
SENATE COMMITTEE ON ENVIRONMENTAL QUALITY

Senator Allen, Chair

2019 - 2020 Regular

Bill No: AB 2954
Author: Robert Rivas
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Urgency: No
Consultant: Eric Walters

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Fiscal: Yes

SUBJECT: California Global Warming Solutions Act of 2006: climate goal: natural and working lands

DIGEST: This bill tasks the Air Resources Board (ARB) with setting, as part of the 2022 Scoping Plan Update, an overall climate goal for the state's natural and working lands (NWLs), which will support the state's efforts to achieve carbon neutrality and climate resilience. Also tasks ARB with other logistical and coordination considerations in achieving that goal.

ANALYSIS:

Existing law:

- 1) Establishes the Air Resources Board (ARB) as the air pollution control agency in California and requires ARB, among other things, to control emissions from a wide array of mobile sources and coordinate, encourage, and review the efforts of all levels of government as they affect air quality and GHG emissions. (Health and Safety Code (HSC) § 39500 et seq.)
- 2) Requires ARB to ensure that statewide GHG emissions are reduced to at least 40% below the 1990 level by December 31, 2030 (i.e., SB 32); and allows ARB, until December 31, 2030, to adopt regulations that utilize market-based compliance mechanisms (i.e., the cap-and-trade program) to reduce GHG emissions. (HSC §§ 38566, 38562)
- 3) Requires ARB to prepare and approve a scoping plan to achieve maximum technologically feasible and cost-effective reductions in GHG emissions at least once every five years, as specified. (HSC §38561)
- 4) Restricts, under AB 398 (E. Garcia, 2017), ARB to only adopting rules and regulations that are consistent with the most recent scoping plan update.
- 5) States that it is the policy of the state that the protection and management of natural and working lands, as defined, is an important strategy in meeting the

state's GHG emissions reduction goals, and that the protection and management of those lands can result in the removal of carbon from the atmosphere and the sequestration of carbon in, above, and below the ground. (Public Resources Code (PRC) § 9001 et seq.)

- 6) Tasks the California Environmental Protection Agency (CalEPA), working with the California Department of Food and Agriculture (CDFA), Department of Forestry and Fire Protection (CalFIRE), and the Forest Management Task Force, with promoting a goal of reducing at least five million metric tons of greenhouse gas emissions per year through the development and application of compost on working lands, which include, but are not limited to, agricultural land, land used for forestry, and rangeland.

This bill:

- 1) Makes findings and declarations about California's stake and actions in global climate change.
- 2) Defines "natural lands" and "working lands" for this section of the Health and Safety Code.
- 3) Declares that it is the intent of the Legislature that:
 - a) All policies and programs undertaken to achieve carbon neutrality seek to improve air quality and support the health and economic resiliency of urban and rural communities, particularly low-income and disadvantaged communities.
 - b) All policies and programs undertaken to achieve carbon neutrality be implemented in a manner that supports climate adaptation and biodiversity, including the protection of the state's water supply, water quality, and native plants and animals.
 - c) State agencies engage the support, participation, and partnership of universities, businesses, investors, and communities, as appropriate, to achieve greenhouse gas emissions reductions goals
- 4) Requires ARB to, as part of the next scoping plan update, to:
 - a) Identify, by January 1, 2023, an overall climate goal for the state's NWLs, which will support the state's efforts to achieve carbon neutrality and

climate resilience.

- b) Identify practices, policy incentives, and potential reductions in barriers that would help achieve that goal.
- c) Integrate opportunities to enhance other specified far-reaching benefits.
- d) Develop methods for state agencies to track GHG emission reductions, carbon sequestration, and cobenefits from NWLs over time.

Background

- 1) *Natural and Working Lands*. California's natural and working lands include rangelands, forests, woodlands, wetlands, grasslands, shrubland, farmland, riparian areas, and urban green space. They cover more than 90 percent of the State and supply life-sustaining resources including clean water, air, food, and fiber. With their potential to sequester carbon, reduce GHG emissions, and increase the capacity for California to withstand inevitable climate impacts, these lands are a critical component of California's integrated climate change strategy. However, some sources show that California's natural and working lands are a net GHG source, losing more carbon than they are sequestering, with wildfire being the largest cause of carbon loss. A number of entities in California's executive branch are developing policy and implementing programs to mitigate disturbances on natural and working lands and protect these lands from conversion to more intensive land uses.
- 2) *NWLs in ARB's 2017 Scoping Plan*. Pursuant to the AB 32 requirement that ARB prepare (and update every five years) a Scoping Plan to achieve the maximum technologically feasible and cost-effective reduction of GHG emissions, ARB released the latest update of the Scoping Plan in 2017. Among other topics and GHG emission sources, the 2017 Scoping Plan discussed NWLs in some depth. Briefly, the 2017 Scoping Plan set the following objectives for NWLs in California: (1) to maintain them as a resilient carbon sink (i.e., net zero or negative GHG emissions), and (2) to minimize the net GHG and black carbon emissions associated with management, biomass disposal, and wildfire events to 2030 and beyond. To achieve these objectives, the Scoping Plan called for the participation of CNRA, the California Department of Food and Agriculture (CDFA), the California Environmental Protection Agency (CalEPA), and ARB to produce a draft 2030 Natural and Working Lands Climate Change Implementation Scoping Plan.

- 3) *The Draft 2030 NWL Climate Change Implementation Plan.* As directed by ARB's 2017 Scoping Plan Update, the 2030 NWL Climate Change Implementation Plan (Plan) was released in January 2019 and is designed to reduce GHG emissions and to cultivate net carbon sequestration potential for California's natural and working lands. To prepare the Plan, ARB worked with CalEPA, CNRA, CDFG, and the Strategic Growth Council to ensure findings and recommendations reflected the intersectionality of the challenges from and required responses to climate change.

The Plan describes the need for a NWL strategy, directives to set a 2030 GHG reduction goal for NWL, a 2030 pathway for significantly increasing state-supported NWL actions, and other next steps. The Plan proposes an increase in State-led conservation, restoration, and management activities from two to five times above current levels, to achieve a level of effort commensurate with that invested in other sectors of California's climate change portfolio.

At the board meeting on April 23, 2020, ARB announced their intention to fold the Plan into the 2022 update to the Scoping Plan.

- 4) *Counting carbon.* Quantifying carbon flows in and out of a source is challenging in any real-world circumstance, and it becomes particularly difficult with natural sources. It is important to ensure the removal is relatively permanent, and represents a true removal of carbon from the atmosphere. AB 2954 tasks ARB with developing methods that can be used by state agencies to quantify sequestered carbon.

CNRA, in collaboration with ARB, CDFG CalEPA, and the Governor's Office of Planning and Research (OPR), are engaged in development of the California Natural and Working Lands Carbon and Greenhouse Gas (CALAND) model. The model is being developed by Lawrence Berkeley National Laboratory (LBNL) under contract to CNRA, and began development in August 2016. CALAND is a data-driven, empirical model of the California landscape carbon budget and associated GHG emissions. It considers ecosystem carbon exchange, wildfire, land use based cover change, and a suite of management practices. Annual emissions of carbon dioxide, methane, and black carbon are calculated based on the respective carbon pathways within the overall carbon budget. The utilization of forest biomass for wood products and bioenergy is also included, and their respective emissions are also quantified. A first iteration of the model was used for the 2017 Scoping Plan Update, and an updated model will likely be used as part of the 2022 Scoping Plan Update as well.

- 5) *Carbon in forests.* In 2018, the Forest Climate Action Team (comprised of members from CNRA, CalEPA, CalFIRE, ARB, and numerous other agencies) released the California Forest Carbon Plan. It describes forest conditions across California based on the best available information and provides a projection of future conditions given the ongoing and expected impacts of climate change. It also describes goals and related specific actions to improve overall forest health, enhance carbon storage resilience, increase sequestration, and reduce GHG emissions, and provides principles and policies to guide and support those actions.
- 6) *Carbon neutrality.* Achieving “carbon neutrality”—a state where GHG emissions either reach zero or are entirely offset by equivalent atmospheric carbon removal—is essential in all scenarios that would keep Earth’s average temperature within 1.5°C of its historical average. The sooner carbon neutrality is reached globally, the less warming will be experienced. The effects of global warming to date have been felt the world over, but the most dire consequences have often struck those least able to defend themselves. Should carbon neutrality be delayed and rapid warming allowed to continue, experts predict unprecedented numbers of deaths, ecosystem destruction, and human migration.

In California, carbon neutrality by 2045 was set as a goal for the state under Governor Brown’s Executive Order B-55-18. This executive order was issued the same day in 2018 as then-Senator Kevin de Leon’s SB 100, which requires 100% zero-carbon electricity by 2045, was signed into law. While the goal enshrined in EO B-55-18 exceeds the requirement in SB 100 (e.g. economy-wide carbon-neutrality, as opposed to only electricity generation), it also did not carry the force of law. These twin 2045 goals were relatively novel at the time and helped raise the bar worldwide. Recently, Democratic Party presidential candidate Joe Biden announced a clean energy plan calling for 100% clean electricity by 2035 – surpassing California’s ambitious SB 100 goal by a decade. The continued acceleration of clean energy and carbon neutrality goals by cities, states, and countries reflects the reality of observed climate change impacts, and the dire calls of climate scientists.

Although there is widespread consensus on the need for eventual carbon neutrality, the path to achieving it still has many open questions. Some have simple answers: what should be decarbonized? As much of the economy as can be. When should we decarbonize? As soon as feasibly possible. Other questions, like “who should lead decarbonization efforts?”, or “how should we prioritize carbon neutrality in different sectors?” are more challenging.

Comments

- 1) *Purpose of Bill.* According to the author, “AB 2954 would require the California Air Resources Board (CARB) to work in collaboration with relevant state agencies to set an overall climate goal for the State’s natural and working lands to capture carbon, while identifying best practices and policy incentives to achieve that goal. This bill builds off California’s landmark environmental law, AB 32: the California Global Warming Solutions Act of 2006, which established a comprehensive program to reduce greenhouse gas emissions from all sources in our state. AB 32 requires the CARB to develop a Scoping Plan every five years that describes the approach our state will take to reduce greenhouse gasses.

“In preparation for the next scoping plan update in 2022, AB 2954 calls on the CARB to incorporate and set an overall climate goal for the State’s natural and working lands. This effort will ensure the next Scoping Plan fully considers and leverages the huge power of our State’s natural and working lands, which comprise over 90% of California’s landscape, in achieving our ambitious greenhouse gas emission goals. The 2017 Scoping Plan projected that State-funded efforts to establish programs to capture carbon could result in cumulative emissions reductions of - 36.6 to 11.7 million metric tons of carbon by 2045, equivalent to removing the emissions from about 2.5 to 8 million passenger cars.

“Yet, there is a lack of State-funded programs to spearhead this effort. The priority California places on stewarding and conserving these lands will help determine how well we fight climate change and prepare for climate impacts that may take a dramatic toll on our environment and our communities. The decisions we make today will determine if our forests, rangelands, farms, wetlands and urban green spaces become an asset or a liability in the fight against climate change. AB 2954 does not create a land-use mandate, but is a basic, yet crucial step the State must take towards establishing a policy framework and setting a climate goal for our natural and working lands to achieve California’s greenhouse gas emission goals.”

- 2) *Codifying carbon neutrality.* AB 2954 would create the first reference to carbon neutrality in California statute, by requiring ARB’s next Scoping Plan Update to “Identify by January 1, 2023, an overall climate goal for the state’s natural and working lands to sequester carbon and reduce atmospheric greenhouse gas emissions. The climate goal shall support the state’s efforts to achieve carbon neutrality and resilience to climate impacts.” While AB 2954 does not detail what those carbon neutrality efforts are, nor dictate what the

carbon neutrality goal is, it would still represent the first explicit reference to carbon neutrality in California's codes.

- 3) *Compatible with ongoing work.* ARB will be releasing the next update of the Scoping Plan in 2022. While there are not yet scheduled public workshops for input, planning is no doubt underway. According to the Assembly Appropriations Committee analysis, "ARB costs are minor and absorbable. The deadlines and requirements are consistent with plans for the upcoming scoping plan update." So while there will likely be updates to ARB's NWL actions under the 2022 Scoping Plan Update with or without this bill, it is appropriate for the Legislature to input its specific priorities and considerations. Should stakeholders have further concerns with drafts of the Scoping Plan Update, public workshops will provide opportunities for further discussion of any issues.

Related/Prior Legislation

SB 1323 (Skinner, 2020) would have created the California Carbon Sequestration and Climate Resilience Project Registry, in order to maintain a list of eligible but unfunded projects, many of which would likely involve NWLs. SB 1323 was never heard in committee due to calendar constraints caused by the COVID-19 pandemic.

SB 1362 (Stern, 2020) would have required ARB to no later than July 1, 2021, adopt a comprehensive strategy to achieve carbon neutrality in the state by no later than December 31, 2045. SB 1362 was never heard in committee due to calendar constraints caused by the COVID-19 pandemic.

AB 2832 (C. Garcia, 2020) declared it the policy of the state to achieve carbon neutrality as soon as possible and no later than 2045, and also would have required ARB to work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward achieving carbon neutrality, and ensure that updates to the scoping plan identify and recommend measures to achieve carbon neutrality. AB 2832 was never heard in committee due to calendar constraints caused by the COVID-19 pandemic.

SOURCE: The Nature Conservancy

SUPPORT:

350 Sacramento
American Farmland Trust
Aromas Progressive Action League
Bear Yuba Land Trust
California Association of Resource Conservation Districts
California Climate & Agriculture Network (CALCAN)
California Compost Coalition
California Habitat Conservation Planning Coalition
California Releaf
Californians Against Waste
Carbon Cycle Institute
City of Watsonville
Climate Reality, Santa Clara County Chapter
Climate Resolve
Community Environmental Council
Community Nature Connection
Defenders of Wildlife
Eastern Sierra Land Trust
Ecology Action
Elders Climate Action Nor Cal Chapter
Environmental Defense Fund, Incorporated
Feather River Land Trust
Greenpower
Midpeninsula Regional Open Space District
National Audubon Society
Natural Resources Defense Council
Nature Conservancy
Pacific Forest Trust
Placer Land Trust
Plastic Recycling Corporation of America
Regeneración - Pajaro Valley Climate Action
Romero Institute
Roots of Change
San Diego 350
San Diego Climate Action Cam
Santa Clara Valley Open Space Authority
Santa Cruz Climate Action Network
Sierra Business Council
Sierra County Land Trust
Sierra Foothill Conservancy
Sierra Nevada Alliance
SLO Climate Coalition

Sonoma Land Trust
Truckee Donner Land Trust
Trust for Public Land

OPPOSITION:

African American Farmers of California
Agricultural Council of California
Almond Alliance of California
American Pistachio Growers
Calchamber
California Association of Wheat Growers
California Building Industry Association
California Cotton Ginners & Growers Association
California Farm Bureau Federation
California Fresh Fruit Association
California Grain and Feed Association
California Pear Growers
California Seed Association
Far West Equipment Dealers Association
Nisei Farmers League
Western Agricultural Processors Association
Western Growers Association
Western Plant Health Association

ARGUMENTS IN SUPPORT: According to the sponsor, The Nature Conservancy, “AB 2954 provides much needed policy direction and guidance to ensure that California’s forests, urban green spaces, rangelands, agricultural lands and wetlands are integrated into state plans and policies to support carbon neutrality and foster overall climate resilience ...

“While the state has taken some action to integrate natural and working lands in its overall climate strategies, much greater focus and cohesion is needed to ensure these resources are resilient and play a critical role helping the state achieve carbon neutrality and other important community benefits. Based on our analyses, the state’s natural and working lands – through changes in management, restoration and conservation, can provide up to 500 million metric tons of greenhouse gas reductions by 2050.”

ARGUMENTS IN OPPOSITION: According to a coalition of opposition groups, “Natural and working lands serve a valuable function in increasing carbon sequestration. However, such functions must work in tandem with, not against, their ability to provide economic benefits to the communities that depend upon

them. By their nature, some crops, some soil types, and some regions have higher abilities to sequester carbon than others. For example, orchards in the Central Valley may sequester more carbon than rotational row crops in the Salinas Valley, so row crops in that district would shoulder more of the burden of a statewide goal. If the provisions of AB 2954 lead to de facto mandates to maximize sequestration potential on natural and working lands, there is a concern that farmers and ranchers will be required to transition to crop types or cropping patterns, that yield the highest sequestration benefit, not what is agriculturally the most beneficial. This fails to contemplate the values of California's agriculture—its diversity, its abundance, and its much-needed jobs and support for local economies.

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