

# THE BOARD OF FORESTRY AND FIRE PROTECTION



**ANNUAL REPORT** 2023

**MEMBERS OF THE CALIFORNIA STATE BOARD OF FORESTRY AND FIRE  
PROTECTION**

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## **California State Board of Forestry and Fire Protection Mission**

*The mission of the Board 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.*

## **Board Background and Organization**

The California State Board of Forestry and Fire Protection (Board) is a Governor-appointed body within the California Department of Forestry and Fire Protection (CAL FIRE). Members are appointed on the basis of their professional and educational qualification and their general knowledge or interest in problems that relate to watershed management, forest management, wildland fire management, fish and wildlife, range improvement, forest economics, or land use policy. Of its nine members, five are chosen from the public, three from the forest products industry, and one from the range-livestock industry.

The Board is responsible for developing the general forest policy for the State, determining the guidance policies of CAL FIRE, and representing the State's interests in federal land located within California. Together, the Board and CAL FIRE work to carry out the California Legislature's mandate to protect and enhance the State's unique forest and wildland resources.

### **Committees of the Board**

#### **Committees Required by Statute**

Range Management Advisory Committee  
Professional Foresters Examining Committee  
Soquel Advisory Committee

#### **Internal Standing Committees**

1. Forest Practice: The mission of the Forest Practice Committee is to evaluate and promote an effective regulatory system which ensures the continuous growth and harvest of commercial forests and protects soil, air, fish, wildlands, and water resources.
2. Resource Protection: The mission of the Resource Protection Committee is to develop and promote a policy and regulatory program that implements fire safe land use planning and effective vegetation management, pursues a fire prevention program in alignment with the State Fire Plan, and improves forest and rangeland health in California.
3. Management: The mission of the Management Committee is to evaluate and promote long-term, landscape-level planning approaches to support natural resource management on California's non-federal forests and rangelands and to evaluate State Forest management plans.

## External Advisory Committees

1. Effectiveness Monitoring Committee
2. California Forest Pest Council and the California Oak Mortality Task Force
3. Jackson Advisory Group
4. Joint Institute for Wood Products Innovation

## Committee Updates

### Range Management Advisory Committee

The Range Management Advisory Committee (RMAC) is an advisory body to the Board of Forestry & Fire Protection, statutorily authorized by Public Resources Code (PRC) § 741. A California range policy advisory body has existed in some form since 1945, when the Board of Forestry and Fire Protection requested the appointment of the Range Improvement Advisory Committee (RIAC). Legislation was introduced in 1984 to make the RMAC a statutory advisory body of the Board and the California Natural Resources Agency (CNRA). Additional legislation in 1996 expanded the advisory role to include the California Environmental Protection Agency (CalEPA) and the California Department of Food and Agriculture (CDFA). The Secretaries of the CNRA, CalEPA, and CDFA are required to notify, and encouraged to consult with, the RMAC on rangeland issues.

The RMAC envisions a resilient rangeland landscape in California that provides a diversity of ecosystem services to support the state's ecological and human health. To do so, the RMAC may consider issues related to California's rangeland resources, provide recommendations on addressing them, facilitate strong relationships with local, state, and federal agencies and develop solutions that are based on environmental, social, and economic information that is current, data-driven, and considers diverse perspectives.

The RMAC conducted business virtually and in person in 2023, summarized as follows:

- The RMAC hosted six open, virtual or hybrid public meetings to conduct committee business, and a quorum was reached at five of these meetings. Meeting activities included approval of meeting minutes; membership updates, recruitment, and seat appointments; legislative and partner organization updates; public education and outreach presentations by rangeland and natural resource representatives, professionals, and practitioners.
- Chair Dr. Marc Horney and Vice-Chair Dr. Stephanie Larson were appointed for one-year seats through January 2024. Member Bart Cremers was reappointed to a four-year term representing rangeland owners in May 2023. Terms expiring in early 2024 will be assessed at the first meeting of the new year to determine if current members will continue in their seats.
- The **State Lands Grazing License and Land Management (SLGLLM) subcommittee** was dissolved after completing the first stage of documents to support grazing agreements, planning, and implementation. In late 2023, the RMAC began planning for finalization of

deliverables around summer 2024, which will include:

- Grazing License Agreement outline and template, with support and approval from the Department of General Services, and an example of a completed Grazing License Agreement;
  - Grazing Management Plan outline and template to assist in creating a Grazing Management Plan as a stand-alone document or as an attachment to Grazing License Agreements, and an example of a completed Grazing Management Plan; and,
  - Guidance Booklet to accompany the templates and assist users in the development, planning, and implementation of grazing agreements and management plans, with a focus on state-managed lands. Applications to other land types will be addressed.
- The Department of Forestry & Fire Protection (CAL FIRE) and the Wildfire Prevention Grants Program partnered with RMAC to put on a January 18, 2023 workshop, **Applying for a Wildfire Prevention Grant**, with a focus on prescribed grazing projects. The grant application opened December 14<sup>th</sup>, and representatives from UCCE/UC ANR and CAL FIRE spoke at this virtual workshop to assist grazers interested in applying for this grant funding to support grazing projects for fuel reduction. This virtual workshop was attended by 198 registrants from regional, state, and federal agencies, academia, non-governmental organizations, private industry, and the community.
  - The RMAC continued to plan and implement an **Annual Educational Workshop Series**, with four field tours, two virtual workshops, and one hybrid workshop in 2023. The RMAC partnered with and leveraged resources from allied range organizations to attract speakers and attendees. The 2023 educational series focused on prescribed grazing for vegetation management and fuels reduction. Speakers, partners, and sponsors of workshops and field days spanned a wide range of private industry, governmental agencies, and non-governmental agencies.
  - To support the directive of PRC § 741 to advise the Board on rangeland resource matters under its purview, the RMAC conducted a range-focused field tour for the Board's May 2023 meeting.
  - The process of revising the 2023 Annual Priorities, Goals, and Objectives began in late 2022 and was finalized in 2023 (see the 2022 Annual Report and Workplan on the RMAC webpage).
  - Appointed members and support staff to teams working under advised agencies and other organizations with synergistic goals:
    - As a member of the CWGA and the CWGA's Targeted Grazing Committee, Member Bush spear-headed an action team to liaise with that committee to develop several work products focused on prescribed grazing for fuels reduction. In early 2023 the action team completed an educational information sheet on Prescribed Herbivory to be shared with CAL FIRE, and potentially addended to the 2021 [CAL FIRE Fuels Reduction Guidance](#) (CAL FIRE 2021) or incorporated into future versions of this guidance. The RMAC awaits the Board and CAL FIRE's direction for next steps in publication and dissemination of this information. This action team will also conduct a comprehensive update of the [2015 Prescribed](#)

[Herbivory](#) white paper (RMAC 2015), and concurrently develop a stand-alone Technical Guide on Prescribed Herbivory in California, and expects to have drafts ready for review mid-2024. Members Paul Starrs, Dr. Stephanie Larson, and Joel Kramer will also contribute to these efforts.

- Board staff Dr. Wolf joined the **Natural Working Lands (NWL) Science Team** under the CNRA in 2022 and has continued to work with and provide input to the team for integration of range-related resource issues into climate-smart strategies. Members of this team work to inform and review modeling and analyses for natural and working lands, advise state agencies on implementation strategies and standardized accounting, and provide recommendations on addressing barriers to efficient implementation of climate action in natural and working lands. Dr. Wolf also attends the related NWL Executive Advisory Committee (EAC)—a committee developed to support the implementation of [AB 1757](#)—and presented to this committee at a public meeting in 2022 to provide information and guidance on range resource needs and concerns in California. In collaboration with the Air Resources Board and Department of Food and Agriculture, the NWL EAC will produce recommendations for nature-based climate solutions that reduce greenhouse gas emissions to support state goals to achieve carbon neutrality and foster climate adaptation and resilience by January 1, 2024.
- Board staff Dr. Wolf was asked to be an author on the rangelands chapter of the Forest and Resource Assessment Program's report which assesses the amount and extent of California's forests and rangelands, analyzes their conditions, and identifies alternative management and policy guidelines. Members of the RMAC will also be asked to review the chapter draft prior to finalization.
- The RMAC submitted a letter of guidance and recommendations to the **Management Committee (MC)**, a standing committee of the Board, providing input on the **Joint Policy on Hardwoods** as the MC determined the need to revise, update, or otherwise alter this Policy.

### **Professional Foresters Examining Committee**

In 2023, the Professional Foresters Examining Committee (PFEC) continued to deliberate on priorities intended to improve examination outcomes through updating of the examination process. The PFEC also approved fifty-five new applications for the RPF exam. In April and October 2023, Registered Professional Forester (RPF) and Certified Rangeland Manager (CRM) examinations were carried out at three different locations. In total, ninety-one RPF applicants and four CRM applicants sat for these exams. For the April 2023 exam, fifty-six percent passed the RPF exam. For the October 2023 exam, sixty-three percent passed the RPF exam.

- The Board of Forestry and Fire Protection's Office of Professional Foresters Registration continues to perform outreach to increase awareness of careers in forestry in California and the licensing requirements for foresters. A three-year outreach contract was awarded to Forestry Educators Incorporated (FEI) in 2021 to provide our licensing message to multiple Society of American Forester (SAF) accredited forestry programs

in the western US and Canada as well as the annual SAF convention. This last year, outreach was conducted as in-person presentations to the following institutions:

1. Oregon State University
2. University of British Columbia
3. College of the Redwoods
4. Mt. Hood Community College
5. Lake Tahoe Community College
6. Society of American Foresters National Meeting Sacramento, CA

- FEI has plans to visit the following colleges in the coming months.

1. Oregon State University
2. Central Oregon State University
3. Mt. Hood Community College
4. Green River Community College
5. The University of British Columbia
6. Forestry Professionals British Columbia Annual Conference

- In 2023, the CAL FIRE Communications department helped the Board create an online promotional video about becoming a Registered Professional Forester. It can be found on YouTube and on the CAL FIRE and Board of Forestry Facebook pages.

- Other items for PFEC consideration in 2023 include PFEC priorities:

1. Consideration of Board certification of an Apprentice Professional Forester (APF) educational program to assist in exam preparedness and performance. This includes consideration of an abbreviated examination associated with successful completion of an APF program and successful testing of core competency forestry concepts by enrollees in an APF program.
2. Consideration of changes to the requirements for qualifying forestry work experience under 1621.1(b)(4) to include arboriculture when conducted on forested landscapes for public safety purposes. Under this proposal, arboriculture experience would be limited to two years of qualifying forestry experience but would not qualify for experience under an RPF supervisor regardless of the work being conducted at the supervisory or planning level as described in 14 CCR 1622 (c)(1).

### **Effectiveness Monitoring Committee**

The Board formed the Effectiveness Monitoring Committee (EMC) in 2014 to develop and implement a monitoring program to address both watershed and wildlife concerns and to provide a more effective feedback loop to policymakers, managers, agencies, and the



public. Effectiveness monitoring is necessary to assess whether management practices are achieving the resource goals and objectives set forth in the California Forest Practice Rules (FPRs) and other natural resource protection statutes and regulations. This kind of monitoring is a key component of adaptive management. Effectiveness monitoring is also a crucial component for complying with the “ecological performance” reporting requirements outlined in AB 1492 (2012). The EMC and the Board developed a suite of critical monitoring questions based on input from a variety of stakeholders and organized them into 11 themes. The EMC uses these themes and critical questions as guidance to solicit and evaluate research monitoring projects with the goal of developing a process-based understanding of the effectiveness of the FPRs and associated regulations in maintaining and enhancing water quality and aquatic and wildlife habitats. The themes and questions are revisited annually and revised as needed.

The following is a summary of EMC activities in 2023:

- The EMC met four times virtually in open, webcast meetings to conduct business, including a field tour at Boggs Mountain Demonstration State Forest in November to observe monitoring projects. The tour was attended by members of the public, governmental and non-governmental agencies, and forestry and industry professionals from across the State.
- A Project Liaison Guide was developed for distribution to new members and project liaisons to provide clarity around the responsibilities of project liaisons.
- Two new members were welcomed to the EMC, a new co-chair was appointed, and the updated Membership Roster is available [online](#):
  - Drew Coe filled the seat of former co-chair Loretta Moreno in July. Member Coe continues to serve on the EMC as a representative of the Department of Forestry and Fire Protection (CAL FIRE).
  - Jonathan Meurer joined the EMC in March as an agency representative of the Central Valley Regional Water Quality Control Board. Mr. Meurer is an Engineering Geologist for the Central Valley Regional Water Quality Control Board and filled the seat behind Justin LaNier.
  - Clesi Bennett filled Loretta Moreno's seat in November as representative of the California Natural Resources Agency.
- The Research Themes and Critical Monitoring Questions (CMQs) were revised and approved in March. One new Research Theme—Resilience to Disturbance in a Changing Climate—was incorporated into the previous set of 11 Themes, and several CMQs were removed, revised, or added (see [EMC 2023b](#) for details).
- The EMC designated six priority CMQs to prioritize for funding in Fiscal Year (FY) 2022/23 FY. As in previous years, these questions were prioritized for research funding, but not to the exclusion of projects focusing on other CMQs or other research needs related to the FPRs and associated regulations.
- The EMC received an ongoing allocation of \$425,000 from the Timber Regulation and Forest Restoration Fund, of which \$337,500 was allocated to newly and previously awarded ongoing projects.

- The EMC reviewed four Initial Concept Proposals (ICPs) and requested Full Project Proposals (FPPs) from all four research teams. Upon review and discussion, the committee voted to recommend funding for one proposal for \$149,429.00. The EMC tabled a vote on an additional project for an upcoming meeting and a vote is anticipated at the first meeting in 2024. Project information for these two projects is as follows:
  - Funded: [EMC-2023-002: Assessing Fire Hazard, Risk, and Post Fire Recovery for Watercourse and Lake Protection Zones \(WLPZ\) and riparian areas of California](#)
  - Vote Tabled: [EMC-2023-003: Pre and Post Harvest Fuel Loads for Site Productivity](#)
- Presentations were provided at public EMC meetings by members of research teams for the following projects:
  - EMC-2017-002: Boggs Mountain Demonstration State Forest Post-Fire Automated Bird Recorders Study ([Stanish 2023](#)) – Project update
  - EMC-2017-006: Tradeoffs among riparian buffer zones ([York 2023](#)) – Final project presentation
  - EMC-2018-003: Alternative Meadow Restoration ([Surfleet 2023](#)) – Final project presentation
- One or more brief project updates were provided by Board staff, Principal Investigators and/or Project Liaisons at EMC meetings for the following projects:
  - EMC-2016-003: Repeat LiDAR Surveys to Detect Landslides/Road Rule Effectiveness at Reducing Mass Wasting with LiDAR assessment
  - EMC-2017-001: Effects of Forest Stand Density Reduction on Nutrient Cycling and Nutrient Transport at the Caspar Creek Experimental Watershed
  - EMC-2017-006: Tradeoffs among riparian buffer zones
  - EMC-2017-007: The Life Cycle of Dead Trees and Implications for Management
  - EMC-2017-008: Do Forest Practice Rules Minimize Fir Mortality from Root Disease and Bark Beetle Interaction
  - EMC-2018-003: Alternative Meadow Restoration
  - EMC-2018-006: Effect of Forest Practice Rules on Restoring Canopy Closure, Water Temperature, & Primary Productivity

In 2024, the EMC priorities are as follows:

- Meet at least four times per year in open meetings accessible to the public.
- Meet in the field at least once to observe active or proposed monitoring projects.
- Support projects related to the EMC Themes and CMQs, including funding new projects where knowledge gaps exist.
- Monitor progress on EMC-funded or EMC-supported monitoring projects.
- Review and update EMC Research Themes and CMQs as needed.
- Identify themes/CMQs for priority research funding in the 2024/25 RFP.
- Use an Adaptive Management approach to provide research results that inform management and policy development.

## Joint Institute for Wood Products Innovation

The Joint Institute for Wood Products Innovation (Institute) is an advisory committee to the California Board of Forestry and Fire Protection (Board). The Institute is committed to supporting sustainable forestry and forest restoration and funds forest wood and biomass research to help retain and establish related industries in the state.

The Institute finalized and published three reports in 2023.

A '[Forest Biomass Pile Data Collection](#)' (and associated [Appendices](#)) report produced by Clere, Inc and the Spatial Informatics Group was approved by the Board and published online in December 2023. This report quantifies the number of forest biomass piles in the state that accumulated from 2018 – 2021, including the area treated to create a given pile; composition, volume, and locations of the piles; and the planned vs actual fate of each pile. It also provides an inventory of forest biomass pile material potentially available for wood and biomass utilization. The project estimates there are potentially 150,000 acres of piles of forest biomass, representing approximately 1,000,000 tons of material in piles currently on the landscape, with 78% of this material occurring on public lands. Nineteen percent of this material, or 27,385 acres and 195,938 tons, is accessible via existing road networks.

A '[Cellulose Nanocrystals as a Value-Based Additive for Low Carbon Footprint Concrete with Limestone](#)' report produced by Oregon State University was approved by the Board and published online in March 2023. The report found that cellulose nanocrystals (CNCs) obtained from forest biomass produced during sustainable forest management activities helps to reduce hazardous fuels and improve forest health. Additionally, when adding CNCs to Portland limestone cement (PLC), greenhouse gas (GHG) emissions are reduced by 19%. A typical concrete freeway lane mile would consume about 3.5 acres of woody biomass when using CNCs mixed with PLC. An education and outreach document covering this research was also produced and [posted on online](#).

The TallWood Design Institute added an [Addendum to their 'Cross-Laminated Timber \(CLT\) Layup Tests Using Western Wood Products Association \(WWPA\) White fir Species Group'](#) report. The Addendum was approved by the Board and added online to the initial report in March 2023. It highlights the comparisons of white-fir CLT to that of the design values used within the CLT standard (PRG-320). Findings show that white-fir can meet the PRG-320 standard and is a viable option for CLT. Next steps will include a manufacturer going through the certification process to make white fir panels before white fir can be used within a structure.

Six research projects are currently underway with the Institute:

Oregon State University is leading a project on 'Measuring Transport Properties for Concrete Containing Cellulose Nanocrystals: Porosity, Resistivity, and Chloride Ingress.' This project is assessing the influence of CNCs on the service life of steel in concrete elements to extend

the time to onset of reinforcing steel corrosion. The final report is expected March 2024.

The TallWood Design Institute at Oregon State University is leading a project on 'Mixed-Species Cross-Laminated Timber Layup Tests Using Western Wood Products Association White fir Species Group.' This study is assessing the feasibility of mixed species CLT, using white fir and Douglas-fir, to help incentivize industry who may be interested in establishing a CLT facility in California. The final report is expected March 2024.

UC Berkeley is leading a project on 'Procurement of Forest-Derived Renewable Natural Gas to Meet California Public Utility Commission Targets.' This report will provide recommendations to the CA Public Utilities Commission and state's investor-owned utilities regarding procurement of biomethane from forest biomass. The final report is expected March 2024.

Clere, Inc is leading a project on 'CEQA Support for Wood Utilization.' This project will produce a CEQA guidebook. It will also consider the value of a new CEQA Guideline amendment that was described in the Institute's November 2020 'Recommendations to Expand Wood and Biomass Utilization in California to determine whether the language proposed should be recommended. The Institute is interested in ensuring that forest health and fuel reduction projects that provide long-term GHG benefits are explicitly supported. The draft amendment in the Recommendations document, as well as alternative language, will be analyzed for potential benefits to achieving the State's goals as well as any drawbacks or potential unintended consequences of implementation of this recommendation. The final report is anticipated September 2024.

TSS Consultants is leading a project on 'Assessment of State Purchasing Protocols Related to Innovative Wood Products.' This project is assessing current state purchasing protocols and identifying barriers and implications of updating the protocols to facilitate procurement of innovative wood products. The final report will include solutions and pathways that allow for implementation over a 2-year-period. The final report is anticipated December 2024.

Cal Poly, Humboldt is leading a project on the 'Development of a Life Cycle Accounting Model for Biofuel Production from Forest Biomass Waste in California.' This project is developing a lifecycle assessment (LCA) calculator tool quantifying the GHG impact of diverting forest residues from current management practices to bioenergy products. The LCA tools will model the life cycle GHG impact of electricity or hydrogen fuel pathways. This will help state agencies evaluate the carbon intensity of forest residue liquid and gaseous transportation fuels and their potential role in the state's climate and forest plans. The final report is anticipated December 2024.

The Institute is pursuing two projects for fiscal year 2023/34:

A 'Mountain Community Affordable Workforce Housing with Mass Timber Components' project will develop affordable workforce housing designs that will fit the needs of mountain

community workforces. Designs will include mass timber elements and they will be designed to be permitted in the areas for which they are intended.

A 'Supporting California Forest Restoration Through Forest Industry Infrastructure Retention and Development – Capacity Assessment and Needs Analysis by CALVEG Sub-Region' project will characterize current industry infrastructure by CALVEG sub-region and by volume and type of supply necessary to retain and sustain industry infrastructure needed to accomplish relevant California Wildfire and Forest Resilience Task Force goals.

In addition to research, the Institute is also the Sustainable Wood Products Work Group Lead for the Wildfire and Forest Resilience Task Force.

## ***Chaptered Legislation with Future Regulatory Action by the Board***

### **AB 1526 Forestry: Committee on Natural Resources. Public resources.**

The Z'berg-Nejedly Forest Practice Act of 1973 prohibits a person from conducting timber operations, as defined, unless a timber harvesting plan prepared by a registered professional forester has been submitted to the Department of Forestry and Fire Protection. The act authorizes the State Board of Forestry and Fire Protection to exempt from some or all of those provisions of the act a person engaging in specified forest management activities, as prescribed, including the one-time conversion of less than three acres to a nontimber use, as specified.

This bill would authorize the Board to allow a waiver of the one-time limitation.

## ***Forest Health Trends***

### ***Monitoring Efforts***

Programmatic monitoring of the Forest Practice Rules (FPRs) on private and public forestlands has shown generally high compliance with water-quality related rules, and that those rules are generally effective in preventing erosion and sedimentation when properly implemented (FORPRIEM, 2014). Additionally, since the passage of SB 901 in 2018, CAL FIRE has been engaged in the monitoring and reporting on of ministerial Exemptions and Emergency Notices. To date, CAL FIRE has released legislative reports on the following: the §1052 Emergency Notice of Timber Operations (Olsen et al., 2019); §1038(c) Structure Protection 0-150 Foot Fire Safe Exemption Notices (Olsen and Coe, 2021); §1038(c)(6) Fire Hazard Reduction Within 300 Feet of Residences Exemption Notices (Olsen and Coe, 2021); and the §1038.3 Forest Fire Prevention Exemption Notice (Olsen et al., 2022). The second phase of post-fire §1052 Emergency Notice of Timber Operations monitoring has been completed, and results will be presented in California Forestry Report #8 (Olsen et al., in prep).

In addition to programmatic monitoring, CAL FIRE implements and coordinates research grade effectiveness monitoring. Examples of this includes the collaborative research partnership between CAL FIRE and the USFS Pacific Southwest Research Station on Jackson Demonstration State Forest's Caspar Creek watersheds, which has been active since 1962. Also, post-fire salvage logging-related research conducted on the Boggs Mountain Demonstration State Forest following the 2015 Valley Fire resulted in several published manuscripts, as well as the generation of the world's first guidance document on how to reduce water quality impacts from post-fire salvage logging (California Forestry Report #7; Wagenbrenner et al., 2023). Monitoring and research conducted by the Effectiveness Monitoring Committee has resulted in FPR rule refinement related to the Anadromous Salmonid Protection Rules riparian prescriptions for Class II watercourses (Pate et al., 2020).

## ***Pest Conditions***

The following is a summary of notable insect, disease, and forest health issues that continue to threaten and alter urban and wildland forests in California in 2023. Forest pest conditions can change dramatically from year to year. For a summary of forest pests and diseases, see the [2022 California Forest Pest Conditions Report](#). The 2023 California Forest Pest Conditions Report will be available on the [California Forest Pest Council website](#) in early 2024.

### **Invasive Shot Hole Borer (ISHB)**

Polyphagous shot hole borer (PSHB; *Euwallacea formicatus*) is established in Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties. Kuroshio shot hole borer (KSHB; *E. kuroshio*) is established in Los Angeles, Orange, Santa Barbara, San Diego, and Riverside Counties. KSHB was found in a San Luis Obispo County trap once in 2020. While no infestations have been found in the landscape there to date, trapping and surveying continues in high-risk locations throughout the county. PSHB and KSHB, together known as ISHB, are associated with several fungi, including species of *Fusarium*, which are known plant pathogens. Major reproductive hosts include species of willow, oak, maple, sycamore, cottonwood, and numerous other hardwoods. Extensive damage continues to occur in parks, urban trees, and riparian areas. No new sites have been found outside of the eight-county ISHB Zone of Infestation (ZOI), although there has been intensification throughout the range. Ten million dollars has been spent since 2020 on education, outreach, tree removal, trapping, and proper disposal of infested material. Funding through CAL FIRE for tree removal and proper disposal of amplifier trees (trees producing large quantities of beetles) will end in March 2024. In 2023 a single ISHB was found in a trap in the city of San Jose. Surveys and trapping in that area will continue to determine if there is an infestation there. Reports from other countries that have been infested with ISHB (Israel, Australia, and South Africa) indicate that the pest complexes may be detrimental to a number of fruit and nut crops as well as forest and shade tree species.

## **Goldspotted Oak Borer (GSOB)**

GSOB (*Agrilus auroguttatus*) continues to spread in southern California through localized beetle flight as well as firewood movement. It is now found in extensive areas of San Diego, Los Angeles, Orange, Riverside, and San Bernardino Counties, with new spot outbreaks found outside of previous infestation locations. GSOB attacks and can kill California black oak, coast live oak, and, to a lesser extent, canyon live oak, preferring larger diameter and older trees. No new sites have been detected outside of the five-county area. Surveys, monitoring, and research for the pest are ongoing.

## **Bark Beetles (various species)**

Conifer-killing bark and engraver beetle populations remain an issue throughout northern and central California as a result of previous drought conditions, overstocking, and climate change. Most infestations are in the northern and central Sierra Nevada, the northern Coast Range, and counties around Clear Lake, where both Napa and Lake Counties declared tree mortality emergencies. Stress from the past drought is exacerbating the outbreaks of western pine bark beetle (*Dendroctonus brevicomis*) in ponderosa pine and Ips engraver beetles (*Ips* spp.) in all pine species, though outbreaks of each diminished in 2023. Fir engraver beetles (*Scolytus ventralis*) are causing extensive top kill and mortality in true firs throughout the upper reaches of the Sierra Nevada and were the main bark beetle issue in 2023. This is the traditional pattern for fir engraver beetles. Fir engraver beetles are following the traditional pattern of becoming major outbreaks following a year or two after a pine bark beetle epidemic has diminished. Although a small Douglas-fir beetle (*Dendroctonus pseudotsugae*) outbreak occurred on Douglas-fir trees in Jackson Demonstration State Forest and surrounding areas, the main cause of Douglas-fir die-off in the state is the flatheaded fir borer (*Phaenops drummondi*), which is causing a significant increase in the number and size of mortality patches throughout the northern half of the state. In hardwoods, the western oak bark beetle (*Pseudopityophthorus pubipennis*) continues to infest true oaks around the Central Valley and Coast Range. Associated foamy bark canker outbreaks have been detected statewide and are particularly bad in the foothills around the Central Valley.

## **Mediterranean Oak Borer (MOB)**

MOB (*Xyleborus monographus*) and its associated fungi continue to kill valley and blue oaks throughout Napa, Sonoma, and Lake Counties as well as in Citrus Heights, Sacramento County. Splat verbenone appears to have moderate repellency against MOB for 4 – 6 weeks after application. Long-term plots have been established to track decline in valley, blue, and Oregon oak in Napa and Sonoma Counties in burned and unburned plots post wildfires. After 1 year, burned plots appear to be slightly more susceptible to MOB attack and valley oaks in dry and fire disturbed areas show the greatest levels of MOB-related decline. No new infestations have been found outside of the known impacted counties; however, in Oregon, 21 beetles were found in traps in four counties showing the potential for further spread. Genetic testing indicates the Oregon MOB originated in Germany; whereas,

the California MOB originated in France. The potential for further introductions into California remains a concern.

### **Sudden Oak Death (SOD)**

In late 2021 and early 2022, CAL FIRE and UC Cooperative Extension Humboldt-Del Norte Counties detected a satellite *Phytophthora ramorum* EU1 (plant pathogen known to cause SOD; a European strain of the pathogen) infestation near the original EU1 site found in Del Norte County. These detections were later confirmed by UC Berkeley as part of the 2022 SOD Blitz. Further surveys and plans for treating this infestation were underway in 2023, as was discussion of the optimal size and location for a requested SOD zone of infestation (ZOI) in Del Norte County.

Wet winters and springs over the past two years are expected to result in increased SOD activity in 2024. There is typically a two-year delay from infection during wet periods to increases in symptoms and mortality in oaks and tanoaks.

Positive stream samples for SOD in San Luis Obispo County remain a concern. The potential vegetative source of the infestation has yet to be found despite numerous surveys over the past several years in the area.

### **Pitch Canker Disease**

Pitch Canker (*Fusarium circinatum*) has spread into Sonoma and Mendocino Counties and is causing significant mortality in Monterey, bishop, and shore pine. Mortality is occurring from Salt Point north, through Pt. Arena and Manchester. This northern distribution is much further than was originally predicted and continues to spread. Surveys continued into 2023 with no further spread of the pathogen found.

### **White Pine Blister Rust**

White pine blister rust (caused by *Cronartium ribicola*) was found in Los Angeles County in 2023 and is confirmed to be fruiting on several species of gooseberry (*Ribes* spp). While western white pine, sugar pine, whitebark pine, and limber pine are primary white pine blister rust hosts, *Ribes* species are required alternate hosts for the fungus lifecycle. This is the first time white pine blister rust has been found this far south in California. To date, no primary hosts have been found infected in the area.

### **Acute Oak Decline**

Blue oaks with basal trunk cankers were found in Santa Benito County in 2023. Several bacteria were isolated from tree samples (*Rahnella victoriana*, *Brenneria goodwinii*, *Gibbsiella quercinecans*, and *Erwinia* sp.). These bacteria have been associated with acute oak decline in Britain. Further surveys and sampling have found the bacteria in Los Angeles



County on blue and coast live oaks with potential sites throughout southern and central California. It is unknown if these are new introductions of the bacteria or if it has been present and previously gone undetected.

### **Sooty Canker of Maple**

Sooty canker of maples (*Cryptostroma corticale*) is a newly identified disease of maples in California that was found in Sacramento and El Dorado Counties killing silver and Norway maples. It was also identified in Puget Sound, Washington in 2022 and 2023. Researchers found the disease to be common on big leaf maple throughout eastern Washington and believe it might be native to the area. It is currently unknown if it is native to California. The disease was previously only known to be native to the Great Lakes Region. The fungus can cause a respiratory disease in humans with weakened immune systems.

### **Ghost Canker of Pines in Southern California**

Ghost canker (caused by two species of the fungus *Neofusicoccum*) is a new pest of pines in Orange County. The fungi are native and have been recorded causing disease in grapevine and fruit and nut trees in the area. The disease was not previously found on conifers. It is killing planted Monterey, Aleppo, and Canary Island pines. The potential host range for the disease is unknown, and there is concern about what impacts it might have on native pine species.

### **Emerald Ash Borer in Oregon**

Emerald ash borer (*Agrilus planipennis*), a non-native insect, has killed hundreds of thousands of ash trees in the eastern and midwestern regions of the U.S. In 2023 it was found for the first time on the West Coast in the greater Portland, Oregon area. There is a high probability of the insect moving into California via firewood where it could affect native and urban ash trees.

### **Spongy Moth**

Spongy moth (*Lymantria dispar*), formerly known as gypsy moth, is a non-native insect known for defoliating and damaging oaks and other hardwood trees in the eastern U.S. In 2023, seven adult male moths were captured in traps in six California counties (Los Angeles, San Diego, Monterey, Santa Clara, Contra Costa, and Ventura). Delimitation traps are being deployed throughout the affected counties. To avoid moth establishment, spot treatments may be implemented. The Los Angeles County find is especially concerning since it is of Asian or Siberian decent, which differs from the more common European moth in that the females can fly and the caterpillars feed on both hardwood and conifer tree species.

## ***Timber Harvest Permitting***

Annual timber harvesting permits are shown in the below tables. The use of exemptions, as allowed for under PRC § 4584 and 14 CCR § 1038, decreased in acres and number of notifications (Figure 1). Emergency Notices provided for under 14 CCR § 1052.1 increased in number of notifications and decreased in acreage (Figure 2). Individual Timber Harvesting Plans (THPs) decreased slightly in number and decreased in acreage in Fiscal Year 2022-23 (Figure 3). The number and acreage of Non-Industrial Timber Management Plans (NTMPs) both increased this year (Figure 4).

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**Figure 1. Exemption Statistics for Fiscal Years 14/15-22/23**

<b>Fiscal Year</b>	<b>Harvest Document Type</b>	<b>Number of Notifications</b>	<b>Acres</b>	<b>Total Acres</b>
<b>2014/15</b>	1038(b) Exemptions	781	2,884,982	
	All other Exemptions	1,009	41,563	
	Total Exemptions	1,790		2,926,545
<b>2015/16</b>	1038(b) Exemptions	697	2,589,358	
	1038(k) Exemptions	776	110,224	
	All other Exemptions	1,003	27,433	
	Total Exemptions	2,476		2,721,015
<b>2016/17</b>	1038(b) Exemptions	522	2,592,252	
	1038(k) Exemptions	956	10,358	
	All other Exemptions	1,032	208,111	
	Total Exemptions	2,510		2,910,721
<b>2017/18</b>	1038(b) Exemptions	554	2,933,286	
	1038(k) Exemptions	414	44,357	
	All other Exemptions	1,042	482,206	
	Total Exemptions	2,010		3,459,849
<b>2018/19</b>	1038(a) & 1038(b) Exemptions	451	2,310,695	
	1038(f) Exemptions	3	112	
	1038(k) Exemptions	94	7,464	
	1038.3 Exemptions	15	1,892	
	All other Exemptions	1,605	454,582	
	Total Exemptions	2,168		2,774,745

<b>Fiscal Year</b>	<b>Harvest Document Type</b>	<b>Number of Notifications</b>	<b>Acres</b>	<b>Total Acres</b>
<b>2019/20</b>	1038.3	48	5,447	
	1038(b)	463	2,281,985	
	1038(f)	8	165	
	1038(g)	0	0	
	All other Exemptions	2,246	733,933	
	Total Exemptions	2,765		2,706,977
<b>2020/21</b>	1038.3	66	5,039	
	1038 (b)	384	2,023,689	
	1038 (f)	3	55	
	1038 (g)	126	602	
	All other Exemptions	1020	879,956	
	Total Exemptions	1,599		2,909,341
<b>2021/22</b>	1038.3	70	6,065	
	1038 (b)	289	1,408,843	
	1038 (f)	2	69	
	1038 (g)	0	0	
	All other Exemptions	809	1,410,076	
	Total Exemptions	1,170		2,825,053
<b>2022/23</b>	1038.3	61	5,953	
	1038 (b)	255	1,380,384	
	1038 (f)	1	40	
	1038 (g)	38	272	
	All other Exemptions	633	373,640	
	Total Exemptions	988		1,760,289

**Figure 2. Emergency Notice Statistics for Fiscal Years 14/15-22/23**

<b>Fiscal Year</b>	<b>Harvest Document Type</b>	<b>Number of Notifications</b>	<b>Total Acres</b>
<b>2014/15</b>	Emergency Notice	266	66,735
<b>2015/16</b>	Emergency Notice	231	28,921
<b>2016/17</b>	Emergency Notice	81	15,123
<b>2017/18</b>	Emergency Notice	189	14,133
<b>2018/19</b>	Emergency Notice	289	42,247
<b>2019/20</b>	Emergency Notice	158	16,056
<b>2020/21</b>	Emergency Notice	452	86,616
<b>2021/22</b>	Emergency Notice	289	94,552
<b>2022/23</b>	Emergency Notice	299	65,646

Note: Calculated as Emergency Notices validated by CAL FIRE review team between July 1 and June 30 of each FY.

**Figure 3. THP Statistics for Fiscal Years 11/12-22/23**

<b>Fiscal Year</b>	<b>Harvest Document Type</b>	<b>Number of Plans</b>	<b>Acres</b>
<b>2011-12</b>	THP	270	139,553
<b>2012-13</b>	THP	243	107,051
<b>2013-14</b>	THP	278	146,384
<b>2014-15</b>	THP	260	128,644
<b>2015-16</b>	THP	249	99,271
<b>2016-17</b>	THP	219	91,067
<b>2017-18</b>	THP	266	105,433
<b>2018-19</b>	THP	244	100,888
<b>2019-20</b>	THP	234	122,586
<b>2020-21</b>	THP	207	92,917
<b>2021-22</b>	THP	194	64,272
<b>2022-23</b>	THP	174	56,414

Note: Calculated as Timber Harvest Plans validated by CAL FIRE review team between July 1 and June 30 of each FY.

**Figure 4. NTMP Statistics for Fiscal Years 11/12-22/23**

<b>Fiscal Year</b>	<b>Harvest Document Type</b>	<b>Number of Plans</b>	<b>Acres</b>
<b>2011-12</b>	NTMP	14	10,932
<b>2012-13</b>	NTMP	12	7,365
<b>2013-14</b>	NTMP	10	4,126
<b>2014-15</b>	NTMP	12	3,367
<b>2015-16</b>	NTMP	17	8,100
<b>2016-17</b>	NTMP	23	5,105
<b>2017-18</b>	NTMP	14	4,448
<b>2018-19</b>	NTMP	14	2,410
<b>2019-20</b>	NTMP	13	4,215
<b>2020-21</b>	NTMP	8	1,542
<b>2021-22</b>	NTMP	5	2,413
<b>2022-23</b>	NTMP	9	2,482

Note: Calculated as Nonindustrial Timber Management Plans validated by CAL FIRE review team between July 1 and June 30 of each FY.

### **Timber Harvesting Volumes**

The 2023 timber harvesting volume data has an error that has not been fixed at the time of report publication. 2023 numbers will be included in the 2024 Annual Report.

## **Fire Protection Trends**

### **Weather Patterns**

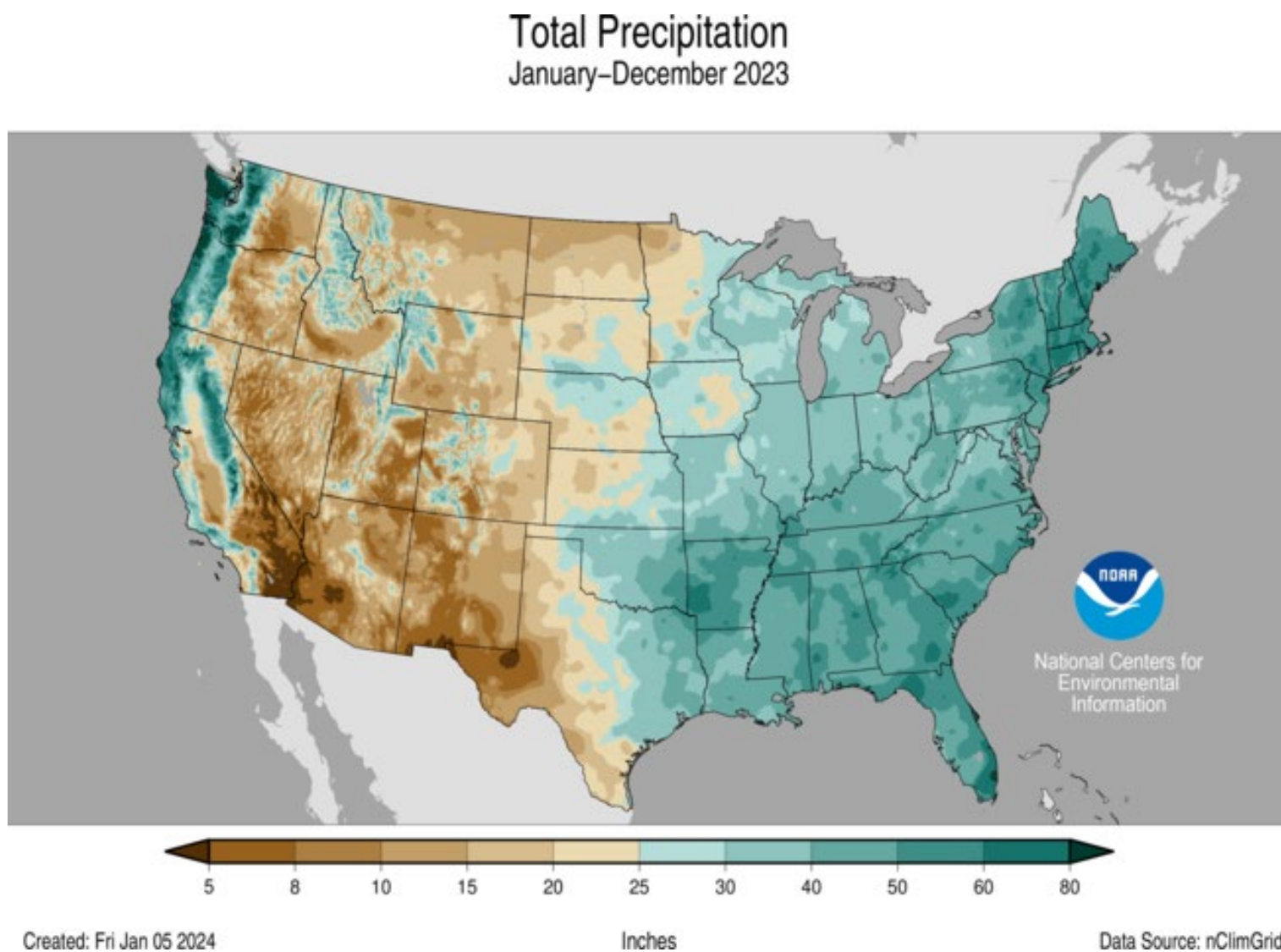
Water Year 2023 showcased California's extreme weather patterns – a dramatic shift from historic drought to intense flooding. This "weather whiplash" led to simultaneous drought and flood emergency proclamations by the Governor. While the drought proclamation was scaled back, it remains in effect for ongoing response. Following three record-dry years, Water Year 2023 was exceptionally wet, with 141% of average precipitation statewide and a massive 237% of average Sierra-Cascades snowpack. The Colorado River Basin, vital to Southern California, also benefited. While this year's snowpack rivals historic levels, precise comparisons are difficult due to changing measurement technologies.

Cooler temperatures allowed for a gradual snowmelt, a welcome change from recent years. The water year began dry, but shifted abruptly in late December with powerful atmospheric rivers. These storms brought about half the year's precipitation within three weeks, leading to further emergency declarations. The Central and Southern Sierra were especially hard-hit, experiencing significant flooding. Southern California faced unusual late-summer tropical storms, setting precipitation records and causing localized flooding. Warmer-than-average Pacific Ocean conditions contributed to these events.

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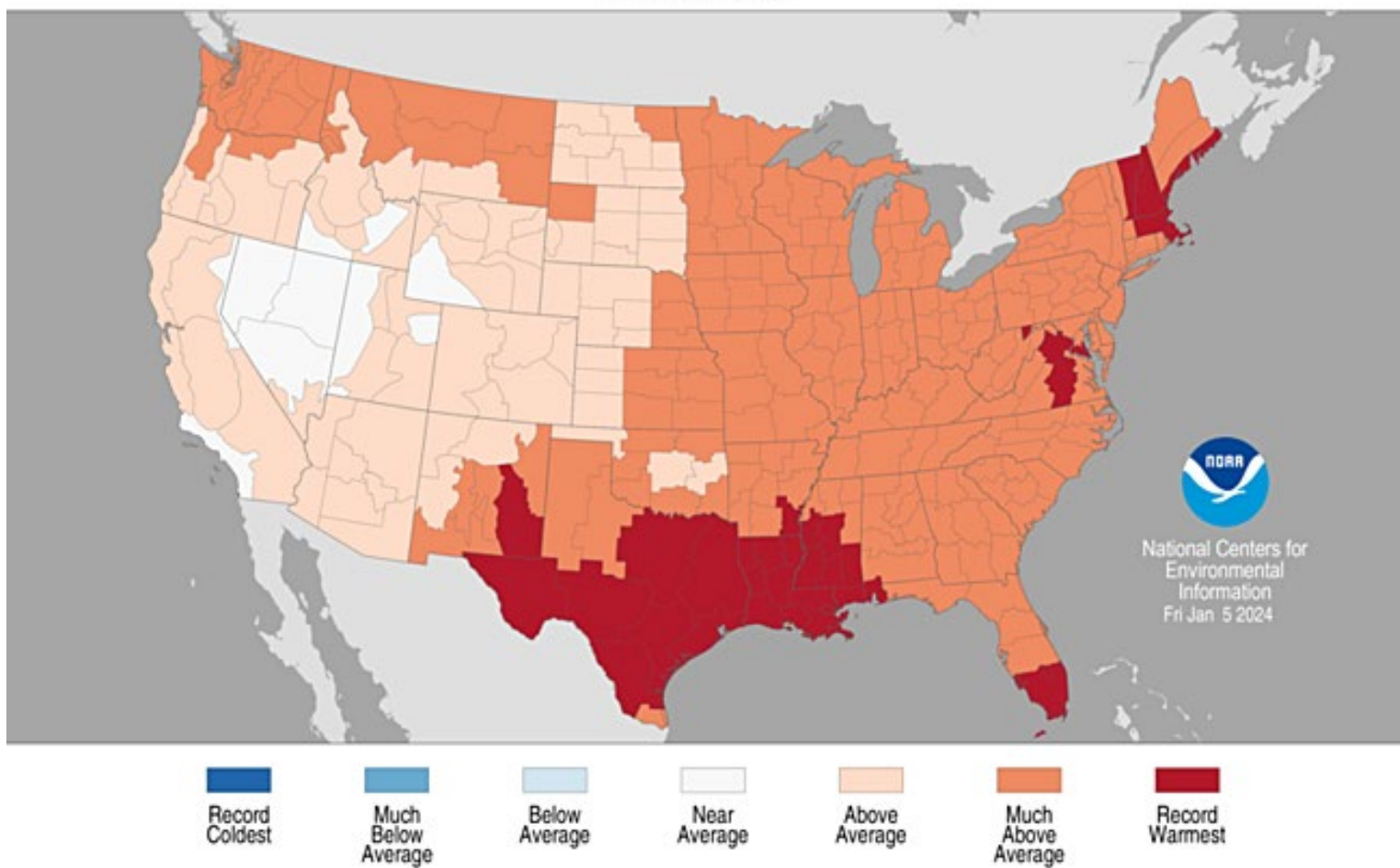
**Figure 5. Precipitation Rankings for January - December 2023 When Compared with Local Averages from 1895-2023. NOAA National Centers for Environmental Information.<sup>1</sup>**



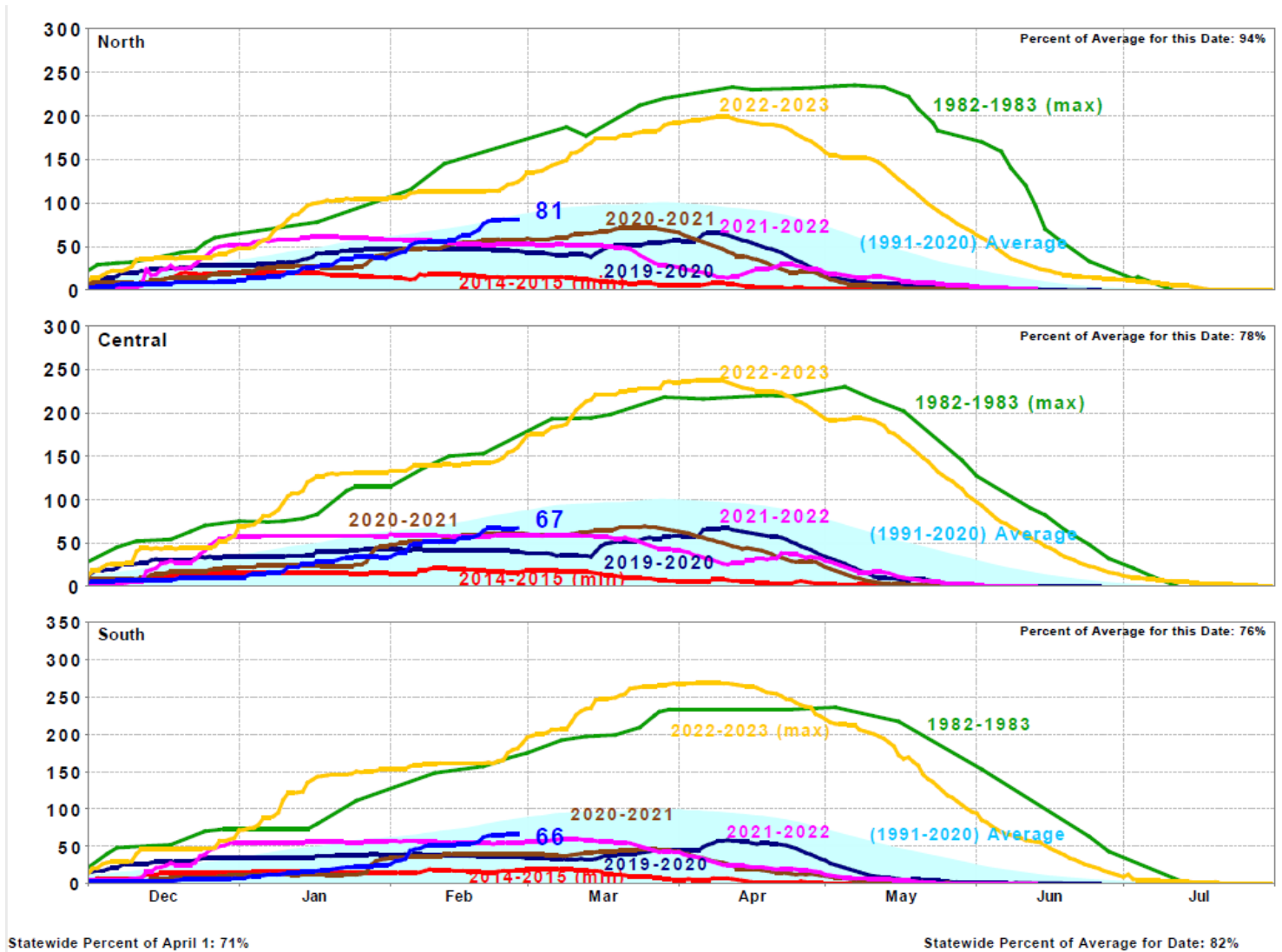
<sup>1</sup> Note: Data for this period were not found presented at the same fine scale used for the annual data.

Figure 6. Temperature Rankings for January–December 2023 When Compared with Local Averages from 1895–2023. NOAA National Centers for Environmental Information.

## Divisional Average Temperature Ranks January–December 2023 Period: 1895–2023



**Figure 7. California Snow Water Content,<sup>2</sup> February 16, 2024, Percent of April 1 Average. California Department of Water Resources.**



<sup>2</sup> The Y-axis of the figure is percent of April 1<sup>st</sup> average Snow Water Content, which refers to the depth of liquid that would result over the same land area if the entire snowpack were to be melted instantaneously.

## Prescribed Fire and Fuel Reduction Efforts

As fire size and severity have worsened over the past decade, mandates to focus on fuels reduction treatments have arisen. In 2018, Executive Order B-52-18 from then-governor Brown ordered the doubling of forest acres treated per year from 250,000 to 500,000 statewide within five years. The expanded use of fuels treatments to prevent catastrophic wildfire continues to be a high priority for the Board and CAL FIRE. Fuel treatments are intended to reduce the amount of surface and ladder fuels and thereby reduce the risk of catastrophic fires that burn longer, further, and hotter. The modification of fire behavior because of fuel reduction efforts may prevent loss of life, reduce fire suppression costs, reduce property losses, and protect natural resources. Fuel treatments utilized by CAL FIRE include, but are not limited to, prescribed fire, mechanical clearing, cooperative fuel reduction grants, and encouraging stand management by timber owners through application of the FPRs. EO B-52-18 also encouraged the use of prescribed fire as a management tool.

CAL FIRE's Vegetation Management Program (VMP) is a cost-sharing program that encourages fuel reduction in state responsibility area lands (SRA) and focuses on prescribed fire. The use of fire mimics natural processes, enables fuel reduction, and restores fire to its historic role in wildland ecosystems, which may improve native communities. The VMP can be utilized by private landowners to accomplish fuel reduction goals on their property using prescribed fire and other fuel management techniques. Figures 8 and 9 below illustrate the acreage goals and number of acres treated in the three most recent fiscal years.

**Figure 8. Broadcast/Prescribed Burn Targets and Acres Completed.**  
\*FY 2021/22 is through June 30, 2021

Fiscal Year	Target	Completed	% Completed
<b>2017/2018</b>	20,000	19,413	97.07%
<b>2018/2019</b>	25,000	31,305	125.22%
<b>2019/2020*</b>	25,000	13,450	53.80%
<b>2020/2021</b>	25,000	27,143	108.57%
<b>2021/2022</b>	30,000	32,226	107.42%
<b>2022/2023</b>	50,000	38,219	76.44%

**Figure 9. All Other Fuel Reduction Method Targets and Acres Completed.**  
\*FY 2020/21 is through December 31, 2020

Fiscal Year	Target	Completed	% Completed
<b>2017/2018</b>	20,000	13,344	66.70%
<b>2018/2019</b>	20,000	15,331	76.66%
<b>2019/2020*</b>	20,000	13,730	68.65%
<b>2020/2021</b>	20,000	28,033	140.17%

<b>Fiscal Year</b>	<b>Target</b>	<b>Completed</b>	<b>% Completed</b>
<b>2021/2022</b>	20,000	12,795	63.98%
<b>2022/2023</b>	50,000	59,356	118.71%

Defensible space is managed space around a structure that creates a buffer between the structure and the plants, brush, trees, or other flammable items that could ignite in the event of a fire. Reduced natural fuel loads, decreased continuity of fuels, the removal of flammable materials from near structures, and the use of fire-resistant materials in landscaping and home construction are just some of the techniques that contribute to defensible space. These techniques reduce the chances of a structure igniting during a wildfire and increase firefighter safety during structure defense operations. Defensible space and the management of fuels, particularly around homes and public buildings, have become increasingly important as the Wildland-Urban Interface (WUI) continues to expand and more severe fires threaten WUI areas. CAL FIRE recently updated the Defensible Space Collector App to make inspections more efficient and accurate. Figure 10 illustrates the goals for defensible space inspections and how many were accomplished within the three most recent fiscal years.

**Figure 10. Defensible Space Inspections Completed.**

<b>Fiscal Year</b>	<b>Target</b>	<b>Completed</b>	<b>% Completed</b>
<b>2017/2018</b>	250,000	217,666	87.07%
<b>2018/2019</b>	250,000	204,341	81.74%
<b>2019/2020</b>	250,000	222,040	88.82%
<b>2020/2021</b>	250,000	150,056	60.02%
<b>2021/2022</b>	250,000	289,255	115.70%
<b>2022/2023</b>	250,000	253,587	101.43%

CAL FIRE also sponsors several grant opportunities which focus on fuels reduction and forest health. The California Forest Improvement Program (CFIP) can be used by small landowners for reimbursement of forestry practices that improve the health and resilience of their lands. These activities may include fuels reduction practices. Additionally, CAL FIRE sponsors the Forest Health, Urban and Community Forestry, and Fire Prevention grants, which are funded through the Greenhouse Gas Reduction Fund. Part of their overarching goal is improving carbon sequestration by reducing the risk of wildfires and improving general forest health.

Finally, CAL FIRE has developed designated fuels reduction crews. Previously, fuels reduction was often completed by local CAL FIRE teams when they were not fighting fire. The development of designated crews for fuels reduction is anticipated to increase prescribed fire and manual fuels treatment numbers in the coming years. Five crews are headquartered in the Northern Region and five in the Southern Region. CAL FIRE approved 318 applicants to take the most recent Forestry Technician exam. The new members of these crews are currently rotating between their required trainings and working in the field.

## **California Vegetation Treatment Program (CalVTP)**

On December 30, 2019, the Board certified a Program Environmental Impact Report (PEIR) and approved the California Vegetation Treatment Program (CalVTP), a Statement of Overriding Considerations, and a Mitigation Monitoring and Reporting program. This CalVTP and PEIR will streamline California Environmental Quality Act (CEQA) compliance for CAL FIRE and other state and local public agencies' vegetation management projects. The CalVTP PEIR is intended for vegetation management activities that lower the risk of catastrophic wildfires on non-federal lands by managing vegetation to modify or reduce hazardous fuels.

Two virtual training sessions were conducted in collaboration with Ascent Environmental, Inc, in the spring of 2021, and covered the practicalities of using the CalVTP for CEQA streamlining. These videos are available for viewing on the Board's website. An additional six CalVTP trainings have been conducted in 2022 through California Polytechnic State University's Swanton Pacific Ranch Fuels and Vegetation Management Education (FAVE) Training Program. Moreover, CAL FIRE now includes training on the CalVTP in their mandated CEQA training as of December 2022.

In 2021, the Board was allocated 2.4 million dollars to provide technical assistance to lead agencies for preparing Project-Specific Analyses (PSAs). Projects were evaluated and selected to present a cross-section of contexts and examples in which the CalVTP can be used for CEQA compliance for eligible vegetation management projects. In collaboration with Ascent Environmental, Board staff identified 15 projects covering treatments on 82,369 acres to support technical assistance in the development of PSAs under the CalVTP PEIR.

Ascent Environmental finalized a white paper on the "Evaluation of Air Quality and Climate Change Impacts from Specialized Biomass Processing Technologies under the California Vegetation Treatment Program." This paper was produced under this initial early action contract to provide information to project proponents seeking to include specialized biomass processing technologies that were not contemplated in the Program EIR and thus not included in their Project Specific Analysis or addenda. This paper provides evidence to support a conclusion that the technologies meet the intent of Mitigation Measure GHG-2 in the Program EIR and would not result in new significant environmental impacts or substantially more severe significant impacts beyond effects already covered in the Program EIR. The analysis also concludes that the GHG, criteria pollutant, and smoke/odor emissions from biomass processing by pile burning can be reduced by use of the specialized technologies.

The Board was allocated an additional two million dollars in 2022 to provide further technical assistance to lead agencies. Ascent was again the successful bidder and they continue to develop Project Scale Analyses for lead agencies.

As of December 31, 2023, of 120 projects, 93 had been approved for implementation, and

the environmental documentation (i.e., Project Specific Analysis and supporting addendums, if any) certifying fulfilment of the CEQA compliance is posted on the Board's webpage for [Environmental Documentation for Approved Projects](#).

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**Figure 11. Vegetation Treatment Projects Proposed for or Certified under the CalVTP as of December 31, 2023.**

<b># Total Projects</b>	<b>120</b>	<b>Acres Approved for Treatment (Footprint)*</b>	<b>190,653</b>
		Manual Treatment	83,012
		Mechanical Treatment	65,079
		Prescribed Fire (Broadcast)	134,730
		Prescribed Fire (Pile Burn)	82,826
		Herbicide Applications	72,475
		Prescribed Herbivory	40,851
<b># Projects with Reported Treatments**</b>	<b>17</b>	<b>Reported Acres of Completed Treatments</b>	<b>1,895</b>
		Manual Treatment	1,096
		Mechanical Treatment	2,063
		Prescribed Fire (Broadcast)	896
		Prescribed Fire (Pile Burn)	800
		Herbicide Applications	200
		Prescribed Herbivory	654

\* The sum of acres for the treatment footprint will not match the sum of acres by treatment activity, as treatment activities may overlap temporo-geospatially.

\*\*This is the most accurate reflection of treated acres, given that acres approved for treatment may or may not be treated depending on a variety of factors. Project proponents are not required to report treated acres until projects are complete and closed. The Board of Forestry & Fire Protection makes efforts to collect treatment data on a regular basis but cannot compel reporting before a project is closed.

New features rolled out in 2023 include the CalVTP Resource Library, which features example PSAs and PSA/Addenda, mitigation monitoring and reporting program implementation tools, updated frequently asked questions, and treatable landscape calculator; downloadable spatial files for proposed and approved CalVTP projects, completed treatments, and the treatable landscape; updated User Guides for submission of required environmental documentation and project calculation of the treatable landscape; and an online submission tool for Proposed Projects.

Several new endeavors are in various stages of development and implementation to improve the CalVTP reporting process and quality of the data received by lead and implementing agencies, with expected completion and roll-out in 2024, including:

- Online submission of Approved and Completed Projects, including Treatment Reporting, using GIS Web Applications.
- A CalVTP Report Summary platform for internal agency use.



## Wildfire Activity

The 2023 fire season in California, marked by proactive management and favorable weather conditions, saw a substantial decrease in both the number of wildfires and the total acreage burned compared to the 5-year average. The total acreage burned was remarkably lower, with approximately 250,000 acres affected, significantly less than the 5-year average of over 2,300,000 acres.

The efforts of CAL FIRE, coupled with improved resource management and community preparedness, played a key role in mitigating the impact of wildfires throughout the state. Additionally, the widespread adoption of preventive measures, such as controlled burns and vegetation management, contributed to the overall reduction in fire severity and scale. This year serves as a testament to the effectiveness of strategic planning and collaborative efforts in wildfire management.

**Figure 12. Top 2023 Largest Fires**

<b><u>FIRE NAME</u></b>	<b><u>DATE</u></b>	<b><u>COUNTY</u></b>	<b><u>ACRES BURNED</u></b>
<b>Smith River Complex</b>	August 2023	Del Norte	95,107
<b>York Fire</b>	August 2023	San Bernardino	93,078
<b>SRF Lightning Complex</b>	August 2023	Humboldt	50,198
<b>Happy Camp Complex</b>	August 2023	Siskiyou	21,725

\*These are the largest fires regardless of state, federal, or local responsibility.

## **2023 Regulatory Accomplishments**

### **Northern Spotted Owl Take Avoidance Pathways and Habitat Definition Updates**

Several of the habitat definitions in 14 CCR § 895.1 related to Northern Spotted Owl were derived from the USFWS 1992 “Protocol For Surveying Proposed Management Activities That May Impact Northern Spotted Owls” and are not present in the 2012 “Protocol For Surveying Proposed Management Activities That May Impact Northern Spotted Owls”. In addition, some mechanisms for take avoidance as described in 14 CCR §§ 919.9 and 939.9 are no longer in effect. The definitions and take avoidance pathways are updated to reflect current regulatory requirements from the Department and listing agencies.

### **Tractor Operations and Cable Yarding Amendments**

Prior to amendment of this rule section, it was common in the Coast Forest District for RPFs to propose exceptions pursuant to this former rule section, particularly to allow for tractor yarding in areas of poor deflection and hard to reach corners in cable corridors. As a result of the amendments to this section and 14 CCR § 914.2(f)(5), the RPF may now again propose exceptions to 14 CCR § 914.2(f)(5), which allows Tractor Operations on slopes greater than 50% in Cable Yarding areas. Additionally, the rule section did not capture all possible treatments that were permitted to occur, e.g., special prescriptions and other types of associated timber harvesting, such as road right-of-way or timberland conversion.

### **Ford Definition Amendment**

Although the term “ford” was defined as part of the Road Rules 2013 package, the definition is ambiguous which has led to confusion in the field. The updated definitions now define subsets of ford including areas where the road grade dips through the native watercourse channel and where it may include flowing water across a constructed dip in the road grade, which is designed to act as the watercourse channel.

### **Maximum Sustained Production Amendments**

Reviewed performance of existing MSP rules since Board adoption. After considering implications for carbon forest health, including resiliency, and changing climatic conditions, the Board expanded the current intent to address the mitigation of fire risk and to allow for management for fire protection.

### **Coastal Commission Special Treatment Areas Silviculture Amendments**

Forest Practice Rules for Coastal Commission Special Treatment Areas had not been updated at the same rate as the Forest Practice Rules for the rest of the state, resulting in several circumstances that limited opportunities for forest landowners to manage

timberlands and respond to changing climate conditions. This included: treatment of slash with no allowances for pile burning or broadcast burning, stocking requirements requiring point-count of 450 countable trees per acre on Site I and II lands and 300 countable trees per acre on Site III, IV, and V lands, and no allowances for fuel breaks or variable retention stands.

### **Issues with Municipalities Regulating Timber Harvest of Group A/B Species**

The Board is the governing body that is responsible for creating rules that guide the timber harvest process of commercial timber species on lands deemed timberland in this State. Board staff reviewed all circumstances raised by a letter raising concerns that counties and municipalities were requiring additional permits for the harvest of Group A trees in Timberland, creating a potential preemption issue. Board staff contacted the municipality with a report of alternative processes that exist in addition to the permitting process and rules governed by the Board and CAL FIRE. The Board will continue to monitor and address if necessary.

### **Wet Areas, Meadows, and Restoration Activities**

The term “Meadows and Wet Areas” is used in the Rules to describe both areas that do not support trees and areas that require additional consideration of ecological impacts. “Wet Meadows and other Wet Areas” is used only for consideration of ecological impacts. Otherwise, the two terms have almost identical definitions.

The definitions conflate two very different types of areas: meadows and wet areas. While there may be some overlap, they are two distinct and very different ecological systems and are not equivalent. The definitions also lack temporal consistency. What may be “moist on the surface” during most of a year with historically average precipitation may not be moist on the surface during a year with significantly less precipitation. This lack of consistency creates a problem for enforcement and an atmosphere of regulatory uncertainty.

The definitions of “meadows” and “Wet Areas” have been separated since these are two distinct ecological systems. The definition of “Wet Areas” has been revised to address temporal consistency, include duration of such saturation, and specify that the area’s vegetation should be dominated by hydrophytes or lack vegetation.

## Local Government

### General Plan Safety Elements

Under Government Code § 65302.5, the Board is required to review the General Plan Safety Elements for jurisdictions with SRA or very high fire hazard severity zones (VHFHSZ). Utilizing staff from CAL FIRE's Land Use Planning team, the Board established a standardized method to review the safety element of general plans. The methodology includes:

- 1) Reviewing the safety element for the requirements in Government Code §65302, subdivision (g)(3)(A),
- 2) Examining the safety element for goals, policies, objectives, and implementation measures that mitigate the wildfire risk in the planning area (Gov. Code, § 65302, subd. (g)(3)(B) & (C)), and
- 3) Making recommendations for methods and strategies that would reduce the risk of wildfires (Gov. Code, § 65302.5, subd. (b)(3)(B)).

Once completed, the Safety Element Assessment should provide clear guidance to a city or county regarding any areas of deficiency in the safety element as well as specific goals, policies, objectives, and implementation measures the Board recommends adopting to mitigate or reduce the wildfire threat in the planning area. The Board does not have the authority to approve safety elements, but rather offers recommendations to improve fire hazard planning in the planning area. If jurisdictions choose not to implement the Board's recommendations, they must respond in writing to the Board discussing the reasons why not. If a local jurisdiction chooses not to adopt the Board's recommendations, the Board may request a consultation which must occur before the local jurisdiction proceeds with adopting its draft safety element. The Board has reviewed 149 safety elements since the requirement took effect in 2013, 28 of which occurred in 2023.

**Figure 13. General Plan Safety Elements Reviewed by the Board January – December 2023**

<b>Region</b>	<b>Type</b>	<b>Jurisdiction</b>	<b>Received</b>	<b>Reviewer</b>	<b>Board Review</b>
CSR	City	San Luis Obispo	12/21/2022	J KENNEDY	1/17/2023
CNR	County	Napa County	12/30/2022	SHANE VARGAS	1/17/2023
CSR	City	LAKE ELSINORE	1/23/2023	J KENNEDY	3/7/2023
CSR	County	SANTA BARBARA COUNTY	2/3/2023	J KENNEDY	3/7/2023
CSR	City	CALABASAS	2/23/2023	KEVIN MERKH	4/4/2023
CNR	City	IONE	3/17/2023	SHANE VARGAS	4/4/2023
CSR	City	Encinitas	12/15/22	BRIAN OLSEN	4/4/23
CSR	City	MOORPARK	1/13/2023	J KENNEDY	4/4/2023
CNR	County	SHASTA COUNTY	4/20/2023	JAMES AUSBOE	5/9/2023
CSR	County	FRESNO COUNTY	4/4/2023	KYLE O'NEIL	5/9/2023
CNR	City	COLFAX	5/2/2023	DONNIE PRIVETT	5/9/2023
CSR	City	CLAREMONT	4/5/2023	KEVIN MERKH	5/9/2023
CNR	City	LAFAYETTE	5/16/2023	M KENNEDY	6/13/2023
CNR	City	NEVADA	5/4/2023	DONNIE PRIVETT	7/25/2023
CNR	County	HUMBOLDT COUNTY	6/5/2023	JAMES AUSBOE	7/25/2023
CSR	City	PALOS VERDES ESTATES	6/22/2023	KEVIN MERKH	7/25/2023
CNR	County	GLENN COUNTY	6/28/2023	JAMES AUSBOE	7/25/2023
CSR	City	LA HABRA	6/28/2023	J KENNEDY	7/25/2023
CSR	City	BRADBURY	7/4/2023	KEVIN MERKH	7/25/2023
CNR	City	OAKLAND	8/1/2023	FC KENNEDY	8/22/2023
CSR	City	SANTEE	8/2/2023	BRIAN OLSEN	8/22/2023
CSR	City	THOUSAND OAKS	8/31/2023	SHAWN ARNOLD	9/26/2023
CNR	City	PIEDMONT	9/5/2023	M KENNEDY	9/26/2023
CSR	City	SARATOGA	9/5/2023	M KENNEDY	9/26/2023
CSR	City	RIALTO	9/5/2023	BRIAN OLSEN	9/26/2023
CSR	City	CARLSBAD	9/5/2023	BRIAN OLSEN	9/26/2023
CNR	City	LARKSPUR	9/5/2023	DONNIE PRIVETT	9/26/2023
CSR	City	ARCADIA	10/27/2023	KEVIN MERKH	11/7/2023

### **Subdivision Review Program**

Public Resources Code §4290.1 requires the Board, in consultation with the State Fire Marshal, to “survey local governments, including counties, cities, and fire districts, to identify existing subdivisions located in a state responsibility area or a very high fire hazard severity zone [SRA or LRA VHFHSZ], identified pursuant to Section 51178 of the Government Code, without a secondary egress route that are at significant fire risk” on or before July 1, 2022.

The Board is additionally required to develop recommendations to improve fire safety in the identified subdivisions, in consultation with the State Fire Marshal and the local government that identified the subdivision. Subdivision Review Program staff at the Office of the State Fire

Marshal conduct an on-the-ground fire safety survey of each identified subdivision. Program staff then develop survey reports, which include fire safety recommendations, for review by the Board's Resource Protection Committee. The Board does not vote to approve or deny reports and recommendations; its role is to review and provide input before reports are sent back to local jurisdictions on the Board's behalf. The Resource Protection Committee began reviewing these reports on a county-by-county basis at its November 2021 meeting. The recommendations included in these reports are non-binding, and the Board does not have legal authority to require their implementation.

Of the state's 56 counties which contain SRA or LRA VHFHSZ, 50 contain subdivisions which meet the criteria to be surveyed. Approximately 2,100 subdivisions have been identified for survey. Surveys have been completed for approximately 1,800, of those, or 82%. The Board has reviewed approximately 1,700 of the resulting reports as of December 2023.

**Figure 14. Jurisdictions for which all Fire Safety Survey Reports have been completed and reviewed by the Board, Jan 2023 - December 2023**

Region	Jurisdiction	Board Review
CSR	Fresno County	1/17/2023
CNR	Santa Clara County	3/7/2023
CNR	El Dorado County	4/4/2023
CSR	Santa Barbara County	5/9/2023
CSR	Santa Barbara City	5/9/2023
CNR	Butte County	6/13/2023
CNR	Lake County	6/13/2023
CNR	Stanislaus County	7/25/2023
CNR	Nevada County	7/25/2023
CNR	Alameda County	7/25/2023
CNR	San Joaquin County	7/25/2023
CNR	Mendocino County	8/22/2023
CSR	City of Poway	9/26/2023
CNR	Yuba County	9/26/2023
CSR	City of Monterey	11/7/2023
CSR	County of Monterey	11/7/2023
CSR	City of Hollister	11/7/2023
CNR	Humboldt County	12/5/2023
CNR	Del Norte County	12/5/2023

**State Forests**

The Board has changed the review periods for Initial State Forest Management Plans from five to ten years. This change was made following concerns expressed by forest managers, citing limited staffing and increasing workload. The longer period will allow the plans to be broader, encompass longer-term changes and trends, and reduce pressure on staff. Figure 15 (below) outlines the proposed schedule for management plan updates. The Department committed to an early review of the Jackson Forest Management Plan in 2022 as part of government-to-government discussions with a local tribe. The public process will begin in 2024 and a Management Plan is expected to be brought to the Board in late 2025 or early 2026.

<b>Figure 15. Proposed Management Plan Update Schedule Demonstration State Forest</b>	<b>Management Plan Update (Year)</b>	<b>Management Plan Status</b>
LaTour	2022	Approved 2013
Soquel	2024	Approved 2014
Jackson	2026	Approved 2016
Boggs Mountain	2028	Approved 2018
Mountain Home	2030	Approved 2020

**Stewardship Lands**

The Department acquired 6,982 acres in the Pit & Tunnel Reservoir Planning Units in 2023. This brings to a close the acquisition of forestlands from PG&E through the Pacific Watershed Stewardship Council. The Department now operates 14 Demonstration State Forests totaling 85,135 acres. An updated fact sheet with the general location of each is on the State Forest website ([link](#)).

The Conservation Easements require forest management activities to conform to a forest management plan approved by the Board. The Department will work with the Board to develop these plans and work them into the review schedule outlined in Figure 15.

**Professional Licensing and Forest Practice Enforcement**

Pursuant to California Public Resources Code (PRC) § 750 *et seq.*, the Board is authorized to grant licenses to Registered Professional Foresters (RPFs) and specialty certificates for Certified Rangeland Managers (CRMs). Earning either license is contingent upon meeting educational and work experience standards and ultimately passing an examination specific to the license or specialty.

The term “Professional Forester” is defined in PRC § 752 and refers to a person who, by reason of his or her knowledge of the natural sciences, mathematics, and the principles of forestry, acquired by forestry education and experience, performs services, including, but not limited to, consultation, investigation, evaluation, planning, or responsible supervision of forestry activities when those professional services require the application of forestry principles and techniques. The CRM certification is the only “Certified Specialist” credential bestowed and recognized by the Board. A CRM is defined in 14 CCR § 1651 as “... a person who provides services pursuant to 14 California Code of Regulations (CCR) 1602, at the request of the landowner or hiring agent, relating to the application of scientific principles to the art and science of managing rangelands and range.

*Figure 16. Board Licensed Professionals and Certified Specialists*

Year	RPFs	CRMs
2018	1132	88
2019	1126	89
2020	1105	86
2021	1108	81
2022	1110	80
2023	1110	79

## **Professional Discipline**

Professional disciplinary matters are confidential. They are handled administratively and generally do not culminate in a hearing before an Administrative Law Judge and/or the Board. In 2023, the PFEC received three RPF complaints. For case 346, the allegations of failure of professional responsibility were not sustained and a confidential letter of concern was sent to the respondent RPF. For Case 348, the allegations of failure of professional responsibility were dismissed and the case closed. Case 347 remains under review by the PFEC.

## **Enforcement**

PRC § 4601 *et seq.* authorizes the Board to investigate and discipline, “Any person who willfully violates any provision of this chapter or rule or regulation of the Board....” These civil penalties are identified, investigated, and pursued by CAL FIRE, with final adjudicative authority on these matters residing with the Board. During the 2023 calendar year, the Board deliberated and acted on two civil penalties for non-compliance with the Forest Practice Act and/or the Forest Practice Rules.



## **Acronyms**

The following acronyms and abbreviations are used in this document:

APA: Administrative Procedure Act  
Board: California State Board of Forestry and Fire Protection  
CalEPA: California Environmental Protection Agency  
CAL FIRE: California Department of Forestry and Fire Protection  
CalVTP: California Vegetation Treatment Program  
CDTFA: California Department of Tax and Fee Administration  
CEQA: California Environmental Quality Act  
CFIP: California Forest Improvement Program  
CLFA: California Licensed Foresters Association  
CRM: Certified Rangeland Manager  
DWR: California Department of Water Resources  
EMC: Effectiveness Monitoring Committee  
FCAT: Forest Climate Action Team  
FPA: Z'berg-Nejedly Forest Practice Act of 1973  
FPRs: Forest Practice Rules  
FRAP: Fire and Resource Assessment Program  
FRID: Fire Return Interval Departure  
LRA: Local Responsibility Area  
NTMP: Nonindustrial Timber Management Plan  
OAL: Office of Administrative Law  
PG&E: Pacific Gas & Electric  
PEIR: Program Environmental Impact Report  
PFEC: Professional Foresters Examining Committee  
RMAC: Range Management Advisory Committee  
RPF: Registered Professional Forester  
SRA: State Responsibility Area  
SYP: Sustained Yield Plan  
UCANR: University of California Agriculture and Natural Resources  
USDN: United States Drought Monitor  
USFS: United States Forest Service  
VHFHSZ: Very High Fire Hazard Severity Zone  
WFMP: Working Forest Management Plan  
WUI: Wildland-Urban Interface

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