



# Forest Stewardship 2023 Annual Report



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*Cover photo 1. Forest Stewardship Santa Clara – Santa Cruz Co-hort participants*

*Cover photo 2. Oak seedling in Mariposa post-fire location*

*Cover photo 3. Post-fire Forest Resilience Siskiyou Co-hort participants*

# FOREST STEWARDSHIP: BEFORE & AFTER WILDFIRE

UC ANR recognizes the efforts that forest landowners are conducting on their lands, pre- and post-wildfire, and offers two educational programs statewide to assist them. The Forest Stewardship Education Program began in 2020 and the Post-fire Forest Resilience Education Program in 2022. Both programs target clientele that are private forest landowners. Collaboration between the two programs enables landowners and other workshop participants to learn about the entire spectrum of forest health and management from before a wildfire impacts their forests, to after a fire. In 2023, 15 participants who attended a Stewardship Workshop, also engaged in the Post-Fire Program.

## Thoughts from participants of both Stewardship Programs

- "Having participated in many workshops with UC Extension, as a forestry project we attended both the Forest Stewardship course prior to our catastrophic fire and the Post-fire Forest Resiliency workshop after our fire. The Forest Stewardship course provided invaluable information and resources for us and enabled us to receive a grant from the State of California through CAL FIRE. We knew fire was coming at some point in the future but had no idea how soon and how severe the impact of a wildfire, the Lava Fire, would be on our project. These workshops are timely and the information critical to land stewards and those who care about the future of California. We all need more education to stay up to date on the changes occurring in our environment and to meet the challenges ahead. These courses are a tremendous public benefit." – Participant of both programs*
- "After experiencing the devastation of the 2020 Glass Fire on my work property, the stewardship and post-fire workshops were very helpful. These sessions gave the tools to understand the best next steps, including the biology behind ecosystem restoration, and introductions to experts to help. Meeting people in similar situations was also encouraging. The field day at Blodgett Forest was an excellent introduction to forestry tools and seeing results of planting strategies and different forest management techniques. I was grateful for these resources." – Participant of both programs*



Photo 4: UC ANR Forestry Workgroup

# FOREST STEWARDSHIP EDUCATION INITIATIVE

The UC ANR Forest Stewardship Education Initiative was developed as a project through input by the Forest Landowner Education and Outreach Working Group of the California Governor's Forest Management Task Force in 2019. Goals of the Forest Stewardship Education Initiative are to educate forest landowners to better understand, manage and protect their forests by developing a forest management plan, engaging with natural resource professionals, and taking advantage of market or cost-share opportunities that can help them meet their management goals.

*Since the workshops began in 2020, 485 people have completed one of the 24 series offered (Figure 1).*

## Forest Stewardship Workshop Overview

Fifteen educational workshop events were held in 2023. This included five forest stewardship workshop series completed by 117 participants. The nine-week long workshop series were offered through a hybrid learning style involving online learning assignments, nine weeks of evening zoom meetings, and one in-person field day to view various silvicultural methods and build hands on forestry skills including inventory, mapping, and plant identification.

2023 workshop series were held in:

- Napa County – January/February
- Trinity County – March/April
- Solano-Sacramento Counties – July/August
- San Bernardino County – September/October
- Santa Clara-Santa Cruz Counties– October/November



Figure 1. Workshop series locations (2020 - 2023)

Additionally, 10 educational events were offered in 2023. A total of 199 Forest Stewardship participants and/or members of the general public participated to learn more about forest topics.

Events included:

- Small-landowner cost-share program participation field day, Napa County, February 2023
- Two DIY hand tools for vegetation anagement field days – Jackson State Demonstration Forest, May 2023; and Blodgett Research Forest, June 2023
- Cone & seed collection webinar, May 2023 and field day, Blodgett Research Forest, June 2023 (Photo 1)
- Bioenergy field day at North Forth, Tuolumne County, May 2023 and webinar, August 2023
- Forest Legacy Program webinar, May 2023
- Vegetation management in shaded fuel breaks webinar, August 2023, and field day, Amador County, September 2023



*Photo 5. Participants at the Blodgett Cone & Seed Collection Field Day*

## Workshop Content

The workshop goal is to help participants draft a California Cooperative Forest Management Plan (CCFMP), which can assist them with implementation of forest management projects and make them eligible for state and federal cost-share programs. Pre-workshop survey data from all workshop participants (2020 – 2023) shows 57% at least somewhat understood the importance of having a management plan, and 31% had some knowledge about cost-share programs. In contrast, after completing the workshop, 93% reported they were somewhat or very aware of what a management plan is and the importance of having one. Additionally, 93% were somewhat or very aware of cost-share program opportunities, how to apply for them, and how they can be utilized to pay for management activities.

The curriculum relies on the [25-part Forest Stewardship Series](#), a peer-reviewed publication series on forestry and forest management published by UC ANR and targeted at family forest owners. Materials for the workshops are hosted on the California Family Forest website, <https://www.cafamilyforest.org/> and the UC ANR Forest Research and Outreach website, <https://ucanr.edu/forestry/>. Additionally, we offer one special session during each workshop series. The topic of the special session is based on the specific need of each co-hort as identified by the planning committee. Special session topics in 2023 included erosion control post-fire, GSOB and other bark beetles, targeted grazing, prescribed burn associations, smoke management plans, and oak woodland restoration. Content for follow-up workshops is based on participant input. Subject matter experts structure their presentations around desired knowledge and questions provided by participants ahead of time.

***With the hiring of a Communications Specialist in 2023, we have greatly increased our social media and outreach presence to reach a larger audience across California.***

## Social Media Outreach

In addition to the standard workshop format and curriculum, we use multiple education and outreach methods to provide information to our participants and the general public.

**Blogs:** The reporting period saw 4,449 users visit the blog website, averaging 404.5 users per month and 12 users per day. Fourteen original blogs were published and are listed below. Blogs covered a wide variety of topics, ranging from local landowner perspectives to educational events.

- [Trinity County Community Spotlight: Carol Fall](#)
- [Project Learning Tree Program Spotlight](#)
- [Tax Tips for Forest Landowners](#)
- [Fresno County Community Spotlight: Drew Nelson](#)
- [Top 10 Tools for New Forest Landowners](#)
- [Preserving Forestland Through the Forest Legacy Program](#)
- [Reforestation Education Coverage](#)
- [Sacramento-Solano Community Spotlight: Tracy Katelman \(Figure 2\)](#)
- [Forest Stewardship Story Map Announcement](#)



Figure 2. UC Forest & Research Blog main website:  
<https://ucanr.edu/blogs/forestrymgmt/>

- [San Bernardino Community Spotlight: David Kelly](#)
- [Post-Fire Forest Resilience Program Spotlight](#)
- [UC Berkeley's Mini Camp Coverage](#)
- [Santa Cruz Community Spotlight: Barb Satink-Wolfson](#)
- [UC ANR Fire Network Tour Coverage](#)

**Facebook:** The Forest Research and Outreach Facebook page continued with content that focused on program events and information. Through engaging with other forestry and natural resource pages and posting relevant content, the reach of Facebook doubled in 2023 when compared to 2022 (Figure 3).

**Story map:** The [Forest Stewardship Story Map](#) was published in June 2023, and currently hosts 25 interviews with past workshop participants and California natural resource professionals (Figure 4). The application has been hosted on ArcGIS Experience Builder since November 2023. Since publication, over 700 users have visited the Story Map. In addition, the project has received coverage in forestry and agriculture media outlets, including: California Society of American Foresters, Farm Progress, Morning Ag Clips, and the Society of American Foresters' eForester newsletter. Additional stories from other forest landowners and natural resource professionals are added frequently to engage more landowners in forest stewardship principles and encourage them to sign up for upcoming workshops.

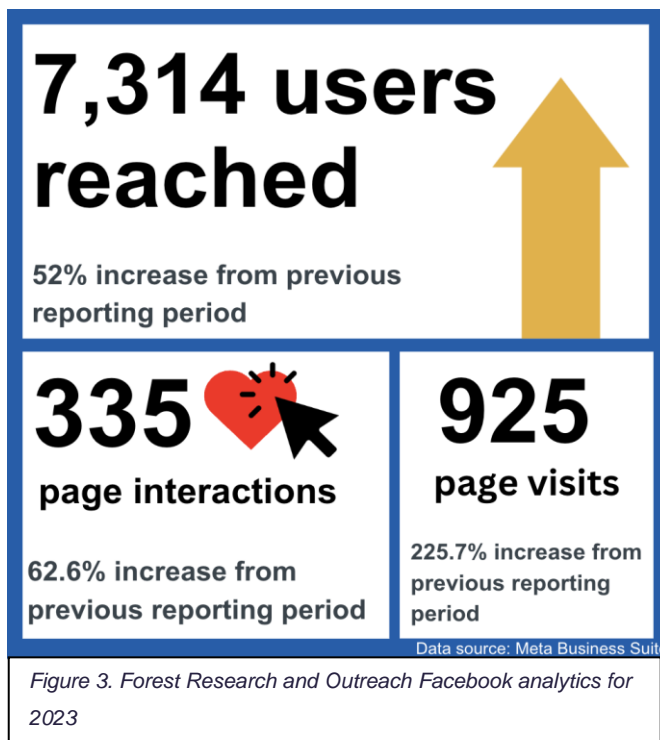


Figure 3. Forest Research and Outreach Facebook analytics for 2023

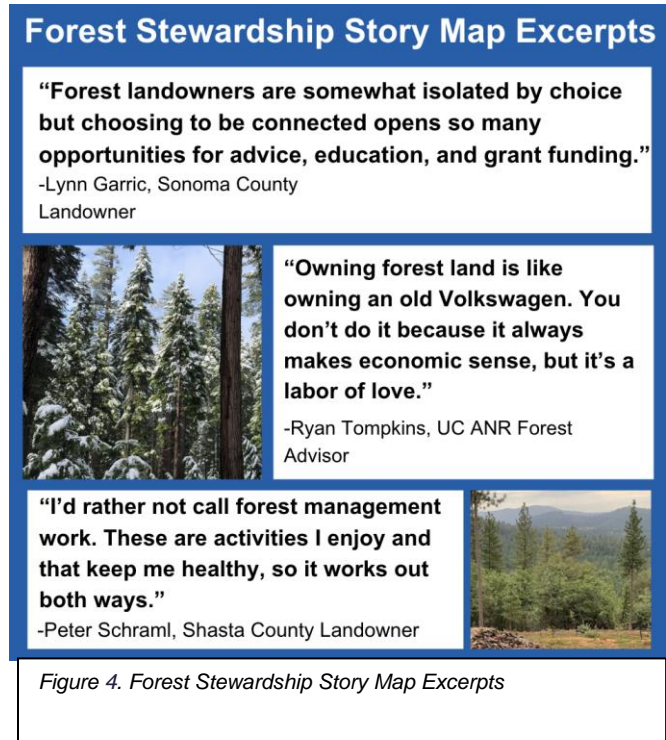


Figure 4. Forest Stewardship Story Map Excerpts

**Newsletters:** In 2023, we produced four newsletters that provided foundational knowledge to several of our 2023 webinars and field days.

- [Woody Biomass, Part 2, February 2023](#)
- [The Forest Legacy Program, April 2023](#)
- [Shaded Fuel Breaks, July 2023](#)
- [Forest Roads, September 2023](#)

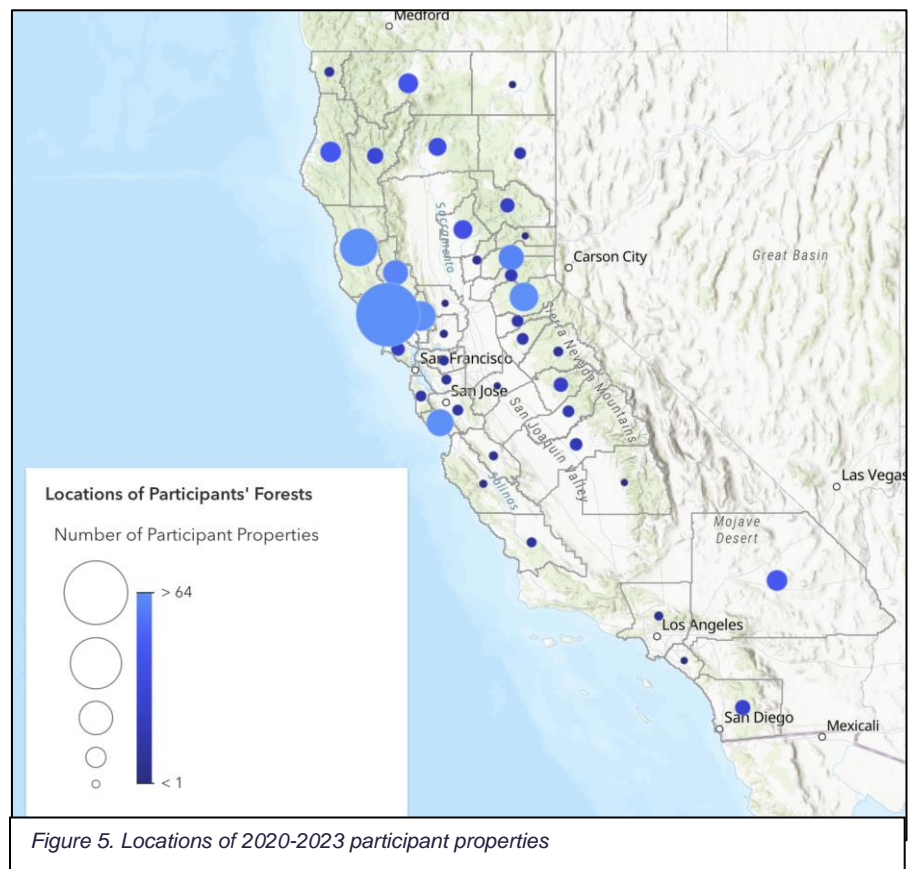
## Stewardship Participant Overview

From the registration and pre-workshop surveys, we gather information about participants' properties, management attitudes and activities, and what concerns they have about owning and managing forestland. Between 2020 and 2023, participants continue to highly rank ecological and aesthetic reasons for owning their land (primarily for beauty, and to protect biological diversity, wildlife habitat, and water) over utilitarian reasons (hunting, timber production and firewood). Additionally, participants continue to express high levels of concern relating to wildfire, drought, keeping their forest land intact, and climate change.

**Ownership size:** The acres owned or managed by all workshop series participants are fairly evenly distributed amongst the size grouping, with just over half of participants owning or managing 50 or more acres. Participants identify owning forestland across most of California (Figure 5).

**Ownership type:** 39% of all workshop participants owned their land as an individual or with a partner (including other family members or friends). 23% owned land with families through partnerships, LLCs or family trusts. 31% had other ownership types.

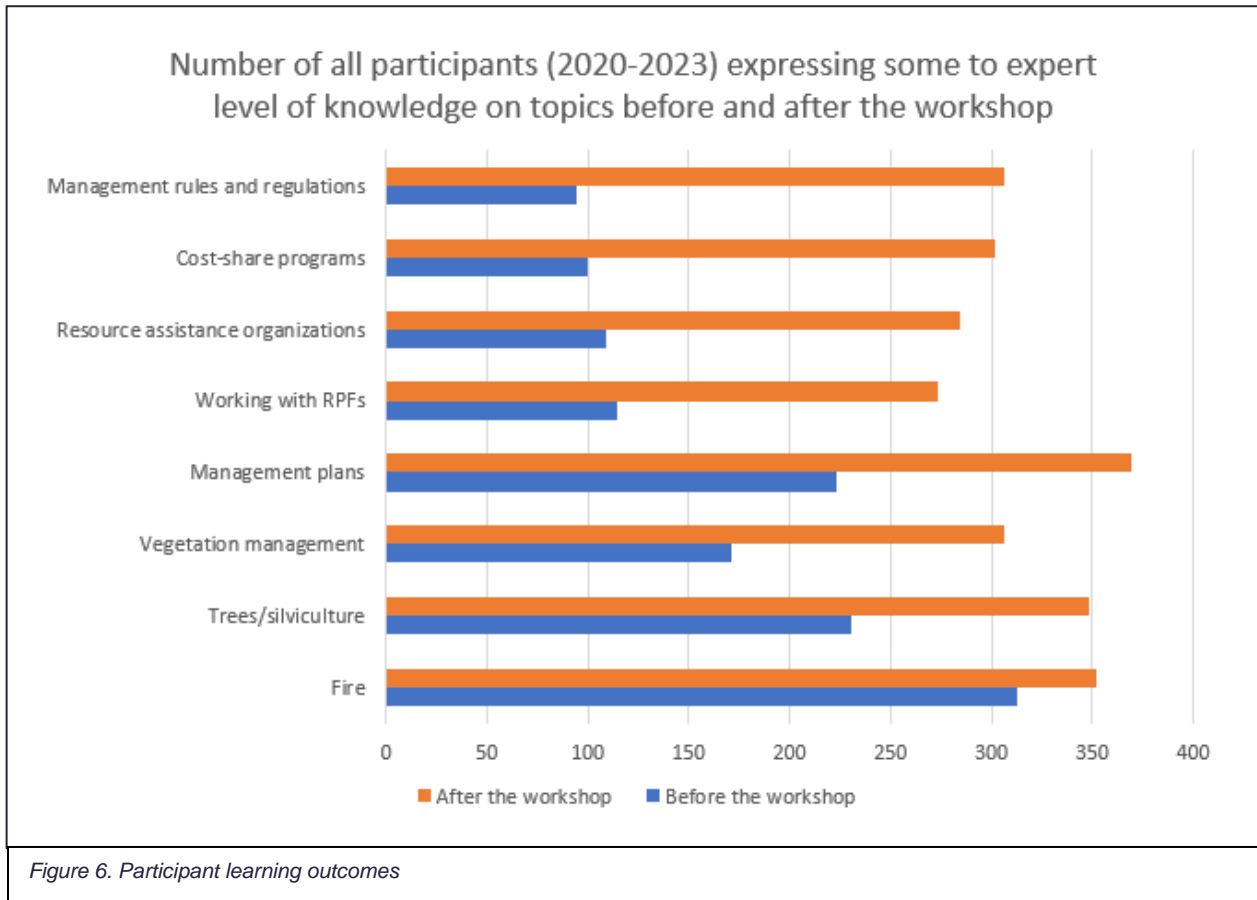
These included non-profits, land trusts, homeowners' associations, camps, businesses, local and state parks and open space districts, and community colleges. 2% were tribal members or owned land through tribal allotments. The remaining 5% did not own forestland.





## Participant Learning Outcomes

During each weekly session, participants rated their knowledge about management topics both before and after the session in order to measure their change in knowledge. As a result of the workshop, participants gained knowledge about all subjects taught, with participants gaining the most knowledge on management rules and regulations, cost share programs, resource organizations, and working with RPFs (Figure 6).



Workshops and field days focused on specific forestry topics have included both Forest Stewardship Workshop participants and the general public. They also have demonstrated increased learning and excitement over certain management activities. For example, before workshops covering the use of shaded fuel breaks, 29% of participants indicated they knew a lot about the subject. After the workshop, 80% indicated they knew a lot about how and why shaded fuel breaks are used. Workshops and field days focusing on vegetation management with hand tools, and tool safety and care were very popular. Before the workshops, 18% of participants reported a lot or expert knowledge of vegetation management using hand tools, and 11% reported a lot or expert knowledge of how to safely use and care for these hand tools. After the workshops 89% of participants reported a lot or expert knowledge of vegetation management using hand tools, and 73% reported a lot or expert knowledge of how to safely use and care for these hand tools. After participating in these events,

several general public participants have gone on to register for the full Forest Stewardship Workshop series.

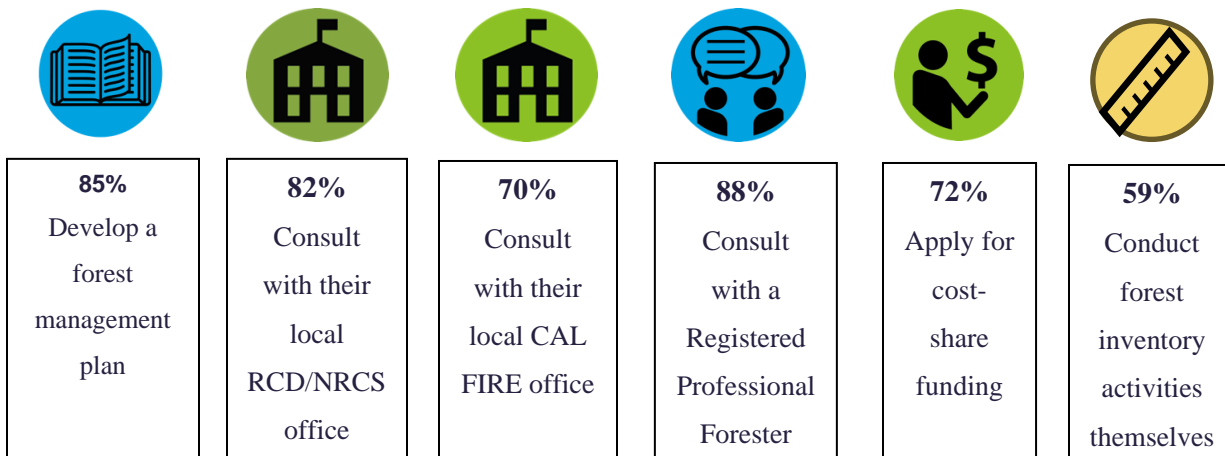
Participants continue to rate the workshop highly. Between 2020 and 2023, 92% of participants rated the workshop as excellent or very good. They agreed that the information presented was informative and comprehensive (65% strongly agreed and 35% agreed), and that presenters were knowledgeable and gave practical advice (72% strongly agreed and 27% agreed). As a result of this workshop, 71% strongly agreed and 27% agreed that they had a better idea of how to develop a forest management plan.

**Comments from participant evaluations include:**

- *I hope we'll be working with a forester soon, but I might even take the class again.*
- *Much appreciation for everyone who supported this workshop.*
- *I look forward to meeting with and communicating with a registered professional forester in order to complete a forest management plan for my property.*
- *This workshop was incredibly informative and covered such a thorough list of topics. I came into it expecting more time spent on basic concepts, such as fire regimes, forest types, and road design. But, I was happily surprised by the in-depth lessons on cost sharing programs, permits, and property taxes. I will definitely be reviewing all the notes and resources moving forward.*
- *Thank you for presenting in Southern CA. (It's) hard to get assistance here.*
- *Exceeded expectations. Will turn out to be expensive because I need to buy more tools now!*
- *I would recommend it to others.*
- *The field day was great! We learned so much about the tools used by professionals. It also helped us to look at our little piece of the forest differently, with an eye for taking care of the forest land that we own.*

**Program Impacts**

Participants who complete the workshop series are asked to complete an on-line survey indicating their intentions for action. The percentage of participants (2020-2023) who very much or definitely plan to carry out a specific action include:



Participants were also asked on the post-workshop survey about their willingness to implement certain forest management activities. The percentage of participants who very much or definitely plan to carry out a specific action includes:

95% - Fuels reduction

88% - Tree thinning

74% - Prescribed fire

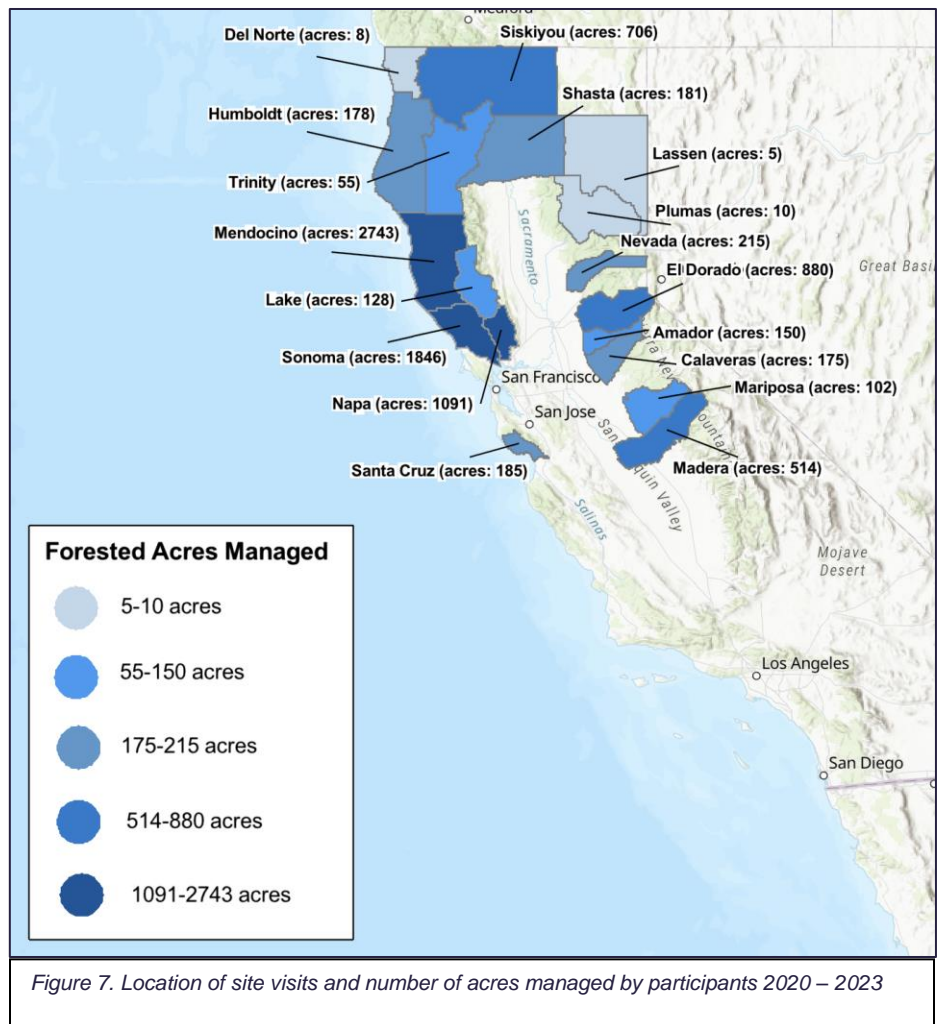
67% - Collaborate with their neighbors

60% - Reforestation work

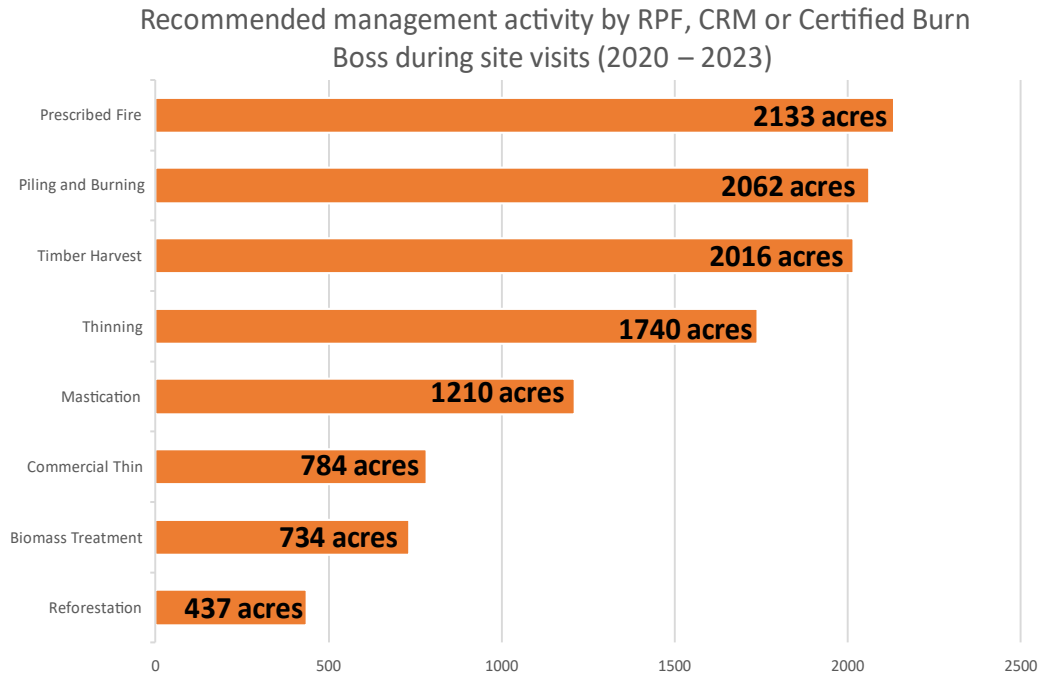
38% - Timber harvest

### Initial Site Visits

Completion of the workshop series entitles participants to a free initial site visit by a Registered Professional Forester (RPF), Certified Range Manager (CRM) or California Certified Burn Boss. These professionals are paid an \$800 stipend by the program. The goal of this visit is for the RPF, CRM or Burn Boss to assess participants' plans and goals and identify management practices to meet their goals. It's also to help landowners learn more about their services and potentially set up an on-going relationship with them. Thirty-two consulting RPFs, four NRCS/RCD foresters, and two CRMs have assisted participants with initial site visits since the program started. A total of 88 participants had initial site visits by the end of 2023 (Figure 7).



Together these participants manage over 9,167 acres of forested land. Management recommendations include a variety of practices, with the most common recommendations being timber harvest, prescribed fire, piling and burning, and thinning (Figure 8 - \*11,158 acres includes acres with more than one recommended treatment)



*Figure 8. Management activities recommended by natural resource professional during initial site visits  
Below: Photo 6 Trinity Co-hort participants and Photo 7 San Bernardino Co-hort participants*



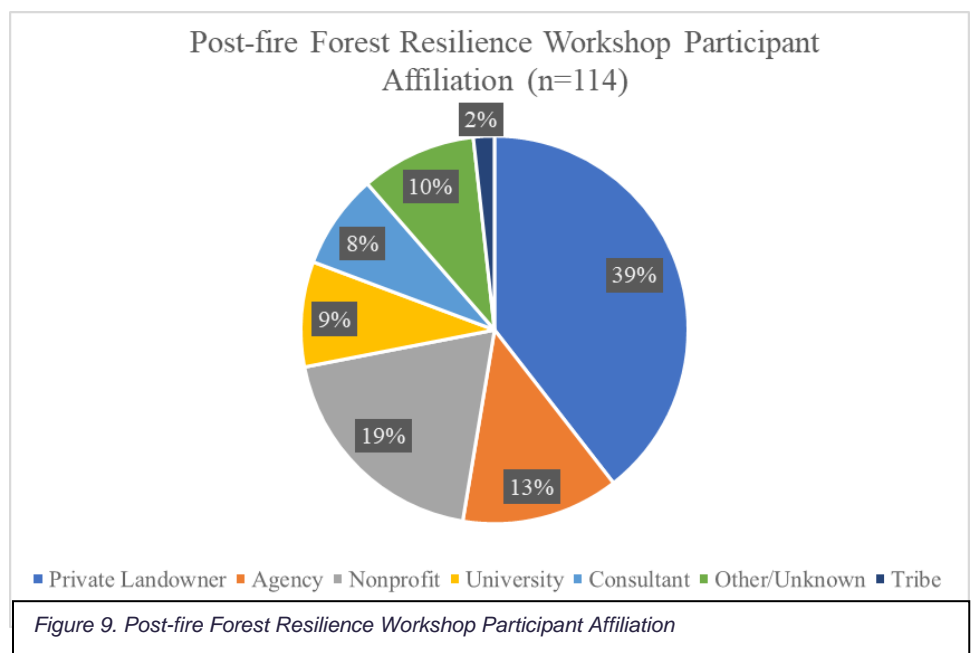
***Post-fire forest challenges in California: The extent and severity of wildfires in California forests has increased dramatically in the last decade. Many small private forest landowners need assistance to address impacts and restore their forests. Outreach and education about post-fire resilience will provide landowners and collaborators science-based information on post-fire management practices, connections with post-fire professionals and information on resources to manage their lands.***

## POST-FIRE FOREST RESILIENCE EDUCATION

The focus of this program is to assist and educate private forest landowners who seek assistance after catastrophic wildfire. The Post-Fire Resilience Program is received funding from the USFS State and Private Forestry division in March 2022. While there have been many fires in CA in recent years, this program focuses on fires that burned within the 2019-2021 fire years, along with other historical and more recent fires. We host a seven-week long educational workshop series on Zoom, with one in-person field day.

### Post-fire Educational Workshop Overview:

In 2023, we hosted 3 successful workshops, bringing our total number of participants to 114. Our workshop attracts a wide range of participants, as seen in Figure 9. It has become clear that our workshop not only attracts landowners affected by fire, but also the agencies, non-profits, and consultants who work with landowners. We believe that partnering with other professionals who are working in post-fire landscapes extends our educational reach to broader audiences and strengthens the discussions and conversations around post-fire forest management practices.



## 2023 Counties and Focus Fires for Post-Fire Workshops:

Spring: Mariposa/Fresno/Madera counties

Fires discussed: Creek Fire 2020, Oak Fire 2022

Summer: Napa County

Fires discussed: Glass Fire 2020, LNU Fire 2020, Tubbs fire 2017

Fall: Siskiyou/Shasta/Trinity Counties

Fires discussed: Antelope fire 2021

## Workshop Content and Structure:

The post-fire forest resilience workshops include seven evening sessions on Zoom, with a different focus topic each week. These sessions cover a variety of post-fire forest management practices and concepts such as increasing disturbance in California, dealing with dead trees and safety, erosion control, salvage logging, competing vegetation control and landowner assistance programs. Figure 10 is an example of the syllabus that participants receive; note the guided questions and “review” readings which encourage topic interest and

<b>Thursday Oct 12 (6:00-7:30pm, zoom)</b>	<b>Rangeland Management and Grazing, post-fire</b>  What do I need to consider when grazing on a post-fire landscape? Specific plants to be aware of and how to best graze the disturbed landscape.	Introductions, presentations, and Q&A; poll  <b>Why this session is important:</b> Listen to local speakers discuss the ecological considerations when grazing on a post-fire landscape. What types of plants and regeneration to consider before allowing grazing. What are the policies and requirements?
In preparation of next zoom session <ul style="list-style-type: none"> <li>Dealing with competing vegetation and on-going maintenance</li> </ul>		Review: <a href="#">Post-fire Managing Competing Vegetation Factsheet</a>  <i>Guiding Questions:</i> <i>What kind of competing vegetation do I have on my property and how could that impact reforestation efforts?</i> <i>What competing vegetation management treatments (or combinations) can be utilized on my land?</i>
<b>Thursday, Oct 19 (6:00 – 7:30pm zoom)</b>	<b>Dealing with competing vegetation</b>  What are the invasive weeds to consider in this region? Best treatment methods, costs? What does the timeline look like for vegetation regrowth?	Introductions, Presentations, and Q&A; poll.  <b>Why this session is important:</b> Learn why managing competing vegetation will improve your land in the long-term. What local and regional practices are best to consider. What are ongoing maintenance plans and how can it be done on private lands.
In preparation of our next zoom session		Review: Forest Stewardship #23 <a href="#">Technical and Financial Assistance</a>  <i>Guiding Questions:</i> <i>What supporting technical and financial resources are in my area and what programs are applicable to me?</i>
<p><i>Figure 10. Post-fire workshop syllabus with special session on re-sprouting hardwood trees</i></p>		

questions, in hopes of encouraging discussions with expert speakers. After completing the online weekly sessions, workshop participants are encouraged to attend an in-person field trip to apply their learning and take a deeper dive into discussions at various site visits.

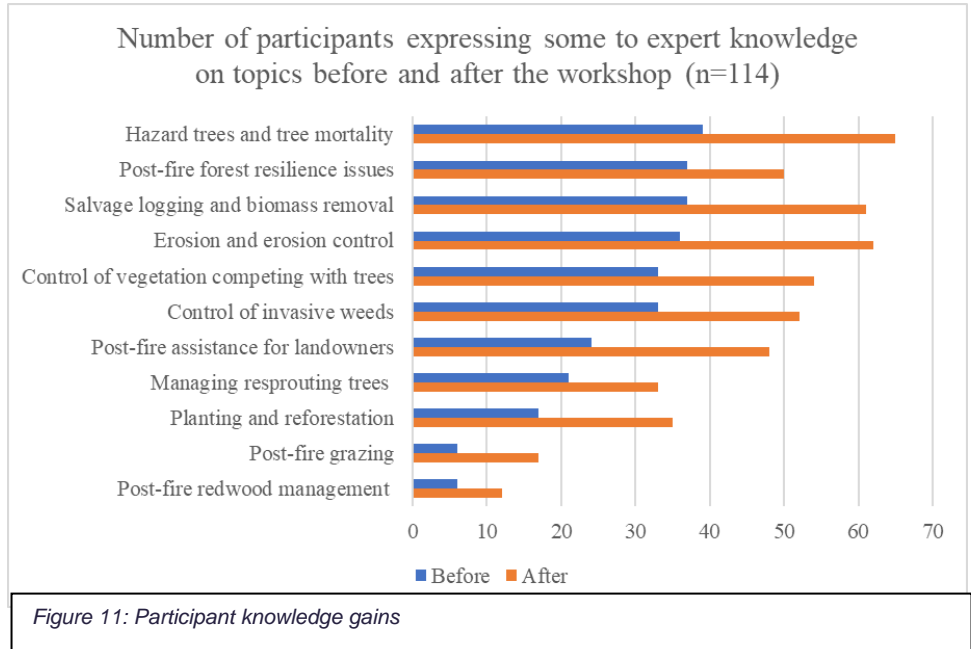
## Curriculum development:

Post-fire landscapes are not a “one-size-fits-all”. Each fire discussed in our workshop presents its own set of challenges and circumstances. Therefore, we use expert speakers to speak generally about wildfire issues in addition to local speakers who can discuss the focus fires and issues in their region. Region-specific issues include post-fire grazing practices, redwoods, or resprouting

hardwoods. To address the unique differences from one fire and region to the next, we ask our planning committee (generally resource professionals in the area) what they feel is an important “special session” that can be catered to the region. For example, in Siskiyou County we discussed post-fire grazing, in Napa we discussed resprouting oak trees. Other challenges include the inherent emotional complexities that fire brings to a community, but for some, attending our workshop is the first step in building their forested lands back, better.

## Workshop Learning Outcomes

Overall, the workshop was highly rated by the participants with 76% rating it as excellent or very good. Learning outcomes showed growth in many subject areas covered by the workshop including post-fire assistance programs, hazard tree removal, vegetation management and reforestation practices (Figure 11).



### Participant quotes and highlights:

“This workshop was amazing! Really informative and interesting” - 2023 Siskiyou County workshop participant

“I appreciated the ‘pace’ and the anecdote discussions that solidified a lot of post-fire concepts, also really appreciate the variety of speakers too” - Napa County workshop participant

“Great collaboration of multiple programs, thank you for connecting and organizing” -Siskiyou County workshop participant

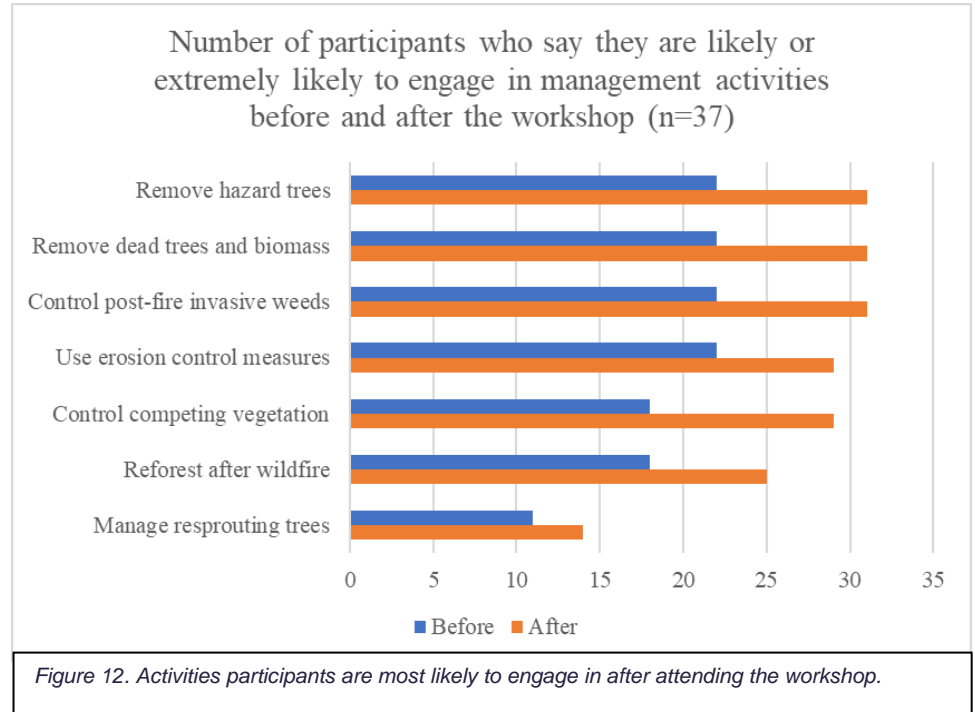
“The networking was outstanding” - Mariposa/Fresno workshop participant

## Upcoming Workshops

After the success of 2023, we plan to host three to four more workshops in 2024. We began the Santa Cruz and Santa Clara cohort in January 2024. As time passes, and we get farther away from the fire events, we will adjust our curriculum to accommodate the management timeline many landowners are experiencing. We also plan to return to previous workshop locations including Plumas County’s Dixie

fire and El Dorado County's Caldor fire.

In surveys, participants indicated how likely they are to engage in management practices as a result of our workshop. Managing competing vegetation and controlling invasive weeds were intentions that grew substantially following our workshop discussions. See figure 12.



## Reforestation Needs on Private Lands Assessment

In 2023, in collaboration and partnership with American Forests, we worked on developing a reforestation needs assessment for California. The goal was to identify areas of reforestation opportunity on private forest land burned in the 2019 to 2021 fire seasons.

A Shiny App was developed as an interactive mapping tool to show the results of this assessment. The app allows the user to explore the impact of a single wildfire and determine the reforestation opportunity (where at least 50% of the tree canopy was killed). The app displays either acreages or in proportions of parcels as well. Demographic data was incorporated using the CDC Social Vulnerability Index, which defines vulnerability based on 14 social factors from groups such as socioeconomic status, minority status and language, housing and transportation, and disability.

This tool can be used to identify landowners in need of assistance and will broaden our outreach to a variety of audiences around reforestation.

The app also displays the region's technical assistance capacity and identifies agency staffing levels by region. The app was presented to the Small Landowner Assistance work group of the Governor's Wildfire and Forest Resilience Task Force in January 2024 and final edits are being made before broader distribution.



## Emergency Forest Restoration Teams Lessons Learned Report

We concluded interviews in late 2023 with “key informants” involved in the Caldor, Dixie and Tamarack EFRTs to develop case studies of EFRT implementation. We developed a report on lessons learned from the first 2 years of the EFRTs. The report includes case studies, lessons learned from EFRT implementation and recommendations for EFRTs moving forward. The report is currently under review and will be finalized in the first quarter of 2024. In the next year we will begin conducting interviews with landowners served by the EFRTs to gauge EFRT effectiveness from a landowner perspective. These interviews, along with our continual communication with EFRT “key informants” will inform a final EFRT report to be published in 2026.

## Emergency Forest Restoration Teams Ecological Monitoring

We have developed an ecological monitoring protocol and experimental design to evaluate the effectiveness of EFRT reforestation treatments in the pilot EFRTs. We are receiving funding from the El Dorado RCD and the Feather River RCD to assist them in evaluating the establishment and survival of planted seedlings. Data will be collected on seedling survival, competing vegetation and fuel conditions following post-fire treatments undertaken by the Caldor and Plumas EFRTs. In 2024, we will train RCD field crews on the protocol and data collection and management, provide ongoing support and data quality assurance, and manage data analysis and reporting.



*Photo 8. 2023 Napa County In-Person Post-Fire Forest Resilience Workshop*

# Stewardship and Post-fire Programs

## Professional and Workforce Development

Though the primary clientele of both programs is the private forest landowner, we have observed an increase in participants who identify as taking the workshops for either training for their current job or to prepare them for additional jobs. Since late 2023, registration for both programs has included the question, “Please tell us why you became interested in taking this workshop series?” (Figure 13) Since we started asking this question, 27% of participants said they were taking the course because they were interested in forestry as a career and 47% for professional development. 24% of participants are professionals also working with landowners. This data shows that, with the increase in forestry-related workforce development initiatives, our forest stewardship programs have become an important resource for people interested in developing and expanding their forestry knowledge and skills to join or improve their work in the forestry sector.

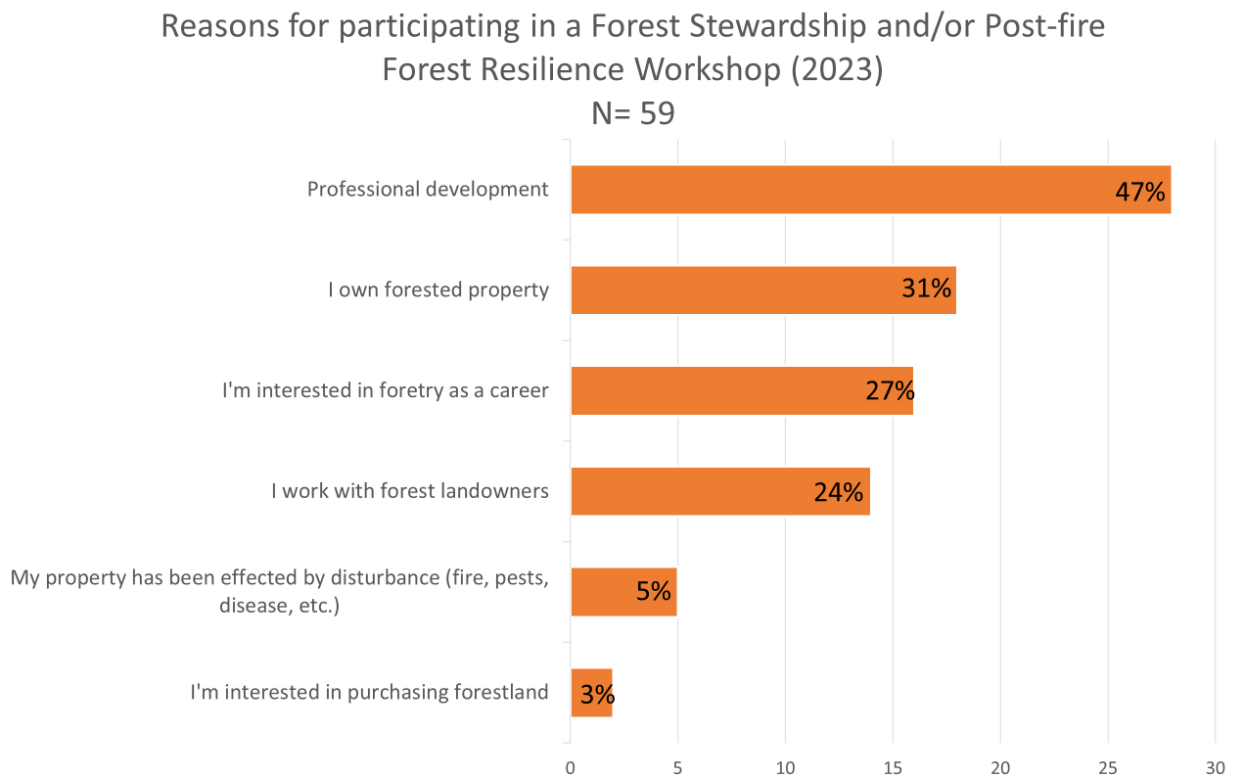


Figure 13: Forest Stewardship and Post-fire Forest Resilience workshop participation reasons (Participants can select multiple answers)

# COLLABORATION

Both workshop series are held in collaboration with local, state and federal governments, community-based organizations, nonprofits and private industry partners including the Natural Resources Conservation Service, Resource Conservation Districts, Fire Safe Councils, CAL FIRE and the US Forest Service. Workshop partners have participated on planning committees, provided location and logistical support, given presentations, participated in group breakout sessions, and assisted workshop participants in plan development. This collaboration allows participants to share knowledge and develop relationships with local agencies and professionals. Stewardship participants rely on these relationships with RPFs to develop their forest management plans and use the contacts they've made with CAL FIRE and RCDs to then apply for CFIP and EQIP cost-share opportunities.

Many thanks to our steering committee of leaders from partner organizations that give input on implementation of the initiative. We meet every other month to review progress and get advice on next steps. In 2023, that included:

Larry Camp – Forest Landowners of California

Stew McMorrow – CAL FIRE

Tracy Katelman – ForEverGreen Forestry

Sierra Riker – California Association of RCDs

Martin Twer – The Watershed Research and Training Center

Dana Walsh - USFS

Jason Wells – Sonoma County RCD



For more information on the Forest Stewardship Programs, please visit:

<http://ucanr.edu/forestryworkshops> and [www.ucanr.edu/post-fireworkshops](http://www.ucanr.edu/post-fireworkshops)

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