THE BOARD OF FORESTRY AND FIRE PROTECTION



**ANNUAL REPORT *2020***

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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 work of the Range Management Advisory Committee (RMAC) was severely curtailed in 2020 due to the COVID-19 pandemic as well as multiple major fires affecting rangeland. Due to these emergencies, most Committee meetings this year did not reach a quorum of members, so forward action in 2020 was minimal. In November, RMAC successfully hosted a series of three virtual workshops on grazing for fire prevention – “Using Grazing to Help Keep Communities Safe.” The workshop topics were: Wildland Fuels: A Primer for Concerned Citizens & Grazers; Using Grazing for Fuels Management 101: Practices & Strategies; Organizing Community-Based Wildland Fuels Management Projects: Approaches and Examples. Over 150 people attended each workshop.

#### Professional Foresters Examining Committee

In 2020, the Professional Foresters Examining Committee (PFEC) and the Office of Professional Foresters Registration began review of and updates to several documents including the 2013 guidance document Role of the Registered Professional Forester and the 2007 PFEC Policy documents. The April 2020 Registered Professional Forester (RPF) and Certified Rangeland Manager (CRM) examinations were canceled due to COVID-19. The October RPF and CRM exams were carried out at seven different locations and employed CDC and State Guidelines for preventing COVID transmission. Forty-seven RPF applicants and one CRM applicant sat for this exam. The completion of grading and presentation of exam results will occur in January 2021.

* “Licensing Fee Amendments, 2020” went into effect in April 2020 increasing the biennial renewal fee for RPFs from $190 to $350 and for Certified Specialists from $70 to $130. To address RPF retirements and incentivize RPF license retention, the new discounted biannual fee of $250 was implemented for RPFs with 30 years or more in the registry.
* The Executive Officer for Professional Foresters Registration continues to perform outreach to increase awareness of careers in forestry in California and the licensing requirements for foresters. Outreach in the first part of 2020 required travel throughout the state to universities, community colleges, high schools, and California Conservation Corps. field offices to inform young people about the opportunities that exist in the California forestry sector. Later in the year these outreach efforts were conducted online utilizing zoom meeting and Go-To Webinar.

**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 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.

No new projects were funded in 2020, but all ongoing projects received allocations as planned. EMC meetings continued to be held quarterly. The following is a summary of EMC activities and progress made in 2020.

* The EMC charter was updated by the committee and approved by the Board of Forestry and Fire Protection (Board).
* Strategic Plan themes and critical questions for 2019 were reviewed and retained. No additions or alterations were made to the priorities for 2020. The EMC committed to examining the research already funded and setting priorities by themes and critical questions in 2021.
* The EMC received an allocation of $425,000 for the 2020/21 fiscal year from the Timber Regulation and Forest Restoration Fund for ongoing projects, of which $267,841 had been previously applied to funded projects. The remaining balance of $157,159 was not applied to any future project during FY 19/20 at the request of CNRA.
* The EMC recommended that a grant program be considered as a means of distributing funding for future projects, and the Board approved a recommendation to ask Board staff to explore this option.

#### Joint Institute for Wood Products Innovation

The Joint Institute for Wood Products Innovation (Institute) was established in response to SB 859 (2016) and the California Forest Carbon Plan. The first meeting of the Institute was held April 24, 2019.

The first project undertaken by the Institute was a “Literature Review and Evaluation of Research Gaps to Support Wood Product Innovation,” which was approved by the Board in January 2020 and submitted for a Governor’s Office Action Request in March. Findings from the report included the identification of numerous innovative wood products with sufficient commercial and technical readiness as well as potential market size.

The Institute funded two contracts. The first was “Cross-Laminated Timber Layup Tests Using Western Wood Products Association White Fir Species Group.” Results will help inform industry as to how white fir species in California will fare as a mass timber commodity. The second was “Opportunities for Low-carbon and Carbon-negative Fuels from Non-merchantable Forest Biomass in California.” This contract will identify biofuels research gaps and it will convene key stakeholders to explore the potential for a low-carbon and carbon-negative fuels industry in California that includes the use of non-merchantable forest biomass.

At the request of the Forest Management Task Force, the Institute also developed “[Joint Institute Recommendations to Expand Wood and Biomass Utilization in California](https://bof.fire.ca.gov/media/qjha01sc/final-board-approved_joint-institute-wood-and-biomass-utilitization-recommendations-_11-4-20_ada.pdf).” It was approved by the Board in November 2020 and provided to the Forest Management Task Force.

# Chaptered Legislation with Future Regulatory Action by the Board

#### AB 3074: Fire prevention: wildfire risk: defensible space: ember-resistant zones.

Existing law requires the Director of the Department of Forestry and Fire Protection to identify areas in the state as very high fire hazard severity zones based on specified criteria and the severity of the fire hazard. Existing law requires a person who owns, leases, controls, operates, or maintains an occupied dwelling or structure in, upon, or adjoining a mountainous area, forest-covered land, brush-covered land, grass-covered land, or land that is covered with flammable material that is within a very high fire hazard severity zone, as designated by a local agency, or a building or structure in, upon, or adjoining those areas or lands within a state responsibility area, to maintain a defensible space of 100 feet from each side and from the front and rear of the structure, as specified. This statute mandates more intense fuel reductions between 5 and 30 feet around the structure, including an ember-resistant zone within 5 feet of the structure, as provided. Work will not begin on this effort until a legislative appropriation occurs to support the Board’s efforts in the development of these regulations. The statute also transfers primary responsibility for a guidance document pertaining to these defensive space guidelines from CAL FIRE to the Board, including a requirement to update the guidance document by January 1, 2023, to include suggestions for the new ember-resistant zone. Both of these requirements are contingent on the Legislature making a legislative appropriation to the Board for these purposes.

# Forest Health Trends

## Monitoring Efforts

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. Reporting from 2018 was published on May 7, 2019 ([**Olsen et al., 2019**](https://www.researchgate.net/publication/335149799_Exemption_and_Emergency_Notice_Monitoring_Pilot_Project_Report)), and the results from 2019 were approved by the Board on December 30, 2019, however impacts related to COVID-19 and the fire-siege of 2020 delayed such efforts for the 2020 calendar year.

**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 2020. Forest pest conditions can change dramatically from year to year. For a summary of forest pests and diseases, see the [2019 California Forest Pest Conditions Report](https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd736355.pdf). The 2020 California Forest Pest Conditions Report will be available on the [California Forest Pest Council website](http://caforestpestcouncil.org/) in early 2021.

**Invasive Shot Hole Borer (ISHB)**

Polyphagous shot hole borer (PSHB) is established in Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties. Kuroshio shot hole borer (KSHB) is established in Los Angeles, Orange, Santa Barbara, San Diego, and Riverside Counties. Previously KSHB was found in a San Luis Obispo County trap. While no infestations have been found in the landscape there to date, it is suspected to be present. A previous trap find in Santa Cruz County has never been confirmed and no infestations found. PSHB and KSHB are found associated with several fungi, including species of *Fusarium*, which are known plant pathogens. Extensive damage has occurred in parks, urban trees, and riparian areas. An ISHB zone of infestation (ZOI) was approved by the Board of Forestry and Fire Protection in counties impacted by the beetles in areas with known reproductive host trees, which support beetle reproduction. The ZOI includes all of San Diego, Orange, Los Angeles, Ventura, Santa Barbara, and San Luis Obispo Counties as well as portions of Riverside and San Bernardino Counties.

**Goldspotted Oak Borer (GSOB)**

GSOB continued 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. It attacks and can kill California black oak, coast live oak, and, to a lesser extent, canyon live oak, preferring larger diameter and older trees. The continued spread resulted in the expansion of the GSOB ZOI to include all susceptible hosts within the impacted counties. No new sites have been detected outside of the five-county area.

**Bark Beetles**

Conifer-killing bark and engraver beetle populations remained low in California. Small pockets of pine bark beetles and fir engraver beetles were found throughout the state, particularly at higher elevations. Bark beetle activity was increasing in some areas due to a return to drought conditions but remain low compared to the recent years of epidemic outbreaks.

**Mediterranean Oak Borer (MOB)**

The valley oak wilt of 2019 was determined to be caused by the non-native MOB ambrosia beetle (*Xyloborus monographus*) and its associated fungi. The pest complex has killed valley and blue oaks throughout Napa, Sonoma, and Lake Counties. In 2020, a separate infestation was found in Sacramento County around the community of Citrus Heights. All indications are the pest complex has been in California for 5 - 10 years. Surveys and trapping are ongoing to determine the extent of the infestation, in addition to research on trapping methods, lures, fungal associates/host pathogenicity, control options, spread rates, and overall tree impacts.

**Sudden Oak Death (SOD)**

SOD (caused by the plant pathogen *Phytophthora ramorum*) was officially confirmed in Del Norte County for the first time. Genotyping confirmed the European strain (EU1) of the pathogen instead of the North American strain (NA1) - the only strain previously found in infested natural areas of the state. The nearest known EU1 forest infestation is in Curry County, Oregon, around 35 miles to the north. Management is ongoing to slow the potential spread of the EU1 strain in California.

In other areas of the state, SOD-related mortality varied by region. Mortality levels were high around the Santa Cruz/Santa Clara County line and there were new expansions of the disease in Humboldt and Mendocino Counties. Infestations appeared to be increasing in more inland sites in many areas, with less activity in coastal zones.

**Incense Cedar Dieback**

High levels of incense cedar mortality were observed throughout the state. Often a few branches would fade and die, and sometimes the entire tree would exhibit thinning and discolored foliage and then die. Dieback tended to start at the tops of the trees then progress downward. A species of *Cytospora* fungus was often recovered from cankers in impacted trees, but not consistently. Studies are ongoing to determine the species and potential pathogenicity of the fungus. Many of the trees were also impacted by drought years with reduced fine feeder roots, so an abiotic cause of mortality remains a possibility.

**Black Acacia Dieback and Mortality**

Black acacia trees (*Acacia melanoxylon*) are dying in Oakland and surrounding parts of the Bay Area down to the coast in Half Moon Bay. Some individual trees are showing dieback and in other areas entire hillsides are dying. The trees show indications of dieback, cankering, and mortality. The cause is currently unknown. Several possible fungi are being investigated, including one that is invasive to California and previously caused dieback of lemonade berry shrubs in San Diego County.

# Forest Products Trends

## In-State Harvest and Production

About 80 percent of lumber and 90 percent of all wood products used in the state of California are imported. As of 2012, there were 52,000 workers in the forest products sector with total earnings of over $3.3 billion annually. There has been a major decline in timber harvesting that has resulted in a 72% decrease in volume since 1955. Sawmills have seen a similar decline in response to lower harvest volumes as well as improvements in technology and automation (about 675 sawmills were in operation in 1956 versus 28 in 2018). Softwood sawmill capacity in California has somewhat stabilized over the last several years after decades of constriction. In response to this decline in processing facilities, the state has shown growth in diversified markets for wood products. However, that diversification is not necessarily equivalent to the historic economic benefits of softwood sawmills ([**FRAP, 2017**](https://frap.fire.ca.gov/media/3180/assessment2017.pdf)).

Generally, the volume of timber harvested has declined steadily from a high in 1988. It has recently started to level out after a significant drop in 2009 likely attributed to the housing market crash of 2008. Figure 1 below illustrates the changes in harvest levels for public and private lands, indicating that recently more volume has been harvested from private lands by a wide margin. In 2018 (not shown), approximately 1,670 million board feet (MMBF) were harvested, in line with the previous five years’ approximate totals (CDTFA, 2020). Approximately 82 percent came from private land, and 18 percent from public land, again keeping with recent trends. The leading counties were Shasta with 219 MMBF, Humboldt with 216, Siskiyou with 206, and Mendocino with 120. These four counties accounted for just over half of all timber harvested in California in 2020.

#### Figure 1. Annual Volume of Timber Harvested in California (FRAP)

Note: PUBLIC refers to timber removed from local, state, and federal government lands. It does not include timber removed from tribal lands.

California has also been experiencing a fluctuating export market over the past few years, with logs being shipped via container to Asia. This is a very volatile market with demand ebbing and flowing dramatically from one year to another and even from month to month.

For managed timberlands, net growth of softwoods (commercial conifer species) provides a measure of whether harvest levels can be sustained. In California, commercial forest management is regulated under the Forest Practice Act and the Forest Practice Rules, which require maximum sustained production of high-quality timber products. A recent USFS Forest Inventory Analysis [**(USFS, 2017**](https://www.fs.usda.gov/sites/default/files/15817-usda-forest-service-fia-annual-report-508-update.pdf)) of the re-measurement period between 2001-2006 and 2011-2016 produced key findings pertaining to net growth of softwoods. On industry-owned timberlands, the most actively managed timberlands within California, growth exceeded harvest and mortality by an average of 22 ft3/acre/year over the re-measurement period. On nonindustrial timberlands, a portion of which are actively managed, growth exceeded harvest and mortality by an average of over 85 ft3/acre/year. On Forest Service managed (i.e., non-wilderness) timberlands, which are managed for multiple objectives including ecosystem services, growth exceeded harvest and mortality by an average of over 33 ft3/acre/year. These values are shown in Figure 2 ([**FRAP, 2017**](https://frap.fire.ca.gov/media/3180/assessment2017.pdf)).

#### Figure 2. Net Softwood Timberland Growth

#### Chart of Timberland Growth, Removals, and Mortality (Softwoods) sorted into Nonindustrial, Forest Industry, and Forest Service. Nonindustrial shows highest growth, and relatively small number of removals and mortality. Forest Industry shows moderate growth, small amount of mortality, and greatest number of removals. Forest Service shows smallest growth, greatest mortality, and fewest removals.

Of the approximately 33 million forested acres in California, about 57 percent are owned and managed by federal agencies, 3 percent by state and local agencies, and 40 percent by families or individuals, Native American tribes, and companies. Industrial timber companies own 14 percent of the total forested acres in California. 9 million acres are owned by individuals, with nearly 90 percent of these owners having less than 50 acres of forest land. ([**UCANR, 2019**](https://ucanr.edu/sites/forestry/California_forests/)**a**). Ownership patterns have changed for large industrial forest landowners within California. All industrial ownerships are now privately held firms, in contrast with 1970 when 56 percent were publicly traded firms.

The use of exemptions, as allowed for under PRC § 4584 and 14 CCR § 1038, decreased slightly in acreage, but increased in number (Figure 3). Emergency Notices provided for under 14 CCR § 1052.1 decreased in number and in acreage (Figure 4). The Board and CAL FIRE recently completed the Exemption-Emergency Notice Pilot study. The study gathered data on the use of exemptions and emergency notices and a variety of environmental indicators to begin to determine how the use of exemptions impacts public trust resources. An initial report was published in May, 2019 ([**Olsen et al., 2019**](https://www.researchgate.net/publication/335149799_Exemption_and_Emergency_Notice_Monitoring_Pilot_Project_Report)).

Individual Timber Harvesting Plans (THPs) decreased slightly in number and increased in acreage in Fiscal Year 2019-2020 (Figure 5). The number of Non-Industrial Timber Management Plans (NTMPs) remained nearly the same, but acreage was almost doubled (Figure 6). The first Working Forest Management Plan (WFMP) was approved in 2019 (Figure 7).

#### F**igure 3. Exemption Statistics for Fiscal Years 14/15-19/20**

| Fiscal Year | Harvest Document Type | Number of Notifications | Acres | Total Acres |
| --- | --- | --- | --- | --- |
| 2014/15 | 1038(b) Exemptions | 781 | 2,884,982 |  |
|  | All other Exemptions | 1,009 | 41,563 |  |
|  | Total Exemptions | 1,790 |  | 2,926,545 |
| 2015/16 | 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 |
| 2016/17 | 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 |
| 2017/18 | 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 |
| 2018/19 | 1038(a) & 1038(b) Exemptions (prior to 3/1/19) | 320 | 1,310,933 |  |
|  | 1038(b) Exemptions (after 3/1/19) | 131 | 999,762 |  |
|  | 1038(f) Exemptions (after 3/1/19) | 3 | 112 |  |
|  | 1038(k) Exemptions | 94 | 7,464 |  |
| 2018/19 (continued) | 1038.3 Exemptions (after 3/1/19) | 15 | 1,892 |  |
|  | All other Exemptions | 1,605 | 454,582 |  |
|  | Total Exemptions | 2,168 |  | 2,774,745 |
| 2019/20 | 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 |

#### Figure 4. Emergency Notice Statistics for Fiscal Years 14/15-19/20.

| Fiscal Year | Harvest Document Type | Number of Notifications | Total Acres |
| --- | --- | --- | --- |
| 2014/15 | Emergency Notice | 266 | 66,735 |
| 2015/16 | Emergency Notice | 231 | 28,921 |
| 2016/17 | Emergency Notice | 81 | 15,123 |
| 2017/18 | Emergency Notice | 189 | 14,133 |
| 2018/19 | Emergency Notice | 289 | 42,247 |
| 2019/20 | Emergency Notice | 158 | 16,056 |

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

#### Figure 5. THP Statistics for Fiscal Years 11/12-19/20

| Fiscal Year | Harvest Document Type | Number of Plans | Acres |
| --- | --- | --- | --- |
| 2011-12 | THP | 270 | 139,553 |
| 2012-13 | THP | 243 | 107,051 |
| 2013-14 | THP | 278 | 146,384 |
| 2014-15 | THP | 260 | 128,644 |
| 2015-16 | THP | 249 | 99,271 |
| 2016-17 | THP | 219 | 91,067 |
| 2017-18 | THP | 266 | 105,433 |
| 2018-19 | THP | 244 | 100,888 |
| 2019-20 | THP | 234 | 122,586 |

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

**Figure 6. NTMP Statistics for Fiscal Years 11/12-1****9/20**

| Fiscal Year | Harvest Document Type | Number of Plans | Acres |
| --- | --- | --- | --- |
| 2011-12 | NTMP | 14 | 10,932 |
| 2012-13 | NTMP | 12 | 7,365 |
| 2013-14 | NTMP | 10 | 4,126 |
| 2014-15 | NTMP | 12 | 3,367 |
| 2015-16 | NTMP | 17 | 8,100 |
| 2016-17 | NTMP | 23 | 5,105 |
| 2017-18 | NTMP | 14 | 4,448 |
| 2018-19 | NTMP | 14 | 2,410 |
| 2019-20 | NTMP | 13 | 4,215 |

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

#### Figure 7. WFMP Statistics for Fiscal Year 19/20

| Fiscal Year | Harvest Document Type | Number of Plans | Acres |
| --- | --- | --- | --- |
| 2019-20 | WFMP | 1 | 4,470 |

## Biomass and other Wood Product Innovation

Biomass utilization is recognized by many stakeholders as a carbon-neutral opportunity to facilitate management of California’s forested ecosystems. The expenses of forest restoration and sustainable management on both public and private lands can be supported through the sale of biomass and forest products. However, for sales to be profitable there is a need for increased biomass processing capacity to handle dead trees and other traditionally unmerchantable vegetative material removed for hazard control ([FCAT, 2018](http://resources.ca.gov/wp-content/uploads/2018/05/California-Forest-Carbon-Plan-Final-Draft-for-Public-Release-May-2018.pdf)). In addition to producing electricity, biomass can also be used to produce other innovative short- and long-lived wood products with varying carbon benefits.

The forest products biomass market remains narrow. Challenges to biomass energy expansion include short-term contracts between energy producers and purchasers, fluctuating energy values, lack of energy sector subsidies, competition with other forms of renewable energy, and the economics involved in the treatment, handling, and transportation of forest material ([FCAT, 2018](http://resources.ca.gov/wp-content/uploads/2018/05/California-Forest-Carbon-Plan-Final-Draft-for-Public-Release-May-2018.pdf)).

Biomass facilities across the state have been closing for many years. The retention of the remaining biomass facilities has been a priority for the Legislature, largely due to high numbers of drought-killed trees and to the amount of biomass created by fuels reduction treatments. Thus, SB 859 (2016) was passed by the Legislature and ultimately chaptered by the Brown Administration. The bill, in part, calls on electricity retailers to enter into five-year contracts for 125 megawatts of biomass power from facilities that have the ability to generate energy from wood harvested from high fire hazard zones, as identified by the Tree Mortality Task Force. SB 901 (2018) both expanded the fuels and feedstocks which are eligible to meet those wildfire risk reduction requirements and requires that any organization which currently has an active contract for electricity generated from biomass expiring on or before December 31, 2023 seek to extend that contract for 5 additional years ([FCAT, 2018](http://resources.ca.gov/wp-content/uploads/2018/05/California-Forest-Carbon-Plan-Final-Draft-for-Public-Release-May-2018.pdf)).

The Forest Carbon Plan recommends building out the 50MW small scale wood-fired bioenergy facilities that were mandated through SB 1122 (2012). The California Energy Commission’s Electric Program Investment Charge will continue public investment in this build out. Additionally, there will be an effort to expedite the siting and establishment of facilities fueled by biomass from tree mortality High Hazard Zones ([FCAT, 2018](http://resources.ca.gov/wp-content/uploads/2018/05/California-Forest-Carbon-Plan-Final-Draft-for-Public-Release-May-2018.pdf)).

There are also numerous innovative products with sufficient commercial and technical readiness, and potential market size, to justify increased public and private investments in their development. Earlier this year, under the oversight of the Board, the California Joint Institute for Wood Products Innovation (Institute) produced a review of forest product innovation literature, gaps in forest product innovation research, potential strategic partnerships, and recommendations for near-term priorities to support the expansion of the innovative wood products sector in California (Sanchez et al. 2020). The most promising classes of innovative wood products identified by the Institute include: Mass timber; liquid and gaseous transportation fuels; and chemically and thermally treated wood.

The Institute’s priority recommendations include: (1) Aligning State incentives to better account for the climate benefits of forest products; (2) Promoting infrastructure development for innovative wood product processing and; (3) Funding research to further innovation in wood products, including development of product layups for mass timber panels from California feedstock, identifying scalable structural wood products from small-diameter and non-merchantable biomass and investigating subsidy design for mobilization of nonmerchantable biomass to best serve California’s climate change goals.

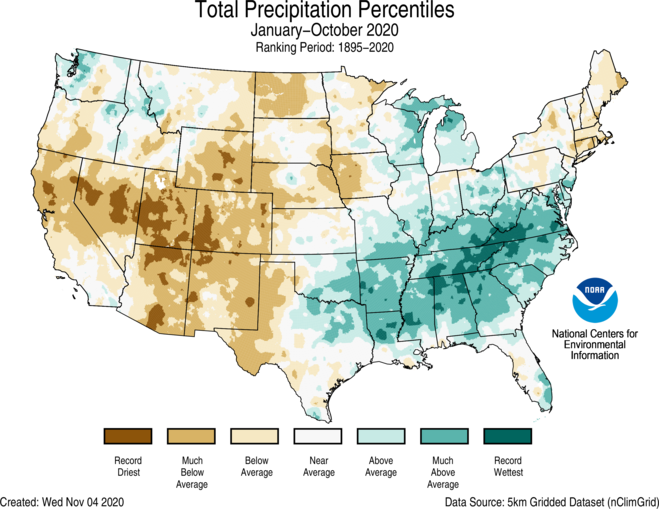
# Fire Protection Trends

## Weather Patterns

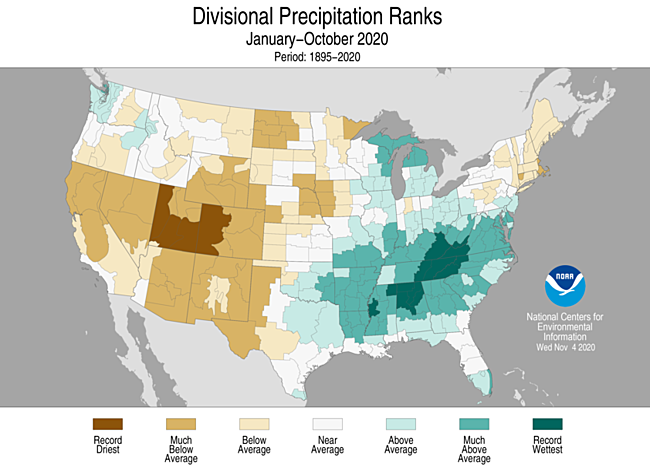
The entire state of California emerged from drought status for a portion of 2019. According to the U.S. Drought Monitor, in the second full week of March 2019, “California emerged from drought conditions for the first week since December 11, 2011, breaking its 376-week streak,” ([USDM,](https://droughtmonitor.unl.edu/Summary.aspx) March 19, 2019). However, as illustrated in Figure 8, nearly all of California was ranging from near average to record driest precipitation for calendar year 2020, especially near the northern Sacramento Valley ([NOAA, 2020](https://www.ncdc.noaa.gov/temp-and-precip/us-maps/)). Precipitation was also significantly below average for the water year (Figure 9), possibly reflecting a slightly shorter or later than average start to winter precipitation in 2019 ([NOAA, 2020](https://www.ncdc.noaa.gov/temp-and-precip/us-maps/)). Temperatures have generally been much above average for majority of the state, with greater departures in the Bay Area, and the San Joaquin Valley; (Figure 10) ([NOAA, 2020](https://www.ncdc.noaa.gov/temp-and-precip/us-maps/)).

The California Department of Water Resources reported smaller snowpack conditions going into 2020, with snow water equivalent on April 1 between 53 and 66 percent of average levels for that date ([DWR, 2019a](https://water.ca.gov/Programs/Flood-Management/Flood-Data/Snow-Surveys)). A lack of snow accumulation from reporting stations in the Southern and Central Sierra regions lasted through at least May 15 and remained in the Northern Sierra/Trinity region through May 31. Snowpack water content was average for the 2019-20 winter, but falling significantly short of 2018-19 (Figure 11) ([DWR, 2020b](https://water.ca.gov/Programs/Flood-Management/Flood-Data/Snow-Surveys)). Snowpack is incredibly important in California’s Mediterranean climate as it typically predicts how much water will reach streams and reservoirs in summer months. Snowpack provides about one-third of the water used by cities and farms in the state as it melts during the summer months. Thanks largely to the average snowpack, the state began the new water year on October 1 with reservoir storage at 95 percent of average for that date ([DWR, 2019c](https://water.ca.gov/Programs/Flood-Management/Flood-Data/Snow-Surveys)).

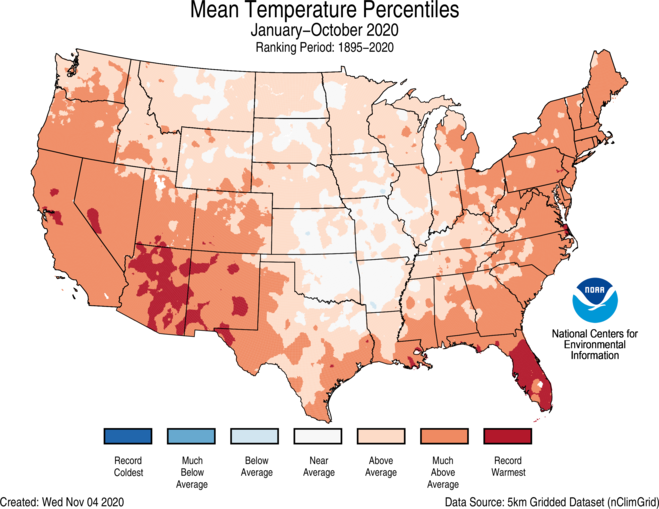
#### Figure 8. Precipitation Rankings for January-October 2020 When Compared with Local Averages from 1895-2019. NOAA National Centers for Environmental Information.

[](https://www.ncdc.noaa.gov/monitoring-content/sotc/national/grid-ranks-prcp/grid-ranks-prcp-201901-201912.png)

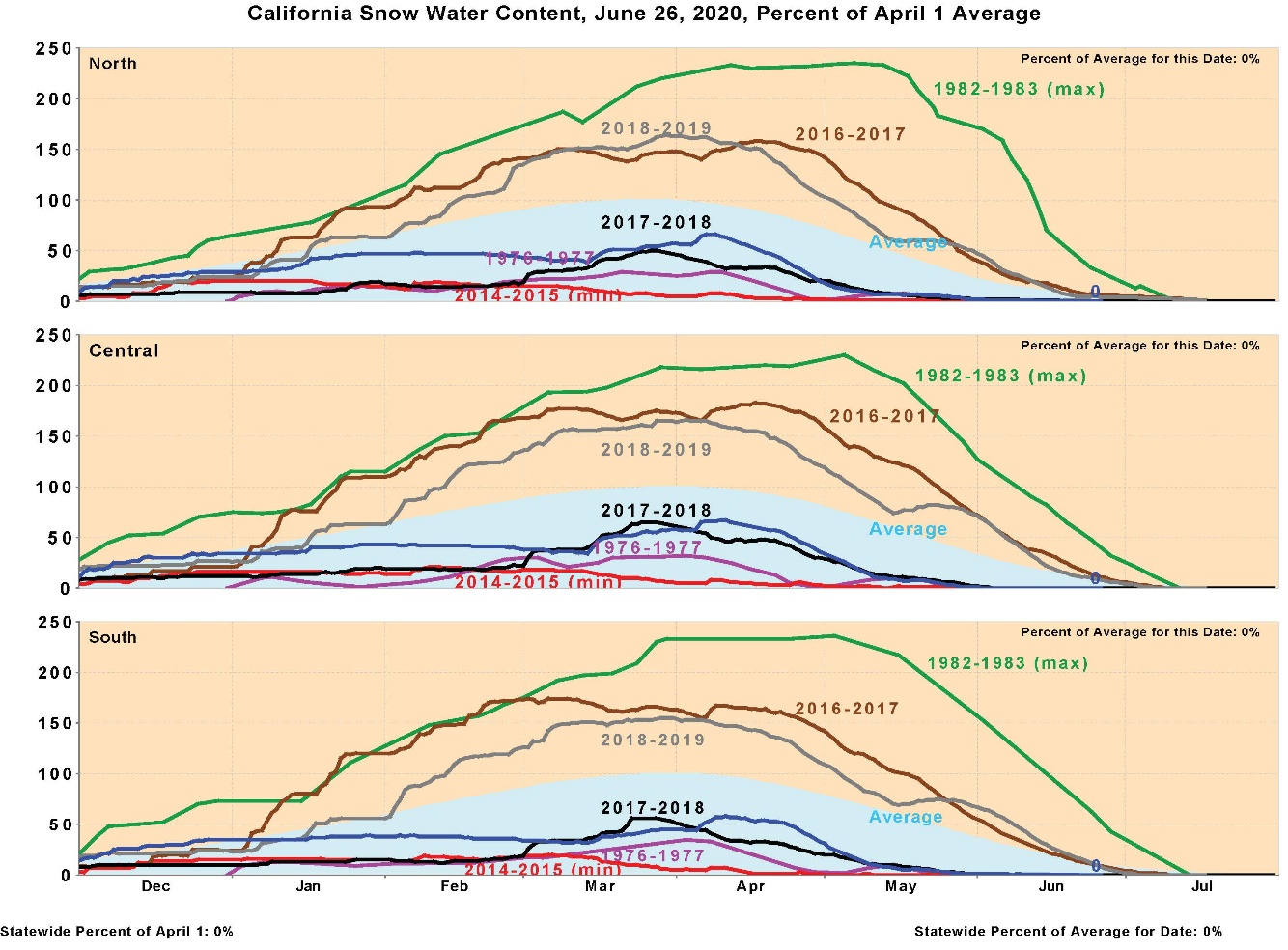
#### Figure 9. Precipitation Rankings for January - October 2020 When Compared with Local Averages from 1895-2019. NOAA National Centers for Environmental Information.*[[1]](#footnote-2)*



#### Figure 10. Temperature Rankings for January-October 2020 When Compared with Local Averages from 1895-2019. NOAA National Centers for Environmental Information.

[](https://www.ncdc.noaa.gov/monitoring-content/sotc/national/grid-ranks-temp/grid-ranks-tavg-201901-201912.png)

#### Figure 11. California Snow Water Content,*[[2]](#footnote-3)* June 26, 2020, Percent of April 1 Average. California Department of Water Resources.



## 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 12 and 13 below illustrate the acreage goals and number of acres treated in the three most recent fiscal years.

#### Figure 12. Broadcast/Prescribed Burn Targets and Acres Completed.

**\*FY 2020/21 is through December 31, 2020**

| Fiscal Year | Target | Completed | % Completed |
| --- | --- | --- | --- |
| 2017/2018 | 20,000 | 19,413 | 97.07% |
| 2018/2019 | 25,000 | 31,305 | 125.22% |
| 2019/2020\* | 25,000 | 13,450 | 53.80% |
| 2020/2021 | 25,000 | 27,143 | 108.57% |

#### Figure 13. All Other Fuel Reduction Method Targets and Acres Completed.

**\*FY 2020/21 is through December 31, 2020**

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

Defensible space is managed space around a structure or other site of importance designed to reduce the risk of a fire spreading into adjoining wildland, and vice versa. 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 14 illustrates the goals for defensible space inspections and how many were accomplished within the three most recent fiscal years.

#### Figure 14. Defensible Space Inspections Completed.

| Fiscal Year | Target | Completed | % Completed |
| --- | --- | --- | --- |
| 2017/2018 | 250,000 | 217,666 | 87.07% |
| 2018/2019 | 250,000 | 204,341 | 81.74% |
| 2019/2020 | 250,000 | 222,040 | 88.82% |

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 intense 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. There are currently 13 proposed projects and 5 which have been certified for implementation (see Figure 15 below).

#### Figure 15. Vegetation Treatment Projects Certified under the CalVTP.

| Project ID | Acres Treated | Treatment Type |
| --- | --- | --- |
| 2020-9 | 398 | Broadcast burning; pile burning |
| 2020-12 | 100 | Manual treatment; pile burning |
| 2020-13 | 1,630 | Broadcast burning; pile burning; Manual treatment; Mechanical treatment; Herbicide Application |
| 2020-10 | 90 | Broadcast burning; Pile burning; Mechanical treatment |
| 2020-1 | 1,012 | Broadcast burning |
| Sum | 3,230 |  |

## Wildfire Activity

The 2020 fire season, like much of the year, ravaged the state. A significant dry lightning storm that began on August 15th produced over 14,000 strikes that sparked more than 900 fires. With minimal precipitation and extreme weather experienced throughout the state over the course of the year, the conditions made the potential for significant fire behavior a reality.

In mid-August, 96% of CAL FIRE’s engines were committed to wildfires. At peak, all 6 CAL FIRE Incident Management Teams (IMT) were activated, and more than 19,000 firefighters from nearly a dozen states across the nation were assigned to emergency incidents.

The magnitude and severity of wildfires CAL FIRE responded to was historic, surpassing previous years. This year, CAL FIRE experienced more than 7,600 fires that burned over 2,100,000 acres in CAL FIRE jurisdiction, compared to the 1,063,414 acres burned in 2018. Nearly 4.8 million acres have been scorched across state and federal jurisdictional lands in California, destroying over 9,400 structures and killing 35 individuals.

| **Figure 16. Most Destructive Incidents, 2020** | | | |
| --- | --- | --- | --- |
| Name (Unit or Contract County Abbreviation) | **Acreage** | **Structures Destroyed** | **Fatalities** |
| August Complex | 1,032,648 | 935 | 0 |
| SCU Lightning Complex | 396,624 | 222 | 0 |
| Creek Fire | 379,895 | 853 | 0 |
| LNU Lightning Complex | 363,220 | 1,491 | 5 |
| North Complex | 318,935 | 2,352 | 15 |
| SQF Complex | 174,178 | 228 | 0 |

\*These are the Top 20 regardless of whether they were state, federal, or local responsibility.

#### Figure 17. Lightning Siege Comparison

|  | 2020\* | 2008 | 1987 |
| --- | --- | --- | --- |
| Lightning Strikes | nearly 14,000 | 5,000 | 11,000 |
| Number of Wildfires | 900+ | 1,459 | 1,100 |
| Acres Burned | nearly 2.8 million | 245,000 | 640,000 |
| Personnel Committed | over 14,000 | 18,457 | 14,000 |
| Engines Assigned | over 1,250 | 1,399 | NA |
| Structures Destroyed | Over 6,900 | 8,400 | 40 |
| Fatalities | 26 | 42 |  |

\* The 2020 Lightning Siege spanned from August 15 through August 30.

***Note: Unless noted otherwise, these values tabulate wildfires responded to by CAL FIRE in SRA and LRA regions under contract with CAL FIRE.***

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# Accomplishments 2020 – Regulatory

#### Appeal Amendments, 2019

Within the Professional Foresters Law, PRC § 765 provides that an applicant for registration as a professional forester or certified specialist who believes that they have been aggrieved by the PFEC with respect to their qualifications may appeal to the Board in accordance with regulations. These amendments provided additional clarity to both the applicant and those administering the appeals procedure and eliminated unnecessary and potentially burdensome aspects of the appeal procedures. Additionally, the amendments created a $100 fee for appellants to cover administrative costs of appeals. The amendments became effective November 1, 2020.

#### Southern Subdistrict and Marin County Stocking Amendments, 2020

These amendments addressed certain forest health and ecological goals to provide for increased forest resilience and suitable resource conservation within the Southern Subdistrict of the Coast Forest District by adjusting point count standards within the Subdistrict to a level that reduces competition between trees for the essential resources of sunlight, water and nutrients needed for photosynthesis and requisite for forest resilience to natural stressors. The amendments additional made point-count stocking standard requirements consistent throughout the coast forest district, eliminated provisions related to the even-aged management of eucalyptus, and generally improved the clarity of the regulations. These amendments are effective January 1, 2021.

#### Fuel Hazard Reduction Amendments, 2020

These amendments made permanent those emergency regulations adopted in 2019 which were intended to increase the utilization of the regulatory permitting process of the Emergency Notice for Fuel Hazard Reduction of 14 CCR § 1052.4 in order to address the hazardous conditions across forested lands throughout the state, as well as to improve the efficacy of vegetative treatments in addressing the existing problem of hazardous fuel conditions within this process. The permanent regulations are effective January 1, 2021.

#### Camping Fee Amendments, 2020

These amendments resulted in modest increases to overnight camping fees within Demonstration State Forests, as well as a simplification of those fee structures. It is anticipated that the regulations are effective January 1, 2021.

#### Licensed Timber Operator Education and Limited License Timber Operator

These amendments improved the clarity and consistency of the existing regulations surrounding timber operator licenses, including making educational requirements of applicants consistent across all types of timber operator licenses. The amendments also limited the activities permitted under a limited timber operator license to avoid excessive risk, given the lack of insurance obligations. Finally, the amendments clearly implement existing conditional requirements within PRC § 4572. These regulations are effective January 1, 2021.

#### Tethered Operation Amendments, 2020

These regulations provided for the implementation of specific tethered logging systems for in use timber operations and to clarify what manner of system is intended for such use in those operations. The rule package additionally improved the clarity and consistency of certain existing regulations related to harvesting practices and erosion control by using modern and defined terminology and regulations, eliminated redundancy within existing regulations, and provided for appropriate disclosure in order to support the enforcement of those purposes described above. These regulations are effective January 1, 2021.

#### Emergency Fire Safe Regulations Applicability

These emergency regulations provided clarity regarding the scope and application of the SRA Fire Safe Regulations and reduced overly burdensome requirements inhibiting increases in affordable housing and increasing housing supply generally in the state. These emergency regulations became effective July 27, 2020, and, unless further action is taken by the Board to adopt permanent regulations, will expire March 26, 2021.

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. SB 1260 (2018) now allows the Board to request a consultation with local jurisdictions who choose not to adopt the Board’s recommendations and prevents the jurisdiction from approving the draft element or amendment until the requested consultation occurs. These changes will improve communication between the Board and local jurisdictions and enable further dialogue to better protect citizens. Regulations to implement this consultation process became effective January 1, 2020.

#### Figure 18. General Plan Safety Elements Reviewed by the Board November 2019-December 2020

| Region | Type | Jurisdiction | Received | Reviewer | Board Review |
| --- | --- | --- | --- | --- | --- |
| CSR | City | Cathedral City | 11/22/19 | Marcus Hernandez | 12/11/2019 |
| CSR | City | Sonora | 10/15/19 | Kevin Lindo | 12/11/2019 |
| CNR | City | Willits | 10/28/19 | Rudy Baltazar | 12/11/2019 |
| CSR | City | Corona | 1/2/20 | Melissa Curtis | 1/22/2020 |
| CNR | County | Lassen | 3/18/20 | Shane Vargas | 4/8/2020 |
| CNR | City | Novato | 3/2/20 | Jeff Hakala | 4/8/2020 |
| CNR | City | Dunsmuir | 4/16/20 | Shane Vargas | 6/10/2020 |
| CSR | City | Murrieta | 5/18/20 | Marcus Hernandez | 6/10/2020 |
| CNR | City | Hercules | 6/23/20 | No VHFHSZ |  |
| CSR | County | Ventura |  | Gene Potkey | 7/14/2020 |
| CSR | County | Orange | 6/82020 | Marcus Hernandez |  |
| CNR | City | Etna | 4/16/20 | Shane Vargas | 7/14/2020 |
| CNR | City | Dorris | 4/16/20 | No VHFHSZ |  |
| CSR | County | San Bernardino | 7/14/20 | Melissa Curtis | 8/18/2020 |
| CNR | City | Auburn | 10/26/20 | Carmel Barnhart | 12/8/2020 |

#### Board Resolution 2020-2: Fire Safe Regulations – Temporary Suspension of Local Ordinance Certification Process

The Board is responsible for adopting the Fire Safe Regulations (FSR), which implement minimum fire safety standards in the SRA and LRA VHFHSZ. The FSRs do not supersede a local ordinance that equals or exceeds those minimum standards and 14 CCR § 1270.04 establishes a process by which the Board may certify a local ordinance as satisfying that standard. SB 901 (2018) requires the Board to adopt additional FSRs by July 1, 2021, and those regulations will invalidate any then-existing Board certifications as a matter of law. In order to avoid administrative inefficiencies for the Board and local jurisdictions, the Board adopted Resolution 2020-2 on November 4, 2020. The [resolution](file:///C:\Users\cmccoy\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\VW8CWK78\Reports\bof-resolution-2020-2-executed.pdf) temporarily suspends Board consideration of local ordinances for certification pending adoption of those statutorily-required revisions to the FSRs.

#### Appointment of Authorized Designees for Less Than Three Acre Conversions

The Board has been working on issues of conversion of timberland to cannabis cultivation for the past several years. The conversion of timberland to a use other than growing timber requires, prior to conversion, a Timberland Conversion Permit (or its equivalent) to be approved by CAL FIRE or, if eligible, a Less Than 3 Acre Conversion Exemption to be accepted by CAL FIRE. In the context of cooperation with local entities, the Board, pursuant to §1104.1(a)(1)(D) of Title 14 of the California Code of Regulations (14 CCR), gives the county the opportunity to determine if proposed timberland conversions are in conformance with all county regulatory requirements through the incorporation of a signed and dated statement from an authorized designee of the County Board of Supervisors.

When a county does not have an authorized designee, the authority falls to the RPF preparing the Exemption to certify that the county has been contacted and the conversion is in conformance with county regulatory requirements. RPFs have communicated that this determination can be challenging if they work in multiple counties, each of which may have different regulatory requirements. Consequently, the Board communicated with County Boards of Supervisors to encourage them, if they have not already done so, to appoint an authorized designee to ensure land uses conform to county regulatory requirements. Figure 20 below indicates the response to the Board's request for counties to appoint an Authorized Designee to determine if conversions are following county regulatory requirements. These efforts have been successful since their inception, with many counties appointing Authorized Designees. In 2020, the Board continued outreach and policy related to Less Than 3 Acre Conversions.

# AB 1504 California Forest Ecosystem and Harvested Wood Product Carbon Inventory

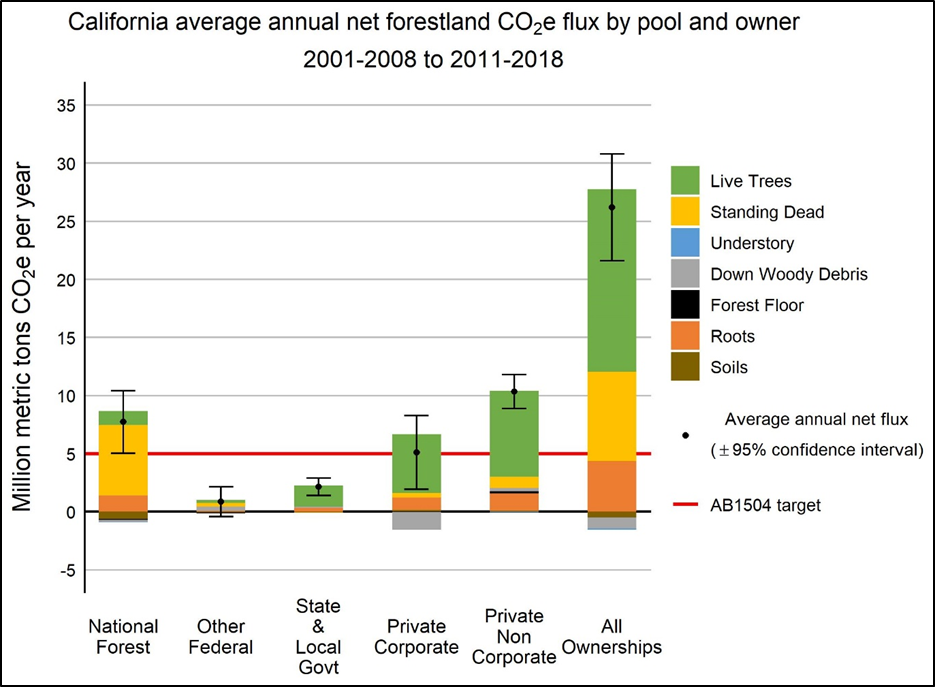
California has set a net carbon sequestration target for the forest sector of five million metric tons (MMT) of carbon dioxide equivalent (CO2e) annually until 2020. The Board is required to analyze above ground and below ground carbon stocks within all forested landscapes in California (AB 1504, 2010). In response, the Board publishes annual reports which discuss several elements of the State's effort to meet these greenhouse gas (GHG) emissions reduction targets.

In September of 2020, the Board released an AB 1504 [California Forest Ecosystem and Harvested Wood Product Carbon Inventory](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fbof.fire.ca.gov%2Fmedia%2F10147%2F5-final_1504_forest_ecosys_hwp_c_2018_full.pdf&data=04%7C01%7CClaire.McCoy%40bof.ca.gov%7Ce4681a04089749d919a108d8b81e8267%7C447a4ca05405454dad68c98a520261f8%7C1%7C0%7C637461788460738439%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=Sh6%2FndwlNawzGth0sIXxtV3nHOy1OA1O5Se40HJfFuI%3D&reserved=0) data update for the 2018 reporting period. The report indicates that California’s forests are sequestering carbon at a rate of 24.9 MMT CO2e per year, down slightly from the 2017 reporting period which estimated 27.9 MMT CO2e per year. This value includes changes in forest ecosystem pools (26.2 MMT CO2e per year), harvested wood product pools (0.7 MMT CO2e per year), non-CO2 emissions from wildfires (-0.6 MMT CO2e per year), and forest land conversions (-1.5 MMT CO2e per year).

In this report there was a revision of soil organic carbon stock and flux estimates based on refinements in the Digital General Soil Map of the United States (STATSGO2) dataset. Minor revisions of harvested wood product carbon stock and flux estimates also occurred following the discovery of errors in a couple input parameters and errors in the model code that resulted in an average of approximately 1% of the initial harvested carbon to disappear from storage pools and remain unaccounted for in emission categories. Model code was corrected through re-coding the model using R-script through an agreement between Oregon Department of Forestry, Oregon State University, and Groom Analytics, LLC. A remaining error that resulted in narrower confidences intervals than expected based on the parameters set for Monte Carlo Uncertainty Analysis will be corrected in the 2019 data update expected by the end of the calendar year.

A new agreement with the Forest Service Pacific Northwest Research Station (PNW) to complete the full 10-year measurement cycle carbon report following completion of data collection in 2020 was executed this year. Collaboration with the states of Oregon and Washington, British Columbia, PNW, and academia have been ongoing through the Pacific Coast Carbon Initiative led by PNW. The Oregon Board of Forestry has released a forest ecosystem and harvested wood product carbon inventory that mirrors California’s AB 1504 inventory and the Washington inventory is in final stages of review. A new agreement was also established with PNW to complete a Pacific Coast Temperate Forest and Harvested Wood Product regional report that will incorporate results from the California, Oregon, and Washington forest carbon inventories as well as relevant data from BC. This report will also include a timber (i.e., log and chip) and finished wood product flow analysis of material within and beyond this region, funded by PNW.

#### Figure 19. California forest land statewide estimate of average annual carbon flux (MMT CO2/year) by pool and ownership, 2001-2008 to 2011-2018\*.



\*Excludes contributions from forest land-use changes, non-CO2 GHG from fire, and HWP C.

# 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 pressures on staff. Figure 23 (below) outlines the proposed schedule for management plan updates.

#### Figure 20. Proposed Management Plan Update Schedule

| Demonstration State Forest | Management Plan Update (Year) | Management Plan Status |
| --- | --- | --- |
| LaTour | 2022 | Approved 2013 |
| Soquel | 2024 | Approved 2014 |
| Jackson | 2026 | Approved 2016 |
| Boggs Mountain | 2028 | Approved 2018 |
| Mountain Home | 2020 | Approved 2020 |

# Stewardship Lands

The Stewardship Council Board has recommended fee title transfer of lands within the North Fork Mokelumne River, Pit River, Tunnel Reservoir, Battle Creek, Cow Creek, Lake Spaulding, and Bear River planning units to CAL FIRE. These future acquisitions added to the Demonstration State Forest system will ultimately require Board-approved forest management plans. With the Stewardship Council Board recommendation for transfer of lands to CAL FIRE at Bear River in November 2018, fee title recommendations have been completed. In 2018, the Stewardship Council Board approved final Land Conservation and Conveyance Plans (conservation easements and agreements known also as LCCPs) for North Fork Mokelumne River, Pit River, and Tunnel Reservoir. The Stewardship Council continued to develop the final LCCPs for the remaining projects during 2020.

The Department of General Services and Pacific Gas & Electric (PG&E) have developed the final form and content for each of the transaction documents, which will be utilized to construct documents for each of the transactions going forward. The California Natural Resources Agency has also participated in these discussions and is working to bring along associated transactions with State Parks. CAL FIRE and PG&E signed the Property Acquisition Agreement for the North Fork Mokelumne property in 2019 and received subsequent approval from the California Public Utilities Commission on October 7, 2019, to proceed with closing the transaction. The acquisition was approved by the Public Works Board in December 2019 and CAL FIRE took fee title to 1,052 acres prior to the end of the year.

Conservation easement holders for each of the properties have been recommended by the Stewardship Council Board and include: Shasta Land Trust (Pit River, Tunnel Reservoir, Cow Creek), Western Shasta Resource Conservation District (Battle Creek), Mother Lode Land Trust (North Fork Mokelumne River), Placer Land Trust (Lake Spaulding), and Bear, Yuba, and Placer Land Trusts (Bear River). As currently written, CAL FIRE has successfully negotiated identical or very similar terms with each of the conservation easement holders to reduce the number of unique restrictions on any property. CAL FIRE has been on site to document baseline conditions and discuss the intended management with each of the conservation easement holders.

It is expected that the Pitt River, Tunnel Reservoir, Lake Spaulding, and Bear River planning units will close in late 2021.

# 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 22. Board Licensed Professionals and Certified Specialists

| Year | RPFs | CRMs |
| --- | --- | --- |
| 2016 | 1194 | 85 |
| 2017 | 1161 | 84 |
| 2018 | 1132 | 88 |
| 2019 | 1126 | 89 |
| 2020 | 1105 | 86 |

#### Professional Discipline

Most professional disciplinary matters are confidential in nature. They are handled administratively and generally do not culminate in a hearing before an Administrative Law Judge and/or the Board. In 2020, the Professional Foresters Examining Committee (PFEC) received no complaints.

#### 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 2020 calendar year, the Board deliberated and acted on seven 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

USDM: 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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# APPENDIX A: 2020 Standing Committee Accomplishments and 2021 Priorities:

# Forest Practice Committee (FPC)

*The mission of the FPC is to evaluate and promote an effective regulatory system to assure the continuous growth and harvesting of commercial forests and to protect soil, air, fish and wildland, and water resources.*

***Management Committee (Committee)***

*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 forest and rangelands.*

***Resource Protection Committee (RPC)***

*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.*

1. Note: Data for this period were not found presented at the same fine scale used for the annual data, Figures 9 and 11. [↑](#footnote-ref-2)
2. The Y-axis of the figure is percent of April 1st 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. [↑](#footnote-ref-3)