
SENATE COMMITTEE ON NATURAL RESOURCES AND WATER

Senator Henry Stern, Chair
2021 - 2022 Regular

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Author:	Frazier		
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Consultant:	Catherine Baxter		

Subject: Forestry: forest carbon and resilience goals

BACKGROUND AND EXISTING LAW

Existing law establishes the California Department of Forestry and Fire Protection (CalFire) in the California Natural Resources Agency (CNRA). CalFire is responsible for, among other things, fire protection and prevention, as provided.

Catastrophic and devastating wildfires have occurred repeatedly in the state in recent years. In 2020 alone, over 8,000 wildland fires burned almost 4.4 million acres breaking the previous record of 1.8 million acres set in 2018. Five of the six largest fires in the state's modern history burned at the same time in 2020. In the last five years from wildland fire, tens of thousands of structures – almost entirely homes - have been destroyed, insured losses incurred are in the billions of dollars, prime habitat has been damaged, and, tragically, hundreds of lives have been lost. Further, millions have been exposed to unhealthy air quality from wildfires. According to the Air Resources Board (ARB), greenhouse gas (GHG) emissions from wildfires in the last year are on the order 112 million metric tons of carbon dioxide.

While fires have always been present in the state, the number of days with extreme fire risk has more than doubled in the last 40 years. This is likely to continue to increase, and one of the impacts of climate change in the state is an increase in the frequency and intensity of wildfires. In forested regions, decades of fire suppression, historic logging practices and drought have produced unhealthy forests. In some forests, the current tree density is up to an order of magnitude greater than the density a century ago which increases the likelihood of damaging high-intensity fire when it burns. Further, communities have continued to expand into forested and other areas at high risk of wildland fire, increasing the risk of wildfire.

The Forest Carbon Plan, released in May 2018 under Governor Brown, called for an increase in the pace and scale of forest and watershed improvements. This plan recommended six overarching goals and 30 subgoals to “reverse historic adverse trends and firmly establish California’s forests as a more resilient and reliable long-term carbon sink, rather than a GHG and black carbon emission source.” Also in May 2018, Governor Brown issued Executive Order B-52-18 to combat tree mortality, increase the ability of our forests to capture carbon, and systematically improve forest management. The Executive Order’s direction aligned with recommendations in the Forest Carbon Plan. That same year, SB 901 (Dodd, Chapter 626) sought to significantly augment funding across multiple programs to implement the goals of the Forest Carbon Plan, including, related to forest health, fire prevention, and fuel reduction.

In January 2021, the Forest Management Task Force released the Wildfire and Forest Resilience Action Plan (Action Plan). The Action Plan seeks to “strategically accelerate” efforts to restore the health and resilience of the state’s forests, grasslands, and natural places; improve the fire safety of communities in the state; and sustain the economic vitality of rural forested areas. The Action Plan includes four principal goals, 22 sub-goals, and almost 100 key actions to implement the goals. The Action Plan is careful to note that while it uses the term “forest” throughout, that “forests include woodlands, grasslands, chaparral, shrublands and related vegetation types that yield both ecological and community benefits.” The Action Plan states that each of the vegetation types offers different benefits, faces different risks from fire, and, therefore, require different management strategies.

PROPOSED LAW

This bill would establish specified state goals for fuel treatment and vegetation management contained in the California Forest Carbon Plan and the Wildfire and Forest Resilience Action Plan. Specifically, the bill would:

- 1) Establish as state goals for fuel treatment and vegetation management all of the following:
 - a) Increase forest restoration and fuels treatment to 100,000 acres per year by 2025.
 - b) Increase the area reforested annually by 25 percent above 2018 levels.
 - c) By 2025, expand areas of high priority habitat by 5 percent above current levels, as provided in the “State Wildlife Action Plan.”
 - d) Increase vegetation management to 500,000 acres per year on nonfederal lands by 2025.
 - e) Urge the federal government to achieve similar treatment levels on federal lands.
 - f) Expand wood products manufacturing in the state.
 - g) Increase carbon storage through increased use of durable wood products in buildings.
 - h) Streamline the planning and permitting for forest restoration and forest health projects.
 - i) Develop a comprehensive program to assist private forest landowners.
 - j) Increase by 10 percent the acreage of forest land protected by conservation easements that include specific management objectives to maintain and improve forest health and reduce the risk of wildfire, as specified. Further require conservation easements to focus on areas that can effectively sequester and store resilient carbon while providing wildlife habitat, protecting watershed values, and supporting other forest ecosystem benefits.
 - k) By 2030, significantly increase California’s urban tree canopy, targeting disadvantaged and low-income communities and low-canopy areas.
- 2) Provide that all vegetation management goals established in this bill shall be for activities that improve the fire resiliency of the landscape where they are conducted and reduce the fire spread, duration, and intensity, fuel ignitability, or ignition of tree crowns, as applicable.

- 3) Require, on or before January 1, 2023, and annually thereafter, CNRA and CalEPA to submit a report to the appropriate policy and budget committees of the Legislature on progress made towards achieving the goals in the bill.
- 4) Adopt findings and declarations, including related to:
 - a) The increasing intensity, destructiveness, and deadliness of wildfires, the resulting greenhouse gas emissions and impacts on air quality, and the utility of vegetation management and fuels treatment strategies to reduce or avoid greenhouse gas emissions associated with wildfires.
 - b) The codification of the goals outlined in the California Forest Carbon Plan and the California's Wildfire and Forest Resilience Action Plan will elevate the importance of reducing emissions of greenhouse gases and criteria pollutants from the forest and wildland sector commensurate with the urgency of achieving those goals.

ARGUMENTS IN SUPPORT

According to the author, "In the past several decades, wildfires have increased in intensity and destructiveness throughout the state of California, increasing from an average of about 60,000 acres annually between the 1950s and 1990s to more than 1 million acres annually this decade. The condition of California's forests have led to higher intensity wildfires that are far more destructive than the low intensity fires that were once commonplace when the forests and wildlands were in a more ecologically beneficial, resilient condition.

Wildfires in California have also become significant sources of greenhouse gas emissions. In 2020, wildfires across the state burned more than 4 million acres and released more than 90 million metric tons of greenhouse gas emissions, according to preliminary estimates. In fact, studies have shown that more than half of all small particle air pollution in the western United States in recent years has come from high severity wildfires, which includes emissions of black carbon.

In 2018, a broad representation of local, state and federal agencies finalized the California Forest Carbon Plan to set goals for the treatment of California's forests to prevent and reduce greenhouse gas emissions from high severity wildfires while promoting carbon sequestration in forests and wildlands. The Plan is the result of several years of careful collaboration and includes vegetation management and fuels treatment strategies such as prescribed fire, mechanical thinning and woody biomass utilization, all of which have been widely scientifically recognized to reduce greenhouse gas emissions associated with high severity wildfires.

While often cited as a roadmap for reducing emissions from California's devastating wildfires, the California Forest Carbon Plan has no statutory authority behind it and has not been nearly as effective as it could in helping California meet its greenhouse gas reduction goals. By codifying various goals of the California Forest Carbon Plan, AB 1431 would stress the urgency of reducing greenhouse gas emissions from wildfires while placing accountability on the agencies responsible for implementing programs and projects to meet those goals. AB 1431 would also allow the Legislature greater oversight by requiring CNRA and CalEPA to report annually on the progress of meeting the goals outlined in the Plan."

Pacific Forest Trust (PFT) supports the bill but recommends updating the language to reflect goals established in more recent planning process, including the Wildfire and Forest Resilience Action Plan. Further, implementation of the Action Plan and any goals in the bill should reflect related efforts that seek to restore health and resilience to our landscape, while mitigating climate change, preparing for climate impacts, and protecting our native biodiversity. This includes the goals and strategies in Executive Order N-82-20, the next update to the Safeguarding California Plan, and the next update to the Scoping Plan.

ARGUMENTS IN OPPOSITION

None received.

COMMENTS

The two plans are proactive and potentially far-reaching. The Forest Carbon Plan and the Action Plan represent substantial coordination and effort that brought together diverse sets of public and private stakeholders. Both seek to provide a long-term guide for the state in improving forest and watershed health and reducing the risk of catastrophic wildfire. There is substantial overlap between the two plans in the findings and recommendations. There is merit in codifying some of the key goals with regular reporting to the Legislature on progress made on those goals in order to help ensure appropriate legislative oversight of actions planned or taken, and to help ensure that legislative priorities are addressed.

That being said, while there is substantial overlap between the two plans, the exact recommendations on some issues differ, reflecting evolving thinking and priorities. If the bill moves forward, the Committee may wish to amend the bill to match any goals that appear in both plans to the version of those goals in the Action Plan to better align with the state's current policies and commitments, including within the budget. One exception to this is the urban forestry goal - the Forest Carbon Plan has a measurable goal to increase urban tree canopy by 10% above 2018 levels by 2030; the Action Plan simply recommends increasing urban tree canopy. Staff recommends adopting the measurable goal. Further, the Committee may wish to amend those goals where the language differs slightly from the actual goal in the relevant plan to better match that goal. (*See proposed Public Resources Code (PRC) section 4599, subdivision (a)*)

Home hardening. Communities have continued to expand into forested and other areas at high risk of wildland fire. Although relatively small in area, millions of homes and approximately 25% of the state's population lives in the wildland-urban interface (WUI) – loosely defined as a zone where development intermingles with undeveloped vegetative fuels. Expansion in these areas has increased the number of people and homes more likely to be affected by wildfire. Further, most of these homes were constructed long before the advent of the WUI building code. Loss experience has shown that these un-hardened homes are far more likely to be lost in conflagrations such as those that occurred in Santa Rosa in 2017, and Paradise in 2018.

Home hardening and vegetation management are key to a structure's ability to survive a wildfire. The Action Plan includes an action item to expand home hardening programs through the development of a statewide program for cost-effective structure hardening and retrofitting to create fire-resistant homes, businesses, and public buildings. It does

not include a specific home hardening goal, but a recent report from Stanford titled *A New Strategy for Addressing the Wildfire Epidemic in California* recommended the state harden up to 100,000 homes per year to achieve the scale necessary to make a difference. The report estimated this would cost around \$500 million per year.

Home hardening is an important component of a holistic set of forest and wildfire goals, as proposed by this bill. If the bill moves forward, the Committee may wish to amend the bill to adopt the goal recommended in the Stanford report in a manner that prioritizes hardening homes for the most vulnerable communities. (See *PRC 4599(a)(12) and (b)(3)*)

Other goals? As noted previously, the Forest Carbon Plan includes six overarching goals and 30 subgoals and the Action Plan includes four principal goals, 22 sub-goals, and almost 100 key actions. This bill would adopt 11 goals (12 with proposed amendments). Other goals not addressed in this bill include:

- Mobilizing regional action plans
- Increasing fuel breaks
- Improving utility-related wildfire risk
- Creating fire-safe roadways
- Reducing the health impacts of smoke
- Integrating forest management into state climate and biodiversity strategies
- Sustaining and expanding outdoor recreation on forestland
- Utilizing best available science and accelerating applied research
- Expanding and improving monitoring, reporting, and decision-support tools

Comparison to other bills. SB 456 (Laird) requires the Forest Management Task Force to develop a comprehensive implementation strategy to achieve the goals and key actions from the Action Plan. The bill also requires the task force to annually report on the progress made achieving those goals and actions. With staff's recommended amendments to align AB 1431 with the goals in the Action Plan, there may be an opportunity to align these two bills. As both bills move forward, the authors may wish to work together to better ensure alignment and avoid duplicative requirements – like the overlapping reporting requirements.

Vegetation management across various ecosystems. Different ecosystems of the state, among the most biodiverse places on earth, require different approaches for effective management. For example, low-intensity fires can have ecological benefits in conifer forests, like creating habitat and germinating the seeds of certain species of plants. Low-intensity fires in these ecosystems can also remove surface fuels, and, therefore, decrease the likelihood of high-intensity fire later. However, other types of vegetation – such as coastal sage scrub and chaparral – may more effectively benefit from other types of treatments and restoration efforts. Thinning and too frequent fire in chaparral ecosystems, for example, may lead to losses of dominant, native plant species and allow invasive, highly flammable species to move in, ultimately increasing wildfire risk.

If the bill moves forward, the Committee may wish to amend the bill to require implementation of the vegetation management goals to meet certain standards,

including to require that the type of treatment be appropriate to each ecosystem, as determined by the best available science, and to require treatments to be designed and implemented in a manner that avoids type conversion. *(See proposed PRC section 4599(b)(2)(A)-(B))*

Prioritizing treatments that reduce risks for communities. The bill includes a requirement that implementation of the vegetation management goals target activities that improve the fire resiliency of the landscape where they are conducted and reduce the fire spread, duration, and intensity, fuel ignitability, or ignition of tree crowns, as applicable. This seeks to reduce the chance of catastrophic, destructive wildfires that degrade forest health. If the bill moves forward, the Committee may wish to further expand on this direction to require the Administration to prioritize treatments in those areas that provide the greatest risk reductions to populations and communities most at risk of and vulnerable to wildfire. This would include treating areas around existing communities in very high fire hazard severity zones in order to protect people, property, and infrastructure. *(See proposed PRC section 4599(b)(2)(C))*

Related legislation.

SB 63 (Stern, 2021) would make multiple changes to state law to enhance fire prevention efforts by CAL FIRE, including, among other things, improved vegetation management, and expanding the areas where fire safety building standards apply *(This bill is pending before the Assembly Housing and Community Development Committee.)*

SB 456 (Laird, 2021) would require the implementation and regular updating of the Action Plan, the alignment of the Action Plan's goals and key actions within the state's climate adaptation and resiliency framework, as provided, and annual reporting of progress, among other things. *(This bill is pending before the Assembly Natural Resources Committee.)*

SUGGESTED AMENDMENTS

Amend the bill as follows:

4599. (a) Building upon the objectives outlined in the "California Forest Carbon Plan: Managing Our Forest Landscapes in a Changing Climate" released by the Forest Climate Action Team in May of 2018 and the "California's Wildfire and Forest Resilience Action Plan" released by the Governor's Forest Management Task Force in January of 2021, the Legislature hereby establishes as state goals for fuel treatment, ~~and~~ vegetation management, and wildfire risk reduction all of the following

(1) ~~Increase forest restoration and fuels treatment~~ Utilize all fuels reduction methods to treat up to 100,000 acres per year on nonfederal lands by 2025, in support of the goal specified in paragraph (4).

(2) Increase the area reforested annually by 25 percent above 2018 levels.

(3) By 2025, expand areas of high priority habitat by 5 percent above ~~current~~ 2018 levels, as provided in the "State Wildlife Action Plan."

(4) Increase vegetation management to 500,000 acres per year on nonfederal lands by 2025.

(5) Urge the federal government ~~to achieve similar treatment levels~~ increase vegetation management to 500,000 acres per year on federal lands

(6) ~~Expand~~ Create a sustainable wood products ~~manufacturing~~ market in the state.

(7) Increase carbon storage through increased use of durable wood products in buildings.

(8) ~~Streamline the planning and permitting for forest restoration and forest health projects.~~ Improve regulatory processes to increase the pace and scale of ecological restoration and stewardship.

(9) Develop a comprehensive program to assist private forest landowners.

(10) Increase by 10 percent above 2018 levels by 2030 the acreage of forest land protected by conservation easements that include specific management objectives to maintain and improve forest health and reduce the risk of wildfire through the promotion of a more natural tree density, to make improvements that increase the land's ability to increase carbon sequestration, and to provide for the retention of larger trees and growth of larger trees over time. Conservation easements shall focus on areas that are threatened by development and that can effectively sequester and store resilient carbon while providing wildlife habitat, protecting watershed values, and supporting other forest ecosystem benefits.

(11) By 2030, ~~significantly~~ increase California's total urban tree canopy by 10 percent above 2018 levels, targeting disadvantaged and low-income communities and low-canopy areas, with a preference for planting species and varieties that are resilient to the impacts of climate change.

(12) Increase the pace and scale of home hardening efforts to harden at least 100,000 existing homes per year by 2025.

(b)(1) All vegetation management goals established in this article shall be for activities that improve the fire resiliency of the landscape where they are conducted and reduce the fire spread, duration, and intensity, fuel ignitability, or ignition of tree crowns, as applicable.

(2) The state shall implement, or cause to be implemented, the vegetation management goals established in this article in the following manner:

(A) The type of treatment shall be appropriate to each ecosystem, as determined by the best available science.

(B) Treatments of chaparral, coastal sage scrub, and other native shrublands shall:

(i) Be designed, implemented, and maintained to avoid type conversion and the spread of invasive and non-native species. For purposes of this section, type conversion means an outcome in which a significant reduction or extirpation of the dominant native plant species occurs as a result of treatments that provide opportunities for non-native species to colonize and spread due to disturbance events, including fire and vegetation removal.

(ii) Consist solely of removal of flammable non-native, invasive species, restoration of native species in damaged or type-converted vegetation, the creation or maintenance of defensible space of 100-ft around structures or communities, the creation or maintenance of strategic fuel breaks within 1,000 feet of communities at risk, ignition

control along roadways, or maintenance of fire roads that provide firefighting access to communities.

(C) The state shall prioritize treatments in areas that provide the greatest risk reductions to the most vulnerable communities.

(3) The state shall implement, or cause to be implemented, the home hardening goal in paragraph (12) of subdivision (a) in a manner that prioritizes hardening homes for the most vulnerable communities.

(c) Notwithstanding Section 10231.5 of the Government Code, on or before January 1, 2023, and annually thereafter, the Natural Resources Agency and the California Environmental Protection Agency shall submit a report to the appropriate policy and budget committees of the Legislature on progress made towards achieving the goals described in subdivision (a).

SUPPORT

Rural County Representatives of California (sponsor)
Association of California Water Agencies
California Farm Bureau Federation
Humboldt Redwood Company LLC
Little Hoover Commission
Pacific Forest Trust

OPPOSITION

None received.

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