

# Forestry and fire extension efforts in the Central Sierra – responding to local needs

University of California Cooperative Extension, Central Sierra

Presented by Susie Kocher  
Title Registered Professional Forester #2874

Date June 23<sup>rd</sup>, 2020 presentation to the El Dorado BOS

# The Angora Fire 10 Years Later: What have we learned?

Symposium and Field Trip:  
June 22-23, 2017



Thursday, June 22<sup>nd</sup>, 2017

9:00 A.M. - 4:00 P.M.: Field trip in burned areas of the Angora Fire, South Lake Tahoe, CA

5:00 - 8:00 P.M.: Poster Session/reception at Sidellis Brewery, 3350 Sandy Way, South Lake Tahoe, CA

Friday, June 23<sup>rd</sup>, 2017

Registration opens at 8:30 A.M. Program 9:00 A.M. - 4:30 P.M.: Symposium at Lake Tahoe Community College Aspen and Board Room, One College Drive, South Lake Tahoe, CA

Fill out the [online registration](#) for Field Trip, Poster Session/Reception and/or Symposium.  
Register by June 16, 2017

**Presented by:** California Fire Science Consortium, University of California Cooperative Extension, US Forest Service Lake Tahoe Basin Management Unit and Lake Tahoe Community College.

**Symposium Goal:** To bring together managers, scientists, and public representatives to increase understanding about the Angora fire, the research and management done there afterwards, and the lessons learned there that can—and are—being applied in the basin and throughout the Sierra.

**Audience:** Lake Tahoe basin land managers, researchers, regulators, planners and decisions makers.

**For Additional information:** Contact Christina Restaino at [cmrestaino@ucdavis.edu](mailto:cmrestaino@ucdavis.edu), or Susie Koehler at 530-542-2571, [sdkoehler@ucanr.edu](mailto:sdkoehler@ucanr.edu).

For hotel stay and/or more information see <http://ucanr.edu/angora10/>.



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CALIFORNIA  
FIRE SCIENCE  
CONSORTIUM



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## 2006 Started as forestry advisor for Lake Tahoe

- Aquatic invasive species 2007
- Defensible space workshop 2007
- THEN THE ANGORA FIRE 2007
  - Future Forest Workshop 2007
  - Voluntary Revegetation Guidelines 2009
  - Replanting Demonstration Area 2010
  - Forest Regrowth Monitoring 2007- 2017
  - Angora 10 Year Science Symposium 2017

# Great demand for youth / adult education efforts

- Training educators in forestry and wildfire curriculum through Project Learning Tree and the FireWorks program
- Outreach to adults through coordination of Wildfire Awareness Week 2010 – 2013

**GET DEFENSIVE**  
Reduce the fuels, Reduce the risk.  
Lake Tahoe Wildfire Awareness Week May 25-June 2, 2013

Funding for this poster is provided by a grant from the Nevada Division of Forestry in cooperation with the USDA Forest Service. The USDA Forest Service is an equal opportunity provider and employer.

**Project Learning Tree Educator Training**

Project Learning Tree (PLT) is an award-winning environmental education program designed for educators working with youth from pre-K to grade 12.

**FREE!**  
(Optional \$10 cash/lunch)

**BENEFITS INCLUDE:**

- Workbook of 100+ ready made lessons
- Easy to learn and lead programs
- Meet CA state curriculum standards
- Activities require few materials & little prep time
- Background info & instruction provided
- Volunteer opportunities in Tahoe

**Thursday March 17, 2011  
9:30 am – 4:00 pm**

Lake Tahoe Basin Forest Service Office  
35 College Drive, S. Lake Tahoe CA 96150

For more info or to register, contact:  
Lindsay Gusses at [lgusses@fs.fed.us](mailto:lgusses@fs.fed.us)  
(530) 543-2672

**FireWorks Educational Program**

**WILDLAND FIRE AS PHENOMENON**

- Engage in activities from the Sierra Nevada FIRE WORKS curriculum and Project Learning Tree
- Learn how to develop phenomena based lessons supporting NGSS
- Integrate best practices into place based learning

**WHEN:** Thursday and Friday  
April 4 & 5  
9 am – 4 pm

**WHERE:** Blodgett Forest Research Station  
4501 Blodgett Forest Rd.  
Georgetown, CA 95634

**COST:** \$150 includes lodging and meals

**REG:** <http://ucanr.edu/blodgett2019>  
before April 1, 2019

Information contact: Sandy Derby, [stderby@ucanr.edu](mailto:stderby@ucanr.edu)

**Project Learning Tree** University of California  
Agriculture and Natural Resources

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# 2012 Expanded to Central Sierra region

Responding to wildfires

# Reforestation after wildfire

Extension / applied research on reforestation after fire

- Recovering from wildfire / reforestation publications
- Post fire workshops and talks

DATE	WORKSHOP NAME	LOCATION
October 2013	Rim fire recovery	Groveland
April 2014	Fire hazard reduction at outdoor camps	Groveland
October 2014	Sand and King fire recovery	Placerville
October 2015	Butte Fire recovery	San Andreas
May 2017	Project Learning Tree educator	Georgetown
April 2017	Land use planning to reduce fire risk talk	Placerville
June 2017	Angora Fire 10 year symposium	South Lake Tahoe
October 2017	Detwiler fire recovery	Mariposa
February 2018	Ponderosa fire recovery	Feather Falls
Sept 2018	Preparing the built environment for wildfire	Tahoe City
Nov 2018	Reforestation – Private landowner concerns	Sacramento
Dec 2019	Vegetation type conversion workshop	Sacramento
	Total attendees:	765

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ANR Publication 8572 | June 2017  
<http://anrcatalog.ucanr.edu>



## Recovering from Wildfire: A Guide for California's Forest Landowners

### WHAT SHOULD I DO NOW?

**A**s a forest landowner, you will eventually face the inevitable: wildfire. No matter how many acres have burned on your property, you are left wondering, "What should I do now?" After the fire is out, it is time to assess the impact of the fire and make some decisions. Wildfires typically have a range of impacts, many of which can be damaging to trees and property. However, when wildfires burn at lower intensities, they often have fewer negative impacts and may actually improve the long-term health of the forest. Understanding the range of impacts on your property can help you decide where and when to take action to protect your land from further impacts and to recoup losses.

This publication discusses issues that forest landowners should consider following a wildfire in their forest, including how to assess fire impacts, protect valuable property from damage due to erosion, where to go for help and financial assistance, how to salvage dead trees or replant on your land, and how to claim a casualty loss on your tax return.

KRISTEN SHIVE, Staff Research Assistant, Department of Environmental Science, Policy and Management, University of California, Berkeley; SUSAN KOCHER, Forestry/Natural Resources Advisor, UC Cooperative Extension, Central Sierra

RESEARCH ARTICLE

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fire & fuels management

## Landowner Perspectives on Reforestation following a High-Severity Wildfire in California

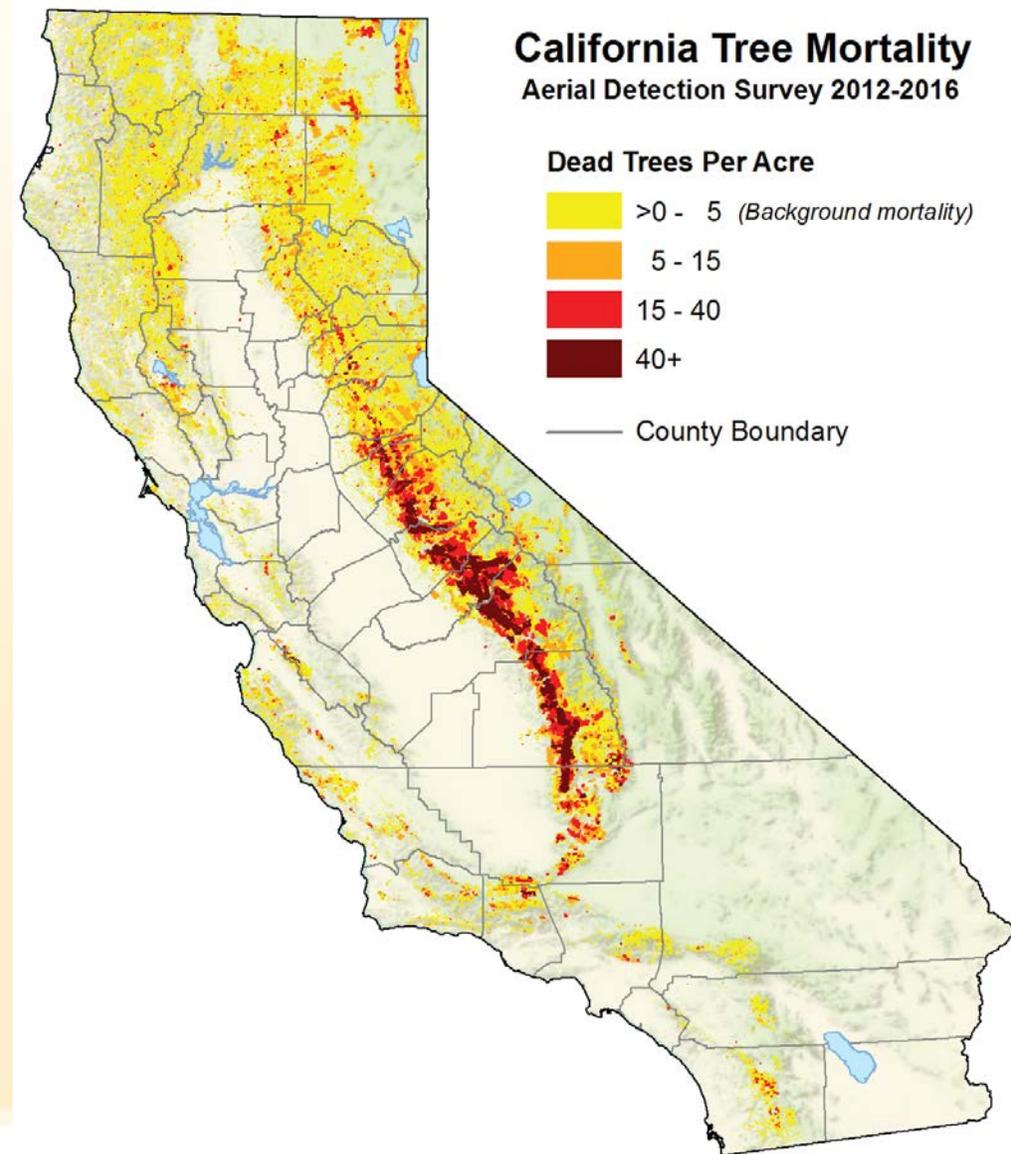
Lulu Waks, Susan D. Kocher, and Lynn Huntsinger

We interviewed 27 nonindustrial forest landowners whose properties burned in a wildfire in California's central Sierra Nevada in 2014 about postfire reforestation and local and government-assisted reforestation programs. All wanted to reforest, but a third would not have without the free reforestation program offered by the Resource Conservation District. The rest would have tried to do the work themselves or pursued other programs despite complicated logistics and high upfront costs. Many experienced distress, or "solostalgia," at the loss of forest and wanted to "put the forest back the way it was" as quickly as possible. This may limit reforestation suited to climate change. Reforestation is a way of assuring carbon sequestration and regrowth, and may have other benefits. If forestland was owned by 202,000 NIPF landowners (USDA Forest Service 2018). Most landowners owning 494 acres or less value their land for its natural amenities and as a financial investment more than as an ongoing source of income (Ferranto et al. 2015). If 20% of landowners may not have

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# Responding to tree mortality

Through outreach and education about forest regrowth after the drought



# Reforestation after tree mortality

- Appointed to Tree Mortality Task Force's Forest Resilience group
- Coordinated tree mortality data network stakeholder meetings 2018-2019



LANDOWNERS	
DATE	LOCATION
Feb 2017	Auberry
March 2017	Mariposa
April 2017	Sonora
April 2017	Oakhurst
May 2017	Jackson
March 2018	Placerville
Mar 2018	Sonora
Mar 2018	Mariposa
Attendees	275

LICENSED PESTICIDE APPLICATORS	
October 2016	Sonora
Attendees	50
CA NATIVE PLANT SOCIETY	
Sept 2015	Sonora
Sept 2017	Sonora
Attendees	145



# Tree Mortality Research and Outreach

- Received a \$10K grant from UC to train Master Gardeners to help answer questions and give advice about planting after tree mortality

MASTER GARDENERS	
DATE	LOCATION
Fall 2015	Central Sierra
March 2017	Placerville
June 2017	Pollock Pines
June 2017	Sonora
Oct 2017	Oakhurst
Attendees	350

## WHY ARE CONIFERS DYING?

Across the state, but in the Sierra Nevada in particular, unprecedented numbers of trees have died on both public and private land. Many trees stressed from the four year drought and overcrowding have succumbed to bark beetles. Aerial detection surveys done in 2016 showed that 102 million trees have died.

Hardest hit have been ponderosa pines (*Pinus ponderosa*) but many incense cedars, sugar pine and white fir have died too. Western pine beetle is the primary culprit killing ponderosa pine, although mountain pine beetles and pine engravers have also been active.

Removing dead trees from your landscape is important, especially around your home. Dead trees should be removed to avoid falling onto homes or other infrastructure. Dead tree debris should be cleared to reduce fire risk and to create defensible space around your home.

## DEFENSIBLE SPACE:

**REMOVE:**  
Create a lean, clean, and green zone 30 feet around any structure. Remove branches, limbs and brush 8-10 feet above ground.

**REDUCE:**  
Reduce the number of shrubs and trees from 30 to 100 feet from the structure, or up to the property line to create a reduced fuel zone.

**REPLACE:**  
Replace fire prone vegetation with green areas and fire breaks.

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## WHAT TO PLANT AFTER TREE LOSS



UNIVERSITY OF CALIFORNIA  
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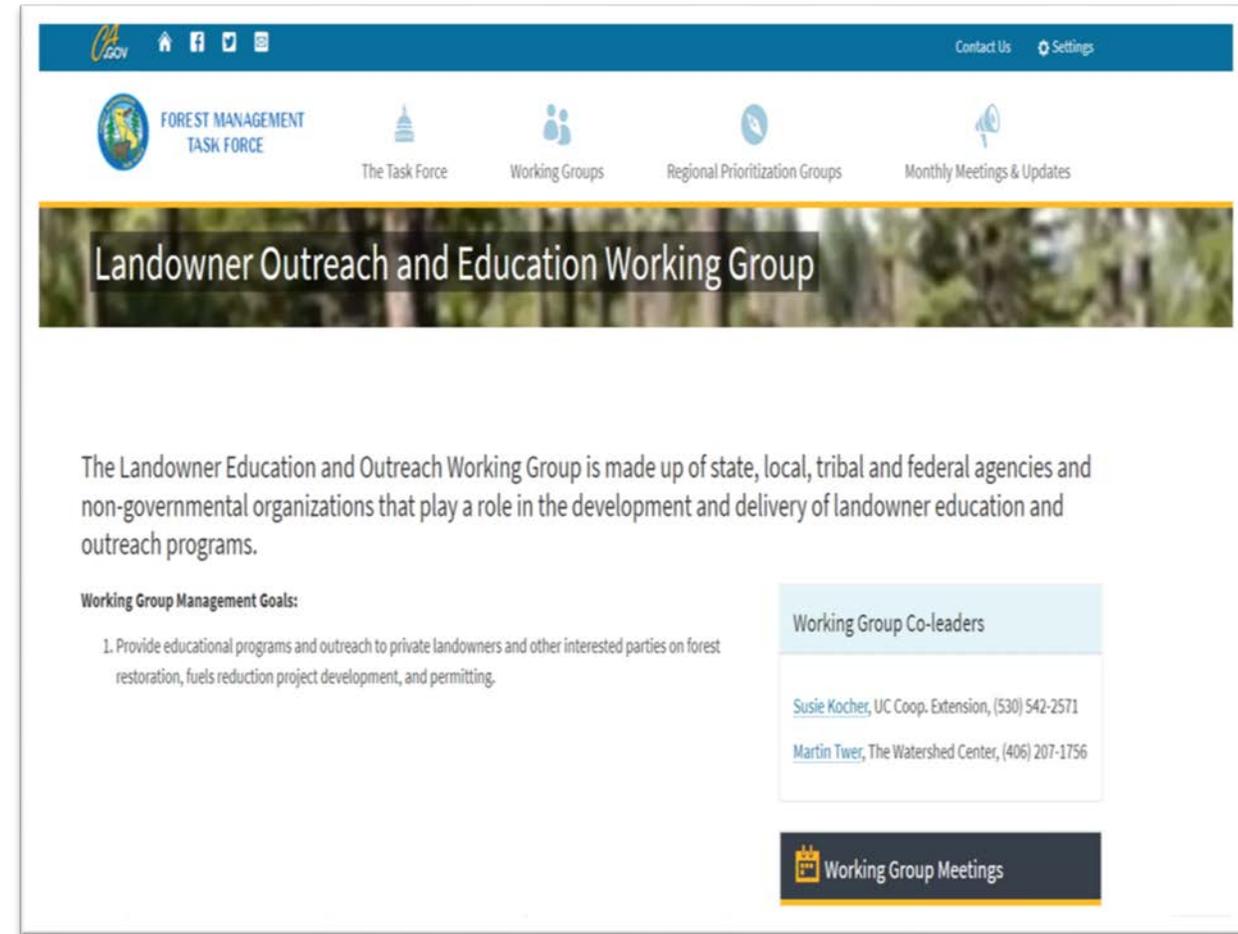
# Increasing the pace and scale of forest management

Through outreach and education on forest management and prescribed fire



# Forest Stewardship Education Initiative

- Appointed co-chair of Forest Management Task Force Landowner Outreach and Education Working group
- <https://fntf.fire.ca.gov/>
- WG recommended increased outreach to private landowners
- Contract between CalFire and UCANR for five to ten forest stewardship workshops per year throughout state 7/1/2019 to 6/30/2021
- <http://ucanr.edu/forestryworkshops>



The screenshot shows the website for the Forest Management Task Force. The header includes the California State Government logo, social media icons, and links for 'Contact Us' and 'Settings'. Below the header is a navigation menu with icons and labels for 'The Task Force', 'Working Groups', 'Regional Prioritization Groups', and 'Monthly Meetings & Updates'. The main content area features a banner for the 'Landowner Outreach and Education Working Group' with a background image of trees. Below the banner, a paragraph describes the group's composition and purpose. A section titled 'Working Group Management Goals' lists a goal to provide educational programs and outreach. To the right, a box titled 'Working Group Co-leaders' lists Susie Kocher and Martin Twer with their contact information. At the bottom right, there is a button for 'Working Group Meetings'.

**LANDOWNER OUTREACH AND EDUCATION WORKING GROUP**

The Landowner Education and Outreach Working Group is made up of state, local, tribal and federal agencies and non-governmental organizations that play a role in the development and delivery of landowner education and outreach programs.

**Working Group Management Goals:**

1. Provide educational programs and outreach to private landowners and other interested parties on forest restoration, fuels reduction project development, and permitting.

**Working Group Co-leaders**

- [Susie Kocher](#), UC Coop. Extension, (530) 542-2571
- [Martin Twer](#), The Watershed Center, (406) 207-1756

**Working Group Meetings**

- Three day workshops - first 3 workshops held in person starting in January
- Now using blended learning hybrid in person with one in person field day and 8 online session over 8 weeks



**Hosted by:**  
*University of California  
Cooperative Extension*

*in collaboration with:*

*American Forest  
Foundation*

*CAL FIRE*

*California Association of  
Resource Conservation  
Districts*

*California Fire Safe  
Council*

*Forest Landowners of  
California*

*USFS Region 5*

# Save the Date!

## Register now for a California Forest Stewardship Workshop

**Online May 18<sup>th</sup> – July 18<sup>th</sup> and in-person July 11<sup>th</sup> 2020**  
UC Berkeley's Blodgett Research Forest, 4501 Blodgett Forest Rd, Georgetown, CA 95634. (El Dorado County)

**Join the workshop to understand and protect your forests by developing a Forest Management Plan. Topics include:**

- Forest management objectives and planning
- Forest health, insects and disease
- Forest and fire ecology, wildlife, watersheds
- Fuels reduction and forest resource marketing
- Mapping, inventory and silviculture
- Project development & permitting
- Getting professional help and cost-share opportunities

Participants will utilize online resources on their own time to complete learning modules and short activities. Zoom meetings with all participants and presenters will take place once a week on Thursdays, 6-7:30pm. The in-person field day will cover silviculture, forest inventory and mapping activities. To complete the workshop will be **eligible for a free site visit** with a California

# Workshop goals

- Help landowners start to develop their own California Cooperative Forest Management plan
- Set up initial site visit by a Registered Professional Forester
- Can be used to apply for state and federal cost share programs

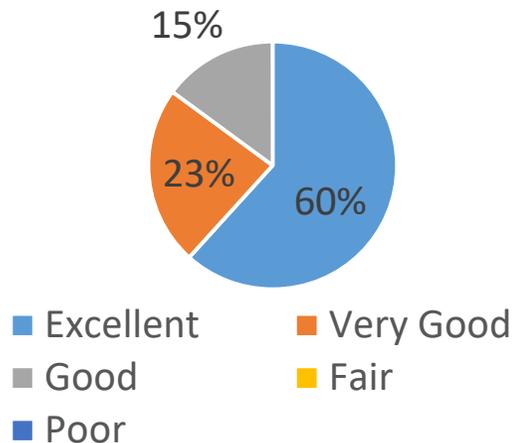


# Project outcomes

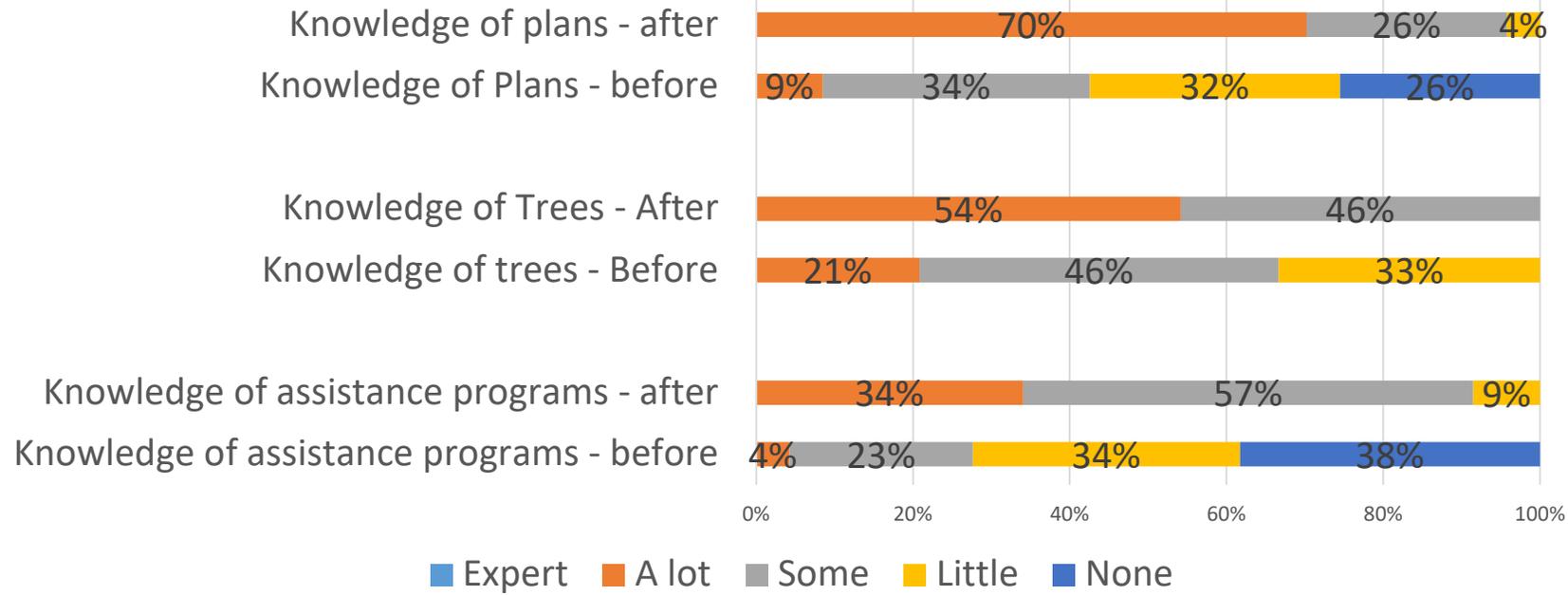
## Tracking

- Workshop satisfaction
- Initial RPF site visit
- Development of forest management plans
- Implementation

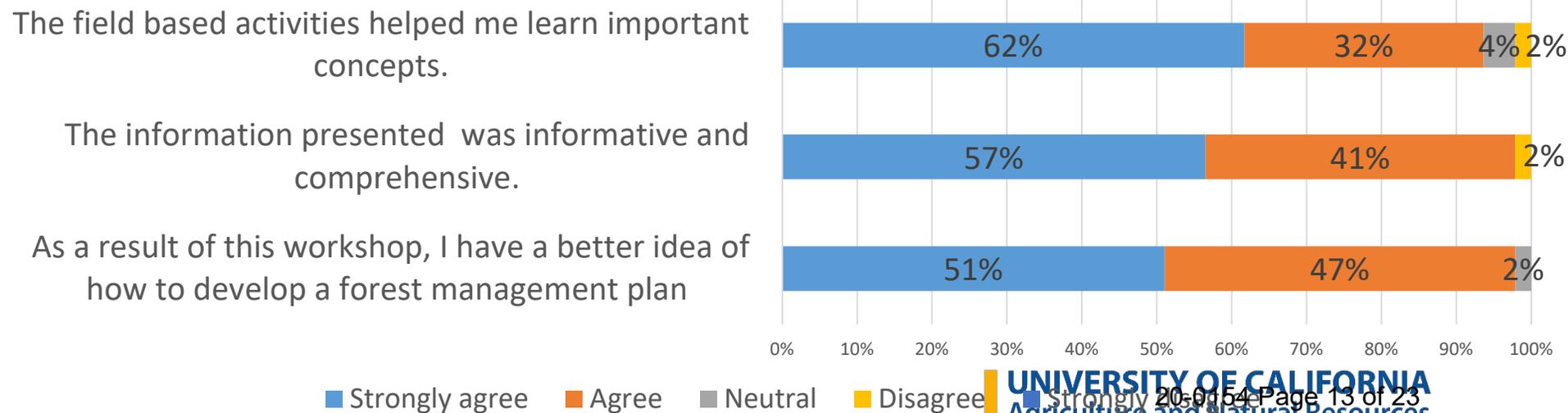
Overall how would you rate this workshop?



## Knowledge gains during the workshop

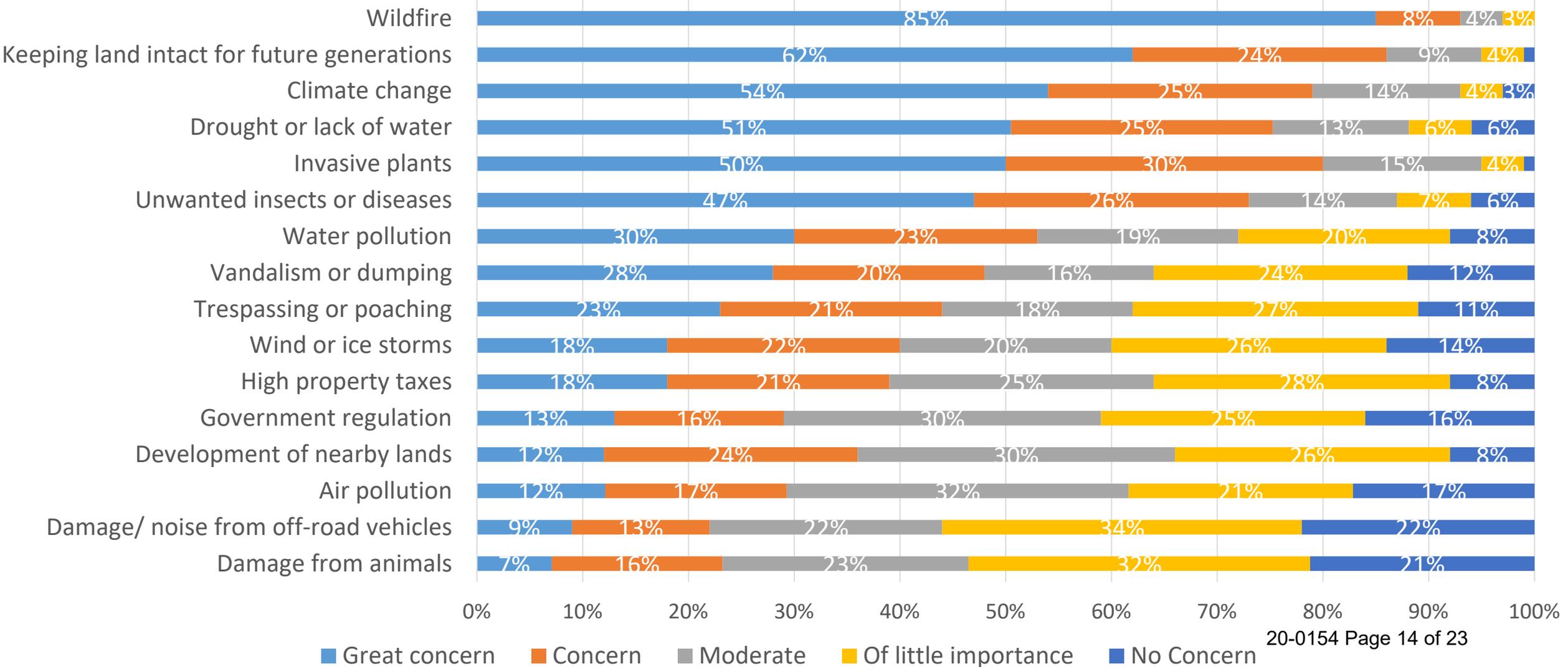


## Participant evaluation ratings



# Workshop participant issues of concern

Please indicate your level of concern about each of the following topics for your wooded land in California. N = 85



# Prescribed Fire Initiative

- Working to increase the capacity for private landowners to conduct Rx fire on their own property
- Prescribed fire can be done at small scale for relatively low cost
- Address loss of knowledge about broadcast burning in California
- 2019 CalFire grant to host 12 Rx workshops for private landowners over the next 3 years

CALIFORNIA FIRE SCIENCE CONSORTIUM

## Save the Dates!

### Prescribed Fire on Private Lands Workshops

**October 8th, 2019:** Ambulance, Fire and EOC Facility  
18440 Striker Court, Sonora, CA (*burn day last week of October*)

**October 10th, 2019:** American Legion Hall, 11401 American Legion Drive,  
Sutter Creek, CA (*burn day last week of October*)

**October 18th and 19th:** UC Berkeley Forestry Camp, 8091 Schneider Creek Rd, Meadow Valley, CA 95956

**November 5th and 6th, 2019:** Central Sierra Historical Museum, 42642 Tollhouse Road, Shaver Lake, CA

**December 13th, 2019:** Chico State University's Big Chico Creek Reserve, 3521 14 Mile House Rd, Forest Ranch, CA

**Workshop Topics:**

- Permitting and legal considerations
- Cal Fire's Vegetation Management Program
- Fire weather forecasting / online tools
- Air quality and smoke management

- Prescribed burn associations
- Local fire history
- Fire terms and fire behavior
- Burn plan development
- Burn unit preparation
- Tools and equipment

These two-day workshops are designed for landowners and managers looking to gain skills in prescribed fire planning and implementation. The first day will consist of classroom lecture, instruction, and exercises. The second day will include a field trip to view lands actively managed with prescribed fire and take part in a prescribed fire, permit / weather allowing.

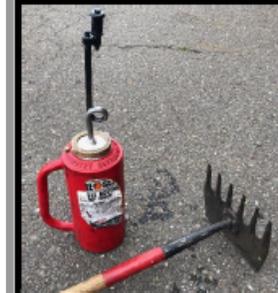
**Registration** for a nominal fee is required. Registration will be available at <http://ucanr.edu/2019rxworkshops> by September 15th. For questions, contact Susie Kocher, [sdkocher@ucanr.edu](mailto:sdkocher@ucanr.edu) (530) 542-2571.



Workshops are funded in part by California Climate Investments, a statewide initiative that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment — particularly in disadvantaged communities.

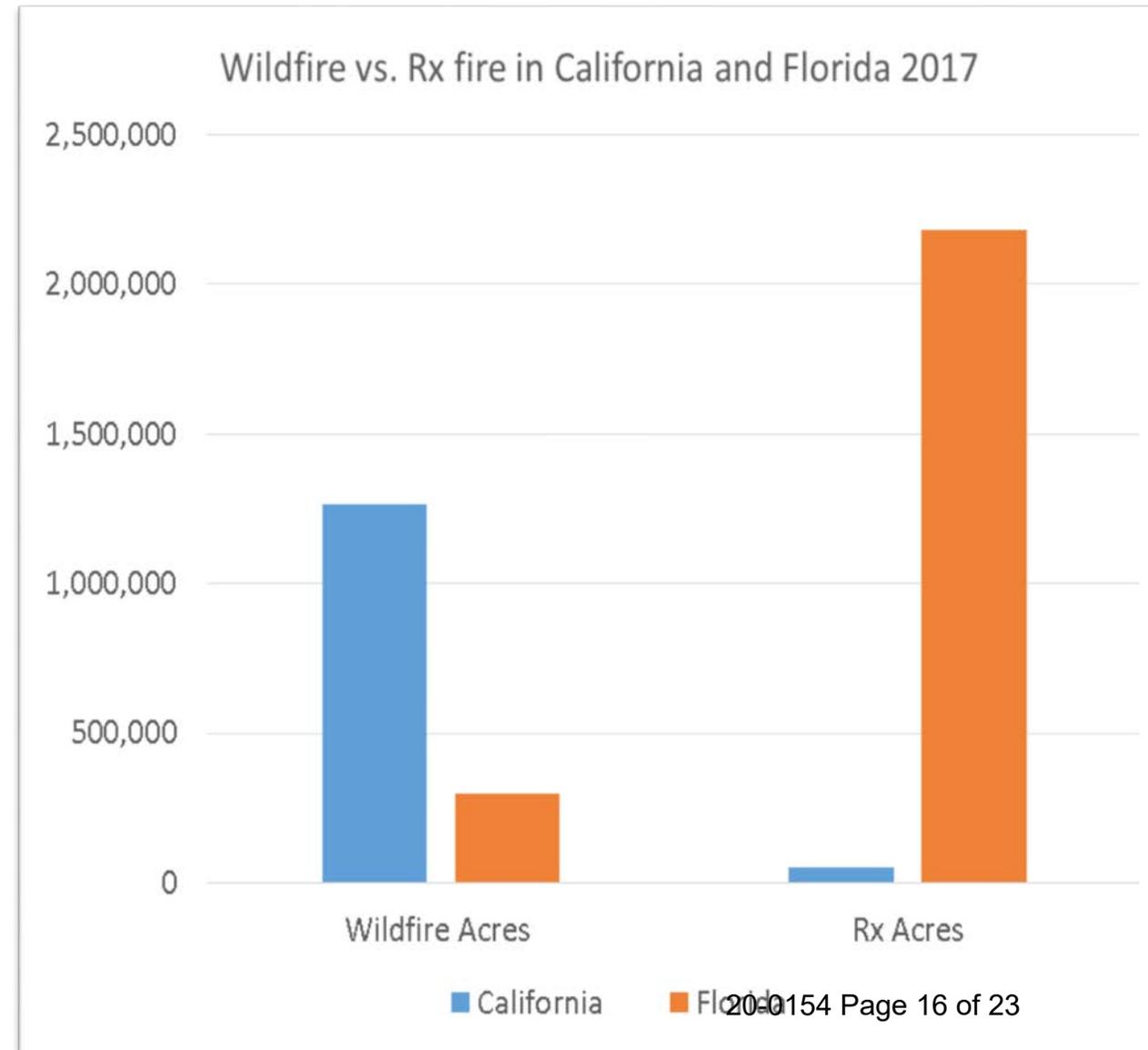
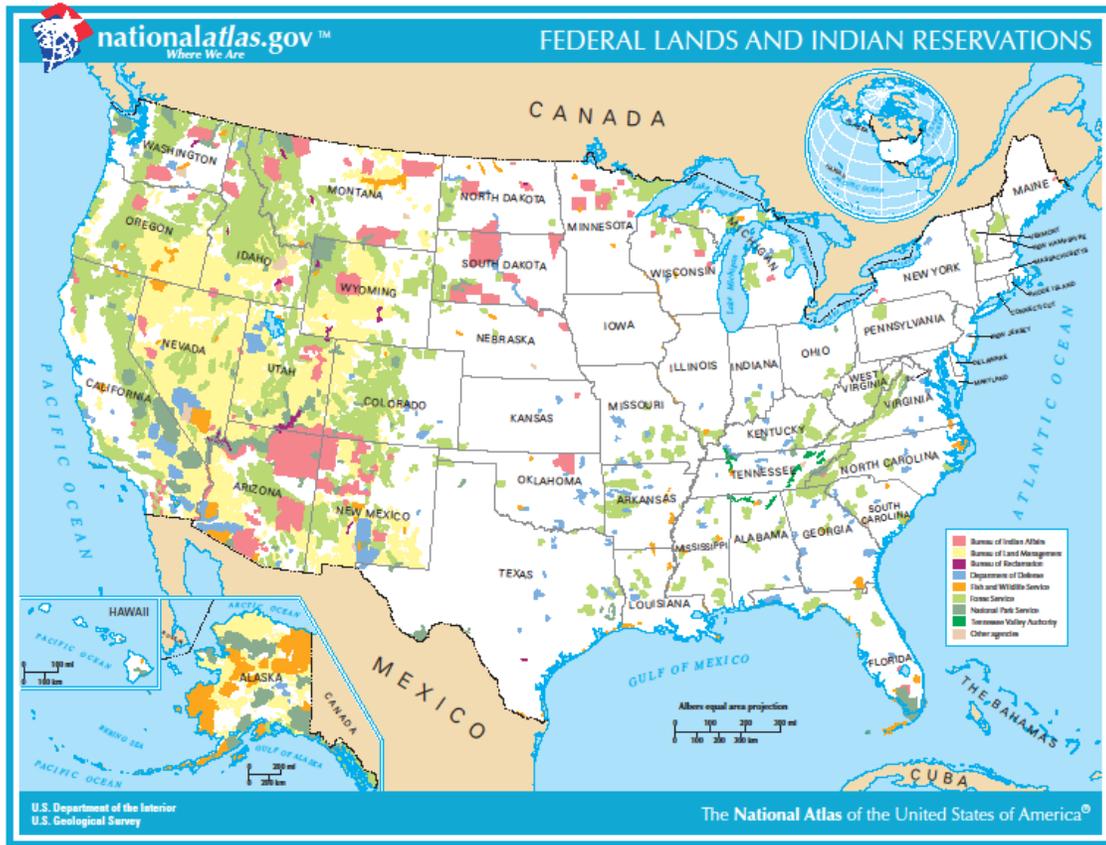
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# Private lands important for increasing use of Rx fire

- Very common in other states especially in southeast
- Most common where there is little public land



# Many landowners have experience with pile burning

The goal is to people expand this knowledge and experience to broadcast burning



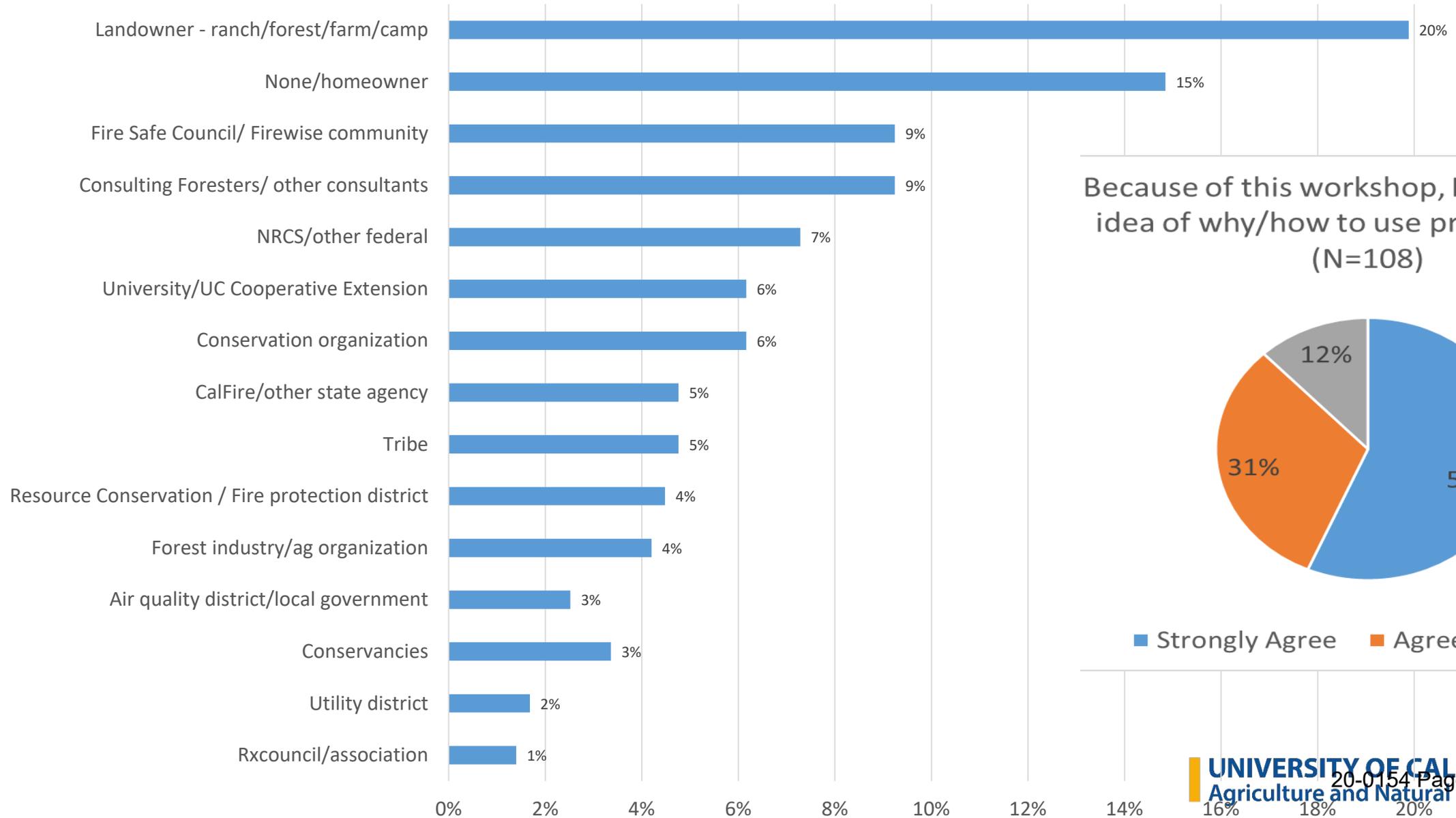
# Rx on private land workshops

DATE	WORKSHOP STYLE	LOCATION	#
May 14/ 15, 2018	2 day, 1 class 1 burning	Georgetown	40
October 2, 2018	1 day classroom	Colfax	35
October 4, 2018	1 day classroom	Arnold	45
October 25, 2018	1 day field burning	Georgetown	20
May 17/18, 2019	2 day, 1 class 1 burning	Georgetown	50
September 2019	2 day, 1 class 1 burning	Quincy	50
October 2019	1 day classroom	Sutter Creek, Jackson	55
November 2019	2 day, 1 class 1 burning	Shaver Lake	50
December 2019	1 classroom	Chico	40
February 2020	2 days field burning	Georgetown	20
	Total attendees:	Over 400 so far	

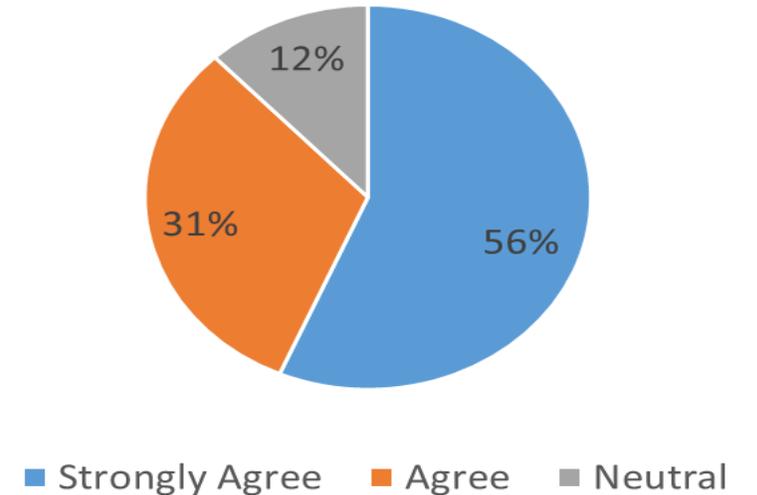


# Who's attending the workshops

Registered participants at UCCE 2018 and 2019 Prescribed fire workshops N = 357



Because of this workshop, I have a better idea of why/how to use prescribed fire. (N=108)



# After workshop, participants wanted to burn with:



UCCE Rx fire team Shaver Lake burn Nov 6<sup>th</sup>  
2019

- Prescribed Burn Association (PBA): 63%
  - <https://www.calpba.org/>
  - [https://www.youtube.com/watch?v=RcNcATftN9Q&feature=emb\\_logo](https://www.youtube.com/watch?v=RcNcATftN9Q&feature=emb_logo)
- CalFire Vegetation Management Plan (VMP): 49%
- NRCS/ EQIP: 46%
- Family: 36%
- Contractor: 24%

# UCCE Mariposa organized online version

- 300 people registered, 200 regularly attended
- 5 sessions posted online at [http://cemariposa.ucanr.edu/Fire\\_Information/Events/Workshop\\_Resources/](http://cemariposa.ucanr.edu/Fire_Information/Events/Workshop_Resources/)



Prescribed Fire Webinar Series - Session 1: Fire Ecology

241 views • May 7, 2020

LIKE DISLIKE SHARE SAVE ...



# Prescribed fire policy work

- New article in California Agriculture Journal on burn permitting process
- <http://calag.ucanr.edu/archive/?article=ca.2020a0014>



## OUTLOOK

### Burn permits need to facilitate — not prevent — “good fire” in California

The weather last fall was unusually favorable for private landowners to carry out prescribed burns to reduce wildfire hazard. Burn permits, however, made burning unnecessarily difficult. Safe and effective prescribed burns can benefit from changes in permitting.

Robert A. York, UC Cooperative Extension Specialist, UC Berkeley

Ariel Roughton, Interim Manager, Berkeley Forests

Ryan Tompkins, UC Cooperative Extension Forestry and Natural Resources Advisor

Susan Kocher, UC Cooperative Extension Forestry and Natural Resources Advisor

Online: <https://doi.org/10.3733/ca.2020a0014>

In California, there is intense focus on expanding the use of prescribed burns — fires that are intentionally set to burn with low intensity and to consume litter and woody debris across the forest floor. Policymakers have recognized the critical importance that prescribed burns have in reducing the impact of large, damaging wildfires (Little Hoover Commission 2018), and \$1 billion in state funding over the next 5 years is aimed

at expanding the use of prescribed burns. Yet only a small fraction of what is needed to facilitate these “good fires” is being done.

In 2017–2018, only 33,000 acres of private land were treated by state agencies (Newsom 2019), and much of this work was mechanical (i.e., thinning and chipping), not prescribed burns. By contrast, the California Carbon Plan (2015) estimates that 250,000 acres of private land are needed. Private landowners, who own

A photograph of a forest fire. In the foreground, a yellow fire hose is laid out on the ground, winding from the bottom left towards the center. The ground is covered in dry leaves and twigs. In the middle ground, there are several large, dark tree trunks. To the right of the center, a large tree trunk is visible. In the background, there is a dense forest of tall, thin trees. A fire is burning in the distance, with bright orange and yellow flames and thick white smoke rising into the air. The sky is a pale, hazy blue. The overall scene is one of a controlled fire in a forest setting.

**Thank you!**

*Contact me: Susie Kocher, Forestry Advisor,  
sdkocher@ucanr.edu*