California State Assembly

ENVIRONMENTAL SAFETY AND TOXIC MATERIALS

BILL QUIRK
CHAIR

AGENDA

Thursday, July 30, 2020
10:00 a.m.
State Capitol, Room 4202

HEARD IN FILE ORDER

SB 86	Durazo	Department of Pesticide Regulation: chlorpyrifos: quarterly reports.
SB 312	Leyva	Cosmetic Fragrance and Flavor Ingredient Right to Know Act of 2020.
SB 1044	Allen	Firefighting equipment and foam: PFAS chemicals.

PROPOSED CONSENT

SB 1156	Archuleta	Lithium-ion batteries: illegal disposal: fire prevention.

Date of Hearing: July 30, 2020

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
SB 86 (Durazo) – As Amended July 27, 2020

SENATE VOTE: 38-0

SUBJECT: Department of Pesticide Regulation: chlorpyrifos: quarterly reports

SUMMARY: Requires the Department of Pesticide Regulation (DPR) to submit a quarterly report, as specified, on the use of the pesticide, chlorpyrifos, in granular form. Specifically, **this bill**:

1) Makes legislative findings about the hazards posed by exposure to chlorpyrifos and about the process California has taken to regulate and monitor the pesticide.

2) Requires DPR, beginning with the first quarter of 2021, to prepare and submit quarterly reports, due sixty days after the end of each quarter, to the Senate Committee on Health, the Senate Committee on Labor, Public Employment and Retirement, the Senate Committee on Environmental Quality, the Assembly Committee on Health, the Assembly Committee on Labor and Employment, the Assembly Committee on Environmental Safety and Toxic Materials, and the Office of the Surgeon General.

3) Requires that the report provide all of the following information:

   a) The amount of chlorpyrifos in granular form used during the quarter, reported in pounds and by location of use;

   b) Potential reasons for any increase or decrease in the use of chlorpyrifos in granular form in the quarter as compared to the same quarter of the previous year; and,

   c) A description of how DPR monitors exposure to the use of chlorpyrifos in granular form with a particular emphasis on dermal and inhalation exposure, and any information relating to that exposure during the quarter.

EXISTING LAW:

1) Regulates the use of pesticides and authorizes the director of DPR (director) to adopt regulations to govern the possession, sale, or use of specified pesticides, as prescribed. (Food and Agriculture Code (FAC) §11501, et. seq)

2) Requires the director to endeavor to eliminate from use in the state any pesticide that endangers the agricultural or nonagricultural environment, is not beneficial for the purposes for which it is sold, or is misrepresented. (FAC § 12824)

3) Authorizes, the director, after a hearing, to cancel the registration of, or refuse to register, any pesticide that fulfills these, among other, criteria:
   a) That has demonstrated serious uncontrollable adverse effects either within or outside the agricultural environment;

b) The use of which is of less public value or greater detriment to the environment than the benefit received by its use;
c) For which there is a reasonable, effective, and practicable alternate material or procedure that is demonstrably less destructive to the environment; or,
d) That, when properly used, is detrimental to vegetation, except weeds, to domestic animals, or to the public health and safety. (FAC § 12825)

4) Requires DPR to designate, control and regulate restricted materials found to meet specified criteria, including, but not limited to, danger of impairment to public health, hazard to applicators and farmworkers, and hazard to the environment. Authorizes DPR to adopt regulations that prohibit the use or possession of a restricted material that he or she finds and determines is injurious to the environment or to any person, animal, crop, or other property. (FAC § 14001, et. seq)

5) Requires that, except as may be provided in regulations adopted by the director, a pesticide use report (PUR) be submitted to the county agricultural commissioner within seven days after each use of a restricted material. (FAC § 14011.5)

6) Requires each county agricultural commissioner to submit to the director a copy of each PUR received, and any other relevant information the director may require. Requires that copies of the reports from the county agricultural commissioner be rendered to the director within one calendar month after they are received. (FAC § 14012 (b))

7) Requires the director to summarize the contents of these PURs quarterly as to the type of material and amounts, and requires the summaries to be made a public record. Authorizes the director to publish or distribute the summaries. (FAC § 14012 (b))

8) Defines a Toxic Air Contaminant (TAC) as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health. (FAC § 14021)

9) Requires the director, in consultation with the Office of Health Hazard Assessment (OEHHA) and the State Air Resources Control Board (ARB), to evaluate, as specified, the health effects of pesticides that may be or are emitted into the ambient air of California and that may be determined to be a TAC that poses a present or potential threat to human health. (FAC § 14022)

10) Requires the director to determine, in consultation with OEHHA, the ARB, and the air pollution control districts or air quality management districts in the affected counties, the need for and appropriate degree of control measures for each pesticide listed as a TAC. (FAC § 14023 (e))

11) Requires, for pesticides determined to need control measures, the director, in consultation with the agricultural commissioners, air pollution control districts and air quality management districts in the affected counties, to develop control measures designed to reduce emissions sufficiently so that the source will not expose the public to the levels of exposure that may cause or contribute to significant adverse health effects. (FAC § 14024 (a))

12) Requires, if no demonstrable safe level or threshold of significant adverse health effects has been established by the director, the control measures to be designed to adequately prevent an endangerment of public health through the application of best practicable control techniques, which include, but are not limited to, the following:
    1) Label amendments;
    2) Applicator training;
    3) Restrictions on use patterns or locations;
    4) Changes in application procedures;
    5) Reclassification as a restricted material; and,
    6) Cancellation. (FAC § 14024 (a) – (b))

13) Requires the operator of the property which is producing an agricultural commodity to report the use of pesticides applied to the crop, commodity, or site to the agricultural commissioner of the county in which the pest control was performed by the 10th day of the month following the month in which the work was performed. (3 California Code of Regulations (CCR) 6626 (a))

14) Requires an agricultural pest control business to report the use of pesticides applied by it for the production of an agricultural commodity to the agricultural commissioner of the county in which the pest control was performed within seven days of completion of the pesticide application. (3 California Code of Regulations (CCR) 6626 (b))

FISCAL EFFECT: Unknown

COMMENTS:

Need for the bill: According to the author,

"SB 86 would require DPR to submit quarterly reports to legislative committees that provide information on the amount of chlorpyrifos use in granular form and the department's plans for monitoring the use of chlorpyrifos in granular form. SB 86 protects the health of children and frontline communities from the brain-toxic pesticide chlorpyrifos.

Chlorpyrifos in granular form consists of granules either coated or saturated with chlorpyrifos. Chlorpyrifos in granular form takes longer to break down in the environment than it takes to break down in liquid form. Chlorpyrifos in granular form may persist in the environment for as long as 180 days.

Scientists from the U.S. EPA have determined that the handling of chlorpyrifos in granular form results in unsafe levels of exposure to farmworkers, even when farmworkers follow all of the directions on chlorpyrifos labels, wear personal protective equipment, and use engineering controls. California continues to allow use of granular pesticides containing chlorpyrifos, despite the substantial risk these products present to farmworkers, children, and mothers.

DPR has one of the most comprehensive data gathering tools in the nation that includes data gathering at the local level and at the state level. Given the scientific evidence of the harm caused by chlorpyrifos, it is imperative that specific data on granular uses be incorporated

into the existing data gathering infrastructure and the information provided to the Legislature."

Chlorpyrifos uses: According to the United States Environmental Protection Agency (US EPA), chlorpyrifos is an organophosphate insecticide, acaricide, and miticide used primarily to control foliage and soil-borne insect pests on a variety of food and feed crops. Chlorpyrifos has been used as a pesticide since 1965 in both agricultural and non-agricultural areas. Nationwide, the largest agricultural market for chlorpyrifos in terms of total pounds of active ingredient is corn. It is also used on soybeans, fruit and nut trees, Brussels sprouts, cranberries, broccoli, and cauliflower, as well as other row crops. Non-agricultural uses include golf courses, turf, green houses, and on non-structural wood treatments such as utility poles and fence posts. Chlorpyrifos is also registered for use as a mosquito adulticide, and for use in roach and ant bait stations. Products are sold as liquids, granules, water dispersible granules, wettable powders, and water soluble packets, and may be applied by either ground or aerial equipment.

Chlorpyrifos concerns: Chlorpyrifos is an organophosphate that inhibits the functioning of the nervous system (acetylcholinesterase inhibition). This is how it kills insects. According to DPR, acute exposure can have similar effects on humans (sweating, salivation, vomiting, low blood pressure and heart rate, seizures, and death). DPR affirms that recent research has shown that chlorpyrifos is also a developmental neurotoxin in children and sensitive populations, and that the threshold for chlorpyrifos-induced neurodevelopmental effects is approximately 10-fold lower than the threshold for acetylcholinesterase inhibition. According to the American Academy of Pediatrics, California, "Chlorpyrifos is highly toxic, with demonstrated severe health effects far below current average exposure levels."

In 2015, DPR designated chlorpyrifos as a restricted material. Restricted materials are pesticides deemed to have a higher potential to cause harm to public health, farm workers, domestic animals, honeybees, the environment, wildlife, or other crops compared to other pesticides. Only trained, licensed professionals with a permit from a local county agricultural commissioner may use products containing a restricted material.

In 2017, OEHHA listed chlorpyrifos as a chemical known to cause developmental toxicity under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65), which requires the State of California to publish a list of chemicals known to cause cancer or reproductive toxicity (Health and Safety Code § 25249.8).

California's pesticide program: DPR is vested with the authority to regulate the registration, sale, and use of pesticides in California and has a mission of protecting public health and the environment. This authority is derived from several laws that cover all aspects of pesticide use in all media: air; ground and surface water; food; and, in agricultural, industrial, institutional, occupational and home-and-garden settings. Statutory regulatory authority allows DPR to regulate application rates; ensure pesticide efficacy; designate pesticides as restricted materials; develop criteria to prevent unacceptable pesticide residues in food and water; license applicators and dealers; and, adopt rules to protect workers and the public from overexposure. This full exercise of DPR's authority extends to the suspension or cancellation of a pesticide's registration. Cancellation prohibits use of a pesticide after an administrative adjudicatory hearing.

Chlorpyrifos as a Toxic Air Contaminant (TAC): DPR's TAC program is one of several regulatory options DPR can use to control exposure to potentially hazardous airborne pesticides. The Legislature created the statutory framework for the evaluation and control of chemicals as TACs with the enactment of California's Toxic Air Contaminant Act (AB 1807, Tanner, Chapter 1047, Statutes of 1983). The statute defines TACs as air pollutants that may cause or contribute to increases in serious illness or death, or that may pose a present or potential hazard to human health. DPR is responsible for the evaluation of pesticides as TACs.

In September 2018, following extensive scientific review and public comment, DPR proposed designating chlorpyrifos as a TAC, and on April 1, 2019, DPR finalized the listing of chlorpyrifos as a TAC.

DPR's cancellation of the registration of products containing chlorpyrifos: On May 8, 2019, the California Environmental Protection Agency (CalEPA) announced that DPR, "Is acting to prohibit the use of the pesticide and TAC chlorpyrifos in California by initiating cancellation of the pesticide." According to CalEPA, "The decision to prohibit chlorpyrifos follows mounting evidence, including recent findings by the state's independent Scientific Review Panel on [TACs], that the pesticide causes serious health effects in children and other sensitive populations at lower levels of exposure than previously understood. These effects include impaired brain and neurological development." CalEPA also announced at the time that the administration was convening a cross-sector working group to identify safer alternatives to avoid replacing chlorpyrifos with an equally harmful pesticide, and proposing the appropriation of $5.7 million in new funding in that year's state budget to support the transition to safer, more sustainable alternatives.

On August 14, 2019, DPR initiated cancellation proceedings regarding pesticide products containing the active ingredient chlorpyrifos and announced that chlorpyrifos product registrations will be made "inactive" on or before January 1, 2020. They announced, however, that the products are subject to existing stock provisions that allow for limited continued use and sale beyond that date.

On October 9, 2019, CalEPA announced that virtually all use of the pesticide chlorpyrifos in California will end in 2020 following an agreement between DPR and pesticide manufacturers to withdraw their products. The CalEPA announcement notes that under the settlement, the companies agreed that:

- All sales of chlorpyrifos products to growers in California will end on February 6, 2020;
- Growers will no longer be allowed to possess or use chlorpyrifos products in California after December 31, 2020; and,
- Until then, all uses must comply with existing restrictions, including a ban on aerial spraying, quarter-mile buffer zones and limiting use to crop-pest combinations that lack alternatives. DPR will support aggressive enforcement of these restrictions.

Chlorpyrifos in granular form: When CalEPA announced on October 9, 2019, that virtually all use of the pesticide chlorpyrifos in California will end in 2020, it also stated, "A few products that apply chlorpyrifos in granular form, representing less than one percent of agricultural use of chlorpyrifos, will be allowed to remain on the market. These products are not associated with detrimental health effects. DPR will continue to monitor for any exposures associated with these products."

While initially evaluating chlorpyrifos as a TAC, DPR evaluated inhalation and dermal exposure in the context of "bystanders." This evaluation did not find that chlorpyrifos in granular form offgassed or left a residue on food crops. DPR did not assess occupational exposure to granular chlorpyrifos during the TAC process. Because it is a restricted material, application of granular chlorpyrifos requires a permit from the county agricultural commissioner, a recommendation by a licensed pest control advisor, and supervision by a licensed certified applicator.

According to the author, "While the granular products may be used less frequently, they are not less dangerous for the farmworkers who are using them. In the 2016 Risk Assessment, US EPA assessed work scenarios involving granular formulations of chlorpyrifos, and found skin and inhalation exposures combined exceeded the level [US] EPA determined was safe for workers."

DPR provided the following data on the use of chlorpyrifos over the last five years in California (pounds per year applied).

Pounds of Chlorpyrifos Applied in CA per Year	2015	2016	2017	2018	2019*
All formulations	1,107,417	903,238	948,004	602,658	12,802
Granular formulations	14,121	14,315	12,861	11,966	6,589

* 2019 data has not been finalized and may contain errors.

DPR reports that on average from 2016-2018, about 550 applications to apply granular chlorpyrifos were submitted per year, as reported through the PUR. In 2019 about half that were submitted.

Pesticide use reports in California: According to DPR, California's pesticide use reporting program is recognized as the most comprehensive in the world. In 1990, California became the first state to require full reporting of agricultural pesticide use in response to demands for more realistic and comprehensive pesticide use data. Under the program, all agricultural pesticide use must be reported within seven days to county agricultural commissioners, who in turn report the data to DPR within one calendar month. Statute requires the director to summarize the contents of these PURs quarterly as to the type of material and amounts, and requires the summaries to be made a public record.

DPR currently makes PUR information available to the public through its California Pesticide Information Portal (CalPIP), which includes a comprehensive database of all pesticide use reports, and through the Pesticide Use Annual Summary Reports, which includes annual data summaries, indexed by chemical or by commodity. These summaries include analyses of pesticide use trends, including the use of organophosphate pesticides, and are available from 1989 to present. The summaries take about a year and a half to publish because, DPR indicates, they scrutinize the self-reported PUR data to verify its accuracy.

DPR's website states that, "DPR is currently reviewing CalPIP and the Pesticide Use Annual Summary Report to improve their utility and accessibility."

This bill requires DPR to prepare and submit quarterly reports, due sixty days after the end of each quarter, on the amount of chlorpyrifos in granular form used during the quarter to specified California Senate and Assembly Committees and to the Office of the Surgeon General. Current regulations require a pest control business to report a PUR to the county agricultural commissioner within seven days of application and a property owner to report a PUR by the tenth day of the month following the month in which the work was performed. Statute requires the county agricultural commissioner to submit the PURs it receives to DPR within one calendar month after they are received. DPR indicates that it then examines submitted PUR data, which is initially self-reported, to verify its accuracy for publication in CalPIP and in the annual PUR summary. This takes some time. The author may wish to consider extending the timeframe by which DPR must submit the report to allow for data to be received and verified by DPR for accuracy.

This bill also requires DPR to include in the report potential reasons for any increase or decrease in the use of chlorpyrifos in granular form in the quarter as compared to the same quarter of the previous year; a description of how DPR monitors exposure to the use of chlorpyrifos in granular form with a particular emphasis on dermal and inhalation exposure; and, any information relating to that exposure during the quarter. It is unclear how DPR, as is required by the bill, would ascertain the potential reasons for any increase or decrease in the use of chlorpyrifos in granular form in the quarter as compared to the same quarter of the previous year. If the author intends for DPR to check directly with applicators, growers, or county agricultural commissioners on the reasons for a change in the amount of chlorpyrifos used, instead of simply making an educated guess, she may wish to consider giving DPR additional time to complete this research.

Federal action on chlorpyrifos: Federal regulatory action on chlorpyrifos stretches back about two decades, when, in 2000, the US EPA finalized chlorpyrifos risk assessments for re-registration and identified the need to address health and environmental risks from chlorpyrifos exposure. At that time, the registrants of chlorpyrifos voluntarily entered into an agreement with US EPA to eliminate, phase out, and modify certain uses. The agreement included eliminating most homeowner uses of chlorpyrifos, except ant and roach baits in child resistant packaging and fire ant mound treatments.

While the US EPA made label changes and took other actions on chlorpyrifos over the years, most recently, in October 2015, under the Obama administration, the US EPA proposed to revoke all food residue tolerances for chlorpyrifos. Because tolerances are the maximum residue of a pesticide that can be in or on food, the proposed rule revoking all chlorpyrifos tolerances means that if this approach had been finalized, all agricultural uses of chlorpyrifos in the United States would have ceased. On November 3, 2016, the US EPA submitted *Chlorpyrifos: Revised Human Health Risk Assessment for Registration Review* (revised risk assessment), which concluded that exposure to chlorpyrifos from diet (i.e., residues of chlorpyrifos on food crops) and drinking water could lead to unacceptably high population exposures and determined that some reproductive-aged women, infants, and children consumed levels of chlorpyrifos substantially above the acceptable level for these vulnerable life stages. US EPA also identified numerous scenarios that could result in unsafe exposures for agricultural workers and bystanders.

As evidence of need for continued scrutiny of granular chlorpyrifos, proponents of the bill point to page 7 of the revised risk assessment, which states, "Using the updated [model for deriving toxicological points of departure] and [specified] uncertainty… all agricultural occupational handler scenarios, all primary seed treatment handler scenarios, and all secondary seed treatment

(planter) scenarios are of concern with label-specified and maximum levels of personal protective equipment (PPE) or engineering controls."

In March 2017, under the Trump administration, Scott Pruitt, the head of US EPA at the time, rejected the above scientific conclusion of US EPA's chemical safety and public health experts and rejected a petition filed a decade prior by the Pesticide Action Network and the Natural Resources Defense Council asking that the agency revoke all pesticide tolerances for chlorpyrifos and cancel all chlorpyrifos registrations. In rejecting the petition, Pruitt took what is known as a "final agency action" on the question of the safety and use of chlorpyrifos, suggesting that the matter would not likely be revisited until October 2022 when US EPA is formally required to re-evaluate the safety of the pesticide.

Judicial action on chlorpyrifos: In a long running court case on chlorpyrifos that dates back to 2007, on August 9, 2018, three appellate judges of the U.S. Ninth Circuit Court of Appeals ordered US EPA to prohibit the use of chlorpyrifos within 60 days. The court ruled that there was, "no justification for [US EPA's] decision in its 2017 order to maintain a tolerance for chlorpyrifos in the face of scientific evidence that its residue on food causes neurodevelopmental damage to children." Following the ruling, US EPA sought a rehearing, saying that the appeals court lacked jurisdiction to review Pruitt's March 2017 ruling. The US EPA stated that the court should have simply directed him to reconsider the evidence rather than order a ban. As a result, the Ninth Circuit took the rare step of granting US EPA's request to have the full panel of the appeals court rehear oral arguments. On April 17, 2019, the 11-judge appeals court panel ruled that US EPA must, within 90 days, review its 2017 decision to reverse its previous decision to prohibit the use of chlorpyrifos on food crops. On July 18, 2019, US EPA announced that it would not ban the use of chlorpyrifos because the data supporting objections to the use of the pesticide was "not sufficiently valid, complete or reliable." The agency added that it would continue to monitor the safety of chlorpyrifos through 2022.

Arguments in Support:

According to Earthjustice,

> "SB 86 [is] a bill that will provide important information to the Legislature on granular products of chlorpyrifos that remain available for use in California. The oversight function of the Legislature has come into sharper focus especially this year. Protecting public health of farmworkers and frontline communities is an essential function of state government. The data submitted to the legislature under SB 86 will empower the policy committees to track the use of granular uses of chlorpyrifos and its health impacts on farmworkers… It is important to monitor the use of granular products of chlorpyrifos as the chemical remains dangerous as long as it is allowed to be in use."

According to the American Academy of Pediatrics, California,

> "Chlorpyrifos is highly toxic, with demonstrated severe health effects at far below current average exposure levels. One long-term Columbia University study found that toddlers with higher levels of chlorpyrifos exposure displayed developmental delays by age three, and were more than five times as likely to be on the autism spectrum and more than 11 times as likely to display symptoms of attention disorders than their peers. In the 2016 Risk Assessment, the U.S. Environmental Protection Agency (USEPA) found that combined dermal and inhalation exposures exceeded the level USEPA determined was safe for workers even when maximal personal protective equipment or engineering controls were assumed…

Given the scientific evidence of the harm caused by chlorpyrifos, it is imperative that specific data on granular uses be provided to the legislature, empowering them to make responsible decisions regarding this product."

According to the United Farm Workers,

"This year, the world faces a global health pandemic. The Governor and policymakers are relying on science and medical experts to minimize harm to our public health. And, as scientists and medical experts throughout the country continue to conclude that NO SAFE FORM and NO SAFE LEVEL of chlorpyrifos exists, the United Farm Workers will not rest until this brain damaging chemical is legislatively banned in this state."

Arguments in Opposition:

According to a coalition of opponents,

"Our organizations do not oppose information on granular chlorpyrifos use being made available to the Legislature and public. However, this bill is unnecessary as California's Department of Pesticide Regulation (DPR) reports this data annually. Further, we are opposed to the findings of the bill as they are misleading and mischaracterize both the use and risk of granular chlorpyrifos. [*The letter lists the following arguments.*]

1) DPR already compiles an annual use report for all pesticides in California and quarterly reporting would result in unnecessary costs… Under the [existing] reporting program, all agricultural pesticides must be reported monthly to the county agricultural commissions, who then report the compiled data to DPR… All reports are compiled by DPR staff and indexed by chemical or commodity and made available online to the public… There should be considerations of the increased cost of quarterly reports before requiring the shifting of funds.

2) The findings in SB 86 are misleading as they do not acknowledge the work DPR has done to mitigate the risk of granular chlorpyrifos use or the differences between granular chlorpyrifos and chlorpyrifos applied through ground spray and aerial application… The findings of SB 86 claim that the use of granular chlorpyrifos results in unsafe levels of exposure to farm workers; can be found on food as a residue; and is tracked home by parents and siblings, which in turn impact young children. These insinuations of danger are untrue and do not consider the facts and scientific studies conducted by DPR…
   a) DPR extensively evaluates each pesticide before it can be registered for use in California for human health and environmental impacts…
   b) California has the most advanced system in the nation to ensure that no produce is sold to consumers with pesticide residue levels that would negatively impact human health…

3) Application of granular chlorpyrifos is severely restricted and any applicator must follow the label requirements for application."

REGISTERED SUPPORT / OPPOSITION:

Support

American Academy of Pediatrics, California (Co-Sponsor)
Earthjustice (Co-Sponsor)
United Farm Workers (UFW) (Co-Sponsor)
Association of Regional Center Agencies
California League of Conservation Voters
Californians for Pesticide Reform
Community Nature Connection
East Yard Communities for Environmental Justice
Environmental Working Group (EWG)
Friends of the L.A. River
From Lot to Spot
Los Angeles Waterkeeper
Mujeres de la Tierra
Natural Resources Defense Council (NRDC)
Pesticide Action Network North America
Physicians for Social Responsibility-Los Angeles
Sierra Club
1 Individual

Opposition

African American Farmers of California
Agricultural Council of California
Almond Alliance of California
American Chemistry Council
American Pistachio Growers
California Association of Pest Control Advisers
California Association of Winegrape Growers
California Chamber of Commerce
California Citrus Mutual
California Cotton Ginners and Growers Association, Inc.
California Farm Bureau Federation
California Fresh Fruit Association
California League of Food Producers
California Seed Association
Far West Equipment Dealers Association
Nisei Farmers League
Western Agricultural Processors Association
Western Growers Association
Western Plant Health Association

Analysis Prepared by: Shannon McKinney

Date of Hearing: July 30, 2020

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
SB 312 (Leyva) – As Amended July 27, 2020

SENATE VOTE: 38-0 (unrelated bill content)

SUBJECT: Cosmetic Fragrance and Flavor Ingredient Right to Know Act of 2020.

SUMMARY: Requires disclosure of specified flavor and fragrance ingredients in cosmetic products. Specifically, **this bill**:

1) Establishes the Cosmetic Fragrance and Flavor Ingredient Right to Know Act of 2020 (Act).

2) Declares the intent of the Legislature to provide consumers and salon workers with ingredient information about cosmetic products that encourages informed purchasing decisions and reduces public health impacts from exposure to potentially harmful chemicals by requiring product manufacturers to provide a specific list of chemicals used in their fragrance and flavor formulations.

3) Defines "cosmetic product" as an article for retail sale or professional use intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body for cleansing, beautifying, promoting attractiveness, or altering the appearance.

4) Defines "designated list" as any of the 22 authoritative lists of chemicals with hazard traits identified in the Act, including any subsequent revisions to those lists when adopted by the authoritative body.

5) Defines "flavor ingredient" as any intentionally added substance or complex mixture of aroma chemicals, flavor chemicals, natural essential oils, and other functional ingredient or ingredients for which the purpose is to impart a flavor or taste, or to counteract a flavor or taste.

6) Defines "fragrance ingredient" as any intentionally added substance or complex mixture of aroma chemicals, natural essential oils, and other functional ingredient or ingredients for which the purpose is to impart an odor or scent, or to counteract an odor.

7) Defines "manufacturer" as any entity whose name appears on the label of a cosmetic product pursuant to the requirements of Section 701.12 of Title 21 of the Code of Federal Regulations (CFR).

8) Requires, commencing January 1, 2022, a manufacturer of a cosmetic product sold in the state to disclose all of the following information to the Division of Environmental and Occupational Disease Control (Division) within the California Department of Public Health (CDPH):

    a) A list of each fragrance ingredient or flavor ingredient that is included on a designated list and present in the cosmetic product;
    b) A list of each fragrance allergen included in Annex III of the European Union (EU) Cosmetics Regulation No. 1223/2009, as required to be disclosed pursuant to the EU

Detergents Regulation No. 21 648/2004, and subsequent updates to those regulations, that is present in a rinse-off cosmetic product at a concentration at or above 0.01 percent (100 parts per million (ppm)) or in a leave-on cosmetic product at a concentration at or above 0.001 percent (10 ppm). Requires those ingredients to appear on the database in a unique manner that distinguishes those ingredients from other reportable ingredients and indicates that they are hazardous only to individuals who suffer from fragrance allergies;

c) Whether the cosmetic product is intended for professional use or retail cosmetic use;
d) The Chemical Abstracts Service (CAS) number for each ingredient or allergen that requires disclosure; and,
e) The corresponding Universal Product Code (UPC) for the covered cosmetic product.

9) States that, to protect trade secrets, the bill does not require a manufacturer to disclose the weight or amount of an ingredient that requires disclosure or to disclose the manner in which a cosmetic product or intentionally added fragrance ingredient or flavor ingredient is formulated. Authorizes a manufacturer to protect an ingredient as a trade secret if it is not on a designated list or required to be disclosed. Exempts any fragrance ingredient or flavor ingredient that is included in a designated list, or a fragrance allergen that requires disclosure, from constituting a trade secret.

10) Provides that a fragrance ingredient or flavor ingredient that constitutes a trade secret is not subject to disclosure under the California Public Records Act.

11) Requires a manufacturer that is required to disclose a fragrance ingredient or flavor ingredient due to a change in a designated list to disclose the ingredient no later than six months after the revised list is adopted by the authoritative body, or six months after the revised list becomes effective, whichever is later.

12) Requires the CDPH to create a voluntary electronic mailing list for CDPH to provide updates on the inclusion or deletion of fragrance allergens, fragrance ingredients, and flavor ingredients on the designated lists.

13) Requires, commencing January 1, 2022, the Division to post on the database created pursuant to the California Safe Cosmetics Act of 2005 (Safe Cosmetics Act), in an easily readable format, all of the following information related to a cosmetic product:

    a) A list of all fragrance ingredients and flavor ingredients that are included on a designated list and all fragrance allergens required to be disclosed; and,
    b) The health hazards associated with each fragrance ingredient or flavor ingredient.

14) Requires the Division to identify whether an ingredient is a fragrance ingredient or a flavor ingredient.

15) Provides that the provisions of this Act are severable.

EXISTING LAW:

1) Requires, pursuant to the federal Food, Drug & Cosmetic Act (FD&C Act), cosmetics produced or distributed for retail sale to consumers for their personal care to bear an ingredient declaration. (21 CFR 701.3)

2) Pursuant to the Sherman Food, Drug & Cosmetic Act:

a) Defines "cosmetic" as any article, or its components, intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to, the human body, or any part of the human body, for cleansing, beautifying, promoting attractiveness, or altering the appearance. Provides that the term "cosmetic" does not include soap. (Health & Safety Code (HSC) § 10990)

b) Considers any cosmetic to be adulterated if it bears or contains any poisonous or deleterious substance that may render it injurious to users under the conditions of use prescribed in the labeling or advertisement of the cosmetic, or under conditions of use as are customary or usual. (HSC § 111670)

3) Requires, pursuant to the Safe Cosmetics Act, a manufacturer of a cosmetic subject to regulation by the federal Food and Drug Administration (FDA) to submit to CDPH a list of its cosmetic products sold in California that contain any ingredient that is a chemical identified as causing cancer or reproductive toxicity. (HSC § 111792)

4) Requires a professional cosmetic for sale in this state manufactured on or after July 1, 2020, to have a label affixed on the container that satisfies all of the labeling requirements for any other cosmetic pursuant to the FD&C Act (21 United States Code (USC) Sec. 301, et seq.), and the federal Fair Packaging and Labeling Act (15 USC Sec. 1451, et seq.). (HSC § 110371)

5) Requires, pursuant to the Cleaning Products Right to Know Act, manufacturers of cleaning products to disclose specified chemical ingredients on a product label and on the manufacturer's website. (HSC § 108950)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author,

> "In California, we actually know more about the fragrance ingredients in products that we use to clean our homes than those that we put on our faces or bodies. Consumers have a right to know what ingredients are in the beauty and personal care products they bring home to their families and use daily on their bodies. The bottom line is that no toxic ingredients should be kept secret. SB 312 will empower consumers so that they can make educated decisions about which products to use with their kids and families.
>
> No federal law requires the disclosure of fragrance or flavor ingredients in personal care and beauty products to consumers, workers, manufacturers or even regulatory agencies. This loophole allows dozens – sometimes even hundreds – of chemicals to hide under the word "fragrance" on the labels of cosmetic products with no regulatory oversight of the safety of those ingredients. Fragrance chemicals can be found in more than 95% of shampoos, conditioners, hair styling products, antiperspirants and shaving products as well as fine fragrances, body spray and lotions and 1/3 of the fragrance chemicals currently in use have been linked to negative health impacts ranging from allergic reactions to reproductive harm and increased risk of breast cancer. The same loophole exists for chemicals used to flavor a product, which are appearing more and more frequently in lip gloss and chap sticks marketed to kids.
>
> SB 312 would remove trade secret protection from any fragrance or flavor ingredient, for purposes of disclosure via the Safe Cosmetics Program, deemed harmful to human health or

the environment, defined as whether that ingredient appears on any of the 22 designated lists referenced in the bill."

Cosmetics: Cosmetic products are used as part of daily beauty and cleansing routines, often times on the skin's most sensitive areas, like the face, eyelids, and lips. Cosmetic products are most heavily used by women, including those of childbearing age, increasing the likelihood of exposing mothers, fetuses, and nursing children to substances that can cause cancer and reproductive toxicity.

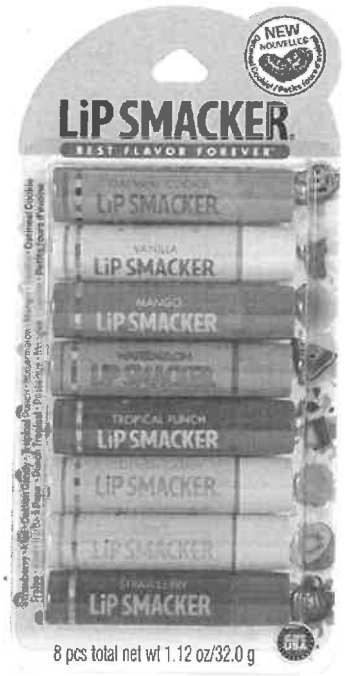
Cosmetic products contain a wide variety of chemical ingredients to which cosmetic users, both consumer and professional salon workers, are exposed to on a daily basis. The average consumer uses 12 different cosmetic products a day (including soaps and shampoos). According to the United States Department of Labor, "These exposures can 'add up,' especially when many products are being used at the same time [and] the products are used day after day."

Federal laws on fragrance disclosure: Pursuant to the FD&C Act, cosmetics and their ingredients are not required to be approved before they are sold to the public, and the FDA does not have the authority to require manufacturers to file health and safety data on cosmetic ingredients or to order a recall of a dangerous cosmetic product.

The FD&C Act requires ingredients to be identified by the names established or adopted by regulation; those accepted by the FDA as exempt from public disclosure may be stated as "and other ingredients" (21 CFR 701.3(a)). The FD&C Act exempts chemicals used as fragrances or flavoring from being identified as ingredients on the labels of cosmetic products.

The 1966 Federal Fair Packaging and Labeling Act (FPLA) requires manufacturers to list all of the ingredients on a cosmetic product label; however, fragrance and flavoring are specifically exempt from the FPLA's labeling requirements.

The current practice for ingredient disclosure has been to identify fragrances as a separate category of product content, as a parenthetical "fragrance," without identifying the specific chemical composition used in the fragrances. Examples are provided, on the next page.



INGREDIENTS: Ricinus Communis (Castor) Seed Oil, Cetyl Acetate, Beeswax/Cire d'Abeille, Euphorbia Cerifera (Candelilla) Wax/Cire de Candelilla, **Flavor/Aroma**, Polybutene, Sesamum Indicum (Sesame) Seed Oil, Ozokerite, Copernicia Cerifera (Carnauba) Wax/Cire de Carnauba, Acetylated Lanolin Alcohol, Mineral Oil/Huile Minerale, Hydrogenated Soy Glycerides, Paraffin, Propylene Glycol , Triticum Vulgare (Wheat) Germ Oil, Stearic Acid, Propyl Gallate, Citric Acid, Sucralose, Stevia Rebaudiana Leaf/Stem Extract, Neotame, Benzyl Alcohol, Benzyl Benzoate, Citral, Amyl Cinnamal, Limonene, Linalool, Methyl 2-Octynoate. MAY CONTAIN/PEUT CONTENIR (+/-): Red 7 Lake (Cl 15850), Red 6 Lake (Cl 15850), Yellow 5 Lake (Cl 19140), Blue 1 Lake (Cl 42090), Red 28 (Cl 45410), Carmine (Cl 75470), Titanium Dioxide (Cl 77891).

ACTIVE INGREDIENTS: Aqua/Water; Glycerin; Alcohol Denat.; Butylene Glycol; Sodium Chloride; Sodium Citrate; Dipotassium Phosphate; Panthenol; PPG-26-Buteth-26; Potassium Phosphate; Citric Acid; Benzophenone-4; Disodium EDTA; PEG-40 Hydrogenated Castor Oil; Capryloyl Salicylic Acid; Rosa Centifolia Flower Water/Rosa Centifolia Flower Water; Diazolidinyl Urea; Cl 14700/Red 4; Cl 17200/Red 33; **Parfum/Fragrance**; Limonene; Linalool; Benzyl Benzoate; Alpha-Isomethyl Ionone; Hydroxycitronellal; Butylphenyl Methylpropional.

INGREDIENTS: Active: Sodium Monofluorophosphate 0.76% (0.14% W/V Fluoride Ion)...Purpose: Anticavity. Inactive: Glycerin, Water, Hydrated Silica, Calcium Carbonate, Xylitol, Sodium Lauryl Sulfate, Mentha Viridis (Spearmint) Leaf Oil **And Other Natural Flavors**, Chondrus Crispus (Carrageenan), Glycyrrhiza Uralensis (Licorice) Root Extract.

Why chemical disclosure in cosmetic products matters: Consumers may want or need to avoid certain chemical exposures for various, personal reasons.

While a direct link between endocrine disrupting chemicals and cancer is not yet definitive, certain cancers are hormonally-driven, such as breast cancer, prostate cancer, ovarian cancer, and endometrial cancer. According to Dr. Lorenzo Cohen, Ph.D., MD, director of the Integrative Medicine Program at the University of Texas, even a low dose of endocrine disrupting chemicals could cause concern, especially if a product is used every day. He also notes some personal care products may contain endocrine disrupting chemicals and allergens under the guise of "fragrance." Because those fragrance ingredients are not disclosed, though, it is unknown which fragrances do and how many.

Several cosmetic manufacturers, including BeautyCounter, 100% Pure, HAN Skincare Cosmetics, EO Essential Oils, and others, state that, "It is perfectly legal for companies to hide chemicals that have documented negative impacts on public health under the word "fragrance" or "flavor" on product labels, because there is no federal or state law that requires the disclosure of these ingredients in retail cosmetics or professional salon products … Giving consumers product-specific fragrance ingredient information enables them to make value comparison between products, and thus the ability to avoid certain products that may contain chemicals of concern."

Furthermore, the disease and health conditions plaguing Americans (diabetes, obesity, heart disease, immune system diseases/dysfunction and respiratory diseases) have been linked to exposure to a variety of endocrine disrupting compounds in animal models and human epidemiology studies, according to Dr. Linda S. Birnbaum, Ph.D., Scientist Emeritus (Retired) Former Director, National Institute of Environmental Health Sciences and National Toxicology Program. Endocrine-disrupting chemicals can weaken our immune systems, making us more susceptible to diseases like COVID-19. Therefore, giving consumers more information about products' chemical makeup can lead to consumers making choices that limit harmful exposures, which in turn can help make the public more defensible against various diseases and viruses.

Safe Cosmetics Act: California's Safe Cosmetics Act (SB 484, Migden, Chapter 729, Statutes of 2005) requires that for all cosmetic products sold in California, the manufacturer, packer, and/or distributor named on the product label shall provide CDPH a list of all cosmetic products that contain any ingredients known or suspected to cause cancer, birth defects, or other reproductive harm, including any chemical that:

a) Is contained in the product for purposes of fragrance or flavoring; or,

b) Is identified by the phrase "and other ingredients" and determined to be a trade secret, as specified.

Keeping an eye on what chemicals are required for disclosure is the onus of the manufacturer. The Safe Cosmetics Act provides that, if an ingredient identified pursuant to this law subsequently is removed from the product in which it was contained, is removed from the list of chemicals known to cause cancer or reproductive toxicity, or is no longer a chemical identified as causing cancer or reproductive toxicity by an authoritative body, the manufacturer of the product containing the ingredient is required to submit the new information to the Division. The Safe Cosmetic Act further provides that, upon receipt of new information, the Division, after verifying the accuracy of that information, is required to revise the manufacturer's information

on record with the Division to reflect the new information, and the manufacturer is not under obligation to submit subsequent information on the presence of the ingredient in the product unless subsequent changes require submittal of the information. (HSC § 111792 (c))

CDPH maintains an active, searchable database with all of the ingredient information collected from manufacturers under the Safe Cosmetics Act to make that data user-friendly and available to the public. It is called the California Safe Cosmetics Program Product Database. Anyone can search the database for a type of product; a specific product name; or, a brand or company name to get more information about whether a product contains a covered chemical.

Since the launch of the online program in 2009, a total of 77 unique ingredients that are carcinogens or developmental or reproductive toxins have been reported in more than 57,313 products by 481 companies. Sixty-three percent of the reported products are makeup, 13% are nail products, 8% are skin care products, and 6% are sun-related products. However, CDPH states that not all companies are complying with the reporting requirements and that the extent of non-compliance is difficult to assess.

For Fiscal Year 2018-19, the State Budget Act included a $1.5 million General Fund appropriation for the Safe Cosmetics Act, plus $500,000 annually thereafter to CDPH to increase staffing for enforcement and program improvement activities in the Safe Cosmetics Program.

Cleaning Product Right to Know Act of 2017: SB 258 (Lara, Chapter 830, Statutes of 2017) requires a manufacturer of a cleaning product, including an air care product, general cleaning product, or janitorial floor cleaning product, to disclose on the product label and on the product's internet website information related to chemicals contained in the product. Manufacturers of those products are allowed to protect certain chemicals from disclosure by use of a generic name.

The law requires any chemical to be disclosed if it is included on any of the 22 authoritative lists of chemicals that exhibit hazardous traits and/or an environmental or toxicological endpoint, as identified by the United States Environmental Protection Agency, the state of California, the European Union, Canada, the International Agency on Cancer Research, the federal Agency for Toxic Substances and Disease Registry, among others.

The Cleaning Product Right to Know Act requires a manufacturer, within six months of a change to a designated trait list, to make a revision to the information disclosed online, and requires a manufacturer, within eighteen months of a change to a designated list, to make a revision to the information disclosed on the product label. (HSC § 108956 (e)-(g))

This bill: SB 312 would require cosmetic manufactures, beginning July 1, 2022, to disclose to the Division information related to cosmetic products that contain a fragrance or flavor ingredient that is included on one of the designated lists and a list of fragrance allergens that are present in specified concentrations. It would also require the Division to post in the Safe Cosmetics Act database a list of those intentionally added fragrance and flavor ingredients and fragrance allergens in the cosmetic product.

SB 312 would broaden the Safe Cosmetics Act by expanding the disclosure of flavor and fragrance ingredients beyond carcinogens and developmental toxicants to any chemical listed on any of 22 designated lists of chemical health hazards – the same lists included in the Cleaning Product Right to Know Act and the Department of Toxic Substances Control's candidate

chemical lists, plus allergens listed in Annex III of the EU Cosmetics Regulation No. 1223/2009, when present at designated levels.

Disclosure provided under this bill would provide consumers greater information to make more informed choices, and it could potentially lead to safer products designed without hazardous chemicals.

The Safe Drinking Water and Toxic Enforcement Act of 1986, known as Proposition 65, provides a good example. According to the Office of the Attorney General, Proposition 65 has motivated some businesses to eliminate or reduce listed, or likely to be listed, toxic chemicals in numerous consumer products, such as ceramic tableware, jewelry, potato chips, and vitamin supplements. Thus, Proposition 65 has prompted reformulation of products to be safer to avoid the warning label prescribed under the law. Similarly, SB 312 could inspire some cosmetic manufactures to reformulate a product to obviate the need for disclosure in the Safe Cosmetics Program Product Database.

Unilever, the manufacturer of Dove, TRESemmé, Suave, and Vaseline personal care product lines, writes in support of SB 312, "We believe that consumers have a right to know what's in their products. That is why we currently disclose fragrance ingredients on SmartLabel for all of our mass-market beauty and personal care products sold in the US. We are pleased that SB 312 will help increase ingredient transparency in our industry."

Facilitating compliance: Manufacturers and CDPH alike will need to track the designated lists of chemicals for changes for purposes of complying or tracking compliance, respectively. Given the magnitude of chemicals covered and the scope of disclosure, to facilitate compliance, the bill would require CDPH to create a voluntary listserv for manufacturers to opt-into to provide updates on the inclusion of fragrance ingredients and flavor ingredients on the designated lists. The bill also provides manufacturers up to six months to disclose any chemical that is added or removed to one of the designated lists.

Public disclosure: SB 312 requires covered fragrance and favoring information to be submitted to the Safe Cosmetics Act database. That database is and would be a central hub for all cosmetics ingredient information covered under the Safe Cosmetics Act and the Cosmetic Fragrance and Flavor Ingredient Right to Know Act of 2020. Having all of the information in one publicly-facing portal provides a one-stop shop for professionals and consumers wanting information on myriad products. It also simplifies enforcement: CDPH will know who is in compliance based on who has submitted information or not.

Related legislation:

1) SB 574 (Leyva, 2019). Would have required disclosure of specified flavor and fragrance ingredients in cosmetic products. This bill was held in the Assembly Appropriations Committee.

2) AB 2775 (Kalra, Chapter 393, Statutes of 2018). Requires a professional cosmetic manufactured on or after July 1, 2020, for sale in this state to have a label affixed on the container that satisfies all of the labeling requirements for any other cosmetic pursuant to the federal FD&C Act and FPLA.

3) SB 258 (Lara, Chapter 830, Statutes of 2017). Requires a manufacturer of a cleaning product manufactured or sold in California on or after July 1, 2020, to disclose each ingredient contained in the product on the product label.

4) AB 2125 (Chu, Chapter 564, Statutes of 2016). Requires DTSC to publish guidelines for cities, counties, and cities and counties to voluntarily implement local Healthy Nail Salon programs. Requires the guidelines to include, but not be limited to, specified criteria, such as the potential for exposure of nail salon workers and customers to chemicals.

5) SB 928 (Simitian, 2010). Would have required manufacturers to disclosure the chemical content of specified types of cleaning products sold in California. This bill was held in the Assembly Appropriations Committee.

REGISTERED SUPPORT / OPPOSITION:

Support

Black Women for Wellness (Co-Sponsor)
Breast Cancer Prevention Partners (Co-Sponsor)
California Healthy Nail Salon Collaborative (Co-Sponsor)
Women's Voices for The Earth (Co-Sponsor)
100%pure
5 Gyres Institute
A Voice for Choice Advocacy
Alaska Community Action on Toxics
American College of Obstetricians and Gynecologists District IX
American Lung Association in California
As You Sow
Beautycounter
Brand Geek
Breast Cancer Action
Breast Cancer Over Time
Business and Professional Women of Nevada County
CA Coalition for Clean Air
California Health Coalition Advocacy
California League of Conservation Voters
California Product Stewardship Council
California School Nurses Organization
CALPIRG
Center for Biological Diversity
Center for Oceanic Awareness, Research, & Education
Central California Asthma Collaborative
Change Californians for a Healthy and Green Economy
City and County of San Francisco
Clean Water Action
Clorox Company
Consumer Federation of California
Courage California
Demes Natural Products, Inc.

Dignity Health
Dr. Bronners
Earth Mama Organics
Educate. Advocate.
Eighty2 Degrees
Empower Family California
Environmental Health Strategy Center
Environmental Working Group
EO Essential Oils
Equal Rights Advocates
Friends Committee on Legislation of California
Grassroots Recycling Network DBA Zero Waste USA
Green Science Policy Institute
Greenpeace USA
Grove Collaborative
Han Skincare
Heal The Bay
Innersense Organic Beauty
Intelligent Nutrients
Just the Goods
Keep a Breast
National Employment Law Project
National Stewardship Action Council
Natural Resources Defense Council (NRDC)
Northern California Recycling Association
Oz Naturals
Physicians for Social Responsibility - Los Angeles
Physicians for Social Responsibility - San Francisco Bay Area Chapter
Plastic Oceans International
Plastic Pollution Coalition
Regional Asthma Management and Prevention (RAMP)
Safer States
Save Our Shores
Seventh Generation
Seventh Generation Advisors
Sierra Club California
Skin Owl
Sprout San Francisco
Suntegrity
UCLA Center for Study of Women
Unilever
Upstream
W.S. Badger Company
Wishtoyo Chumasch Foundation
Woodland Coalition for Green Schools
Worksafe

Opposition

None on file.

Analysis Prepared by: Paige Brokaw / E.S. & T.M. /

Date of Hearing: July 30, 2020

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
SB 1044 (Allen) – As Amended June 18, 2020

SENATE VOTE: 38-0

SUBJECT: Firefighting equipment and foam: PFAS chemicals

SUMMARY: Prohibits the manufacture, sale, distribution, and use of class B firefighting foam containing PFAS chemicals by date certain, with some exceptions, and requires notification of the presence of PFAS in the protective equipment of firefighters. Specifically, **this bill**:

1) Defines "firefighter personal protective equipment" as personal protective equipment covered by general industry safety orders in regulations.

2) Defines "perfluoroalkyl and polyfluoroalkyl substances (PFAS)" as a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom.

3) Defines "class B firefighting foam" as foam designated to prevent or extinguish a fire in flammable liquids, combustible liquids, petroleum greases, tars, oils, oil-based paints, solvents, lacquers, alcohols, and flammable gases.

4) Defines "large storage tank" as a storage tank for flammable liquids with a surface area greater than 500 square meters.

5) Defines "terminal" as a fuel storage and distribution facility that has been assigned a terminal control number by the United States Internal Revenue Service.

6) Requires, beginning January 1, 2022, any person selling firefighter personal protective equipment (PPE) to provide a written notice to the purchaser at the time of sale if the PPE contains PFAS chemicals. Requires the notice to include the reason PFAS chemicals are added to the equipment. Requires the written notice to be on file for at least three years from the transaction, and the seller or purchaser must provide the State Fire Marshal the written notice within 60 days of a request.

7) Authorizes the State Fire Marshal to request a certification of a compliance for the manufacturer's PPE and requires the manufacturer to provide the certification.

8) Prohibits, as of January 1, 2022, the manufacture, sale, distribution, and use of class B firefighting foam that contains intentionally added PFAS chemicals in the state. Extends, until January 1, 2024, any manufacture, sale, distribution, or use by a person exclusively using class B firefighting foam for use on a large storage tank at a terminal, chemical plant, or oil refinery. The prohibition does not apply if the inclusion of PFAS chemicals is required by federal law.

9) Requires, no later than July 1, 2021, a manufacturer of class B firefighting foam to notify persons that sell the manufacturer's products in the state in writing about these provisions.

10) Requires a manufacturer that manufactures, sells, or distributes the prohibited class B firefighting foam after January 1, 2021 to recall the product by the specified date and reimburse the retailer or any other purchaser for the product. The recall is required to include safe transport and storage and specified documentation, unless and until the California Environmental Protection Agency (Cal EPA) identifies safe disposal technology. The manufacturer is required to provide documentation to the State Fire Marshal upon request.

11) Requires the State Fire Marshal to inform public entities, as defined, that provide firefighting services of these prohibitions on or before July 1, 2021.

12) Permits the State Fire Marshal to request from a manufacturer a certificate of compliance with these provisions for the manufacturer's class B firefighting foam containing intentionally added PFAS chemicals, and requires the manufacturer to provide the certification.

13) Prohibits, as of January 1, 2022, a person, as defined, from discharging or otherwise using for training purposes class B firefighting foam that contains intentionally added PFAS chemicals.

14) Imposes a civil penalty of up to $5,000 for a first violation and no more than $10,000 for subsequent violations of the specified provisions. Specifies that an individual firefighter cannot be held personally liable for the payment of these civil penalties.

15) Provides that the provisions of the bill are severable.

EXISTING LAW:

1) Authorizes the State Fire Marshal to make such changes as may be necessary to standardize all existing fire protective equipment throughout the state and requires the State Fire Marshal to notify industrial establishments and property owners having equipment for fire protective purposes of the changes necessary to bring their equipment into conformity with standard requirements. (Health and Safety Code (HSC) §13026-13027)

2) Authorizes the State Water Resources Control Board (State Water Board) to order a public water system to monitor for perfluoroalkyl substances and polyfluoroalkyl substances, requires community water systems to report detections, and where a detected level of these substances exceeds the response level, to take a water source out of use or provide a prescribed public notification. (HSC §116378)

3) Requires, pursuant to the federal Safe Drinking Water Act (SDWA) and California SDWA, drinking water to meet specified standards for contamination (maximum contaminant levels, or MCLs) as set by the United States Environmental Protection Agency (US EPA) or the State Water Board. (HSC § 116270, et seq.)

4) Establishes the policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. (Water Code § 106.3)

5) Requires the State Water Board to administer provisions relating to the regulation of drinking water to protect public health, including conducting research, studies, and demonstration

projects relating the provisions of a dependable, safe supply of drinking water. (HSC §116350)

6) Requires the State Water Board to adopt regulations to implement the SDWA, including, but not limited to, the monitoring of contaminants, including the type of contaminant, frequency and method of sampling and testing, and the reporting of results, as well as the monitoring of unregulated contaminants for which drinking water standards have not been established by the department. (HSC §116375)

7) Requires the Department of Toxic Substances Control (DTSC) to adopt regulations to establish a process to identify and prioritize chemicals and chemical ingredients that may be considered chemicals of concern, as specified. (HSC § 25252)

    a) Identifies, pursuant to regulation, chemicals that are candidates for the above-described process that exhibit a hazard trait and/or an environmental or toxicological end-point and meet certain criteria. (22 California Code of Regulations (C.C.R.) § 69502.2)

    b) Requires, pursuant to regulation, DTSC to consider various factors when identifying and implementing regulatory responses for priority products, such as public health and environmental protection. (22 C.C.R. 69506)

8) Requires DTSC to adopt regulations to establish a process to evaluate chemicals of concern and potential alternatives to those chemicals of concern to determine how to best limit exposure or to reduce the level of hazard posed by a chemical of concern and potential regulatory responses that DTSC may take after the alternatives analysis is completed. Specifies, but does not limit, regulatory responses that DTSC can take, ranging from no action, to a prohibition of the chemical in the product. (HSC § 25253)

9) Requires the US EPA to establish criteria for a program to monitor unregulated contaminants and publish a list of up to 30 contaminants to be monitored every five years, known as the federal Unregulated Contaminant Monitoring Rule (UCMR). (42 United States Code § 300(f))

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author,

"Per- and poly-fluoroalkyl substances (PFAS) are a class of manufactured chemicals that are prevalent in the environment, can build up in our bodies, and are linked to numerous health problems including, cancer, hormone disruption, kidney and liver damage, thyroid disease, birth defects, and harm to developing infants and children. PFAS have been used since the 1950s to make commercial and industrial products that resist heat, stains, grease, and water, including carpets, clothing, non-stick pans, paints, cleaning products, and food packaging. These manmade chemicals are extremely stable. That stability prevents break down, causing accumulation in the environment. PFAS contaminates drinking water around the country, including drinking water sources for the public water systems that serve at least 7.5 million

people in California. One of the primary sources of this contamination is the use of PFAS-containing firefighting foam, used to fight liquid fires, known as "Class B" fires.

Firefighters already face greater risks of cancer and other health problems than the general population due to exposure related to their vital work. Firefighting protective gear also contains PFAS, so there is exposure from both the gear and the firefighting foam. Elevated levels of PFAS chemicals have been documented in the bodies of firefighters, putting them at greater risk of harm from the health effects associated with PFAS, including cancer. SB 1044 addresses two sources of PFAS chemicals that threaten the health of firefighters and pollute our drinking water. Specifically, the bill bans the use of firefighting foam containing PFAS chemicals except in situations where the use is federally required, including when testing is federally required. When federal requirements are rescinded, these applications will also switch to non-PFAS foams. In addition, it would require notification of the presence of PFAS in the protective equipment of firefighters, which will allow firefighting organizations and firefighters to make informed choices to limit unnecessary exposure."

Perfluoroalkyl and polyfluoroalkyl substances, also known as PFAS chemicals: PFASs are a group of human-made chemicals that do not occur naturally in the environment and have been synthesized for heat, water, and lipid resistance. PFASs are a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom. These chemicals can be classified as perfluoroalkyl or polyfluoroalkyl substances depending on how many hydrogen atoms have been replaced by fluorine atoms. PFASs have been used extensively in surface coating and protectant formulations due to their unique ability to reduce the surface tension of liquids, including in consumer products such as carpets, clothing, fabrics for furniture, paper packaging for food, and other materials (e.g., cookware) designed to be waterproof, stain-resistant, or non-stick. In addition, PFAS chemicals have been used in firefighting foam and various industrial processes.

The PFAS class includes about 5,000 chemicals, with varying degrees of understanding of toxicity and environmental occurrence. Of all PFAS compounds, perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) have been the most extensively produced and studied. PFOA, most commonly known as the chemical used to produce Teflon, and PFOS, formerly used in Scotchgard, are known as "long-chain" chemicals, meaning they have six or seven or more carbon molecules. PFOS and PFOA are extremely persistent in soil and water due to their resistance to typical environmental degradation processes, and can bioaccumulate and persist in human and animal tissues.

The main route of exposure to PFAS is through ingestion, by eating or drinking contaminated food or liquid, or breathing in or touching products treated with PFAS. While consumer products have been a large source of exposure to these chemicals for most people, drinking water has become an increasing concern due to the persistence of PFAS chemicals in the environment and their tendency to accumulate in groundwater. Groundwater contamination typically has been associated with industrial facilities where these chemicals were manufactured or used in other products, such as airfields where the chemicals have been used for firefighting, or in areas near landfills that accept items containing PFAS. Because of their presence and persistence in many drinking water supplies, PFASs remain a serious source of exposure decades after their release into the environment.

According to the Agency for Toxic Substances and Disease Registry, research suggests that exposure to PFAS may lead to increased cholesterol levels, decreased vaccine response in children, changes in liver enzymes, increased risk of high blood pressure in pregnant women, decreased infant birth weights, and increased risk of kidney or testicular cancer.

Since these chemicals have been used in an array of consumer products, scientists have found PFOA and PFOS in the blood of nearly all people tested. According to the Centers for Disease Control and Prevention (CDC), blood levels of both PFOS and PFOA have steadily decreased in US residents since 1999-2000. However, the 2011–2012 US National Health and Nutrition Examination Survey reported detectable serum PFAS concentrations in 97% of individuals.

Between 2000 and 2002, PFOS was voluntarily phased-out of production in the US by its primary manufacturer, 3M. Beginning in 2006 other manufacturers began to voluntarily limit the number of ongoing uses. However, manufacturers are developing replacement technologies in the PFAS family, including reformulating/substituting longer-chain substances with shorter-chain substances.

Short-chain PFAS: Short-chain PFASs are widely used as alternatives to long-chain PFASs. The limited but growing data on these newer chemicals indicate that they are of similar structure, are equally persistent in the environment, and behave in similar fashion in the human body, particularly at the cellular level compared to long-chain PFAS. Short-chain PFAS are still highly persistent and are even more mobile in the environment than long-chain PFAS, meaning they travel even more easily and can be harder to clean up.

PFASs accumulate in protein-rich compartments such as blood, liver, and kidney cells. While early studies suggested that bioaccumulation of PFASs depended on carbon chain length, newer science continues to inform our understanding. The Scientific Guidance Panel, a panel of expert scientists from outside of state government that provide scientific advice to the California Office of Environmental Health Hazard Assessment (OEHHA) found that, "given the wide range of new PFASs, many more replacement chemicals, precursors, or breakdown products might also be detected in human blood or other biological samples." Recent studies have shown that bioaccumulation of short-chain PFASs are similar to that of long-chain PFASs, and that that short-chain PFASs are as persistent as long-chain PFASs.

Federal monitoring and action on PFAS: In May 2016, the US EPA issued a lifetime health advisory for PFOS and PFOA for drinking water, advising municipalities that they should notify their customers of the presence of combined PFOS and PFOA levels over 70 parts per trillion (ppt) in community water supplies. The US EPA recommended that the notification of customers include information on the increased risk to health, especially for susceptible populations. As part of this advisory, the US EPA stated, "exposure to PFOA and PFOS over certain levels may result in adverse health effects, including developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes)." The US EPA's health advisories are non-enforceable, non-regulatory, and provide technical information to states' agencies and other public health officials.

The US EPA uses the UCMR to collect data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the federal SDWA. From 2013 to 2015, the US EPA, under the third UCMR (UCMR3), required all large water systems (i.e.,

water systems serving more than 10,000 people) to collect and analyze more than 12,000 drinking water samples for PFOS and PFOA, and some smaller systems reported approximately 400 drinking water results. The occurrence data that was reported identified 133 UCMR detections in California. Of the water utilities that have been publically identified as having the highest concentrations of PFAS chemicals, 21 are in California. Systems with detectable PFAS chemical contamination below the US EPA's reporting threshold of 10-90 ppt were not released.

The study, *Detection of Poly- and Perfluoroalkyl Substances (PFASs) in U.S. Drinking Water Linked to Industrial Sites, Military Fire Training Areas, and Wastewater Treatment Plants*, used data from UCMR3 and found that the number of industrial sites manufacturing or using PFAS, military fire training areas, and wastewater treatment plants were all significant predictors of PFAS concentrations in public water supplies across the US. Additionally, the number of civilian airports with personnel trained to use Aqueous Film Forming Foam (AFFF) was significantly associated with the detection of PFAS above the minimal reporting level. The study also found that the drinking water supplies for 6 million US residents exceeded the US EPA lifetime health advisory for PFOS and PFOA.

Following the US EPA National Leadership Summit on PFAS in 2018, the US EPA released their formal PFAS Action Plan in 2019. The Action Plan describes long- and short-term actions planned to evaluate whether and how to regulate PFAS under various federal programs, but does not set forth any regulatory measures. In December 2019, the US EPA issued interim recommendations for PFOS and PFOA in groundwater at sites under federal cleanup programs. The 2020 appropriations package passed in December 2019 appropriated funds for the US EPA to establish maximum contaminant levels (MCLs), health-protective drinking water standards to be met by public water systems, under the SDWA for PFAS, and to designate PFAS chemicals as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

State action on PFAS: California has undertaken efforts to address PFAS chemicals across several state agencies. All PFASs are Candidate Chemicals under the DTSC Safer Consumer Products (Green Chemistry) program, because they exhibit a hazard trait and/or an environmental or toxicological endpoint, and the entire class was added by the California Environmental Contaminant Biomonitoring Program (also known as Biomonitoring California) to its list of Priority Chemicals. DTSC has proposed regulations to list carpets and rugs containing PFAS as Priority Products. A Priority Product is a consumer product identified by DTSC that contains one or more Candidate Chemicals that have a hazard trait that can harm people or the environment. DTSC has also proposed adding treatments containing PFAS for use on converted textiles or leathers such as carpets, upholstery, clothing and shoes, as Priority Products. Additionally, DTSC released a Work Plan, as part of their evaluation, on PFAS in food packaging. DTSC's Site Mitigation Program is addressing some sites with PFAS on a case-by-case basis, mainly military bases where firefighting training was conducted.

Under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65), OEHHA listed PFOA and PFOS as chemicals known to the state to cause reproductive toxicity. At the request of the State Water Board, OEHHA is in the process of establishing public health goals, concentrations of contaminants in drinking water that pose no significant acute or chronic health risks, for PFOS and PFOA. The State Water Board has also requested that OEHHA evaluate whether some PFAS chemicals should be grouped together for regulatory purposes.

In February 2020, the State Water Board set new response levels (RLs) for PFOA (10 ppt) and PFOS (40 ppt). An RL is set higher than a notification level (NL) and represents a recommended chemical concentration level at which water systems consider taking a water source out of service or provide treatment. This action followed the August 2019 reduction in the NL for PFOA (5.1 ppt) and PFOS (6.5 ppt), the lowest levels at which they can be reliably detected in drinking water using currently available and appropriate technologies. An NL is a health-based concentration of a contaminant in drinking water that warrants notification and further monitoring and assessment. The RLs and NLs are based on updated health recommendations from OEHHA intended to protect against cancer and noncancer effects. As part of the steps in developing regulatory standards, or MCLs, for PFOA and PFOS, the State Water Board requested OEHHA to develop public health goals. MCLs consider not only health risks from exposure to a chemical, but also factors such as detectability and treatability, as well as costs of treatment to reduce a chemical's presence in drinking water.

AB 756 (C. Garcia, Chapter 162, Statutes of 2019) requires a water system that receives a State Water Board order for testing and finds that PFOA and PFOS exceed the RL to take the water source out of service and provide treatment or notify their customers in writing, among other requirements to communicate the test results to the public.

The State Water Board has also begun a PFAS Phased Investigation Plan, under which they are investigating hot spots for PFAS contamination, and testing to see whether the contamination has impacted drinking water supplies. Since August 2019, the State Water Board has been reporting PFAS detections from more than 600 water system sites to their web portal, and continue to collect data on a quarterly basis. The first phase of testing focused on drinking water supply wells near landfills, airports, chrome platers, and wells near where PFAS contamination had previously been found. As of the State Water Board's March 2020 summary, PFOA, PFOS, and other PFAS chemicals had been detected in roughly 50% of wells sampled, and detection rates at the airports and landfills sampled so far were even higher. Data on the remainder of the airports, landfills, and chrome plating facilities is expected later this year. Subsequent phases of testing will look at other sources, including industrial sites and wastewater treatment systems.

Firefighting foam: Class A firefighting foam, used for structural fires and wildfires, suppresses the fire and prevents re-ignition by lowering the surface tension of water, helping water to penetrate the burning material. Class B firefighting foam is used for flammable liquid fires, primarily at airports, refineries, and chemical plants. These foams help extinguish fires by forming a film around the burning liquid, preventing airflow and evaporation. PFAS is used in AFFF, a type of class B firefighting foam.

State use of class B firefighting foam: The California Department of Forestry and Fire Protection (Cal Fire) uses class B firefighting foam in some cases, such as for flammable liquid fires that require specialized foams designed to both extinguish a fire and prevent re-ignition. These foams are primarily used by Cal Fire Cooperative Fire Protection Agreements in municipal settings, also known as Schedule A agreements. Class B foams are mostly used in conjunction with airports/aircraft fires and for flammable liquid type fires. These class B foams are sometimes carried in five gallon containers on Cal Fire fire engines. Cal Fire does not centrally track how much class B foam is used across the Department's 21 units. Cal Fire states that it is currently in the process of looking at alternatives to class B foam containing PFAS chemicals.

Alternatives to PFAS in class B firefighting foam: Fluorine-free firefighting (F3) class B foams are synthetic foams that use hydrocarbon surfactants. Development of these foams began in the early 2000s and many companies now market their own F3 foams. According to the 2018 International Pollutants Elimination Network (IPEN) expert panel report, *Fluorine-Free Firefighting Foams – Viable Alternatives to Fluorinated Aqueous Film-Forming Foams*, "certain fluorine-free F3 foams can meet all the requirements and are comparable in performance to some of the better fluorine-containing AFFFs, without the environmental disadvantages inherent in extremely persistent perfluorinated end-products with known or potential toxicity and bio-accumulative potential."

According to the 2018 IPEN report, F3 foams used in the aviation and oil and gas sectors have achieved certification under various firefighting foam certification programs, and some foams have passed the International Civil Aviation Organization extinguishment tests. F3 foams are used by the military in Scandinavia, and major airports worldwide, including London Heathrow, Copenhagen, and all 27 major airports in Australia. According to the oil company, Equinor, in the 2019 IPEN expert panel report, *The Global PFAS Problem: Fluorine-Free Alternatives as Solutions*, they have completely switched to F3 foams for their 40 onshore and offshore oil and gas installations in the North Sea.

In the Fire Protection Research Foundation industry-sponsored report cited in a letter in opposition to SB 1044 by the American Chemistry Council, Western States Petroleum Association, and other industry groups, *Evaluation of the fire protection effectiveness of fluorine free firefighting foams*, four Fluorine Free Foams (FFFs) were tested against one AFFF formulation as a function of application rate and discharge density for different fuel types, water types and fuel temperatures. The study states, "the results demonstrate that FFFs have come a long way but there is still a lot more to learn about their capabilities and limitations (although there is a lot of promising data). As of today, FFFs are not a 'drop in' replacement for AFFF. However, some can be made to perform effectively as an AFFF alternative with proper testing and design (i.e., with higher application rates/densities)." Recent testing has indicated that the formulation and type of application of the fluorine-free foam can greatly affect the performance of these alternatives compared to PFAS-containing foams.

F3 foams cannot currently meet US Military Specification (MILSPEC), which by definition requires the inclusion of fluorine chemicals. According to the Department of Defense (DoD) PFAS Task Force Report released in March 2020, while no fluorine-free foam currently meets the MILSPEC for AFFF, DoD is investing over $49 million through 2025 to research alternatives. DoD is also funding research into PFAS-free AFFF alternatives under the Strategic Environmental Research and Development and Environmental Security Technology Certification Programs.

Health impacts on firefighters: Elevated levels of PFAS chemicals have been documented in the bodies of firefighters. The Firefighter Occupational Exposures Project, a study of environmental chemical exposures in firefighters as part of Biomonitoring California, found concentrations of a particular perfluorinated chemical were approximately three times higher in the firefighters tested than in National Health and Nutrition Examination Survey (NHANES) adult males, though the study was not designed to identify specific exposure sources. A study as part of the Women Firefighters Biomonitoring Collaborative found that women firefighters in San Francisco had significantly higher amounts of three PFAS chemicals in their blood, compared to office workers (Trowbridge et al., 2020). The National Institute for Occupational Safety and Health (NIOSH)

conducted a multi-year study of nearly 30,000 firefighters from the Chicago, Philadelphia, and San Francisco Fire Departments, and found the firefighters in the study had higher rates of certain types of cancer than the general US population.

In 2016, the Federal Emergency Management Agency (FEMA) funded the Fire Fighter Cancer Cohort Study with the long-term goal of following 10,000 firefighters across the US over a 30-year observation period. As part of this study, researchers are studying acute PFAS exposure of the fire service through multiple anticipated exposure pathways, including fire response, turnout gear, and the use of AFFF.

Firefighter PPE, or "turnout gear," has three layers, the thermal layer closest to the skin, a moisture barrier for water resistance, and the outer shell. Researchers at the University of Notre Dame tested more than 30 samples of used and unused PPE from six specialty textile manufacturers in the US. Their study, recently published in *Environmental Science and Technology*, found the PPE was extensively treated with PFAS or constructed with fluoropolymers, a type of PFAS used to make textiles oil and water resistant. The study found high fluorine concentrations on the moisture barrier and outer shell, though these chemicals can migrate off treated material. This is the first study of its kind, and more research is needed to better understand PFAS exposure specifically from PPE.

The National Fire Protection Association (NFPA) administers the process of developing product safety standards for PPE. The NFPA standard, NFPA 1971 Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting, sets the minimum levels of protection from thermal, physical, environmental, and bloodborne pathogen hazards. The NFPA technical committee responsible for NFPA 1971 has a task group looking at the issue of PFAS and any other chemicals that might cause cancer and may be used in PPE. Similarly, Cal Fire has a working group looking at the issue of PFAS in PPE and exploring alternative products. AB 2146 (Skinner, Chapter 811, Statutes of 2014) requires the Occupational Safety and Health Standards Board every five years to review revisions to NFPA standards pertaining to PPE and consider updating safety standards to align with NFPA standards.

SB 1044 requires sellers of firefighter PPE to provide a written notice at the time of sale if the PPE contains intentionally added PFAS. The notice is required to include the reason that PFAS chemicals have been added to the PPE. This bill does not prohibit any uses of PPE that contain PFAS, as alternatives are still being explored and developed, and are not currently available on the market. While the Division of Occupational Safety and Health, known as Cal/OSHA, in the Department of Industrial Relations sets and enforces workplace safety standards, including for firefighter PPE, the PPE notification provisions in SB 1044 are under the purview of the State Fire Marshal.

Federal use and action on PFAS in firefighting foam: The military began using AFFF in the 1970s to extinguish chemical fires or spills and for training. The DoD also uses materials with PFAS for vapor suppression at plating shops. Through 2001, PFOS and PFOA were used in the manufacturing of AFFF, and as they were phased out, US manufacturers of AFFF now use other PFASs. While AFFF is no longer used by DoD for maintenance, testing, or training, it is still used to respond to emergencies and treat spills. In 2019, DoD established a PFAS Task Force to address PFAS at military installations and surrounding communities with the stated goals to (1) mitigate and eliminate the use of current AFFF; (2) understand the impacts of PFAS on human health; and, (3) fulfill DoD's cleanup responsibility related to PFAS.

The National Defense Authorization Act (NDAA), signed into law in December 2019, phases out military uses of PFAS-containing firefighting foam by 2024 and prohibits DoD from using PFAS-containing foams during training exercises at military installations. The 2018 US Federal Aviation Authorization Act directed the Federal Aviation Administration (FAA) to stop requiring the use of fluorinated foams at US FAA airports within three years.

As of May 2020, California has 62 military facilities with known or suspected PFAS releases. The State Water Board is also identifying non-military owned municipal supply wells in proximity to military bases under their PFAS investigation for future sampling in late 2020 or early 2021.

Other state-level action on PFAS in firefighting foam: Numerous states have passed legislation banning sales or restricting the use of class B firefighting foams containing PFAS. Colorado, New Hampshire, New York, and Washington have passed legislation similar to SB 1044. In these states, PFAS-containing firefighting foams have been banned for manufacture, sale, distribution, and training use, and manufacturers are required to disclose PFAS in PPE. The legislation passed in these states includes various exemptions to the ban for federally required uses, petroleum refineries and terminals, and certain chemical plants, and the New York law determines exemptions through rulemaking. SB 1044 would go beyond previous state-level bans in its restriction of the use of PFAS-containing class B foams in all cases, except as required by federal law.

Mandating the switch to alternatives: SB 1044 prohibits the use, manufacture, sale, and distribution of class B firefighting foam containing intentionally added PFAS after January 1, 2022. The ban on use also includes class B foams used for training purposes. Six months prior to the ban, a manufacturer is required to notify sellers of class B foam, and the State Fire Marshal is required to notify public entities that provide firefighting services about the provisions of the bill.

In order to address the class B foam already sold to distributors, the bill requires the manufacturer to recall the product by the specified date and reimburse the purchaser of the product. The manufacturer is responsible for the safe transport, storage, and documentation of the recalled foam as required by the bill until CalEPA identifies safe disposal technology, though the bill does not compel CalEPA to do so. PFAS-containing foam is not volatile, and can be stored safely in large drums. There are no manufacturers of class B foam in California, so out of state manufacturers would be able to re-sell their recalled product in other states.

Firefighting foam containing PFAS is not managed as a hazardous waste, and the Department of Resources, Recycling and Recovery (CalRecycle) does not have additional standards or requirements that prohibit firefighting foam from being disposed of in a solid waste landfill. The US EPA is currently studying incineration as one option for disposal PFAS waste. However, there is concern over whether incineration can adequately breakdown PFAS compounds and their thermal decomposition byproducts, the efficacy of emission control technologies, and whether incineration will merely redistribute PFAS contamination in the environment. The NDAA requires incineration of PFAS-containing foams at high enough temperatures to ensure breakdown of the chemicals. However, DoD contracts with waste haulers to incinerate their stockpiles of PFAS-containing foams have been the subject of recent controversy and lawsuits.

Efficacy of non-PFAS foam on large oil tank fires: According to the European Commission and European Chemicals Agency report, *The use of PFAS and fluorine-free alternatives in fire-*

fighting foams, "Use areas where PFAS-free alternatives have not been fully tested, is in the downstream petrochemical sector and large storage tank facilities. In particular, for large storage tank fires, combatting these fires requires foams capable of flowing on large burning liquid surfaces and sealing against hot metal surfaces to prevent reignition…No specific cases with successful 100% transition in installations with large tanks have been identified."

Opponents to the bill have raised concerns about the timeline to develop alternatives to fluorinated foams that meet performance requirements for a significant fire event at an oil refinery or large tank farm. LASTFIRE, an international consortium of 16 oil companies, reported in a test on 30 and 40 meter surfaces ignited with jet aviation fuel, fluorine-free foam was effective for the two types of foam applications tested. However, this was a single test, and more testing needs to be done on large storage tanks to determine the effectiveness and best practices of using fluorine-free alternatives. While additional LASTFIRE tests have been delayed since their 2018 test, they expect to complete further testing on large storage tanks in the next 3-4 years.

Due to the need for further work on testing and development of effective and commercially available alternatives specifically for large storage tanks, as part of the proposed EU phase out of PFAS-containing firefighting foams, there is an exemption for large storage tanks with a surface area greater than 500 square meters until 2032. Australia has managed their transition and exemptions through a regulatory process. Caltex Australia has converted to fluorine-free alternatives for their operations, except for large storage tanks, and have a goal of switching to fluorine-free alternatives for large storage tanks in the next several years. In Washington State, there is an exemption in their manufacture, sale, and distribution ban for large storage tanks at oil refineries, terminals, and chemical plants until 2024, with a waiver process until 2028.

In order to address concerns that appropriate alternatives would not be developed in time, SB 1044 delays the implementation of the ban on use, manufacture, sale and distribution for large storage tanks at terminals, chemical plants, and oil refineries until 2024. This date aligns with the federal phase out of military uses of PFAS-containing firefighting foams, as well as the sales ban for these facilities in Washington State.

Following a directive from the Governor's July 2013 report, *Improving Public and Worker Safety at Oil Refineries*, CalEPA formed an Interagency Task Force on Refinery Safety (Task Force) in August 2013. The Task Force includes ten state agencies, the US EPA, and local agencies from areas of the state that have refineries. AB 1649 (Muratsuchi, Chapter 590, Statutes of 2017) established the Task Force in statute and requires CalEPA to convene two public meetings annually. The Task Force has a Safety and Prevention Workgroup, focused on worker and public safety and the prevention of hazardous material releases, and an Emergency Preparedness and Response Workgroup, focused on improving refineries and local government preparedness and response to the release of hazardous materials. Assessing the safety of fluorine-free class B foams at oil refineries may be a relevant subject for the Task Force to evaluate in the intervening years before the 2024 ban goes into effect.

This bill vests enforcement to Cal Fire and the State Fire Marshal: This bill imposes civil penalties under the purview of Cal Fire and the Office of the State Fire Marshal, though it does not specify civil enforcement actions. Notably however, this bill may place Cal Fire and the Office of the State Fire Marshal in the odd position of policing and investigating itself. The bill provides for an expansive definition of "person" and explicitly includes a government agency.

One of the provisions of this bill relates to the "sales" of firefighter PPE. Although Cal Fire does not manufacture PPE, the Department does establish standards for PPE, and, presumably, manages contacts with manufacturers or third-party distributors for obtaining PPE for Cal Fire staff. Depending on the nature and structure of these agreements, it is conceivable that Cal Fire may be considered a salesperson of PPE. In such an event, the Department would be both subject to the notice requirements of this bill and mandated to enforce the requirements. Given the somewhat awkward situation this bill presents to Cal Fire, the author and sponsors may wish to consider narrowing the definition of person, or in the alternative, vesting the penalty authority with an agency other than Cal Fire and the Office of the State Fire Marshal.

Negotiations continue: While this bill has many program details, the author, proponents, and opponents are in the process of negotiating several pieces of this. As of the timing of this analysis, these negotiations are not complete; however, here is a brief summary of what is being discussed:

Extending exemptions beyond 2024: The author and opponents are discussing whether or not any facilities could warrant an exemption beyond 2024 and under what conditions.

Definitions of exempted uses and facilities: The definitions in the bill and those being discussed are very important as any potential exemptions past current deadlines would be related to these definitions. The definitions are looking at the facilities where class B firefighting foam containing PFAS may be used and under what conditions it is used.

Types of facilities: There has been considerable dialogue with the author related to different types of facilities including chemical plants, hangars at airports, and other similar facilities that may utilize fire suppression systems with class B firefighting foam. Under consideration is the timeline necessary for these types of facilities to comply with the bill's requirement to use PFAS-free class B foams in their fixed fire suppression systems.

Waiver process: In addition to potentially extending the deadlines in the bill, the author has been asked to consider a process that could allow certain facilities to apply for a waiver to use PFAS-containing class B firefighting foam beyond deadlines up until a final deadline. The details of any waiver process are in flux; however, it would involve an entity applying to a state agency, likely the State Fire Marshal, to process the waiver application seeking additional time to use PFAS-containing class B firefighting foam past the deadline. This provision could raise costs; however, it is reasonable for the State Fire Marshal's costs to be reimbursed by the waiver applicant in some manner.

This bill is tackling two similar yet very important issues, the use of and dangers of PFAS chemicals to firefighters in both their PPE and in class B foam, and the environmental impacts of PFAS on human health and the environment, including the contamination of drinking water wells throughout the state. Industry advances, international transitions, and state- and federal-level mandates indicate that fluorine-free alternatives to PFAS-containing class B foams will be both effective and commercially available for most uses in accordance with the timelines of the bill, and progress on alternatives is expected to continue as the demand grows. SB 1044 takes an important step towards reducing exposure to the harmful effects of PFAS by eliminating PFAS-containing class B firefighting foam for most uses in California.

Arguments in support: According to the California Professional Firefighters, "Firefighters who use Class B firefighting foams that contain PFAS face an unacceptable level of additional health

risks in a profession that already brings with it an elevated risk of cancer along with other job-related conditions. There is no reason to continue permitting the usage of fluorinated firefighting foams when there are non-fluorinated options available that function with the same level of efficiency. The IPEN white paper also determined that the film formed by AFFF does not actually provide a noticeable advantage in combatting three-dimensional liquid fires, and that additionally the development of fluorine-free foams has made the usage of AFFF unnecessary. Several departments and facilities in both the United States and internationally have already transitioned to fluorine-free foam, including "high-risk" facilities such as oil refineries, chemical plants and airports…SB 1044 would require the State Fire Marshal to provide guidance to assist public entities that provide firefighting services, inform them of the upcoming ban, and offer resources to help departments convert their equipment. This multi-tier approach gives both time and resources for departments to source foam alternatives and switch out or decontaminate their equipment, where necessary. For those facilities such as refineries and terminals that use PFAS-containing firefighting foam for fire suppression on large storage tanks with a surface area greater than 500 square meters, the prohibition does not begin until January 1, 2024. Additionally, this bill will require a manufacturer of firefighter PPE that contains PFAS to notify the purchaser at the point of sale that the equipment contains the harmful chemical. As the duties conferred to the State Fire Marshal are largely permissive instead of required, these new measures to ensure the safety of California's firefighters, the environment, and the health of all Californians will not result in any significant costs to either the Office of the State Fire Marshal or the State as a whole."

Arguments in opposition: The American Chemistry Council and Western States Petroleum Association along with several other industry groups argue, "While 'fluorine-free foams' are available and can provide an alternative to fluorinated foams in some applications such as spill fires and smaller tank fires, they do not uniformly meet necessary performance requirements for a significant fire event that may occur at an oil refinery, chemical plant or a large tank farm, given the different flammable liquids being managed. The chemistries within AFFF provide fuel repellency and heat stability, allow for rapid extinguishment, burnback resistance, and protection against vapor release, which help to prevent re-ignition and protect firefighters working in the area as part of the rescue and recovery operations… We support current best practices that call for the containment and treatment of foam discharges during training and testing, and would certainly support similar provisions in SB 1044. Given that large scale high hazard Class B fires are actually rare, adopting training and testing restrictions have the potential to significantly reduce discharges of PFAS to the environment. We are concerned however with 1) the 2022 and 2024 deadlines currently in the bill and 2) the complete prohibition on PFAS containing foams being presumptive in assuming the science and technical development of alternative foams can be mandated to fit a timeline. In some cases, particularly high hazard facilities like oil refineries, large scale tank farms, and chemical plants, access to AFFF is still necessary in order to mitigate the risks of high-hazard fire emergencies associated with having large amounts of various flammable liquids on-site."

Related legislation:

1) SB 1056 (Portantino). Would have required the State Water Board to establish an analytical laboratory method that can be used as a tool to assess the extent of PFAS contamination in drinking water, surface water, groundwater, and wastewater. This bill was held in the Senate Environmental Quality Committee.

2) AB 756 (C. Garcia, Chapter 162, Statutes of 2019). Authorizes the State Water Board to order one or more public water systems to monitor for PFASs and establishes a separate customer notification process as a result of any confirmed detection.

3) AB 841 (Ting, 2019). Would have required OEHHA to adopt a work plan to assess which substances in the class of PFAS substances should be tested as a risk to human health, and would require OEHHA, as part of the assessments, to determine which of the PFAS substances are appropriate candidates for NLs to be adopted by the State Water Board. This bill was held in the Senate Environmental Quality Committee.

4) AB 958 (Ting, 2018). Would have required a manufacturer of food packaging or cookware sold in the state to visibly disclose on an exterior location of the food packaging or cookware packaging a specified statement relating to the presence of PFAS. This bill was held on the Senate Floor.

5) AB 1649 (Muratsuchi, Chapter 590, Statutes of 2017). Requires CalEPA to coordinate the activities of those state and local agencies with a regulatory role regarding refineries and requires CalEPA to convene at least two public meetings annually to provide members of the public with current information on refinery safety.

6) AB 2146 (Skinner, Chapter 811, Statutes of 2014). Requires the Department of Industrial Relations to convene an advisory committee to evaluate whether changes are needed to align industry safety standards with NFPA standards. Requires the Occupational Safety and Health Standards Board to complete a review every five years of revisions to the NFPA standards pertaining to PPE and consider modifying existing safety orders to maintain alignment with NFPA standards.

Referral: This bill, under normal circumstances, would likely have been referred to the Assembly Judiciary Committee and the Assembly Environmental Safety and Toxic Materials Committee; however, given the unique circumstances surrounding the COVID-19 pandemic, this bill was only referred to the Assembly Environmental Safety and Toxic Materials Committee.

REGISTERED SUPPORT / OPPOSITION:

Support

Breast Cancer Prevention Partners (Co-Sponsor)
California Professional Firefighters (Co-Sponsor)
Clean Water Action (Co-Sponsor)
Environmental Working Group (EWG) (Co-Sponsor)
Natural Resources Defense Council (NRDC) (Co-Sponsor)
5 Gyres Institute
A Voice for Choice Advocacy
Association of California Water Agencies (ACWA)
Breast Cancer Action
California Coastkeeper Alliance
California Healthy Nail Salon Collaborative
California Indian Environmental Alliance
California Labor Federation, AFL-CIO
California League of Conservation Voters

California Municipal Utilities Association
California Product Stewardship Council
California Public Interest Research Group Education Fund
California Special Districts Association
Center for Environmental Health
Center for Oceanic Awareness, Research, and Education, the
Center for Public Environmental Oversight
Citizens for Choice
Coalition for Clean Air
Community Water Center
Defenders of Wildlife
East Bay Municipal Utility District
Friends Committee on Legislation of California
Green Science Policy Institute
Leadership Counsel for Justice & Accountability
League of California Cities
Los Angeles County Chief Executive Office
Metropolitan Water District of Southern California
National Stewardship Action Council
Oregon Environmental Council
Physicians for Social Responsibility - San Francisco Bay Area Chapter
Plastic Pollution Coalition
Regional Water Authority
Safer States
San Francisco Baykeeper
Sanitation Districts of Los Angeles County
Santa Clara Valley Water District
Santa Clarita Valley Water Agency
Save Our Shores
Seventh Generation Advisors
Sierra Club of California
State Building & Construction Trades Council of California
Wholly H2O
Women's Voices for The Earth

Opposition

Airlines for America (A4A)
American Chemistry Council
California Chamber of Commerce
California Manufacturers & Technology Association
Chemical Industry Council of California
Fire Fighting Foam Coalition
Industrial Environmental Association
Petro Chemical Mutual Aid Organization
Southern California Industrial Mutual Aid Organization
Western Independent Refiners Association
Western States Petroleum Association

Analysis Prepared by: Rachel Silvern / E.S. & T.M. /

Date of Hearing: July 30, 2020

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
SB 1156 (Archuleta) – As Amended July 27, 2020

SENATE VOTE: 39-0

SUBJECT: Lithium-ion batteries: illegal disposal: fire prevention

SUMMARY: Requires, before January 1, 2022, the Department of Forestry and Fire Protection (CalFire) to develop a model protocol and training to identify best practices for managing fires that originate from discarded lithium-ion batteries within the solid waste management system. Requires, on or before July 1, 2023, the Department of Resources, Recovery, and Recycling (CalRecycle) to develop guidance to better inform and educate the public on the proper handling and potential fire risk due to mishandling of lithium-ion batteries. Specifically, **this bill**:

1) Requires, before January 1, 2022, CalFire, to, using existing resources, develop a model protocol and training that identifies best practices for the detection, safe handling, and suppression of fires that originate from discarded lithium-ion batteries or products containing lithium-ion batteries on or in solid waste or recycling collection vehicles, transfer or processing stations, or disposal facilities. Requires CalFire to post the model protocol on its internet website.

2) Requires, before July 1, 2022, a solid waste enterprise, after consulting with the county fire marshal of every county in which the solid waste enterprise conducts solid waste collection operations, to adopt a protocol and arrange for training for relevant employees that identifies procedures to follow for the detection, safe handling, and suppression of fires that originate from discarded lithium-ion batteries or products containing lithium-ion batteries on or in solid waste or recycling collection vehicles, transfer or processing stations, or disposal facilities.

3) Requires, on or before July 1, 2023, CalRecycle, in consultation with the Department of Toxic Substances Control (DTSC), to develop a guidance document for use by local governments to better inform, educate, and increase public awareness as to the proper handling of, and the risk of fire due to the mishandling or improper disposal of, lithium-ion batteries and products that contain lithium-ion batteries, and to reduce the likelihood of illegal disposal.

4) Prohibits a person from knowingly disposing a lithium-ion battery by depositing it in a container or receptacle that is intended for the collection of solid waste or recyclable materials, unless the container or receptacle is designated for the collection of batteries for recycling pursuant to the Universal waste provisions within the Health and Safety Code (HSC).

EXISTING LAW:

1) Enacts the Rechargeable Battery Recycling Act of 2006, that requires every retailer to have a system in place, on or before July 1, 2006, for the acceptance and collection of used

rechargeable batteries for reuse, recycling, or proper disposal. (Public Resources Code (PRC) § 42451-42456)

2) Enacts the Electronic Waste Recycling Act of 2003, establishing a program for consumers to return, recycle, and ensure the safe and environmentally sound disposal of video display devices, such as televisions and computer monitors, that are hazardous wastes when discarded. (PRC § 42460 et seq.)

3) Enacts the Cell Phone Recycling Act which requires all retailers of cellular telephone to have in place a system for the collection, reuse, and recycling of cell phones and requires DTSC to provide information on cell phone recycling. (PRC § 42490-42499)

4) Creates the Hazardous Waste Control Law and provides DTSC with the responsibility for overseeing the management of hazardous waste in California. (HSC § 25100 et seq)

5) Establishes procedures for managing hazardous waste as Universal waste. (California Code of Regulations (CCR) Title 22, Division 4.5, Chapter 23)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "The proliferation of lithium-ion batteries and the improper disposal of these batteries has led to numerous fires at waste facilities and operations. California needs to do more to increase awareness with the public about the need to properly recycle these batteries. At the same time, California needs to implement protocols for both consumers and industry to follow in regards to the disposal of these batteries. My bill, SB 1156 looks to do just that by tasking multiple California state agencies to come up with a protocol for the proper disposal of these lithium-ion batteries."

Universal waste: Universal wastes are hazardous wastes that are widely produced by households and many different types of businesses. Universal wastes include cathode ray tubes from televisions and computers, batteries, fluorescent lamps, mercury thermostats, and other mercury containing equipment, and other electronic devices. The hazardous waste regulations (California Code of Regulations (CCR), Title 22, Division 4.5, Chapter 11, Section 66261.9) identify seven categories of hazardous wastes that can be managed as universal wastes. Any item that falls within one of these waste streams can be handled, transported, and recycled following the simple requirements set forth in the universal waste regulations (CCR, Title 22, Division 4.5, Chapter 23) versus the more stringent requirements for hazardous waste.

Electronic waste (E-waste): E-waste refers to any electronic device or cathode ray tube (CRT) and is classified as a type of universal waste. E-waste frequently contains hazardous materials, predominantly lead and mercury, and is produced by households, businesses, governments, and industries. Each year in California, hundreds of thousands of computers, monitors, copiers, fax machines, printers, televisions, and other electronic items become "obsolete" in the eyes of consumers. Rapid advances in technology and an expanding demand for new features accelerate the generation of "old" electronic equipment ("e-waste"). The result is a growing challenge for businesses, residents, and local governments as they search for ways to reuse, recycle, or properly dispose of this equipment. To meet this challenge, California enacted the Electronic

Waste Recycling Act of 2003, which established the electronic waste recycling program to offset the cost of compliantly handling certain unwanted electronic devices.

Electronic Waste Recycling Act (EWRA): The EWRA was designed to establish a new program for consumers to return, recycle, and ensure the safe and environmentally sound disposal of video display devices, such as televisions and computer monitors that are hazardous wastes when discarded. On January 1, 2005, California consumers began paying a fee of $6 to $10 at the time they purchase certain video display devices. Those fees are deposited into a special account that is used to pay qualified e-waste collectors and recyclers to cover their costs of managing e-waste. Two of the major goals of the EWRA was to limit the amount of toxic substances in certain electronic products sold in California and to establish a funding system for the collection and recycling of discarded electronic devices.

The Cell Phone Recycling Act of 2004: Consumers usually replace their cellular phones about every 18 months. Used cellular phones contain hazardous substances and should not be disposed of with regular household waste. Circuit boards in cellular phones contain arsenic, antimony, beryllium, cadmium, copper, lead, mercury, nickel, and zinc. The rechargeable batteries used with cellular phones contain cobalt, zinc, and copper. The Cell Phone Recycling Act of 2004 AB 2901 (Pavley, Chapter 891, Statutes of 2004) requires retailers to have in place, and promote, a system for accepting and collecting used cellular phones for reuse, recycling, or proper disposal, at no cost to the consumer. This law took effect on July 1, 2006.

Regulation of batteries: Batteries may not be disposed of in the trash or household recycling collection bins intended to receive other non-hazardous waste and/or recyclable materials: it is prohibited by law. Many types of batteries, regardless of size, exhibit hazardous characteristics and are considered hazardous waste when they are discarded because of the metals and other toxic or corrosive materials within the battery. These include single use alkaline and lithium batteries and rechargeable lithium metal, nickel cadmium, and nickel metal hydride batteries of various sizes (AAA, AA, C, D, button cell, 9-Volt, and small sealed lead-acid batteries). Batteries are also potentially a valuable source of recyclable metal.

If batteries end up in the trash or a recycling bin, owners/operators of solid waste transfer stations, municipal landfills, and recycling centers, who discover batteries in the waste or recyclable materials are required to remove and manage the batteries separately. The facility that removes the batteries from the municipal solid waste stream or recyclable materials becomes the generator of the hazardous waste batteries and must comply with the hazardous waste management regulations. Facilities that do not properly manage hazardous waste may be subject to regulatory enforcement and may be liable for monetary penalties.

Depending on the type of battery and applicable management requirements, batteries must be sent to a facility permitted to accept hazardous waste batteries, universal wastes, or spent lead-acid batteries. Only facilities that have a DTSC permit or other type of authorization to treat, store, or dispose of hazardous wastes may accept hazardous waste batteries. Persons that do not have a DTSC permit may accept and store universal waste batteries and spent lead-acid batteries, if they operate according to the regulations specifically tailored for those types of batteries.

California's Universal Waste Rule allows individuals and businesses to transport, handle, and recycle certain common hazardous wastes, termed universal wastes, in a manner that differs from the requirements for most hazardous wastes. The more relaxed requirements for managing

universal wastes were adopted to ensure that they are managed safely and are not disposed of in the trash. The universal waste requirements are also less complex and easier to comply with, thereby increasing compliance.

Lithium-ion batteries: Lithium-ion batteries are widely used in portable electronics like laptops, smart phones, digital cameras, game consoles, and cordless power tools. All batteries, including lithium-ion batteries, are considered hazardous waste in California when they are discarded, and must be recycled, or taken to a household hazardous waste disposal facility, a universal waste handler, or an authorized recycling facility.

Potential fire hazard from discarded lithium-ion batteries: According to an October 10, 2019 news report by NBC Los Angeles, there was an 823-acre fire in Riverside County (the Calimesa blaze) that was started when burning trash was dumped into a field of dry grass. Flames from the burning trash ignited dry grass and spread into a nearby mobile home park destroying approximately 76 mobile homes and killing one woman. The exact cause of the fire within the truck is still unknown at this time, however, the solid waste industry is very concerned about the fire hazards posed by discarded lithium-ion batteries, especially since these batteries are hazardous waste and inside a solid waste truck could be crushed, thereby igniting the battery. While drivers of solid waste trucks do have extensive training, SB 1156 is seeking to provide statewide guidance to the solid waste industry with the goal of better managing and reducing the risk from potential fires causes by discarded lithium-ion batteries. The bill is taking an ounce of prevention is worth a pound of cure approach.

California Rechargeable Battery Recycling Act: Most portable electronic devices use rechargeable batteries, and millions of rechargeable batteries are sold in California each year. California does not allow batteries to be disposed of in the trash because they contain toxic metals such as mercury, lead, cadmium, and nickel. If released, these metals may be harmful to humans and the environment. In 2005, to help promote proper disposal of rechargeable batteries by the public, the Governor signed the California Rechargeable Battery Recycling Act (AB 1125, Pavley, Chapter 572, Statutes of 2005), which requires retailers to have a mechanism to accept all rechargeable batteries from consumers for recycling.

The Rechargeable Battery Recycling Act applies to a retailer, defined in the law as "a person who makes a retail sale of a rechargeable battery to a consumer in the state." A sale includes, but is not limited to, a transaction conducted through sales outlets, catalogs, or the internet. For the purposes of this law, a consumer can be an individual, business, corporation, limited partnership, nonprofit organization, or governmental entity, but not a person who purchases batteries in a wholesale transaction.

Large chain supermarkets and persons (including corporations or franchisees) who have less than one million dollars annually in gross sales are not considered "retailers" under this law's definition; and therefore, these businesses are not subject to the law's requirements. Also, sales of rechargeable batteries that are contained in, or packaged with, a battery-operated device are not subject to this law. However, a retailer selling replacement batteries for such devices must comply.

To track how effective this program is, the law requires DTSC to survey battery handling and/or recycling facilities and post on its website, by July 1 of each year, the estimated amount, by weight, of each type of rechargeable battery returned for recycling in California during the

previous calendar year. DTSC receives data voluntarily submitted by the major California battery recyclers to estimate how many rechargeable batteries, by type (e.g., nickel-cadmium, nickel metal hydride, etc.), are collected in each calendar year.

According to DTSC's website, the following are approximate quantities of rechargeable batteries collected for recycling in California in 2019:

436,135	pounds of lithium-ion batteries (Li-ion)
390,703	pounds of nickel cadmium batteries (Ni-Cd)
1,102,629	pounds of nickel metal hydride batteries (Ni-MH)
3,362,910	pounds of small lead-acid batteries (SS Lead Acid)

DTSC's data for collection of rechargeable batteries from 2017:

500,000	pounds of lithium-ion batteries (Li-ion)
400,000	pounds of nickel cadmium batteries (Ni-Cd)
1,100,000	pounds of nickel metal hydride batteries (Ni-MH)
2,300,000	pounds of small lead-acid batteries (SS Lead Acid)

It is difficult to accurately estimate the rechargeable batteries collected for recycling in California due to the following reasons: some battery handlers and recyclers do not track the state from which batteries are collected; batteries contained within electronic devices that are recycled (e.g., cell phones and laptop computers) are not counted separately but may represent a significant portion of the total quantity; there may be duplicate data as some battery handlers collect batteries from other collection points; and, California law does not require battery handlers or recyclers to report the number or weight of batteries collected for recycling.

SB 1156 is focused on the potential fire hazard of lithium-ion batteries disposed of within the solid waste system. This is a valid concern, and it is why lithium-ion batteries are hazardous waste and are currently prohibited by law from being disposed of as solid waste. However, these batteries are ending up in the solid waste stream. While the state lacks accurate data on the amount of batteries recycled and a robust recycling program of these batteries would help reduce the proliferation of these batteries in the solid waste system, the fire risk from these batteries will remain. Given the likelihood of future droughts and the overall statewide fire risk in California, SB 1156 is seeking guidance from the state's experts on fire prevention and fire suppression to provide to operators of solid waste facilities and drivers of solid waste trucks.

Arguments in Support: According to the California Waste Haulers Council, "Lithium-ion batteries are commonly disposed by consumers in solid waste receptacles, even though existing law prohibits the practice. While these batteries are safe when used as intended, when they are disposed illegally they often result in vehicle and facility fires. Our industry has seen a dramatic increase in the incidence of truck and facility fires that corresponds directly to the increase of these batteries in the solid waste stream. The number of fires at waste facilities across North America has grown 26 percent in just the past three years. Our members report an even greater increase in the number of truck fires, where the fire is often difficult to detect due to the automated nature of collection methods, and can be difficult to suppress or extinguish once fire is detected. This can lead to the loss of the vehicle, or worse, to more widespread damage to other property, including a loss of valued recycling materials and operations. In areas experiencing drought, hot weather conditions, a high wind event or some combination of the three, the threat

to life and to property could be extensive. SB 1156 is an important first step in bringing attention to this problem and engaging expert partners to focus on this issue."

Related legislation:

1) AB 1509 (Mullin). Establishes the Lithium-Ion Battery Recycling Program within CalRecycle that requires manufacturers of lithium-ion batteries to provide convenient collection, transportation, and disposal of lithium-ion batteries. This bill is pending in the Senate Environmental Quality Committee.

2) AB 2832 (Dahle, Chapter 822, Statutes of 2018). Requires the Secretary for the California Environmental Protection Agency to convene a research group to review and advise the Legislature on policies pertaining to the recovery and recycling of lithium-ion vehicle batteries sold with motor vehicles in the state.

3) SB 212 (Jackson, Chapter 1004, Statutes of 2018). Requires entities that sell drugs or sharps in the state to individually, or with other entities, develop and implement a statewide home-generated drug stewardship plan, or a home-generated sharps waste stewardship plan, or both, for the collection and proper disposal of home-generated drug and sharps waste. Requires CalRecycle to oversee and enforce each stewardship plan.

4) AB 1125 (Pavley, Chapter 572, Statutes of 2005). Enacts the Rechargeable Battery Recycling Act of 2006, and requires retailers of rechargeable batteries, by July 1, 2006, to establish a system for accepting rechargeable batteries for reuse, recycling, or proper disposal.

5) AB 2901 (Pavley, Chapter 891, Statutes of 2004). Enacts the Cell Phone Recycling Act of 2004 and requires all retailers of cellular telephone to have in place a system for the collection, reuse and recycling of cell phones, requires DTSC to provide information on cell phone recycling.

6) SB 20 (Sher, Chapter 526, Statutes of 2003). Enacts the Electronic Waste Recycling Act of 2003 to provide for the convenient recycling of covered electronic devices in California.

REGISTERED SUPPORT / OPPOSITION:

Support

Advance Disposal Co.
Athens Services
Big Bear Disposal, Inc.
Burrtec Waste Industries, Inc.
California Chapters of The Solid Waste Association of North America's Legislative Task Force
California Product Stewardship Council
California Retailers Association
California Waste Haulers Council
Californians Against Waste
Call2Recycle
City of Thousand Oaks

City of Torrance
CR&R, Inc.
Desert Valley Disposal, Inc.
Drake Institute of Research and Policy
EDCO
Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task Force
Mid Valley Disposal
Mid-State Solid Waste & Recycling
National Electrical Manufacturers Association (NEMA)
North County Recycling
Palm Springs Disposal Services
Paso Robles Waste & Recycle
Pena's Disposal Service
PRBA - the Rechargeable Battery Association
Recology
Republic Services, Inc.
Resource Recovery Coalition of California
Sanitation Districts of Los Angeles County
South Bayside Waste Management Authority (SBWMA) DBA Rethinkwaste
Varner Bros., Inc.
Waste Connections, Inc.
Waste Management & Affiliated Entities

Opposition

None on file.

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