

CALIFORNIA FOREST STEWARDSHIP PROGRAM

# Forestland Steward

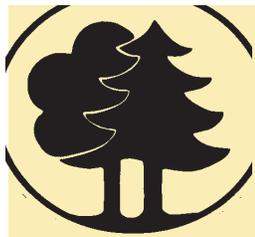
FALL 2018

## Top priority! Rebuilding Forest Health

*Giant Sequoia Forest Resilience  
Projects will invest \$2.4 million to  
improve forest conditions at Calaveras  
Big Trees State Park.*

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## Forestland Steward

Forestland Steward is a joint project of the California Department of Forestry and Fire Protection, Placer County Resource Conservation District, University of California Cooperative Extension and USDA Forest Service to provide information on the stewardship of private forestlands in California.

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# New state task force increases efforts to improve forest health

Signaling a more comprehensive approach to improving conditions in California's forests, the state's newly formed Forest Management Task Force met in August to begin reviewing plans for rebuilding forest health on public and private forestlands.

It replaces the Tree Mortality Task Force, which addressed the recent and unprecedented tree die-off in the Sierra Nevada.

The new Forest Management Task Force's mission is to improve overall forest health conditions in California's roughly 30 million acres of forestland.

## Increased sense of urgency

"Everyone feels a sense of urgency about the issues facing California's forests," said Terry O'Brien, appointed in June to serve as Governor Brown's advisor for forests.

"We're acting to increase the pace and scale of efforts to improve forest health and plan to do a lot more because of the critical decline."

He told those attending the task force's first meeting in the state capitol that \$250 million has been made available in the current state budget to address forest health and fires.

In addition, Senate Bill 901, approved in September, provides about \$1 billion for forest health and wildfire reduction during the next four years. See page 4 for details about the bill.

He noted CAL FIRE has been instrumental in working with small forestland owners to protect their land and said the agency will intensify that work because of its importance.

In recent years, forestry officials said more than 129 million trees have died, primarily in the central and southern Sierra. About 1.5 million of those dead trees have been removed, mostly from locations where they posed a public danger—near roads, homes, and public infrastructure.

Members of the new task force include state, local, tribal and federal agencies with land management, funding or permitting responsibilities for forestlands within the state.

The task force aims to increase the rate of forest treatments and expand wood product markets through innovation assistance and investment.

Advancing forest health project-capacity, aligns with the California Forest Carbon Plan. The goal is to establish healthy and resilient forests that can withstand and adapt to wildfire, drought and a changing climate.

"Achieving these outcomes will require broad partnerships, participation in task force

meetings and work groups that will be open to all willing to contribute," the group said.

One of the new task force work objectives is to "identify and harmonize" cross-jurisdictional regulatory and permitting requirements for forest health, prescribed fire and fuel reduction activities.

To that end, Russ Henly, state Natural Resources Agency Assistant Secretary of Forest Resources Management discussed a new online timber harvest permitting process for non-federal lands.

The program, called CalTREES, will help synchronize multi-agency harvest permits and will become fully operational in November.

For more information about the new permitting program, contact local forestry experts listed on page 10. The new CalTREES on-line system for submitting and reviewing timber harvest plans can be found at: <https://bit.ly/2CaHXUc>.

California's Forest Management Task Force can be found online at: <https://fntf.fire.ca.gov/>.

The website currently includes basic information on the task force's goals and objectives, and operating details, such as upcoming meeting dates; a page for each working group; and links to task force agendas, webinars, and guiding documents.

The website will be built-out over time to include all meeting materials, issue papers, latest news, links to related groups and projects, social media connections and public outreach resources.

Check the site for meeting updates, plans, projects and developments.



*Polemonium carneum, commonly called royal Jacob's ladder, is a native wildflower found in the southern Sierra Nevada. It is among the thousands of plants included in a new illustrated guide to the flora of Sequoia and Kings Canyon national parks. See page 10 for more information. Source: Dana York, 2017.*

# Forests and Rangeland Health Report highlights progress and problems



Wildfires across Northern California on Aug. 4, 2018, could be seen from the International Space Station orbiting 252 miles above the United States. Source: NASA.

Ecosystems in California are facing unprecedented pressures due to a combination of human disturbance, wildfires, pests, invasive species and water quality degradation, according to the 2017 Assessment of Forests and Rangelands prepared by CAL FIRE's Fire and Resource Assessment Program (FRAP).

The periodic assessment of the state's forests and rangelands is required by statute and provides forestland owners, researchers, agencies and policy makers a science and data foundation for making decisions.

The 12-chapter report updates a series of assessments, dating back to the late 1970s, that evaluate the conditions of California's privately owned and public forest and range resources.

## Focusing on future steps

Researchers found climate change is "disrupting historical disturbance regimes," adding another level of uncertainty about how best to conserve and protect healthy ecosystems.

"However, there is growing awareness about action needed to protect these ecosystems," the report said.

"Sustainability initiatives are changing the way private timberlands are managed. And, federal agencies are often working collaboratively with the state and other partners ... to improve ecosystem health."

A detailed accounting of wildlife sustainability concerns and conservation strategies is provided by the California Department of Fish and Wildlife's Statewide Wildlife Action Plan's 2015 Update. It can be found online at <https://bit.ly/2MD7GWf>.

The 2017 FRAP assessment focuses on specific concerns related to species at risk, habitat conversion and protection, habitat quality and degradation, along with climate change impacts.

"Indicators and key findings strongly suggest that California's plant and animal species are experiencing increasing pressure," the assessment concluded.

Nearly 1 of 6 California native plant and animal species now are considered Species of Greatest Conservation Need (SGCN).

The U.S. Geological Survey (USGS) maintains a national data base of SGCN species. California accounts for more than 1,400 species of the more than 16,000 on the list. Find the complete USGS list online at: <https://bit.ly/2Os2W5Y>.

Since 1850, an average of 98,000 acres of California forest and rangeland per year have been converted to other uses, mainly agriculture and urban development, the report said.

More recently, rates have slowed, with about 25,000 acres per year converted to urban use.

About 58 percent of forest and range habitats are protected from conversion through public or conservation organization ownership, or more recently by a growing trend of purchasing conservation easements on private lands.

In 2016, conservation easements protected about 448,000 acres of forestland and 1.24 million acres of rangeland, many of those acres are working landscapes where timber management and grazing continue to contribute to local economies.

The complete FRAP assessment is online at <https://bit.ly/2yJPFzM>.

## Suggestions for improving forest management

- Continue exploration, implementation and support for active and sustainable management practices on non-industrial timberlands.
- Create of additional distributed infrastructure to diversify log and biomass markets, such as increased use of small or portable mills and biomass plants.
- Expand research and support for new wood-based products to increase market options and improve the return value of harvested timber.
- Support collaborative landscape-level projects that involve state and federal agencies, local communities and other stakeholders for improved economic and environmental sustainability.
- Expand research and support to select appropriate genetic sources for adapting new plantings to a changing climate.

Source: California's Forests and Rangelands: 2017 Assessment

## Projected trends for California's forests

- In the future, some forest areas won't be suitable for growing certain commercial tree species due to climate change.
- Statewide, there's a projected loss of between .6 million (3%) and 1.4 million acres (8%) of timberland under various climate-change scenarios.
- Former timberlands will likely transition into oak woodland, or shrubs and grassland.
- Conservation easements will be increasingly effective for preserving timberlands with important environmental or social values, and for protecting working forests from conversion or subdivision.
- Invasive plants, many of which are not native to California, will continue to have a major impact on working forests.

Source: California's Forests and Rangelands: 2017 Assessment.

# Answers to questions about new plans for forest thinning to curb wildfires



A tree faller thins a forest stand in University of California's Blodgett Forest near Georgetown.

Dramatically increased wildfire activity in recent years has prompted approval of new legislation to accelerate the pace and scale of forest thinning.

Under recently approved Senate Bill 901, rules for tree cutting and disposing of dead trees and vegetation will be eased. And, during the next four years, the bill directs about \$1 billion in state funding to wildfire prevention efforts.

With this new opportunity for forest landowners to improve forest health and resilience on their property, come some important questions:

### What forests?

California has about 33 million acres of forestland, with the federal government owning the largest share—about 57 percent, or about 19 million acres. University of California researchers found in 2016 that family owned forestland totals about 9 million acres, with nearly 90 percent of these owners having less than 50 acres of forestland. Industrial timber companies own about 5 million acres. State and local entities own about 3 percent.

This ownership mix makes a cohesive system for managing the forests challenging because of overlapping jurisdictions and divergent management objectives.

### What about funding?

The new legislation provides millions of dollars for forest thinning using different approaches. Per-acre costs will vary.

Crews with heavy equipment can be hired, with costs running as much as \$1,400 an acre.

Controlled burns—targeted fires to remove vegetation—are less costly at about \$150 an acre. The downsides to this method include smoke emissions and higher management risks.

At the bottom of the cost-benefit equation is removing the more than 129 million dead and dying trees in the Sierra Nevada. These trees have little commercial value outside of biomass plants that turn the wood into energy.

### What's burning?

In addition to trees, grassland also has been going up in smoke. Firefighters say these fires are unpredictable, fast-moving and dangerous. Effective forest management also means looking beyond the trees to reduce fire risk in shrub areas and grasslands.

### What about the rules?

The new legislation provides some exceptions to environmental rules to promote faster thinning by streamlining environmental reviews. The bill also allows more forest road building.

### What about the wood?

Landowners and managers want thinning to pay for itself. Harvesting larger trees can help defray some costs, but smaller trees and slash are harder to sell and transport.

Larger trees, however, withstand wildfire better. Smaller, understory trees and shrubs can serve as dangerous ladder fuels that can spread fire to treetops.

The text of SB 901 is online at <https://bit.ly/2oMEW2I>.

# CAL FIRE offers grants to help reduce fire threat and improve forest health

Applications are being sought for projects that will help prevent wildfires and restore forest health.

The California Department of Forestry and Fire Protection (CAL FIRE) announced in October the availability of up to \$155 million in project grants to improve forest conditions, and also sequester carbon and reduce greenhouse gas emissions.

CAL FIRE's Fire Prevention Grants Program will provide funding for local projects that address wildfire risk and reduce wildfire potential to communities in, and adjacent to, forested areas.

Qualified activities include hazardous fuel reduction, fire planning, and fire prevention education, with an emphasis on improving public health and safety.

Collaborative projects that include a mix of treatment activities at the landscape scale will also be eligible for grants.

CAL FIRE's Forest Health Grants Program will provide funding for Conservation easements and land acquisitions under the Forest Legacy Program.

In addition to the \$155 million, another \$3 million will be made available specifically for applied research studies that examine forest management and health to support private forestland owners, resource agencies and fire management organizations in California.

## Official Call for Applications

**Forest Health Program:** The call for applications opened October 1 and applications are due by 3 p.m. on Jan. 29, 2019. Public workshops are being held throughout California.

**Fire Prevention Program:** The call for applications opened Oct. 17, 2018, with a 3 p.m. deadline on Dec. 19 to be eligible for program funding.

These grant programs are part of California Climate Investments (CCI), a statewide program 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.

These programs also are part of a broader effort outlined in the forest management executive order issued by Gov. Brown earlier this year and they support the State Forest Carbon Plan, which seeks to increase the ability of

California forests to capture carbon and improve forest management, including reducing dangerous tree mortality and the impacts of wildfires.

Details about the grant applications and administration process are available online for each program.

Obtain grant guidelines, program details and sign up for announcements at the CAL FIRE Grants page, online at <https://bit.ly/2bfSSiV>.

**CAL FIRE offers a number of grant programs, each with its own scope and funding priorities. See details online.**

## Managing forests for the future

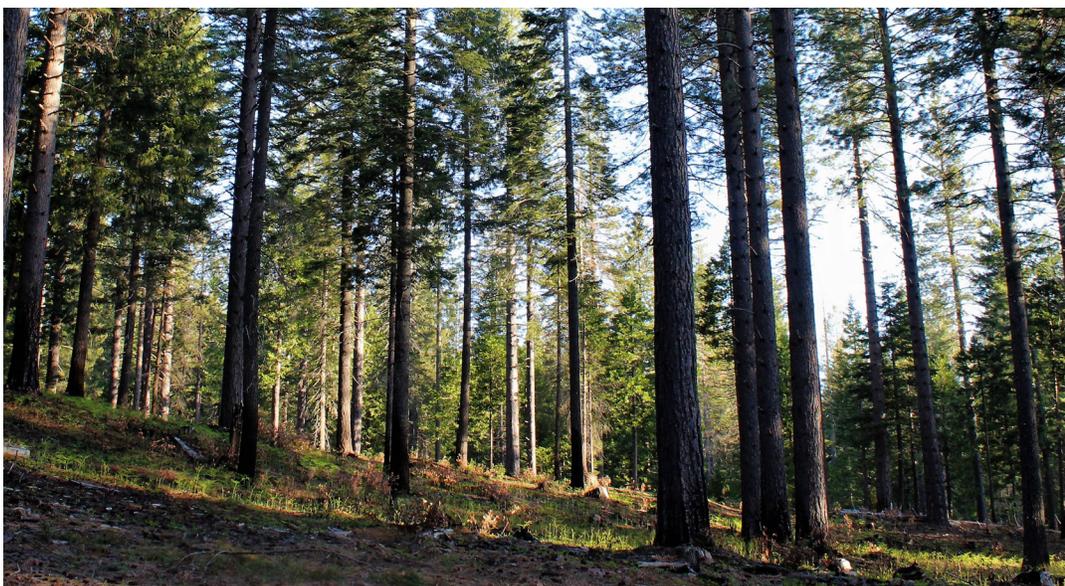
Improving forest health in California is a top priority with new initiatives and funding plans.

Forestry experts say reducing tree density and maintaining species diversity will play a big role in improving future forest conditions.

Areas for improving forest health include:

- Gaining a better understanding about how to approach reforestation and vegetation management in California's high tree-mortality areas.
- Revising the state's seed zone map to factor in potential future climate conditions.
- Understanding the role of genetics and seed stock sources will play in reforestation efforts.
- Forest landowners and managers will need to consider which species and genotypes to plant in which locations in the face of changing climatic conditions.

Source: USDA-FS Science and Management Symposium, 2017, online at: <https://bit.ly/2Mxr2vY>



Fuel reduction treatments open forests to better health and resiliency.

## Precision Forestry

# Emerging technology and modified equipment help address hazardous fuels on steep terrain



*The Swiss-built Menzi Muck is a “walking” brush and tree thinning excavator, sometimes called a “spider.” Using advanced hydraulics, mountain stabilizers and telescopics, the robotic equipment conforms its wheels to very steep hillsides using adjustable spindles and claw supports.*

Part tradeshow, part hike, this summer forestland owners and land managers took a look at equipment designed to alter or remove fuel accumulations on steep terrain. Interest in this specialized thinning and vegetation equipment is heightened by the increased threat of catastrophic wildfires in California and need to perform forest treatments on steep mountainsides.

Over the past five years (2013 –2017), California has averaged about 4,800 fires with 202,786 acres impacted. CAL FIRE said 2017 was an exceptionally challenging year with 9,133 fires across 1,248,606 acres, which resulted in 46 fatalities and loss of almost 10,000 structures.

Sponsored by the USDA Forest Service and CAL FIRE, in cooperation with a number of other partners, the two-day event was held on Sierra Pacific Industries land near Ice House Resort in El Dorado County.

Equipment vendors and brush clearing contractors discussed equipment advances, options, efficiency, costs and environmental impacts with attendees, including timber companies, ski resort operators, utilities, public agencies and private landowners.

The equipment showcased at the event was modified or designed to safely operate on slopes exceeding a 30 percent gradient or a 60 degree angle. The challenge of clearing brush and thinning trees on steep hillsides has become easier and less expensive as a result of new technology, participants said.

The many technical advances taking place in forest management are changing how forestland owners are changing the landscape.

### Revolution in the Woods

A recent study by global business consultants at McKinsey & Company found emerging technologies—drones, lasers scanners, GIS and sensors, are being supplied by a growing number of forestry equipment manufacturers and specialty vendors—creating what they’re calling an “operational revolution in the woods.”

“But precision forestry is not simply the adoption of digital technologies,” McKinsey researchers said. “For forest managers, it involves a paradigm shift, from a highly manual and analog system with broad-brush management prescriptions to a system with digital data capture and analysis, granular management prescriptions and tight operational control.”

The complete report is online at: <https://mck.co/2MqU0gt>.

In addition to accessing a growing number of new mechanical options, California forestland owners also are relying more on technical data gathered by government agencies through the use of advanced technology. See story on page 3.

With better technology, data, equipment and science, California forestland owners are pioneering the use of emerging technology as they respond to increased urgency for improved forest health and resiliency, experts said.

The event near Ice House emphasized improved ability to assess, plan and budget for future fuels treatment projects and

to help local contractors make informed business decisions about what equipment to buy or lease for use on clients' forest properties.

Long-term, organizers said the steep slope demonstrations are expected to lead to improved wildland and watershed health; enhanced ability to defend communities and other infrastructure from wildfires; and mitigate air emissions impacts, including greenhouse gas releases during wildfires.

At the same time, it's anticipated forestland owners will see a reduction in hazardous fuel accumulation, lower site impacts, greater local job retention and perhaps lower costs.

Mechanical fuels treatment with heavy equipment is often the most cost effective way to reduce fuels on steep terrain, but the approach has been under utilized for a variety of reasons.

Historically, fuels treatment activities in California have focused on four techniques: prescribed fire, livestock grazing, treatment with hand crews and mechanical treatment with heavy equipment.

Prescribed fire is typically the preferred and most cost-effective technique to treat excessive fuels. However, in many cases, existing fuel loads are too high to safely treat with prescribed fire, forestry experts say.

Often, a pre-treatment step is needed to reduce standing and down fuels to acceptable levels before prescribed fires can be deployed. Removing biomass takes more time and adds to treatment costs for prescribed fire.

It's also limited by the number of burn days approved by air quality management districts and the number of burn projects competing for approval in the same airshed.

While livestock grazing and hand crews have a relatively light impact on the land, the cost per acre is substantial. In many cases, mechanical treatment with ground-based equipment is the next most cost-effective technique after prescribed fire, but steep terrain has been a barrier for using heavy equipment in those areas.

But, as wildfires have become larger and more frequent, forestland owners and managers have been seeking alternative ways to perform fuels treatment on steep terrain. New equipment and technology is offering some solutions.

### Improving safety

Equipment manufacturers have been improving mechanical vegetation treatment systems to better process and manage biomass on-site.

Improvements include development of equipment with larger carriages and self-leveling cabs that improve safety and performance on steep ground. They've also added robotics, onboard data capture and satellite guidance.

At Ice House in June, equipment and techniques used for demonstration focused on mastication, cutting trees and removing brush.

Equipment was monitored for effectiveness, efficiency, cost and soil impacts. Once performance analysis is completed, results of the field demonstrations will be synthesized and shared with sponsors and other interested parties.

Demonstration project partners included USDA Forest Service; CAL FIRE; Sierra Pacific Industries; The Nature Conservancy; The Watershed Research and Training Center; California Forestry Association; University of California Cooperative Extension; and Natural Resources Conservation Service.

## Biomass holds a piece to the forest health puzzle

*Mechanical fuel reduction creates the problem of large amounts of biomass. However, managed effectively, biomass can help improve both forest health and the environment.*

### Climate change:

Using biomass energy in lieu of fossil fuels reduces greenhouse gases and offers a disposal alternative to open burning and landfills for forest waste.

### Habitat protection:

Biomass harvesting can have a negligible impact on wildlife and watersheds, while improving forest growth.

### Rural economies:

Processing biomass can create jobs in rural communities.

### Climate adaptation:

Increased wildfire frequency is expected. Restoration, thinning and fuel hazard treatments make forests more resilient to climate-related disturbances.

*Source: CAL FIRE Climate and Energy Program*



Equipment contractors discussed heavy-duty equipment for forestry management projects, including clearing vegetation and mastication with hiking tour groups during the 2018 Steep Terrain Equipment Demonstration at Ice House.

## Protecting Forest Resources

Grants awarded to Collaborative projects include:

**National Forest Foundation Tahoe-Central Sierra Initiative**  
\$12,987,710

To be used for a bundle of projects to support a regional restoration program on 1.1 million acres.

**Sierra Nevada Conservancy**  
\$10,723,552

Part of an all-lands regional restoration effort on 2.4 million-acres of public and private land.

**American Forest Foundation**  
\$9,002,948

A “My Sierra Woods” project covering family owned forest lands in Shasta, Yuba, Butte, Tehama, Lassen, Plumas, Sierra, Nevada and Placer counties. Will include over 10,000 private landowners and result in more than 720 projects across more than 42,000 acres.

The list of current grant recipients is online at: <https://bit.ly/2vELDbc>.

Find current Forest Health grant awardees at: <https://bit.ly/2w5j5Xs>.

# \$170 million awarded to reduce fire threat and improve forest health

As California mops up after another destructive wildfire season, more than 100 agencies and organizations across the state currently are receiving funding to help reduce greenhouse gas emissions from wildfires and increase the amount of sequestered carbon.

These grants were awarded before increased funding became available under Senate Bill 901.

The California Department of Forestry and Fire Protection (CAL FIRE) announced in August that more than \$170 million in grants have been awarded to help prevent catastrophic wildfires, like the 2018 Carr Fire and Mendocino Complex, and help restore forest health.

Using funds provided by the Greenhouse Gas Reduction Fund from California Climate Investments (CCI), CAL FIRE awarded 142 fire prevention grants totaling \$79.7 million and 23 forest health projects totaling \$91.5 million.

The grants went to local organizations, like fire safe councils, land trusts and other land managers, to reduce wildfire risk to both forests and communities.

Funded activities include hazardous fuel reduction, fire planning and prevention, with an emphasis on improving public health and safety, all while reducing greenhouse gas emissions.

“California continues to invest millions of dollars into creating healthier, more resilient

forests that benefit all of us,” said Chief Ken Pimlott, CAL FIRE director and California’s state forester.

Pimlott said local projects funded by this money help prevent wildfires before they start, and when combined with fire prevention activities, will help the state move toward its greenhouse gas reduction goals.

In the future, more projects designed to improve water quality, manage forest pests and increase the use of forest management tools—prescribed fire and hazardous fuels reduction to create greater forest resiliency—will be eligible for funding.

To date, CAL FIRE’s Forest Legacy Program has conserved nearly 112,000 acres of working timberland.

The 165 grants were made possible by proceeds from California’s cap-and-trade program to combat climate change.

Information about the Forest Legacy Program can be found online at <https://bit.ly/2N31cUL> or from CAL FIRE Forestry Assistance Specialists, see page 10.

The Sierra Nevada Conservancy offers an online funding guide at: <https://bit.ly/2ymFi5E>.

Grants are focused on vegetation removal for meadow, riparian or other habitat restoration projects.

County Resource Conservation Districts also are a good source of information about new funding opportunities, as are local Fire Safe Councils.



Contractor CTL Forest Management Inc. loads a chip van with woody biomass waste from the Yeti Fuels Reduction Project in the Lake Tahoe Basin Management Unit, Kings Beach, CA. Source: UCANR

# Forest landowner tools for managing threatened and endangered species



The forest-dwelling Pacific fisher is a candidate for Endangered Species Act protection. It is found in coastal forests, including those in Northern California. Source: U.S. Fish and Wildlife Service, Pacific Southwest Region.

Private landowners interested in learning more about how to find and protect wildlife and native plants on their property are tapping a number of free online tools to make the job easier.

California has about 300 species federally listed as threatened or endangered, which increases the likelihood they will be found on privately owned land. That's particularly true after major disturbances like wildfire, drought and pest infestations. Damaged and degraded habitat can displace native species.

"First and foremost, you need to know if your property is home to threatened or endangered species, and which ones," said Kiera Quigley, spokesperson for the National Association of State Foresters.

## Tools make the job easier

The U.S. Fish and Wildlife Service offers an online, interactive state-by-state map that allows searches for specific species. The map includes information about each species. Find the map at: <https://bit.ly/2MB0R7q>.

If you're not sure whether a species on your property could be one of the listed species, Quigley recommends apps such as iNaturalist at <https://bit.ly/1IT6E1I> to make identification easier.

There also is another interactive map available from the USFWS that explores different conservation actions and partnerships happening within states, Quigley said.

These resources provide a place to start—identifying species and understanding habitat

needs—but if questions remain, she recommends contacting local agency wildlife experts.

Additionally, each state has its own Natural Heritage Program, administered by the Department of Natural Resources or a related entity. These state-sponsored programs provide comprehensive information on rare species to support managing these resources.

Find the California Department of Fish and Wildlife Natural Diversity Database online at <https://bit.ly/2nyrzmt>.

Information about tools to help manage forestland for species conservation, including information on Safe Harbor Agreements, Conservation Plans and Conservation Banking, may be found at <https://bit.ly/2vWS20G>.

Conserving threatened and endangered species is critical at this point in history, Quigley said, and, "with more than half of U.S. forestland in the hands of private landowners, the use of these tools is one of the best ways we can conserve biodiversity for generations to come."

## Protecting California species

The California Fish and Game Commission is currently considering a petition to list the Humboldt marten as an endangered or threatened species under the state Endangered Species Act. A member of the weasel family, the species is so rare that it was thought to be extinct.

Only one population of about 40 animals remains in northern coastal California forests.

A list of California threatened and endangered species is online at <https://bit.ly/2yjY6mJ>.

## Top 10 habitat protection measures

1. Plan forest management projects outside of species' breeding seasons.
2. Retain a few snags per acre (standing dead trees) that don't threaten safety or conflict with management goals.
3. Leave areas for wildlife to escape from predators and travel from place to place.
4. Remove brush in stages to have a variety of shrubs of many ages.
5. Design landscapes to include a variety of native plants while maintaining a fire-resilient forest.
6. Consult with experts before clearing along streamsides.
7. Learn about rare plants and how to protect them.
8. Don't plant or spread invasive, non-native plants.
9. Check old wood debris piles for signs of wildlife before lighting a fire. Plan for wildlife escape.
10. Know the wildlife and plants on your property.

Adapted from *Forestland Steward*, Summer 2010 online at <https://bit.ly/2nvDpxj>

# Southern Sierra Nevada flora guide available

The first comprehensive guide to flowering plants in the southern Sierra Nevada Range has been published by the California Native Plant Society. *An Illustrated Flora of Sequoia and Kings Canyon National Parks* by botanist Dana York highlights the diverse flora in the region.

York began working on the book in 1995, as part of his master's thesis. Over time, he created a database of nearly 10,000 collection records, including 2,000 records of his own findings from more than 150 trips in the southern Sierra Nevada.

The guide will be of interest to private forestland owners in the southern Sierra Nevada working on reforestation projects and restoration of native habitat in areas damaged by drought, high levels of tree mortality and wildfire.

But the greatest interest is expected to come from wildflower enthusiasts and those who enjoy hiking, camping and fishing in the Sequoia and Kings Canyon national parks.

York's nearly 600-page paperback covers 1,809 species, sub-species and varieties of plants with more than 1,500 illustrations and species descriptions.

The guide is available at [store.cnps.org](http://store.cnps.org) and from online booksellers.



An Illustrated Flora of  
Sequoia & Kings Canyon  
National Parks



by Dana York

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*Forestland Steward* delivers free forest management news and funding information along with expert tips to your inbox or mailbox.

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Find us on Facebook: <https://bit.ly/2KwzE8e>

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### CAL FIRE Forestry Assistance Specialists (FAS)

(Find the FAS for your county at [calfire.ca.gov/resource\\_mgt/downloads/ForestAdvisorList.pdf](http://calfire.ca.gov/resource_mgt/downloads/ForestAdvisorList.pdf))

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### USDA Forest Service

**Chris Fischer**, Deputy Director State & Private Forestry, 707-562-8921

# Calendar

## November 7 – 10

### California Invasive Plants Council Symposium

**Location:** Monterey Hyatt Regency.

**Information:** Symposium will focus on “Biodiversity: Expanding Our Vision” and include a number of workshops on controlling phytophthora in restoration plants and in commercial nurseries.

**Register online:** <https://bit.ly/2LoYJTD>

## December 2 – 5

### National Grazing Lands Conference

**Location:** Peppermill Resort, Reno, Nevada.

**Information:** This year’s conference theme is “Take the Gamble Out of Grazing” and will focus on improving range management and health to promote resource sustainability.

Register online at <https://bit.ly/2Cmy6Jq>

## January 15 – 17, 2019

### Forest Vegetation Management Conference

**Location:** GAIA Hotel & Spa, Anderson.

**Information:** The conference is accredited for continuing education hours for vegetation managers from California, Oregon and Idaho, and for Certified Forester hours through the Society of American Foresters.

**Register online:** <https://bit.ly/2J2hSXe>

## February 7 – 9

### Sierra-Cascade Logging Conference

**Location:** Shasta District Fairgrounds, Anderson.

**Information:** Annual Forest Products and Construction Equipment Expo.

**Information and online registration:** <https://bit.ly/2yp0ibQ>

## Board of Forestry and Fire Protection

### 2018-19 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 Board meets regularly to discuss forestry issues and make decisions. Meetings are open to the public. Find information online at <https://bit.ly/2od0ogH>.

October	No meeting
November 6-7	Resources Building, Sacramento
December 4-5	Resources Building, Sacramento
January 22-23	Resources Building, Sacramento
February	No Meeting
March 5-6	Resources Building, Sacramento

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## UC Berkeley combines forest and fire centers

The Center for Forestry and the Center for Fire Research and Outreach are merging to become “Berkeley Forests,” a single entity.

Find Berkeley Forests online at: <https://forests.berkeley.edu/>.

The new center's co-directors, Drs. Scott Stephens and William Stewart, said bringing the two centers under one roof will help coordinate and promote continued forest health and fire research in California.

At the same time these changes are occurring, the newly combined forest and fire research centers have combined social media outreach and information offered through Facebook into the Blodgett Forest Research Station page at: <https://www.facebook.com/BlodgettForest/>.

On Twitter, the @ucforestcenter account will be closed, and the @ucfirecenter page will become @berkeleyforests. Those using the @ucforestcenter account, should make sure to change to @berkeleyforests.

Forestland owners looking for the latest forest science and management information from the University of California will continue to find it online at <https://bit.ly/2x0TgZb> and from local UC Cooperative Extension forestry advisors. See Page 10 for contact information.



*Sunrise at University of California, Berkeley's, Blodgett Forest Research Station near Georgetown.*