

**Vice-Chair**  
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# California State Assembly

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## NATURAL RESOURCES

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**LUZ RIVAS**  
CHAIR

### AGENDA

Monday, June 19, 2023  
2:30 p.m. -- State Capitol, Room 447

### BILLS HEARD IN SIGN-IN ORDER

**\*\* = Bills Proposed for Consent**

- |    |                 |            |  |
|----|-----------------|------------|--|
| 1. | <b>**SB 15</b>  | Grove      | Oil imports: air quality emissions data.   |
| 2. | SB 272          | Laird      | Sea level rise: planning and adaptation.   |
| 3. | <b>SB 390</b>   | Limón      | Voluntary carbon offsets: business regulation.   |
| 4. | <b>SB 394</b>   | Gonzalez   | Master Plan for Healthy, Sustainable, and Climate-Resilient Schools.                           |
| 5. | SB 414          | Allen      | Climate change: applications using hydrogen: assessment.                                       |
| 6. | <b>**SB 511</b> | Blakespear | Greenhouse gas emissions inventories.  |
| 7. | SB 665          | Allen      | Plastic waste: single-use plastics alternatives: working group.                                |
| 8. | <b>**SB 675</b> | Limón      | Prescribed grazing: local assistance grant program: Wildfire and Forest Resilience Task Force. |
| 9. | SB 728          | Limón      | Plastic gift cards: prohibition.   |



Date of Hearing: June 19, 2023

ASSEMBLY COMMITTEE ON NATURAL RESOURCES

Luz Rivas, Chair

SB 15 (Grove) – As Amended May 1, 2023

**SENATE VOTE:** 40-0

**SUBJECT:** Oil imports: air quality emissions data.

**SUMMARY:** Requires the Air Resources Board (ARB) to report greenhouse gas (GHG) emissions data associated with oil transported in California and requires the Geologic Energy Management Division (CalGEM) to make available air quality emissions data associated with the transportation of imported oil.

**EXISTING LAW:**

- 1) Pursuant to Executive Order N-79-20, requires ARB to evaluate how to phase out oil extraction by 2045 through the climate change scoping plan, the state's comprehensive, multi-year regulatory and programmatic plan to achieve required reductions in GHG.
- 2) Requires GHG emissions to be reduced at least 85% below the 1990 level by 2045, and establishes a goal of zero net carbon emissions by 2045, commonly known as carbon neutrality. (Health and Safety Code 38562.2)
- 3) Requires, pursuant to the Petroleum Industry Information Reporting Act of 1980 (PIIRA), refiners to report monthly to the State Energy Resources Conservation and Development Commission (CEC) specified information for each of their refineries, including the origin of petroleum receipts and the source of imports of finished petroleum products. (Public Resources Code (PRC) 25353-25354)
- 4) Establishes CalGEM in the Department of Conservation to regulate the drilling, operation, maintenance, and abandonment of oil and gas wells in the state. (PRC 3000, et seq.)

**THIS BILL:**

- 1) States the intent of the Legislature that the CEC monitor foreign countries that export oil to California and identify on its internet website which of those countries have demonstrated human rights abuses, as documented by the United States Department of State, and which of those countries have lower environmental standards for the production of oil than California.
- 2) Requires ARB to annually produce an assessment of the GHGs associated with the transportation of oil in California. Requires the assessment be made available on ARB's internet website. Requires the assessment to include all of the following:
  - a) An estimate of the GHGs associated with the transportation of oil in this state for oil imported into the state during the previous year broken down by the country of origin;
  - b) An estimate of the GHGs associated with the transportation of oil in this state for oil produced within the state during the previous year;

- c) A description of the methodology and assumptions used to produce the assessment; and,
  - d) A citation or link to the data used to produce the assessment.
- 3) Requires the CEC to annually provide specified data to ARB for the purposes of the assessment.
  - 4) Requires the CalGEM to provide a link on its internet website to air quality emissions data associated with the transportation of oil imported into the state.

**FISCAL EFFECT:** According to the Senate Appropriations Committee, enactment of this bill will result in estimated ongoing costs of about \$435,000 annually (Oil, Gas, and Geothermal Administrative Fund) to ARB to calculate GHG and criteria emissions factors associated with the import, production, and export of oil in California; determine and revise pathway differences and emission rates for various countries; collaborate with the U.S. Environmental Protection Agency, CEC, and stakeholders; and, develop and publish a report, among other things.

**COMMENTS:**

1) **Author's statement:**

SB 15 simply asks whether California should be importing its oil from countries that do not share our values on human rights and environmental standards. The bill expresses the intent of the Legislature that the California Energy Commission report on the human rights records and environmental standards of the countries that we buy oil from. The measure would also require the Air Resources Board to report on its website the amount of particulate matter released into the air from tanker ship emissions from oil imported into the state. The bill is a recognition that California should not be importing oil from countries that do not share our California values. We can produce the oil we use, and keep the jobs and revenues inside our Golden State while protecting our environment.

- 2) **California's climate goals.** With the adoption of the California Global Warming Solutions Act of 2006 [AB 32 (Núñez), Chapter 488, Statutes of 2006], California has aggressively adopted GHG reduction targets to reduce the state's portfolio of climate emissions and facilitate emissions reductions across virtually every sector and region. But the impacts of climate change are still happening. Extreme heat, rising sea levels, ongoing drought, flooding, and wildfires have had direct impacts on public health, infrastructure, people's livelihoods, and local economies. The need to further reduce GHGs to spare the most significant impacts of climate change are critical to managing our resources and species' survival.

The recent Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) summarizes the latest scientific consensus on climate change. It finds that atmospheric concentrations of carbon dioxide have increased by 50% since the industrial revolution and continue to increase at a rate of two parts per million each year. By the 2030s, and no later than 2040, the world will exceed 1.5°C warming. In order to remain below 1.5°C, global net anthropogenic carbon (GHG) emissions need to reach net zero by 2050.

- 3) **California’s oil demand.** California is the 7th largest producer in the United States. California is the largest consumer of jet fuel and second-largest consumer of gasoline among the 50 states.

In 2021, California produced 151 million barrels of oil; imported 78 million barrels from Alaska (15% of the state’s total oil); and, imported more than 294 million barrels from foreign countries (56.2% of the state’s total oil use).

According to CEC data cited in ARB’s Draft Scoping Plan for 2022, the total oil extracted in California peaked at 402 million barrels in 1986, and has decreased by an average of six million barrels per year. This steadily decreasing production of crude in California is expected to continue as the state’s oil fields deplete.

A University of California, Santa Barbara, report estimated that under business-as-usual conditions, California oil field production would decrease to 97 million barrels in 2045. The business-as-usual model assumed no additional regulations limiting oil extraction in California. To meet energy demands, California is exponentially investing in renewable energy sources [such as renewable electricity (solar, wind) and hydrogen] that partially, and hopefully one day fully, displace the need for oil consumption.

- 4) **California’s oil imports.** According to the CEC, as of April 6, 2021, California imported oil from the following foreign countries:

<u>Country</u>	<u>Thousands of Barrels</u>	<u>% of Import</u>
Ecuador	52,563	17.69%
Saudi Arabia	48,781	16.42%
Iraq	46,963	15.8%
Brazil	23,852	8.03%
Guyana	23,741	7.99%
Colombia	18,845	6.34%
Russian	18,347	6.17%
Mexico	11,724	3.95%
Brazil	9,621	4.20%
Brunei	9,160	3.08%
Other	43,184	14.53%

Compared to 2019 (pre-pandemic) imports, when California imported more than 342 million barrels of oil, we’ve had a 13% decrease in foreign imports, but the amounts are still staggering.

Approximately 99% of crude imports into California are delivered by marine transportation. The remaining imports are transported by rail. There are no pipelines that bring crude oil into California from out of state. The GHGs associated with both oil tanker and rail are significant. It is estimated that 109 million metric tons of GHG emissions were driven by the transportation of global crude oil in 2018, approximately 8% of the total GHG emissions from the international shipping industry for that year. Researchers from Carnegie Mellon University and the University of Pittsburgh have found that the air pollution and GHG impacts of shipping crude by rail are nearly twice as large as those for oil pipelines.

The California Independent Petroleum Association (CIPA) argues that California's independent oil and natural gas producers are currently at a competitive disadvantage compared to imported crude oil. Foreign crude is exempt from California's strictest-in-the-world climate mitigation regulations that are applied to oil and natural gas extraction in California. The organization states that, as the climate crisis is a global one, reducing in-state production in favor of foreign production worsens the climate crisis and is counter-productive to California's climate goals.

- 5) **Human rights abuses.** SB 15 states the intent of the Legislature for the CEC to monitor foreign countries that export oil to California and identify which of those countries have demonstrated human rights abuses, as documented by the United States Department of State or by human rights organizations, and which of those countries have lower environmental standards for the production of oil than California.

CIPA notes that currently 42% of California's imports come directly from the Amazon Rainforest in Ecuador, arguing, "California should not be complicit in the destruction of the Amazon Rainforest when all of that oil could come from inside California, produced by responsible, accountable, and highly regulated California oil companies." Scientists say the rainforest is vital to curbing climate change because of the vast amount of GHG the forest absorbs, so razing it to produce oil is worsening the climate crisis exponentially.

The second largest exporter of oil into California is Saudi Arabia, a country which shares almost none of California's cultural values and has a track record of habitual and horrendous human rights abuses, particularly targeted at the LGBTQIA+ community.

While human rights abuses don't have a direct nexus to climate change or GHG reduction policy goals, the two can go hand in hand when considering the reasons for reducing imports from foreign countries that have different values than California when it comes to protecting the environment and its people. Countries that have less rigorous environmental regulations around oil extraction and refinement are creating human rights violations by putting humans in greater jeopardy of environmental pollution related to oil *and* climate change.

- 6) **This bill.** SB 15 would require ARB to produce an assessment of the GHGs associated with the transportation of oil in California using data from CEC, and require CalGEM to report on its website the amount of particulate matter released into the air from tanker ship emissions from oil imported into the state.

The ARB does not currently track air quality emissions specifically for the transportation of oil from tankers to California. This bill, however, will give ARB access to PIIRA data from CEC to get more granularity for tankers that import oil so that ARB can tease out with other data sources we use for emission inventory development to calculate the emissions related to oil transportation.

- 7) **Related legislation.** SB 1319 (Grove, 2022) was identical to SB 15. The bill was held in the Assembly Appropriations Committee.

## REGISTERED SUPPORT / OPPOSITION:

### Support

Associated Builders and Contractors of California  
California Independent Petroleum Association  
Championx/Norris Rods  
City of Taft  
County of Fresno  
County of Kern  
Geoguidance Drilling Services  
Global Elastomeric Products  
Greater Bakersfield Chamber of Commerce  
Halliburton Energy Services  
Hathaway  
Horizon Well Logging  
Innex California  
Kern Citizens for Energy  
Kern County Hispanic Chamber of Commerce  
Kern County Taxpayers Association  
Mission Oil Company  
Mmi Services  
Mountain View Resources  
Nisei Farmers League  
San Joaquin Facilities Management  
Senator Shannon Grove  
Strata Credit Union  
Trio Petroleum  
Tulare Chamber of Commerce  
Tulare County Economic Development Corporation  
Vaquero Energy  
West Side Recreation & Park District  
Westside Waste Management Co.  
Western States Petroleum Association

**Opposition**

None on file

**Analysis Prepared by:** Paige Brokaw / NAT. RES. /





Date of Hearing: June 19, 2023

**ASSEMBLY COMMITTEE ON NATURAL RESOURCES**

Luz Rivas, Chair

SB 272 (Laird) – As Amended June 6, 2023

**SENATE VOTE:** 37-1

**SUBJECT:** Sea level rise: planning and adaptation.

**SUMMARY:** Requires a local government in the coastal zone or within the jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC) to implement sea level rise planning and adaptation, as specified, and prioritizes funding for local government projects that meet the state’s goal for approval of the required plans, among other things.

**EXISTING LAW:**

- 1) Creates the California Sea Level Rise State and Regional Support Collaborative (Collaborative) within the Ocean Protection Council (OPC) to provide state and regional information to the public and support to local, regional, and other state agencies for the identification, assessment, planning, and, where feasible, the mitigation of the adverse environmental, social, and economic effects of sea level rise within the coastal zone, as provided. (Public Resources Code (PRC) 30972 (a)(1))
- 2) Establishes the Coastal Act, which provides for the planning and regulation of development within the coastal zone. (PRC 30000)
- 3) Requires local governments in the coastal zone to have a local coastal program (LCP) approved by the California Coastal Commission (Commission) for the local government’s land use plans. (PRC 30500)
- 4) Establishes BCDC to regulate the San Francisco Bay and the first 100 feet inland from the shoreline around the Bay. (Government Code 66620)

**THIS BILL:**

- 1) Finds and declares that BCDC adopted the Bay Adapt Joint Platform (Platform), which lays out a set of guiding principles, priority actions, and vital tasks whose implementation will enable the region to adapt faster, better, and more equitably to a rising San Francisco Bay.
- 2) Finds and declares that the Commission’s Local Government Working Group (Working Group) has affirmed its commitment to the development and advancement of tools that provide local flexibility for adaptation planning while also serving consistent statewide application of the California Coastal Act.
- 3) Requires a local government lying, in whole or in part, within the coastal zone or within the jurisdiction of BCDC to implement sea level rise planning and adaptation through submission of either of the following, as applicable:
  - a) An LCP to the Commission, subject to approval by the Commission consistent with the guidelines described in #8; or,

- b) A subregional San Francisco Bay shoreline resiliency plan to BCDC, subject to approval by BCDC, consistent with the guidelines described in #9.
- 4) Requires the sea level rise planning and adaptation to include, at a minimum, all of the following:
    - a) The use of the best available science;
    - b) A vulnerability assessment that includes efforts to ensure equity for at-risk communities;
    - c) A sea level rise adaptation plan;
    - d) Identification of lead planning and implementation agencies; and,
    - e) A timeline for updates, as needed, based on conditions and projections and as determined by the local government in agreement with the Commission or BCDC, as applicable, for the sea level rise planning and adaptation elements.
  - 5) Requires a timeline for sea level rise planning and adaptation updates to include, to the maximum extent practicable, applicable implementation approaches that build upon both of the following:
    - a) The sea level rise adaptation plan; and,
    - b) Economic analyses of, at a minimum, critical public infrastructure, as defined.
  - 6) States that it is the state’s goal to implement the requirements of this bill by January 1, 2029.
  - 7) Requires all local governments subject to the requirements of this bill to comply by January 1, 2034.
  - 8) Requires, on or before December 31, 2024, the Commission, in close coordination with the OPC and the Collaborative, to establish guidelines for the preparation of the sea level rise planning and adaptation. Requires the guidelines to recognize and build upon the baseline policies as described in the “Sea Level Rise Working Group: 2021 Work Products,” as published by the Commission on December 3, 2021.
  - 9) Requires, on or before December 31, 2024, BCDC, in close coordination with the Commission, OPC, and the Collaborative, to establish guidelines for the preparation of the sea level rise planning and adaptation required pursuant to this bill. Requires the guidelines to recognize and build upon the “guiding principles of the joint platform” as specified .
  - 10) Provides that this bill does not reduce, alter, or diminish the authority of a state agency.
  - 11) Requires a local government that receives approval by the Commission or BCDC on or before January 1, 2029, to be prioritized for sea level rise funding, upon appropriation by the Legislature, for the implementation of projects in the local government’s approved sea level rise adaptation plan.
  - 12) Provides that the operation of this bill is contingent upon an appropriation for its purposes by the Legislature in the annual Budget Act or another statute.

13) Defines terms used throughout the bill.

14) Provides that if the Commission on State Mandates determines that this act contains costs mandated by the state, reimbursement to local agencies and school districts for those costs shall be made pursuant to current law.

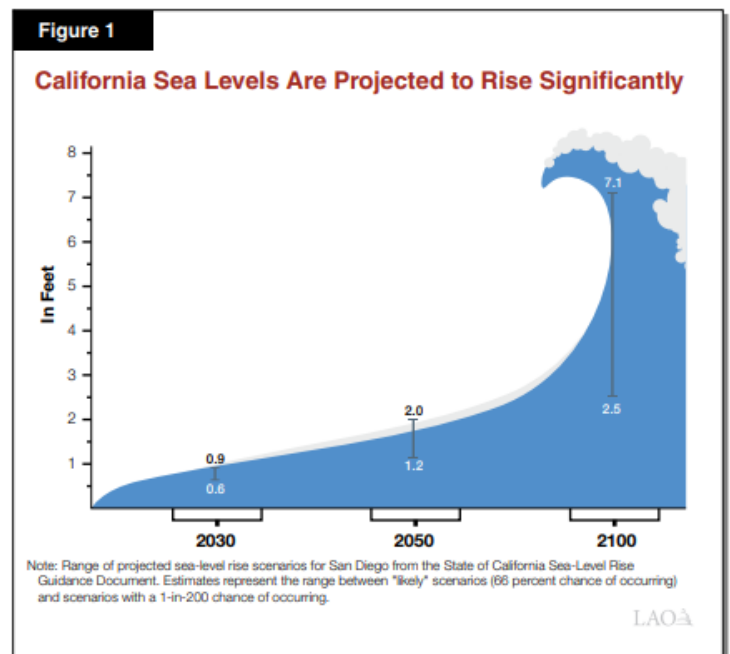
**FISCAL EFFECT:** According to the Senate Appropriations Committee, this bill would result in:

- \$3.04 million annually (various funds) in ongoing costs for BCDC for 14 positions as well as technical and outreach contracts to implement the provisions of this bill;
- \$3-\$3.8 million annually (General Fund or special fund) in ongoing costs for the Commission and 15-18 positions, which could be phased in over a period of three years at a rate of 5-6 positions per year, to implement the provisions of this bill;
- Minor and absorbable costs for OPC;
- Unknown, but significant cost pressure for the state to reimburse local governments due to a new state-mandated local program; and,
- Unknown, but likely very significant state cost savings due to lowered risk of loss or damage to state resources, mitigation of potential negative impacts on the state economy, and avoidance of some disaster response spending.

**COMMENTS:**

1) **Sea level rise.** In 2014, nearly 75% of California's population lived in coastal counties and along the state's 1,100 miles of mainland coastline and the San Francisco Bay's additional 500-mile shoreline. As the nation's largest ocean economy valued greater than \$44 billion/year, California has a significant portion of its economy concentrated on the coast, with a great majority of it connected to coastal recreation and tourism, ports and shipping. Many of the facilities and infrastructure that support this ocean economy, as well as the state's many miles of public beaches, lie within a few feet of the present high tide line.

Sea level rise, a consequence of a warming global climate, poses an immediate and real threat to coastal ecosystems, livelihoods and economies, public access to the coast, recreation, and the well-being and safety of coastal communities. Combined with episodic and extreme events such as storm surges and high tides, sea level rise and land subsidence directly affect Californians living in coastal and inland delta counties, increasing floods that disrupt services and infrastructure systems. The



sea level along the state's coastline is currently predicted to rise by about eight inches by 2050, and more than six feet by 2150 relative to levels in 2020. Additionally, the Fourth Climate Assessment also finds that statewide, \$17.9 billion worth of residential and commercial buildings could be inundated with just 1.7 feet of sea level rise. OPC's Strategic Plan for 2020-2025, approved in February 2020, includes the objective of ensuring California's coast is resilient to a minimum of 3.5 feet of sea level rise by 2050.

- 2) **Sea level rise planning at the Commission.** Updating LCPs to reflect changing climatic conditions, including to address sea level rise, is a complex process. Challenges include significant data and information needs, limited tools, lengthy analyses and planning processes, inadequate funding, unresolved disagreements between local and Commission staff, and legal uncertainties, among others, which have slowed or stalled local government and Commission efforts to update LCPs for sea level rise. Some jurisdictions have expressed concern about initiating LCP updates due to these challenges. However, many local governments have taken the first steps to conduct vulnerability assessments and adaptation plans to support policy development. Still others have developed policies to support their local sea level rise planning efforts that have been incorporated into LCPs adopted and certified by the Commission.

The Commission's Working Group is a collaboration between the Commission and local government partners and focused a significant amount of its effort on ways to improve the LCP process, particularly as it relates to updating LCPs to address sea level rise. Some existing LCPs have not been updated for 25 years or more.

In 2021, the Working Group released four work products – all considered “living documents” subject to updates: a framework for a phased approach to local coastal program updates for sea level rise; a call for regional approaches to resiliency and adaptation; an elevation and concurrence process to support efficient local coastal program updates; and, a quick-links reference document, including resources for sea level rise planning and local coastal program updates. The Working Group emphasized that all communities should analyze a range of sea level rise projections based on the best available science at the time of vulnerability assessment and adaptation plan development.

SB 272 would require a local government lying, in whole or in part, within the coastal zone to implement sea level rise planning and adaptation by submitting an LCP to the Commission consistent with the guidelines established by the Commission that recognize and build upon the baseline policies as described in the *Sea Level Rise Working Group: 2021 Work Products*.

- 3) **Sea level rise planning at BCDC.** BCDC's Bay Adapt and Adapting to Rising Tides is a non-regulatory, collaborative, and inclusive program that provides support for sea level rise vulnerability assessment and adaptation planning to be implemented by local governments in the Bay Area. It includes a complete regional-scale vulnerability assessment, a framework for prioritizing regional-scale adaptation planning, efforts to increase public participation and local capacity to engage in planning and implementation over long term and coordination with local partners to apply project results to related efforts, such as Metropolitan Transportation Commission's Horizon effort and Plan Bay Area 2050.

In October 2021, BCDC adopted the Platform, which provides a set of guiding principles for Bay Area adaptation, nine priority actions, and 21 tasks related to people, information, planning, funding, and permitting.

SB 272 would require a local government lying, in whole or in part, within BCDC's jurisdiction to implement sea level rise planning and adaptation by submitting a subregional San Francisco Bay shoreline resiliency plan to BCDC consistent with the guidelines established by BCDC that recognize and build upon the guiding principles of the Platform.

BCDC would use its Bay Adapt and Adapting to Rising Tides programs to work with stakeholders as it prepares the guidelines with the OPC, the Commission, and the Collaborative.

- 4) **Sea level rise planning at OPC.** OPC leads the State Coastal Leadership Group on Sea-Level Rise to create a near term plan to address sea level rise and its impacts in the state. In February 2022, the OPC released the State Agency Sea-Level Rise Action Plan for California (Action Plan). This collaborative plan both implements the state's 2020 sea level rise principles and helps to "guide unified, effective action toward sea level rise resilience for California's coastal communities, ecosystems, and economies."

The Action Plan includes more than 80 actions of both regional and statewide scope. Key Action Plan themes include: the entire coast of the state should be prepared and planning for sea level rise; sea level rise adaptation plans should lead to project implementation; sea level rise adaption planning should include pathways to resiliency to 3.5 feet of rise by 2050 and 6 feet by 2100; all sea level rise adaptation planning and projects should integrate and prioritize equity and social justice; nature-based solutions should be pursued when possible; coastal habitats, including wetlands, beaches, and dunes should be protected and conserved; and, forward thinking efforts should be incorporated.

Included is the action to launch the Collaborative, as required by SB 1 (Atkins) Chapter 236, Statutes of 2021, to support the identification, assessment, and planning necessary to avoid the environmental, social, and economic effects of sea level rise.

SB 272 would require a local government's sea level rise planning to incorporate best available science and adaptation strategies provided by the OPC.

- 5) **Equity.** Among the other requirements for the sea-level rise planning in the bill, a local government would need to include efforts to ensure equity for at-risk communities. There is no definition for at-risk community, but it is meant to include communities that are threatened by the impacts of sea level rise – which are virtually all coastal communities. At-risk communities would be identified through vulnerability assessments and the intent is to ensure that there is prioritization of adaptation and resilience planning for communities that are historically or currently under-resourced and/or will be disproportionately impacted.
- 6) **Timing.** The impacts of climate change are coming faster than predicted, and sea level rise modeling is an ever-changing science due to the exacerbating impacts on our oceans, glacial sea ice melt, oceanic weather conditions, etc. Local governments need to be fully engaged in planning for the impacts of climate change and sea level rise. However, updates to an LCP

can be a very time consuming and expensive process. Planning for sea level rise requires a lot of technical expertise and takes into account many different factors.

In consideration of that, the bill states that the aspiration is to have the plans submitted by 2029; however, the plans must be submitted by 2034.

SB 272 requires a local government to update its sea level rise planning on a timeline, as needed, based on conditions and projections, and as determined by the local government in agreement with the Commission or BCDC.

- 7) **State funding for regional climate planning.** This bill incentivizes local governments that receive sea level rise planning approval by the Commission or BCDC on or before January 1, 2029, to be prioritized for sea level rise funding, upon appropriation by the Legislature, for the implementation of projects in the local government's approved sea level rise adaptation plan. The bill is also only operational contingent upon an appropriation by the Legislature.

SB 1 requires, upon appropriation in the annual Budget Act, the Collaborative to expend no more than \$100 million annually from appropriate bond funds and other sources for the purpose of making grants to local and regional governments to update local and regional land use plans to take into account sea level rise and for directly related investments to implement those plans.

The 2021-22 Budget Act provided \$100 million over two years to OPC to implement SB 1 to fund the Collaborative that would provide information and support to local, regional, and state agencies in identifying, assessing, planning for, and mitigating the effects of sea-level rise. As intended by SB 1, this funding also provides financial support to local and regional governments for updating their local land use plans to account for sea-level rise.

- 8) **Previous legislation.** SB 867 (Laird, 2022) would have required a local government within the coastal zone to address sea level rise planning and adaptation through either a local coastal program or a San Francisco Bay shoreline coastal resiliency plan by January 1, 2026, and to update that planning and adaptation every 5 years. That bill was vetoed by the Governor.

## **REGISTERED SUPPORT / OPPOSITION:**

### **Support**

Audubon California

Azul

Board of Supervisors for The City and County of San Francisco

Brown Girl Surf

California Coastal Protection Network

California Coastkeeper Alliance

California Institute for Biodiversity

Coastal Commission

Contra Costa County

Environmental Defense Center

Environmental Action Committee of West Marin

Environmental Center of San Diego

Humboldt Baykeeper  
Midpeninsula Regional Open Space District  
Orange County Coastkeeper  
Planning and Conservation League  
San Francisco Bay Conservation and Development Commission  
Save the Bay  
Surfrider Foundation  
Surfrider Foundation San Diego Chapter  
Surfrider Foundation West Los Angeles/Malibu Chapter  
Turtle Island Restoration Network

**Opposition**

None on file

**Analysis Prepared by:** Paige Brokaw / NAT. RES. /





Date of Hearing: June 19, 2023

ASSEMBLY COMMITTEE ON NATURAL RESOURCES

Luz Rivas, Chair

SB 390 (Limón) – As Amended April 10, 2023

**SENATE VOTE:** 33-0

**SUBJECT:** Voluntary carbon offsets: business regulation

**SUMMARY:** This bill adds certain claims about voluntary carbon offsets (VCOs) to the False Advertising Law, related to VCOs that are known or should be known to not be quantifiable, real, and additional, as defined.

**EXISTING LAW:**

- 1) The California Global Warming Solutions Act requires the Air Resources Board (ARB) to adopt a statewide greenhouse gas (GHG) emissions limit equivalent to 1990 levels by 2020, to ensure that statewide GHG emissions are reduced to at least 40% below the 2020 statewide limit no later than December 31, 2030, and declares the policy of the state to achieve net zero greenhouse gas emissions by 2045. (Health and Safety Code 38500 et seq.) The Act requires ARB, among other things, to:
  - a) Adopt rules and regulations to achieve maximum technologically feasible and cost-effective GHG emission reductions;
  - b) Ensure any direct regulation or market-based compliance mechanism achieves GHG reductions that are real, permanent, quantifiable, verifiable, and enforceable by ARB;
  - c) Limit offsets used in the cap and trade regulation to 4% of a covered entity's compliance obligation from 2021 to 2025, and 6% from 2026 to 2030, of which no more than one-half may be sourced from projects that do not provide direct environmental benefits in state; and,
  - d) Adopt methodologies for the quantification of voluntary GHG emission reductions.
- 2) Establishes the Unfair Competition Law, which defines “unfair competition” to mean and include any unlawful, unfair or fraudulent business act or practice and unfair, deceptive, untrue, or misleading advertising and any act prohibited by the False Advertising Law. Business and Professions Code (BPC) 17200 )
- 3) Generally prohibits the use of false or misleading statements in advertising, including any untruthful, deceptive, or misleading environmental marketing claim. Provides that a violation is a misdemeanor punishable by imprisonment in the county jail not to exceed six months, or by a fine not to exceed \$2,500, or by both. Provides an affirmative defense when an environmental marketing claim conforms to voluntary guidelines published by the Federal Trade Commission (FTC). (BPC 17580-17581)

**THIS BILL:**

- 1) Defines 26 terms pertaining to carbon offsets, generally consistent with existing definitions for compliance offset protocols.
- 2) Declares the following activities unlawful for a person to do if the person knows or should know that the GHG reductions or GHG removal enhancements of the VCO are unlikely to be quantifiable, real, and additional:
  - a) Verify a VCO project;
  - b) Certify or issue a VCO;
  - c) Maintain a VCO on a registry; or
  - d) Market, offer for sale, or sell a VCO.
- 3) Declares it to be unlawful for a person to market, offer for sale, or sell a VCO—without explicitly marketing the VCO as not being physically equivalent to the climate impact of carbon dioxide emissions—if the person knows or should know either:
  - a) That the durability of the VCO’s GHG reductions (or removal enhancements) are less than the atmospheric lifetime of carbon dioxide; or
  - b) That the atmospheric lifetime of the GHGs associated with the VCO is less than the atmospheric lifetime of carbon dioxide emissions.

**FISCAL EFFECT:** According to the Senate Appropriations Committee, pursuant to Senate Rule 28.8, this bill would have negligible state costs.

**COMMENTS:****1) Author’s statement:**

Junk carbon offsets undermine our climate goals, defraud purchasers of offsets, and contribute to the greenwashing of corporate operations. These voluntary offsets are purchased by consumers and businesses to counterbalance their carbon footprints. But unfortunately, some offsets are created by projects that fail to provide quantifiable and additional carbon benefits, which completely undermines their purported purpose.

While California has a regulatory framework for compliance offsets as part of our cap-and-trade program, there are no state or federal laws that provide clarity or establish standards for voluntary carbon offsets. SB 390 will establish baseline standards that participants in voluntary carbon offset markets must meet in order to offer their products for sale in our state. If a California consumer or business purchases a carbon offset, that offset must represent the real carbon benefits claimed by the issuer or seller of the offset.

- 2) **The voluntary offset market.** Individuals and corporations purchase carbon offsets to compensate for the GHG emissions they create or contribute to. As more people purchase

these reductions to compensate for their carbon footprint, questions arise as to what is being done to ensure that they are purchasing genuine carbon offsets. There is growing concern about the validity of emission reductions from projects sold and the potential for fraud. Despite the growth of the voluntary offset market in supporting advertising claims and even legal requirements, such as mitigation of GHG emissions under the California Environmental Quality Act, the market remains fairly opaque, and is not regulated by ARB or any other state entity.

The FTC's "Guides for the Use of Environmental Marketing Claims," which are intended to help marketers avoid making environmental marketing claims that are unfair or deceptive, includes the following brief guidance regarding carbon offsets:

260.5 Carbon Offsets.

- (a) Given the complexities of carbon offsets, sellers should employ competent and reliable scientific and accounting methods to properly quantify claimed emission reductions and to ensure that they do not sell the same reduction more than one time.
  - (b) It is deceptive to misrepresent, directly or by implication, that a carbon offset represents emission reductions that have already occurred or will occur in the immediate future. To avoid deception, marketers should clearly and prominently disclose if the carbon offset represents emission reductions that will not occur for two years or longer.
  - (c) It is deceptive to claim, directly or by implication, that a carbon offset represents an emission reduction if the reduction, or the activity that caused the reduction, was required by law.
- 3) **Related legislation.** AB 1305 (Gabriel) requires disclosure of specified information by sellers and buyers of voluntary carbon offsets. Subjects violators to a civil penalty up to \$5,000 per day for each violation. AB 1305 is pending in the Senate Environmental Quality Committee.
- 4) **Double referral.** This bill has been double referred to the Assembly Judiciary Committee.

**REGISTERED SUPPORT / OPPOSITION:**

**Support**

California Environmental Voters  
San Francisco City Attorney's Office

**Opposition**

None on file

**Analysis Prepared by:** Lawrence Lingbloom / NAT. RES. /



Date of Hearing: June 19, 2023

ASSEMBLY COMMITTEE ON NATURAL RESOURCES

Luz Rivas, Chair

SB 394 (Gonzalez) – As Amended June 12, 2023

**SENATE VOTE:** 40-0

**SUBJECT:** Master Plan for Healthy, Sustainable, and Climate-Resilient Schools

**SUMMARY:** Requires, upon appropriation, the California Energy Commission (CEC) to develop a Master Plan for Healthy, Sustainable, and Climate-Resilient Schools (Master Plan) by March 31, 2025.

**EXISTING LAW:**

- 1) Requires the Air Resources Board (ARB), pursuant to California Global Warming Solutions Act of 2006 [AB 32 (Núñez), Chapter 488, Statutes of 2006], to adopt a statewide greenhouse gas (GHG) emissions limit equivalent to 1990 levels by 2020 and adopt regulations to achieve maximum technologically feasible and cost-effective GHG emission reductions. AB 32 authorizes ARB to permit the use of market-based compliance mechanisms to comply with GHG reduction regulations once specified conditions are met. Requires ARB to approve a statewide GHG emissions limit equivalent to 85% below the 1990 level by 2045. (Health and Safety Code (HSC) 38500-38599.11)
- 2) Establishes a goal of doubling energy efficiency savings from existing buildings by January 1, 2030. Requires the CEC to establish annual targets for statewide energy efficiency savings and demand reduction to achieve this goal. (Public Resources Code (PRC) 25310)
- 3) Requires ARB to develop by July 1, 2025, a framework for measuring and reducing the carbon intensity of new building construction. Requires the framework to include a comprehensive strategy to achieve a 40% net reduction in the carbon intensity of construction and materials used in new construction as soon as possible, but no later than December 31, 2035. Establishes an interim target of reducing the carbon intensity of construction materials 20% by December 31, 2030, and requires ARB to assess the feasibility and cost impact of meeting the 2030 interim goal. (HSC 38561.3)
- 4) Establishes the School Energy Efficiency Stimulus Program (also known as the California Schools Healthy Air, Plumbing, and Efficiency Program – CalSHAPE), which provides grants to local educational agencies (LEAs) to fund appliance, plumbing, and HVAC upgrades at schools using ratepayer energy efficiency incentives. Designates the CEC as the third-party administrator of CalSHAPE grants and sunsets the program on January 1, 2027. (Public Utilities Code 1610 *et seq.*)
- 5) Establishes the Clean Energy Job Creation Program, and allocates Proposition 39 revenues, to fund energy efficient retrofits and clean energy installations as well as related improvements and repairs that contribute to reduced operating costs and provide certain non-energy benefits, including improved health and safety conditions in public schools. Allocates funds to the State Energy Conservation Assistance Account Education Subaccount (ECAA-

Ed) to provide LEAs with no-interest revolving loans to fund energy efficiency and renewable energy projects. (PRC 26200 *et seq.*)

- 6) Authorizes schools or school districts located in communities with high cumulative exposure burdens, as specified, to work with districts to identify school sites in need of air quality improvements. Specifies that these schools and districts may be eligible for grants as part of a community emissions program to implement air quality mitigation efforts, including air filter installations and upgrades and vegetation buffer planting. (PRC 44391.3)

**THIS BILL:**

- 1) Requires the CEC, upon appropriation, to develop the Master Plan in consultation with the California Department of Education (CDE), Division of the State Architect (Division), Office of Public School Construction (OPSC), and the Natural Resources Agency (NRA) by March 31, 2025.
- 2) Requires CEC to organize and lead a steering team to facilitate the planning process and stakeholder engagement. Specifies that the steering team include representatives from CDE, the Division, the Office, and the NRA and meet monthly beginning March 1, 2024.
- 3) Requires that the process to create the Master Plan include input from additional state agencies that provide funding, guidance, and oversight for school buildings and grounds, including the Board of Education, State Allocation Board, California School Finance Authority, California Health and Human Services Agency, Department of Public Health, Strategic Growth Council, Office of Planning and Research, ARB, Department of Resources Recycling and Recovery, Public Utilities Commission, California Environmental Protection Agency, and State Water Resources Control Board.
- 4) Requires that the process to develop the Master Plan engage a diverse group of stakeholders and experts to inform the recommendations, as specified.
- 5) Requires the steering team to undertake or solicit and be informed by analysis employing geographic cross-referencing among areas where climate-related hazards, such as heat indices and air pollution, and elevated and where there are concentrated populations of pupils who may be especially vulnerable to stresses and disruptions, including socioeconomically disadvantaged pupils, pupils of color, English learners, and pupils with disabilities.
- 6) Requires that the completed Master Plan be provided electronically to the Governor, the appropriate policy and fiscal committees of the Legislature, CEC, Superintendent of Public Instruction, Secretary of the NRA, and leadership of the state agencies involved in developing the Master Plan. Requires CDE, the Division of the State Architect, OPSC, and NRA to make the Master Plan publicly available on their websites.
- 7) Requires the Master Plan to include:
  - a) An assessment of a representative sample of the state's public elementary and secondary school buildings and grounds, as specified, and recommendations for building ongoing capacity and systems to track and analyze the data to inform planning and investment decisions, including for vulnerability to climate hazards and GHG emissions,

- sustainability, and mitigation potential. Specifies that the sample may be provided by LEAs that agree to participate.
- b) A set of priorities, benchmarks, and milestones for health, resilience, and decarbonization of public school campuses and support facilities in alignment with the state's climate and equity goals, as specified.
  - c) Actionable steps and state agency roles within each priority area and an estimate of the costs to implement and achieve the benchmarks and milestones over a multiyear period, and the fiscal health and learning costs of inaction.
  - d) Guidance for the Legislature and the Governor to inform the development of infrastructure-related programs and the identification of the financial resources for LEAs to implement the recommendations and achieve the goals of the Master Plan, informed by policy and institutional analyses to understand state and local climate adaptation capacities, limitations, and opportunities.
  - e) Recommendations on future school infrastructure spending, including guidance on infrastructure-related budget proposals and state bond measures to:
    - i) Align spending with the state's goal of achieving carbon neutrality by 2045 and action plans for climate adaptation and extreme heat;
    - ii) Position California schools to take full advantage of incentives and funding for decarbonization and climate adaptation within relevant federal legislation; and,
    - iii) Equitably identify climate-vulnerable communities for priority investment.
  - f) Guidance for local school infrastructure funding measures that align with state decarbonization and climate adaptation goals.
  - g) Guidance on the roles of state and county agencies and other partners in providing technical assistance to LEAs to support sustainable and climate-resilient school infrastructure.
  - h) Recommendations to ensure that LEAs have access to sufficient technical assistance, professional learning, training programs, and pipelines of sustainability and climate-resilience personnel to implement decarbonization and climate adaptation plans that include high road labor standards, project labor agreements, workforce development, and training opportunities for current LEA employees.
  - i) Recommendations for state and local leaders from public and private sectors to connect sustainable and climate-resilient school buildings and grounds to learning opportunities for pupils, green career and technical education, and pathways to green economy careers that support and advance statewide sustainability and resilience.
  - j) Recommendations for county and city governments to more effectively include LEAs in their decarbonization and climate adaptation efforts.
- 8) Requires CEC to enter into a contract with one or more nongovernmental entities to review existing research and data, support and coordinate the Master Plan development process, and

conduct research on priority areas of study to guide the implementation of well-aligned state investments in healthy, sustainable, climate-resilient school infrastructure

- 9) States related legislative findings and declarations.

**FISCAL EFFECT:** According to the Senate Appropriations Committee:

- 1) The CEC estimates one-time costs of \$1.5 million (Energy Resources Programs Account [ERPA] or General Fund) and 10 limited-term positions to develop the Master Plan. In addition, the CEC estimates one-time costs of up to \$5 million (ERPA or General Fund) to fund the work of the nongovernmental agency contractor.
- 2) Unknown, likely minor costs (various funds) for other departments and state entities to participate in development of the Master Plan.

**COMMENTS:**

- 1) **Reducing building emissions.** Achieving net zero GHG emissions – when GHG emissions are either zero or are offset by equivalent atmospheric GHG removal – is an important part of reducing GHG emissions and minimizing the effects of climate change. Net zero GHG emissions is also often used interchangeably with carbon neutrality; however, net zero GHG emissions includes GHGs other than those that contain carbon, such as nitrous oxide. Constructing buildings to be net zero will substantially reduce the state’s GHG emissions.
- 2) **Children’s health and air pollution.** Air pollution, particularly ozone and particulate pollution, poses significant risks to human health including premature death, reproductive harm, asthma, lung cancer, cardiovascular disease, and more. Eighty percent of a child’s alveoli, where the transfer of oxygen to blood occurs, develop after birth, and lungs and alveoli aren’t fully developed until adulthood. Children are also generally more active than adults and are outside for more hours per day on average, increasing their exposure to air pollution. The Southern California Children’s Health study tracked 1,759 children between the ages of 10 and 18 from 1993 to 2001 and found that the decrease in lung function associated with growing up in polluted areas was similar to that of children raised in households with parents who smoked. A follow-up study of 863 children in the same area between the years of 2007 and 2011, when air quality had significantly improved compared to the period from 1993 to 2001, found that the population studied had significantly greater lung function than the first study cohort, demonstrating the positive impact that air quality improvements can have on human health. Pollution exposure also increases the probability that children will develop other respiratory symptoms or suffer from impaired development of their nervous, endocrine, and immune systems. These health risks are often disproportionately concentrated in low-income areas and communities of color. According to the Public Policy Institute of California (PPIC), the highest-poverty school districts experienced higher air pollution levels, with approximately 15% higher concentrations of unhealthy particulate matter than in the lowest-poverty school districts. This average does not adequately demonstrate the larger, but infrequent, spikes in poor air quality in these districts.
- 2) **Road proximity and air pollution exposure.** Proximity to freeways and busy roads increases exposure to hazardous particulate air pollution, subsequently increasing health risks. SB 352 (Escutia), Chapter 668, Statutes of 2003, prohibited the construction of new



schools within 500 feet of freeways or other major roadways, but did not outline plans to address schools located in this area prior to 2003. Further, recent research shows that air pollution can still be present at hazardous levels far outside the 500 foot buffer, and that pollution levels also depend on air circulation patterns, geography, time of day and other factors. Additionally, the increase in severity and frequency of wildfires has increased children's exposure to dangerous levels of particulate matter throughout the state, even in areas that have historically had good air quality.

- 3) **Heat.** Average temperatures have increased since 1895, with the fastest relative increase beginning in the 1980s. Every decade since 1980 has been warmer than the previous decade. Globally, the seven warmest years on record were the last seven years. Areas of the state that have not historically faced extreme temperatures have been hit with heat waves resulting in increased emergency room visits and deaths. Children are vulnerable to extreme heat, which can quickly cause dehydration, heat exhaustion, heat cramps, and heat stroke. Moreover, heat contributes to irritability and affects children's ability to learn.

In 2022, the Governor's office released *Protecting Californians from Extreme Heat: A State Action Plan to Build Community Resilience* (Action Plan), which includes "near-term areas of focus," including:

- Implement a statewide public health monitoring system to identify heat illness events early, monitor trends, and track illnesses to intervene and prevent further harm.
  - Accelerate readiness and protection of communities most impacted by extreme heat, including through cooling schools and homes, supporting community resilience centers, and expanding nature-based solutions.
  - Protect vulnerable populations through codes, standards, and regulations.
  - Expand economic opportunity and build a climate smart workforce that can operate under and address extreme heat.
  - Increase public awareness to reduce risks posed by extreme heat.
  - Protect natural and working lands, ecosystems, and biodiversity from the impacts of extreme heat
- 4) **California schools.** California's K-12 facilities include approximately 12,800 schools with more than 714 million square feet of space, making LEAs the largest category of building in the public building sector. Unlike other commercial end users, government buildings generally aren't able to use the financial savings from energy improvements to reinvest in additional capital improvements, which leads public buildings to require regular cycles of investment to update facilities and replace less efficient appliances. While some district may seek local and state bond or tax funding to make these updates, other districts may seek monies and tax incentives from the recently enacted Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA).
- 5) **CEC programs.** While the CEC has not established a master plan addressing K-12 buildings' climate adaptation needs, the CEC has administered multiple programs to provide incentives to improve energy efficiency, water savings, and non-energy benefits associated with clean energy and appliance installations in LEA facilities. Following the passage of Proposition 39 in 2012, the CEC administered the Clean Energy and Jobs Creation Program. Between 2013 and 2020, the CEC approved 2,108 applications from 1,739 LEAs for a total \$1.53 billion in funding. As part of the program, the CEC also approved 42 loans from the

ECAA-Ed program totaling \$64.6 million. Following an extension and revision of the Proposition 39 program in 2017, the program expanded to include the School Bus Replacement Program. As part of this program, the CEC awarded \$74.7 million for replacement electric buses and \$14.1 million for electric bus charging infrastructure.

6) **Author's statement:**

California's K-12 students are served by over 1,000 school districts that utilize more than 10,000 facilities, comprising 125,000 acres of grounds, and 730 million square feet of buildings. The students who attend these schools each day are increasingly burdened by climate-related threats such as extreme heat, flooding, wildfire smoke, and other hazards that can harm their health and hinder their ability to learn.

While the condition of our school facilities plays an integral part in the mission of educating California's students, the State currently has no mechanism for assessing its school facilities' sustainability, and no cohesive strategy to make school buildings and grounds climate-resilient to protect the health and safety of students. It is abundantly clear that for California to meet its climate goals and ensure the educational opportunities of students there must be a comprehensive policy and implementation road map.

SB 394 will address the lack of guidance and planning around school facilities and sustainability by requiring the California Energy Commission to collaborate with various state agencies and education stakeholders to develop a Master Plan for Healthy, Sustainable, and Climate-Resilient Schools. The Master Plan will provide the State and the public with substantive guidance to ensure California's school facilities will be resilient in the face of continuing climate change and its acute impacts on the health and wellbeing of our students. A cohesive plan will also position California to take full advantage of forthcoming grants and incentives for de-carbonization and climate adaptation under the federal Inflation Reduction Act and the federal Infrastructure Investment and Jobs Act and Inflation Reduction Act.

7) **This bill.** This bill seeks to establish a Master Plan to provide guidance to LEAs' building decarbonization and climate resilience investments. The diversity of California's school districts may make the development of the Master Plan challenging, given the vast differences in size, location, resources, and needs of LEAs. Smaller LEAs may require technical assistance to identify and implement the guidance.

8) **Double referral.** This bill has also been referred to the Assembly Education Committee.

**REGISTERED SUPPORT / OPPOSITION:**

**Support**

California Federation of Teachers  
California School Employees Association  
Climate Reality Project, Los Angeles Chapter  
Climate Reality Project, San Fernando Valley

Los Angeles Unified School District

**Opposition**

None on file

**Analysis Prepared by:** Elizabeth MacMillan / NAT. RES. /



Date of Hearing: June 19, 2023

ASSEMBLY COMMITTEE ON NATURAL RESOURCES  
Luz Rivas, Chair  
SB 414 (Allen) – As Amended May 18, 2023

**SENATE VOTE:** 40-0

**SUBJECT:** Climate change: applications using hydrogen: assessment

**SUMMARY:** Requires the Air Resources Board (ARB), upon appropriation, to complete an assessment of the use of hydrogen in specified applications.

**EXISTING LAW:**

- 1) Requires ARB to ensure that statewide greenhouse gas (GHG) emissions are reduced to at least 40% below the 1990 level by 2030. (Health and Safety Code (HSC) 38500 et seq.)
- 2) Declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. (HSC 38562.2)
- 3) Requires ARB, by June 1, 2024, to prepare a hydrogen evaluation, including:
  - a) Policy recommendations to accelerate production and use of hydrogen, and specifically green hydrogen, to help achieve climate, clean energy, and clean air objectives;
  - b) Strategies supporting hydrogen infrastructure and end uses in difficult to decarbonize sectors;
  - c) Potential for other forms of hydrogen, outside of green hydrogen, to achieve emissions reductions;
  - d) An analysis of how curtailed electrical generation could be used to meet climate goals, including for the production of green hydrogen; and,
  - e) An estimate of emissions reductions the state could achieve through deployment of green hydrogen.(HSC 38561.8)

**THIS BILL:**

- 1) Requires ARB, on or before December 31, 2025, to advance efforts to achieve the state's goal for carbon neutrality by 2045, and upon appropriation by the Legislature, in consultation with the California Energy Commission (CEC) and the Public Utilities Commission (PUC), to complete an assessment of the use of hydrogen in all of the following applications within the state:
  - a) Light-, medium-, and heavy-duty vehicles, including long-distance trucks;

- b) Long-distance trains;
  - c) Off-road equipment;
  - d) Household and commercial appliances;
  - e) Maritime shipping;
  - f) Aviation;
  - g) Industrial and agricultural processes, including chemical feedstocks;
  - h) Electricity generation; and,
  - i) Any additional applications ARB determines to be relevant in the assessment.
- 2) Requires the assessment to evaluate, for each specified application, the following:
- a) The potential for reductions in GHG emissions using hydrogen for the application, as well as alternative decarbonization options for the application, including electrification or combinations of decarbonization methods, if applicable;
  - b) A range of cost of the hydrogen needed to replace fossil fuels for the application in the state based on the cost as of January 1, 2024, and projected estimated cost by 2045;
  - c) The energy efficiency of using hydrogen for the application. The assessment shall also evaluate the energy efficiency of using alternative decarbonization options for the application, including electrification or combinations of decarbonization methods, if applicable, for the application;
  - d) Health and safety, environmental, and climate risk associated with transportation and storage of hydrogen for the application, including, but not limited to, the risk of hydrogen leakage; and
  - e) Health and safety, environmental, and climate risk associated with the use of hydrogen for the application, including, but not limited to, the emission of air and water pollutants.
- 3) Requires ARB, for purposes of the assessment, to assume hydrogen produced without fossil fuel feedstocks.
- 4) Requires the assessment to establish a ranked list prioritizing applications for a finite supply of zero-carbon hydrogen.
- 5) Authorizes ARB to contract with an educational institution, research laboratory, or related organization to conduct the assessment.
- 6) Requires the ARB, CEC and PUC to consider the findings of the assessment in their plans, rulemakings, reports, or other processes related to the planning, implementation, or regulation of hydrogen production, distribution, storage, or usage in the state.

**FISCAL EFFECT:** According to the Senate Appropriations Committee:

- Unknown ongoing costs, likely in the millions of dollars annually (Cost of Implementation Account [COIA]), for ARB to coordinate internally, with other entities, and with stakeholders; conduct evaluations, produce a report, and continue to ensure the findings in the assessment are considered in any plans, rulemakings, reports, or other processes related to the planning, implementation, or regulation of hydrogen production, distribution, storage, or usage in the state, among other things.
- The PUC and CEC anticipate that any costs would be minor and absorbable.

## COMMENTS:

- 1) **Background.** The environmental impacts of hydrogen, including effects on climate and air quality, can range from very favorable to very unfavorable, depending on production, delivery, end use, and the fuel the hydrogen is replacing. For example, hydrogen produced with fossil fuels and used in a combustion application that replaces a renewable energy source is not a good environmental solution. However, hydrogen produced with zero-carbon energy and used in a zero-emission application that replaces diesel combustion has clear climate and air quality benefits.

The source of the hydrogen and the source of the energy used to split hydrogen plays a significant role in determining the lifecycle emissions associated with hydrogen use. Today, there are several means of hydrogen production and it is likely that these will evolve as technology advances.

Green hydrogen can result in almost no GHG emissions. Produced by electrolyzing water, green hydrogen is made using 100% renewable electricity to split hydrogen from water molecules. Less than 0.1% of hydrogen production globally comes from water electrolysis.

Ninety six percent of the hydrogen today is considered to be gray hydrogen. Gray hydrogen is produced by heating natural gas, or methane, with steam to form syngas (a mixture of hydrogen and carbon monoxide and carbon dioxide). The syngas is separated to produce hydrogen. This process results in a relatively high release of GHGs.

Blue hydrogen attempts to mitigate some of the GHG emission release during the production of gray hydrogen by pairing production with carbon capture and storage. However, not all carbon dioxide emissions can be captured, and some carbon dioxide is emitted during the production of blue hydrogen. Carbon capture increases the cost and inefficiency of the production of blue hydrogen.

Currently hydrogen branded “renewable” is produced mainly by steam methane reformation of biomethane from North American landfills. SB 1505 (Lowenthal), Chapter 877, Statutes of 2006, requires 33% of the hydrogen produced for fueling stations that receive state funds be made from eligible renewable energy resources, including biomass, digester gas, landfill gas, solar, and wind. However, compliance is achieved largely on paper, through the use of credits from out of state renewable energy sources, rather than direct production and use of renewable hydrogen in California.

No matter how green it is, where hydrogen is used matters. There have been recent evaluations seeking to identify the “least-regrets” end-uses of hydrogen, especially given the

costliness of initial hydrogen production and the varied emissions benefits of hydrogen usage in different sectors. For instance, Earthjustice, an environmental law organization, released a report in 2021 identifying promising applications for green hydrogen and ranking hydrogen use by least-regrets uses, sectors to explore with caution, and sectors where hydrogen is not a solution. The report categorizes the least-regrets use for hydrogen as displacing fossil hydrogen in current industrial feedstocks. The usage of hydrogen in maritime shipping, aviation, and long-haul trucks and trains were categorized as “sectors to explore with caution.” While Earthjustice categorized hydrogen usage in combustion in fossil gas power plants, gas-burning appliances in homes and commercial buildings, and cars, buses, and regional trucks as sectors where hydrogen is not a solution.

Following the passage of SB 1075 (Skinner), Chapter 363, Statutes of 2022, ARB, the PUC, and the CEC are evaluating the possible deployment, development, and uses of hydrogen in the state. The evaluation is mandated to be publicly posted by June 1, 2024. SB 1075 also requires the CEC to study and model potential growth for hydrogen and its role in decarbonizing the electrical and transportation sectors of the economy as part of the 2023 and 2025 editions of its Integrated Energy Policy Report. Ideally this joint agency work will aid understanding of the appropriate end-uses of hydrogen within the state.

## 2) **Author’s statement:**

Cutting the state’s GHG emissions at the pace scientists have determined to be necessary requires all hands on deck and a rapid shift to a decarbonized economy. While we work hard to dramatically expand our clean energy infrastructure, the state should strategically evaluate and implement the strategies available to achieve our climate goals as rapidly as possible. Hydrogen is one tool we can use to decarbonize our economy. In order to effectively choose the right tool for the right job, the state needs easily accessible data that can inform that decision, including the potential for reducing emissions, the cost, and the energy efficiency. SB 414 aims to make such information readily available for hydrogen and enable comparison to alternative zero-carbon options such as electrification. We also need a robust assessment of health and safety, environmental, and climate risks associated with hydrogen as we anticipate scaling up its use. SB 414 aims to complement other assessments requested by the Legislature to answer some of these questions and develop a prioritization of where hydrogen implementation can be most effective for the state to meet its carbon neutrality and zero-carbon energy goals.

## **REGISTERED SUPPORT / OPPOSITION:**

### **Support**

Sustainable Rossmoor

### **Opposition**

None on file

**Analysis Prepared by:** Lawrence Lingbloom / NAT. RES. /



Date of Hearing: June 19, 2023

ASSEMBLY COMMITTEE ON NATURAL RESOURCES

Luz Rivas, Chair

SB 511 (Blakespear) – As Amended April 24, 2023

**SENATE VOTE:** 38-0

**SUBJECT:** Greenhouse gas emissions inventories

**SUMMARY:** Requires the Air Resources Board (ARB) to develop, publish, and update greenhouse gas (GHG) emissions inventories for cities and counties, upon request, as specified.

**EXISTING LAW:**

- 1) Requires ARB to ensure that statewide GHG emissions are reduced to at least 40% below the 1990 level by 2030. (Health and Safety Code (HSC) 38500 et seq.)
- 2) Declares the policy of the state to achieve net zero greenhouse gas (GHG) emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. (HSC 38562.2)
- 3) Directs ARB to prepare, adopt, and update California's GHG inventory. (HSC 39607.4)
- 4) Requires ARB to prepare and approve a scoping plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions and to update the scoping plan at least once every five years. (HSC 38561)

**THIS BILL:**

- 1) Requires ARB, before January 1, 2028, to develop, and publish on its internet website, a report on GHG emissions inventories for the calendar year 2025 for each city, county, or city and county that requests inclusion in the report, consistent with the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, Version 1.2, July 2019, developed by the ICLEI - Local Governments for Sustainability USA.
- 2) Requires the report to include electricity and natural gas usage data disaggregated by the residential, commercial, industrial, and agricultural sectors for each emissions inventory.
- 3) Requires ARB to update the GHG emissions inventories, for each city, county, or city and county that requests inclusion in the respective update, for the calendar year 2030 and every fifth year thereafter.
- 4) Authorizes ARB to collect necessary data from state agencies, special districts, local governments, and electric and gas utilities.
- 5) Authorizes ARB to solicit bids and enter into contracts for the development of the inventories.

- 6) Requires ARB, before January 1, 2026, to establish a local government advisory committee to inform its development of the GHG emissions inventories.
- 7) Requires \$2,500,000 to be available in the 2024–25 fiscal year for purposes of the bill, upon appropriation by the Legislature in the annual Budget Act.
- 8) Makes related findings.

**FISCAL EFFECT:** According to the Senate Appropriations Committee:

- ARB estimates ongoing costs of about \$18 million annually (Cost of Implementation Account [COIA]) and 45 positions to implement the provisions of this bill. Staff note that ARB may not currently have the capacity to conduct the type of bottom-up accounting that local level GHG inventories require. All of ARB's existing inventory work uses a top-down, macro approach.
- Ongoing cost pressure of \$2.5 million (General Fund or special fund) in FY 2024-25 and of a similar amount every five years thereafter in order to provide an appropriation for the funds made available in the bill. This amount would count toward ARB's total costs of implementation.

**COMMENTS:**

- 1) **Background.** ARB is required to maintain a statewide GHG emissions inventory that includes estimates for carbon dioxide, methane, nitrous oxide, and fluorinated gases with high global warming potentials. ARB uses an inventory scope and framework consistent with international and national GHG emission inventory practices. An updated emission inventory is published annually to include additional years and improved estimation methods. Statewide emission estimates rely on state, regional or federal data sources, and on aggregated facility-specific emission reports from ARB's Mandatory Reporting Regulation (MRR). Certain electricity generators, industrial facilities, fuel suppliers, and electricity importers are required to report data to ARB through the MRR. ARB is not currently required to maintain GHG emission data at the local level as this bill directs.

ARB's 2022 Scoping Plan identifies local action as a critical component to meeting the state's climate goals. Local governments have authority that can be leveraged for climate action. They have primary authority to plan, zone, approve, and permit how and where land is developed to accommodate population and employment growth and the changing needs of their jurisdictions. They make decisions on how and when to deploy transportation infrastructure and can promote residential and commercial development that supports transit, bicycling, and walking. Local governments have the authority to adopt building ordinances that exceed statewide building code requirements for energy efficiency or other environmental standards and facilitate the implementation of zero-emission vehicle (ZEV) infrastructure.

Local Climate Action Plans (CAPs) are used as roadmaps for reducing GHG emissions to address the potential risks of climate change to local communities. CAPs typically include a GHG emission inventory, an emissions reduction target, and a series of actions for the local government to take. They may also include assessments of specific climate change risks to a

community, such as floods, wildfires, effects on water supply, or other impacts of climate change. According to ARB, 53% of California cities and counties have a CAP.

This bill directs ARB to generate GHG emission inventories using the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions, Version 1.2, July 2019, developed by the International Council for Local Environmental Initiatives (ICLEI). The ICLEI was established in 1990 and is officially recognized by the United Nations. The U.S. Community Protocol is a technical document with methodologies and best practices for local governments to measure and report emissions associated with their communities. This protocol was most recently updated in 2019.

## 2) **Author's statement:**

In order for local governments to be best equipped to implement effective and equitable solutions to save energy, reduce emissions, and accelerate climate action, GHG emissions inventories are critical. These inventories enable local governments to develop data-informed targets and climate action plans to understand which strategies can yield the most significant emissions reductions and co-benefits. However, many California jurisdictions do not have emissions inventories, largely due to staff capacity and funding barriers.

## **REGISTERED SUPPORT / OPPOSITION:**

### **Support**

CivicWell (co-sponsor)  
 Contra Costa County (co-sponsor)  
 350 Bay Area Action  
 Active San Gabriel Valley  
 Albany Climate Action Coalition  
 American Planning Association, California Chapter  
 Association of Monterey Bay Area Governments  
 Berkeley Electrification Working Group  
 California Environmental Voters  
 California Federation of Teachers  
 California State Association of Counties  
 Central Coast Climate Collaborative  
 City and County of San Francisco  
 City of Alameda  
 City of Arcata  
 City of Arroyo Grande  
 City of Berkeley  
 City of Buena Park  
 City of Burlingame  
 City of Chula Vista  
 City of Delano  
 City of Dublin  
 City of El Cerrito  
 City of Encinitas  
 City of Fremont

City of Gilroy  
City of Gilroy Council Member Zach Hilton  
City of Hayward  
City of Marina  
City of Mill Valley  
City of Millbrae  
City of Monterey  
City of Napa  
City of Oakland  
City of Pacifica  
City of Palo Alto  
City of Piedmont  
City of Richmond  
City of Sacramento  
City of Salinas  
City of San Jose  
City of San Juan Bautista  
City of San Leandro  
City of San Luis Obispo  
City of Santa Clara  
City of Santa Cruz, CA  
City of West Hollywood  
City of Woodland  
City/County Association of Governments of San Mateo County  
Cleaneearth4kids.org  
County of Mendocino  
County of Monterey  
County of Napa  
County of San Mateo  
County of Santa Clara  
County of Santa Cruz  
County of Ventura  
Democrats of Rossmoor  
Drawdown Bay Area  
Ecology Action  
Environmental Science Associates  
Farallon Strategies  
Greenbelt Alliance  
League of California Cities  
Let's Green CA!  
Los Angeles Regional Collaborative for Climate Action and Sustainability  
Marin Clean Energy  
Quitcarbon  
Recolte Energy  
San Diego Green Building Council  
San Gabriel Valley Council of Governments  
San Luis Obispo Council of Governments  
San Luis Obispo County Air Pollution Control District  
San Mateo County Board of Supervisors

Santa Cruz Climate Action Network  
Sierra Climate Adaptation and Mitigation Partnership  
Sierra Club Yoloano Group  
Sierra Nevada Alliance  
Sonoma County Regional Climate Protection Authority  
Sustainable Claremont  
Sustainable Rossmoor  
Swale Consultants  
The American Engineers  
The Climate Center  
The Energy Coalition  
Town of Truckee  
Tri-County Regional Energy Network  
U.S. Green Building Council  
Ventura County Regional Energy Alliance  
Wind Harvest International  
Windsor Earth Action Climate Team  
Yolo County Board of Supervisors

**Opposition**

None on file

**Analysis Prepared by:** Lawrence Lingbloom / NAT. RES. /



Date of Hearing: June 19, 2023

ASSEMBLY COMMITTEE ON NATURAL RESOURCES

Luz Rivas, Chair

SB 665 (Allen) – As Amended May 18, 2023

**SENATE VOTE:** 39-0

**SUBJECT:** Plastic waste: single-use plastics alternatives: working group

**SUMMARY:** Requires, by January 1, 2025, the California Environmental Protection Agency (CalEPA) to establish a working group to establish a framework to evaluate novel material types.

**EXISTING LAW:**

- 1) Establishes the Plastic Pollution Prevention and Packaging Producer Responsibility Act (Act), enacted by SB 54 (Allen), Chapter 75, Statutes of 2022, which:
  - a) Requires, by January 1, 2024, producers of covered material to form and join a producer responsibility organization (PRO), subject to specified requirements and Department of Resources Recycling and Recovery (CalRecycle) approval, to carry out the requirements of the Act. Prohibits a producer of covered material from selling, offering for sale, importing, or distributing covered materials in the state unless the producer is approved to participate in the PRO.
  - b) Requires that all covered material offered for sale, distributed, or imported into the state on and after January 1, 2032, is recyclable in the state or eligible to be labeled "compostable," as specified.
  - c) Requires that all plastic covered material offered for sale, distributed, or imported into the state to meet the following recycling rates:
    - i) Not less than 30% of covered material on and after January 1, 2028;
    - ii) Not less than 40% of covered material on and after January 1, 2030; and,
    - iii) Not less than 65% of covered material on and after January 1, 2032.
  - d) By January 1, 2032, requires the PRO to develop and implement a plan to achieve 25% reduction by weight and 25% reduction by plastic component for covered material sold, offered for sale, or distributed in the state, as prescribed, including interim targets of 10% by January 1, 2027, and 20% by January 1, 2030. (Public Resources Code (PRC) 42040 *et seq.*)
- 2) Defines "plastic" to mean a synthetic or semisynthetic material chemically synthesized by the polymerization of organic substances that can be shaped into various rigid and flexible forms, and includes coatings and adhesives. Specifies that plastic includes traditional plastics like HDPE and PET and aliphatic biopolyesters, such as polyhydroxyalkanoate (PHA) and polyhydroxybutyrate (PHB). Specifies that plastic does not include natural rubber or naturally occurring polymers such as proteins or starches. (PRC 42041)
- 3) Prohibits the sale of plastic products that are labeled as "biodegradable," "degradable," "decomposable," or implies that the plastic product will break down, fragment, biodegrade,

or decompose in a landfill or other environment unless it meets specified standards. (PRC 42357)

- 4) Requires CalRecycle to, by July 1, 2020, convene a Statewide Commission on Recycling Markets and Curbside Recycling, and, by January 1, 2021, to issue policy recommendations to achieve market development goals and identify products that are recyclable or compostable. (PRC 42005.5)
- 5) Requires the State Water Resources Control Board (SWRCB) to adopt a definition of microplastics in drinking water, adopt a standard methodology to be used to test drinking water for microplastics, adopt requirements for four years of testing and reporting of microplastics in drinking water, consider issuing a notification level or other guidance to aid consumer interpretations of the results, and accredit qualified laboratories to analyze microplastics. (Health and Safety Code 116376)

**THIS BILL:**

- 1) States legislative findings and declarations, including:
  - a) The Legislature passed and the Governor signed SB 54 (Allen), which, among other things, requires producers to reduce the amount of single-use plastic material that they use by 25% by 2032. One pathway to achieve this goal is to shift from plastic material to “alternatives that are reusable, recyclable, or compostable.” Innovative companies are already researching and developing alternative materials that can provide the same functionality as single-use plastics without some or all of the negative impacts traditional plastics have had on human health and the environment.
  - b) Jurisdictions outside of California have also put in place policies to reduce single-use plastics, including policies to “promote or require” the use of biodegradable or biobased materials as a replacement for nonbiodegradable, petroleum-based single-use plastic.
  - c) As companies innovate to meet these requirements, the alternatives they produce will have different benefits, impacts, and costs.
  - d) To prevent regrettable substitutions as California strives to reduce the use of single-use plastics and phases out the use of fossil fuels, and to provide incentives to companies to innovate and produce environmentally beneficial products, states the intent of the Legislature to develop a science-based framework to assess the sustainability of plastic or plastic-alternative material along its whole life-cycle, including the formation and risks of microplastics.
- 2) Requires, by January 1, 2025, CalEPA to establish a working group made up of SWRCB, the Department of Toxic Substances Control (DTSC), CalRecycle, the Office of Environmental Health Hazard Assessment (OEHHA), and the Ocean Protection Council (OPC) to establish a framework for evaluating novel material types as they are developed in order to inform policy decisions designed to create a more sustainable and circular economy. Specifies that the working group be staffed by SWRCB.
- 3) Requires the working group to:



- a) Ensure the framework can be used as a comparative tool to assess novel material types to determine potential impacts to human health and the environment, and assess the ease with which those material types can be readily recycled, composted, or reused. Requires that the framework enable an assessment and categorization based on the full life-cycle of representative finished products made from those novel material types, including, but not limited to, the material's source, production, distribution, and end-of-life properties. Requires that the framework enable a comparative analysis of material life-cycles, as specified.
  - b) Consider trade-offs between sustainability objectives and risks, including, but not limited to, greenhouse gas emissions, freshwater and energy usage, natural resources depletion, impacts to public health, and pollution.
  - c) Consult with scientists, academic experts in this sector, industry innovators, environmental advocacy organizations, environmental justice advocates, and local agencies responsible for solid waste management, recycling, and composting.
  - d) Review existing scientific data, research, and testing methodologies.
- 4) Requires the working group to develop recommendations, including, but not limited to, potential scientific testing standards that could be used for certifying new materials to inform state policy related to novel material types, including but not limited to, appropriate marketing of the material, how the material is handled at the end of its useful life, and how the material needs to be treated in relation to existing state policies, rules, and regulations.

**FISCAL EFFECT:** According to the Senate Appropriations Committee:

- 1) CalEPA estimates ongoing costs of at least \$500,000 for two positions.
- 2) CalRecycle estimates ongoing costs of \$818,000 annually (special fund) beginning in 2024-25 for six positions. CalRecycle also notes that there may be additional costs for contracted work in the next few years in order to research different technologies as part of the review and approval process.
- 3) OEHHA estimates ongoing costs of \$176,000 annually for one position.
- 4) SWRCB stated that its costs are unknown and would depend on the number and frequency of meetings to be organized, and what meetings, if any, would be publicly held and noticed, among other factors.
- 5) DTSC estimates that its costs would likely be minor and absorbable to perform an advisory role in the working group to establish the framework.
- 6) OPC estimates that any costs would be minor and absorbable.

**COMMENTS:**

1) **Author's statement:**

The passage of SB 54 last year, combined with efforts throughout the state to address pervasive environmental and public health risks posed by the ubiquity of plastics, there is fertile ground for the growth of alternative materials. Seizing on

consumer demand for environmentally friendly options, pioneering companies are creating novel materials for use in products ranging from single-use cutlery to surgical equipment. These innovations have the potential to support a circular economy and drastically reduce pollution and each offers particular benefits related to their production or end-of-life characteristics. Some of these new materials are created from biological sources and are compostable or biodegradable in different types of environments; others break down with catalysts. While each new material has the potential to reduce single-use plastic waste, some are more sustainable or more deployable than others. State regulators need a science-based standard for evaluating these novel materials. The systems in place – those used to determine what is environmentally friendly, or how packaging and products should be labeled to ensure proper end-of-life management – do not reflect either the distinction between newer materials and conventional plastics, or the diversity of materials coming onto the market.

SB 665 will convene a working group of the relevant state agencies to develop a framework to evaluate plastic alternatives as they are introduced onto the market and inform efforts to ensure the material is properly managed.

- 2) **Plastic pollution.** Plastics pose a threat to the environment from origin to end-of-life. Plastic production is responsible for three and a half percent of all greenhouse gas emissions—more than the entire aviation sector. In 2021, global plastics production was estimated at 390.7 million metric tons, a 4% increase from the previous year. The United Nations Environment Programme reports that only 9% of all plastic ever made has been recycled, 12% has been incinerated, and the remaining 79% has accumulated in landfills or the environment.

Once plastics enter the environment, they remain there for hundreds to thousands of years. Plastics do not break down into their constituent parts, but instead break down into smaller and smaller particles, or microplastics. Because they are so small, microplastics can travel in the air and water, and can be easily absorbed by living things and accumulate up the food chain. Microplastics have been found in the most pristine natural environments on earth, including in the deep ocean, Antarctic sea ice, and in the sand of remote deserts. Laboratory studies have found that microplastics increase the risk of cancer and disrupt hormone pathways in lab rats.

Recycling plastic into new products is one way to reduce plastic pollution, as it keeps the recycled plastic out of the environment and reduces our dependence on virgin resin. However, recycling is currently only feasible for some of the more common, and least toxic, forms of plastic. The most effective way to tackle the plastic pollution crisis is to use less of it.

- 3) **Unconventional plastics.** Companies have developed various novel materials that are intended to replace conventional plastics. Approximately 2.11 million tons of bioplastics were produced in 2018. While that is just 1% of all plastics produced, the Bio-Based and Biodegradable Industries Association predicts that compostable materials could substitute up to 5-8% of current plastic packaging in the coming years. This rapid increase in bioplastics is driven in part by policy shifts as the global community seeks to reduce traditional plastic

consumption. Some of these materials are recyclable, some are compostable, and some may degrade when littered.

Alternative plastics, generally, are either biobased, compostable, or biodegradable. Biobased plastics refer to conventional resin types, like polyethylene terephthalate (PET), made from biomass or other non-fossil fuel sources. In most cases, they share the same end-of-life management options as fossil fuel-based conventional plastic.

Compostable plastics are plastics that are designed to decompose under certain conditions, and are not defined by their feedstock. There are various standards in place to determine if a plastic product is compostable or not. Generally, the state has relied upon ASTM International standards, which include specifications for industrially compostable (D6400-19) and home compostable (D6868-19). However, the standard for industrially compostable runs between 90 to 180 days, and California's industrial compost operations process material more quickly than those timelines, resulting in incomplete degradation of the materials composted. The home compost standard requires degradation within 180 days. In recognition of the issues with the current ASTM standards, SB 1335 (Allen), Chapter 610, Statutes of 2018, which establishes reuse, recycling, and compost requirements for food packaging used in state facilities, required CalRecycle to adopt regulations to create standards for reusable, recyclable, and compostable food packaging. For compostability, CalRecycle regulations require that the packaging must meet the ASTM standards D6400-19 or D6868-19, demonstrate 90% biodegradation within 60 days, and comply with related statutory requirements to be labeled "compostable" in the state. Compostable plastics are not recyclable and act as a contaminant in the recycling stream. Given the challenges associated with composting these types of plastic, and the difficulty differentiating compostable plastics from conventional plastics in the waste stream, many compost facilities screen out all plastic materials from the compost feedstock and send them to landfill disposal.

Biodegradable plastics are plastics that claim to degrade in the environment into their organic constituents. In order to biodegrade, these plastics generally require very specific environmental conditions, such as the presence of specific microbes, humidity levels, exposure to sunlight, etc. Some plastics that are marketed as biodegradable are designed to disintegrate into plastic fragments quickly, becoming microplastics that persist in the environment. Because of the specific environmental conditions necessary for degradation, these plastics may persist in the environment indefinitely. PHA plastic seems to show the most promise for degradation; one recent study found that PHA takes between 1.5 and 3.5 years to degrade in marine environments. While this is dramatically faster than conventional plastic, it is still more than enough time to pose risks to marine organisms. Biodegradable plastics have a history of greenwashing in the state by making false claims about the environmental benefits of the materials. These claims have resulted in statutory changes that prohibit labeling products biodegradable or degradable. Biodegradable plastics are not recyclable and act as a contaminant if they enter the plastics recycling stream. Many biodegradable plastics are compostable, but face the challenges associated with other compostable plastics.

- 4) **This bill.** This bill establishes a working group to evaluate the potential health and environmental impacts of novel materials and to assess their recyclability, compostability, and potential for reuse. Given the increase in the production and the continuing development of new polymers, this bill is intended to ensure that the state understand the impacts of novel

materials, how they will fit into the state’s policies relating to plastic, and how they will be managed at the end-of-life.

This bill applies to all novel materials. While the title of the bill refers to the “single-use plastic alternatives working group,” the code section established by the bill is extremely broad and may result in confusion about the scope of the working group’s efforts and unnecessary time and costs to define the parameters of the working group’s jurisdiction. The *committee may wish to amend the bill* to clarify that the bill applies to novel plastic and plastic-alternative materials used for the production of single-use products.

It is unclear why this bill directs SWRCB to provide staffing for the working group. According to SWRCB, it and its nine regional water quality control boards protect water quality and allocate surface water rights. While SWRCB has expertise over the impacts of plastic and microplastic on water quality, it does not have expertise or authority over the life-cycle of novel materials, including the management and end-of-life impacts of solid wastes, including plastic and plastic-alternatives. The *committee may wish to amend the bill* to direct CalEPA to assign staffing duties to the appropriate board, department, or office to ensure that those duties are carried out by the appropriate entity.

- 5) **Additional amendments.** In addition to the amendments recommended above, the *committee may wish to make technical, clarifying, and correction amendments* to the bill, including:
- a) Making clarifying and correction amendments the findings;
  - b) Clarify that the bill is intended to encourage, rather than provide incentives for, companies to innovate and produce environmentally-beneficial products;
  - c) Replace the term “freshwater” with “water” on page 4, line 22;
  - d) Require the working group to consider impacts to the environment and wildlife when evaluating novel materials; and,
  - e) Clarify that the working group’s recommendations include proper labeling of novel materials.

## **REGISTERED SUPPORT / OPPOSITION:**

### **Support**

Climate Reality Project, Los Angeles Chapter  
 Climate Reality Project, San Fernando Valley  
 National Stewardship Action Council  
 Republic Services, Western Region

### **Opposition**

None on file

**Analysis Prepared by:** Elizabeth MacMillan / NAT. RES. /

Date of Hearing: June 19, 2023

ASSEMBLY COMMITTEE ON NATURAL RESOURCES

Luz Rivas, Chair

SB 675(Limón) – As Amended May 18, 2023

**SENATE VOTE:** 40-0

**SUBJECT:** Prescribed grazing: local assistance grant program: Wildfire and Forest Resilience Task Force.

**SUMMARY:** Incorporates prescribed grazing into the state’s wildfire prevention policies.

**EXISTING LAW:**

- 1) Establishes the Range Management Advisory Committee (Committee) to advise the Board of Forestry and Fire Protection (Board), the Natural Resources Agency, the California Environmental Protection Agency, and the California Department of Food and Agriculture on rangeland resource issues. (Public Resources Code (PRC) Section 741)
- 2) Establishes, pursuant to Executive Order No. B-52-18, a Forest Management Task Force, now known as the Wildfire and Forest Resilience Task Force (Task Force), involving specified state agencies to create the action plan for wildfire and forest resilience. (PRC 4005)
- 3) Requires the Task Force to develop a “Wildfire and Forest Resilience Action Plan” (Action Plan) as a strategy to integrate recommendations from existing state and federal plans that tackle various aspects of the state’s forest health and wildfire crisis. Requires the Task Force to develop a comprehensive implementation strategy to track and ensure the achievement of the goals and key actions identified in the Action Plan issued by the task force in January 2021. (PRC 4771)
- 4) Establishes the Regional Forest and Fire Capacity Program (RFFC) at the Department of Conservation (DOC) to support regional leadership to build local and regional capacity and develop, prioritize, and implement strategies and projects that create fire adapted communities and landscapes by improving ecosystem health, community wildfire preparedness, and fire resilience. (PRC 4208)

**THIS BILL:**

- 1) Requires, on or before July 1, 2024, the Committee, in consultation with the Department of Fish and Wildlife (DFW) and the University of California Cooperative Extension Livestock and Natural Resources Advisors and Specialists, to develop guidance for local or regional prescribed grazing plans. Requires the guidance to include all of the following:
  - a) Best practices for identifying and selecting priority areas for prescribed grazing;
  - b) Best practices for developing project plans and metrics for applying, monitoring, and evaluating the effectiveness and impacts of prescribed grazing;

- c) Best practices for using prescribed grazing to increase the diversity and abundance of native species and decrease the abundance of invasive species, including through adaptive management, exclusion areas, wildlife-friendly fencing, and monitoring;
  - d) Recommendations for securing sufficient land and resources, including forage, needed to pasture livestock when not engaged in a prescribed grazing project;
  - e) Best practices for building community support and engaging with public and private landowners to improve the implementation and outcomes of a prescribed grazing plan;
  - f) Methods to identify opportunities to house and maintain shared grazing infrastructure;
  - g) Best practices to use prescribed grazing to support and enhance prescribed burns and other vegetation management projects; and,
  - h) Other recommendations to increase the pace and scale of prescribed grazing at the local or regional levels, where appropriate.
- 2) Requires CAL FIRE to consider and incorporate, where appropriate, the guidance in its Wildfire Prevention grants program.
  - 3) Requires DOC to consider and incorporate, where appropriate, the guidance in the RFFC.
  - 4) Defines “prescribed grazing” as the lawful application of grazing by a specific kind of livestock at a determined season, duration, and intensity to accomplish defined vegetation or conservation goals, including reducing the risk of wildfire by reducing fuel loads, controlling undesirable or invasive plants, and promoting biodiversity and habitat for special status species. Prescribed grazing may involve any or multiple kinds of livestock.
  - 5) Includes prescribed grazing as a statutorily recognized fire prevention activity.
  - 6) Requires CAL FIRE, in consultation with the Committee, to increase opportunities and outreach for projects on state and private land that include prescribed grazing in the local assistance grant program.
  - 7) Includes community-supported prescribed grazing as an eligible activity under CAL FIRE’s local assistance grant program for fire prevention and home hardening education activities in California.
  - 8) Authorizes advance payments additionally for supplies, or infrastructure, including, but not limited to, fencing and watering improvements for prescribed grazing.
  - 9) Requires, on or before June 30, 2025, the Task Force, in consultation with the Committee and the Board, to develop a strategic action plan to expand the use of prescribed grazing to support the state’s efforts to increase the pace and scale of wildfire and forest resilience activities and strengthen the protection of communities and reduce their fire risk.
  - 10) Requires the plan to include a focus on reducing wildfire risk in and near “fire threatened communities.”

- 11) Requires the strategic action plan to include a component on monitoring and evaluating the effectiveness of prescribed grazing on reducing wildfire risk, including near communities, and the impacts of prescribed grazing on forest and wildland health, promoting the diversity and abundance of native species, and decreasing the abundance of invasive species.
- 12) Requires the Task Force to consider incorporating prescribed grazing in the January 1, 2026, update to the state's Action Plan.

**FISCAL EFFECT:** According to the Senate Appropriations Committee, this bill would result in ongoing costs of \$400,000 annually (General Fund) to CAL FIRE and two positions to oversee the training curriculum for livestock management and community-supported prescribed grazing as well as to provide outreach and public education on these opportunities; minor and absorbable costs for DOC; unknown, potentially significant cost pressure (various funds) to provide funding for grants and other activities using prescribed grazing as part of certain wildfire and forest resilience programs and strategies; and, to the extent wildfires are avoided, the bill could result in potential savings due to avoided fire suppression costs (General Fund).

**COMMENTS:**

1) **Author's statement:**

Ecological grazing is a versatile wildfire mitigation strategy with proven benefits including soil health and carbon sequestration, native plant and habitat restoration, and the production of local food and fiber. Grazing is a safer, more climate-friendly alternative to herbicides and fossil fuel powered mechanical vegetation management. Despite these advantages, support for ecological grazing has not always been consistent within existing programs.

This bill requires the Range Management Advisory Committee to develop guidance for local or regional prescribed grazing plans. CAL FIRE must also include the prescribed grazing plan guidance into the Fire Prevention Grants Program. This bill also expands the Fire Prevention Grants Program by defining "prescribed grazing" and including it in the definition of fire prevention activities. Under this bill, the Wildfire and Forest Resilience Task Force must also develop a strategic action plan to expand the use of prescribed grazing to protect fire threatened communities.

- 2) **Wildfires.** Wildfires have been growing in size, duration, and destructivity over the past 20 years. Growing wildfire risk is due to accumulating fuels, a warming climate, and expanding development in the wildland-urban interface (WUI). The 2020 fire season broke numerous records. Five of California's six largest fires in modern history burned at the same time, destroying thousands of buildings, forcing hundreds of thousands of people to flee their homes, and exposing millions of residents to dangerously unhealthy air. Managing forest health and efforts to restrict fire spread is vital to wildfire prevention.

The state and US Forest Service have a collective goal to treat one million acres of land annually to reduce fire risk by 2025. Managed livestock grazing is one tool home owners, land managers, communities, and public agencies can use to reduce fire fuel loads that can lead to catastrophic fires.

- 3) **Grazing.** Goats, sheep, and other grazing animals can help to mitigate the devastation caused by wildfires by consuming fuels with their specific grazing/browsing habits and reduce horizontal and vertical growth of fuels.



Targeted grazing, also known as prescribed grazing or managed grazing, is the “application of a specific kind of livestock at a determined season, duration, and intensity to accomplish defined vegetation or landscape goals.” This is different from conventional grazing in that the primary goal is landscape or vegetation management, not livestock weight gain and reproduction.

Targeted grazing is often most cost-effective on landscapes that are too large, steep, rocky, or remote for mechanical or chemical management or in the WUI where prescribed fire is considered too risky.

Across California, herds of herbivore animals are being used to prevent wildfires — alongside more traditional forms of fire prevention. Goats are not picky eaters, prefer weeds to native plants, and can get up steep hills that humans and machines can't access. Further, targeted livestock grazing is an “environmentally friendly” alternative to traditional methods, because it can be applied to extensive inaccessible areas, leaves no chemical herbicide residue, can be removed whenever necessary, and often improves biodiversity. Plus, in the process of removing plant biomass, grazing animals get fed and convert the grasses into saleable product meat and fiber.

There are many cobenefits of prescribed grazing beyond fire risk prevention. According to California’s Climate and Agricultural Network (CalCAN), California’s grasslands co-evolved with both fire and herds of grazing animals. As such, fire and grazing are critical variables for many of these ecosystems to thrive. Grasses are considered “fine” fuels; they are easy to ignite and burn fast. Grazing reduces flame length and fire intensity, and can therefore shift grasses from a highly flammable and effective fire spreader into a natural fire barrier. This shift has both ecological and safety benefits. Researchers at the UC Hopland Research and Extension Center have observed that sheep grazing in the Center’s oak woodlands prior to the Mendocino Complex Fire in 2018 reduced the fire intensity, which resulted in less tree damage (tree scorching and canopy loss), higher tree survival rates, and less seed mortality.

In 2022, CDFW invested in 70 wildfire resilience projects across 84,000 acres of habitat, which included installing 32,000 yards of fencing to enable prescribed grazing across these lands.

- 4) **Creating new policy guidance for grazing.** The Task Force’s Action Plan recognizes that landscapes at risk of wildfire cross multiple ownerships, so there is need for strong partnerships among federal, state, local and tribal entities and private organizations. In August 2020, Governor Newsom and the United States Department of Agriculture’s Forest Service (USFS) announced an historic Agreement for Shared Stewardship of California’s Forest and Rangelands to improve the health of California’s forests and reduce wildfire risk



across the state. Complementary partnerships at the local level through tribal governments, cities and counties, fire safe councils, regional collaboratives, resource conservation districts, and others will continue to be needed to protect our forested landscapes and at-risk communities.

The bill requires the Committee, in consultation with the DFW and the University of California Cooperative Extension Livestock and Natural Resources Advisors and Specialists, to develop guidance for local or regional prescribed grazing plans with best practices for identifying and selecting priority areas for prescribed grazing, among others, and recommendations for increasing the pace and scale of prescribed grazing at the local or regional levels.

Further, it would require, on or before June 30, 2025, the Task Force, in consultation with the Committee and the Board, to develop a strategic action plan to expand the use of prescribed grazing to support the state's efforts to increase the pace and scale of wildfire and forest resilience activities and strengthen the protection of communities and reduce their fire risk. The strategic action plan would include a component on monitoring and evaluating the effectiveness of prescribed grazing on reducing wildfire risk, including near communities, and the impacts of prescribed grazing on forest and wildland health, promoting the diversity and abundance of native species, and decreasing the abundance of invasive species.

- 5) **Integrating prescribed grazing as a fire prevention tool in state policies.** SB 675 formally recognizes prescribed grazing as a fire prevention tool and would weave prescribed grazing into several of the state's fire prevention programs.

Through RFFC, DOC provides block grants to regional entities to develop regional strategies that develop governance structures, identify wildfire risks, foster collaboration, and prioritize and implement projects within the region to achieve the goals of the program. Block grants are used by recipients to achieve landscape-level and community wildfire resilience consistent with the Action Plan as well as California's Forest Carbon Plan. Regional block grantees are expected to partner extensively across their region to identify priorities and develop projects.

SB 675 would require DOC to consider and incorporate the guidance for local or regional prescribed grazing plans in the RFFC. Grazing is a fire prevention tool that can be nicely applied regionally across jurisdictional borders.

As established pursuant to AB 1956 (Limón), Chapter 632, Statutes of 2018, CAL FIRE administers Wildfire Prevention grants to fund robust year-round fire prevention efforts in and near fire threatened communities in high and very high fire hazard severity zones that focuses on increasing the protection of people, structures, and communities. The grants enable local organizations, like fire safe councils, to implement activities that address the hazards of wildfire and reduce wildfire risk to communities. Funded activities include hazardous fuel reduction, wildfire prevention planning, and wildfire prevention education.

SB 675 would require CAL FIRE to incorporate the guidance for local or regional prescribed grazing plans in the Wildfire Prevention grant program. The bill would also include prescribe grazing in CAL FIRE's community-supported prescribed grazing as an eligible activity under CAL FIRE's local assistance grant program for fire prevention and home hardening education activities in California.

6) **Including all the right advisors.** Endangered Habitats League, a southern California conservation group dedicated to ecosystem protection and sustainable land use, writes that grazing can damage shrublands (coastal sage scrub and chaparral). Such lands are already stressed by too-frequent human-caused fire. Additional fuel reduction in these systems may well be counterproductive, converting native vegetation to flammable weeds (“type conversion”). Such poorly conceived treatments will not affect the wind-borne embers that cause structure loss during wildfires. To appropriately ensure that the ecological and fire prevention considerations are covered, the advisors to the Committee could include a fire prevention expert.

7) **Committee amendments.** The Committee may wish to amend the bill as follows:

- a) In Section 741.5(a), include a representation of *fire ecologists with expertise in the full range of California’s vegetation communities* amongst the advisors to the Committee.
- b) Add an additional item to the list in Section 1 for the Committee’s work:

*Best practices for use of prescribed grazing for reducing wildfire risk in and near “fire threatened communities,” as that term is defined in paragraph (2) of subdivision (b) of Section 4124.5.*

## REGISTERED SUPPORT / OPPOSITION:

### Support

Agricultural Institute of Marin  
 Alchemist CDC  
 Boek House Hearth and Husbandry  
 California Association of Resource  
 Conservation Districts  
 California Association of Winegrape  
 Growers  
 California Certified Organic Farmers  
 California Climate & Agriculture Network  
 California Food and Farming Network  
 California Forestry Association  
 California Invasive Plant Council  
 California Native Grasslands Association  
 California Nurses for Environmental Health  
 and Justice  
 California Rangeland Conservation  
 Coalition, INC  
 California State Grange  
 California Wool Growers Association  
 Carbon Cycle Institute  
 Central Coast Alliance United for A  
 Sustainable Economy  
 Ceres Community Project  
 Channel Islands Restoration  
 Community Alliance With Family Farmers

Community Environmental Council  
 County of Santa Barbara  
 Creekside Center for Earth Observation  
 Cuyama Lamb  
 Fibershed  
 Full Circle Wool  
 Grazing School of The West  
 Kiss the Ground  
 Ld Ford, Consultants in Rangeland  
 Conservation Science  
 Los Angeles Food Policy Council  
 Marin Agricultural Land Trust  
 Morris Grassfed Beef  
 North Santa Clara Resource Conservation  
 District  
 Occidental Arts and Ecology Center  
 Ojai Valley Fire Safe Council  
 Pacific Forest Trust  
 Pesticide Action Network North America  
 Point Blue Conservation Science  
 Roots of Change  
 Rural County Representatives of California  
 Sacramento Food Policy Council  
 San Diego Food System Alliance  
 San Diego Prescribed Grazing Task Force

Santa Barbara County Fire Safe Council  
Shepherdess Land and Livestock Co  
Sierra Harvest  
Sustainable Economic Enterprises Los  
Angeles  
Ted Chamberlin Ranch  
The Climate Center  
The Praxis Project

Tomkat Ranch  
True Grass Farms  
Upper Mark West Fire Safe Council  
Ventura Brush Goats  
Wild Farm Alliance  
Wild Oat Hollow  
Wine Institute

**Opposition**

None on file

**Analysis Prepared by:** Paige Brokaw / NAT. RES. /



Date of Hearing: June 19, 2023

**ASSEMBLY COMMITTEE ON NATURAL RESOURCES**

Luz Rivas, Chair

SB 728 (Limón) – As Amended May 1, 2023

**SENATE VOTE:** 31-9

**SUBJECT:** Plastic gift cards: prohibition

**SUMMARY:** Prohibits plastic gift cards from being sold, offered for sale, or distributed in the state on and after January 1, 2026. Specifies that “gift card” has the same definition as “gift certificate” as defined in Civil Code (CC) 1749.45.

**EXISTING LAW:**

- 1) Defines “gift certificate” to include gift cards, but does not include any gift card usable with multiple sellers of goods or services, provided the expiration date, if any, is printed on the card. (CC 1749.45)
- 2) Prohibits the sale of gift certificates, as defined, that contain an expiration date or a service fee. (CC 1749.5)
- 3) Requires that gift certificates are redeemable for cash value or subject to replacement with a new gift certificate at no cost to the consumer. Requires that gift certificates with cash value of less than \$10 to be redeemable for cash. (CC 1749.5)
- 4) Pursuant to the Integrated Waste Management Act (Public Resources Code (PRC) 40000 et seq.):
  - a) Requires that local governments divert at least 50% of solid waste from landfill disposal and establishes a statewide goal that 75% of solid waste be diverted from landfill disposal by 2020.
  - b) Requires commercial and organic waste generators, including multi-family dwellings, to arrange for recycling services for that material.
- 5) Prohibits the sale or distribution of single-use carryout bags at the point of sale, as specified. (PRC 42283)
- 6) Prohibits lodging establishments from providing small plastic bottles, as defined, containing personal care products to any person staying in the establishment. (PRC 42372)
- 7) Prohibits a food facility from providing single-use foodware or condiments to a consumer except upon request. (PRC 42271)

**FISCAL EFFECT:** Nonfiscal

**COMMENTS:****1) Author's statement:**

More than 3.4 billion gift cards were sold in the United States in 2021. The majority of these gift cards are made from PVC, which is not typically accepted for recycling. Regardless of being reusable in many cases, these cards often end up in the waste stream after only a single use, which is why some companies have made the switch away from plastic gift cards opting for paper, cardboard, sustainable wood, bamboo, and electronic options. SB 728 will transition away from the use of plastic gift cards and ensure that businesses continue the transition towards more sustainable products.

- 2) Plastic pollution.** Plastics pose a threat to the environment from origin to end-of-life. Plastic production is responsible for three and a half percent of all greenhouse gas emissions—more than the entire aviation sector. In 2021, global plastics production was estimated at 390.7 million metric tons, a 4% increase from the previous year. The United Nations Environment Programme reports that only 9% of all plastic ever made has been recycled, 12% has been incinerated, and the remaining 79% has accumulated in landfills or the environment.

Once plastics enter the environment, they remain there for hundreds to thousands of years. Plastics do not break down into their constituent parts, but instead break down into smaller and smaller particles, or microplastics. Because they are so small, microplastics can travel in the air and water, and can be easily absorbed by living things and accumulate up the food chain. Microplastics have been found in the most pristine natural environments on earth, including in the deep ocean, Antarctic sea ice, and in the sand of remote deserts. Laboratory studies have found that microplastics increase the risk of cancer and disrupt hormone pathways in lab rats.

Recycling plastic into new products is one way to reduce plastic pollution, as it keeps the recycled plastic out of the environment and reduces our dependence on virgin resin. However, recycling is currently only feasible for some of the more common, and least toxic, forms of plastic.

- 3) Gift cards.** Plastic gift cards make up a small portion of the state's waste stream, but not an insignificant amount of plastic. Approximately 3.5 billion gift cards were sold in the United States in 2021. Based on their average weight of 1-2 ounces, approximately 89 tons of gift card waste were generated. Since California comprises about 10% of the population, roughly 8.9 tons of gift cards are generated in the state annually.

Most gift cards are made of polyvinyl chloride (PVC), a plastic produced from vinyl chloride. According to the United States Environmental Protection Agency (USEPA), acute exposure to vinyl chloride in air can cause central nervous system effects. Chronic exposure through inhalation or oral exposure can result in liver damage. The USEPA has classified vinyl chloride as a human carcinogen.

PVC commonly contains additives, including as phthalates and per- and polyfluoroalkyl substances (PFAS). Measurable amounts of both phthalates and PFAS have been found in

the general population, based on urine, blood, and tissue testing performed by the Centers for Disease Control. In animal studies, phthalates have been shown to be anti-androgenic (i.e., decrease testosterone). Human studies appear to show similar results. Prenatal exposure to phthalates show effects on children's neurodevelopmental and neurobehavioral outcomes, increasing the risk of learning, attention, and behavioral disorders. Studies of human health impacts of PFAS show that exposures may cause increased cholesterol levels, damage to the liver and immune system, and increased risk of kidney and testicular cancer.

Gift cards are generally not recyclable. The small size of gift cards makes them nearly impossible to collect in conventional recycling systems. Even if they are collected, PVC is the least recycled plastic, with less than one-quarter of one percent recovered for recycling.

- 4) **Gift card alternatives.** There are alternatives to plastic gift cards. Both physical gift cards, such as those of paper, cardboard, bamboo, or other non-plastic materials and electronic gift cards would be permitted under this bill. However, these alternatives may not provide the durability of plastic gift cards.
- 5) **This bill.** This bill is intended to reduce the amount of PVC waste generated in the state by banning the distribution of plastic gift cards beginning January 1, 2026. This bill defines gift cards to include cards that function like gift certificates and excludes cards that can be used at multiple retailers and have an expiration date, like pre-paid debit cards. Gift cards that are reloadable would fall under the prohibition in this bill, but nothing in the bill precludes the ongoing use of reloadable plastic gift cards that were initially sold prior to January 1, 2026.
- 6) **Suggested amendments.** This bill does not include an enforcement mechanism to ensure that stores that distribute gift cards will comply. The *committee may wish to amend the bill* to include an enforcement provision that would allow the Attorney General, city attorney, county counsel, or district attorney to enforce its provisions by issuing civil penalties in the amount of \$25 for a first violation and \$100 for subsequent violations.

The *committee may further wish to amend the bill* to clarify that the prohibition on the sale and distribution of plastic gift card applies to retailers.

Finally, the *committee may wish to amend the bill* to include amendments requested by the author to extend the implementation date one year, to January 1, 2027, and to allow a one year "sell through" period to allow retailers to distribute gift cards already in their possession.

## REGISTERED SUPPORT / OPPOSITION:

### Support

Clean Water Action  
National Stewardship Action Council  
Natural Resources Defense Council

### Opposition

Plastics Industry Association

**Analysis Prepared by:** Elizabeth MacMillan / NAT. RES. /