvement Program, were designed to assist landowners during orderly planned forest management actions, not for rapid response after wildfires. Landowners impacted by fire need timely technical and funding assistance.

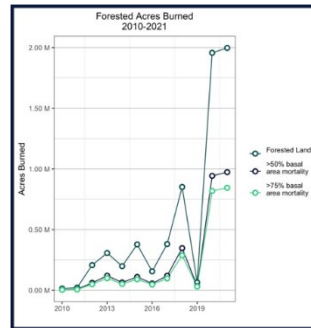


Figure 1. Reforestation need from recent fires in California. Source: California Wildfire Resilience Taskforce Reforestation Working Group

**University of California Agriculture and Natural Resources offers post-fire outreach & education.**

In 2022, UC ANR launched a new post-fire forest resilience outreach and education program for forest landowners. The seven-week long workshop series helps landowners connect with post-fire concepts, professionals and resources to manage their own lands. Workshops focus on specific wildfires, and participants include landowners, state and federal agency staff, non-profit organizations, consultants, and tribes. Learning outcomes show participants gain knowledge of reforestation steps after wildfire and that these landowners intend to implement important reforestation practices.

**Emergency Forest Restoration Teams are making reforestation assistance programs timelier.**

A new coordinated strategy to assist landowners affected by wildfires was called for in the California Wildfire and Forest Resilience Action Plan (Forest Management Task Force 2021). Emergency Forest Restoration Teams are being established after wildfires throughout the state to speed up post-fire assistance to private landowners. Funding has been combined from state and federal sources to assist local resource conservation districts to implement projects on behalf of landowners. New information on the effectiveness of these EFRTs will be available later this year.

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