Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 1724 (Stone) – As Amended April 21, 2022

SUBJECT: State-owned Washing Machines: Microfiber Filtration

SUMMARY: Requires all state-owned washing machines to contain a microfiber filtration system with a mesh size of 100 microns or smaller.

EXISTING LAW:

1) Prohibits, under the federal Marine Plastic Pollution Research and Control Act of 1987, the at-sea disposal of plastic and other solid materials for all navigable waters within the United States. (33 United States Code (USC) § 1901 et seq.)

2) Under the Microbead-Free Waters Act of 2015, the Federal Food, Drug, and Cosmetic Act bans rinse-off cosmetics that contain intentionally-added plastic microbeads and bans manufacturing of these cosmetics. (21 USC § 331)

3) Regulates, under the Porter-Cologne Water Quality Control Act, discharges of pollutants in storm water and urban runoff by regulating, through the National Pollution Discharge Elimination System (NPDES), industrial discharges and discharges through the municipal storm drain systems. (Water Code (WC) § 13000 et seq.)

4) Requires the State Water Resources Control Board (State Water Board) and the regional water boards to implement a program to control discharges of preproduction plastic (nurdles) from point and nonpoint sources. Requires the State Water Board to determine the appropriate regulatory methods to address the discharges from these point and nonpoint sources. (WC § 13367)

5) Declares that littered plastic products have caused and continue to cause significant environmental harm and have burdened local governments with significant environmental cleanup costs. (Public Resources Code (PRC) § 42355)

6) Finds that plastic pollution is the dominant type of anthropogenic debris found throughout the marine environment; plastic pollution is an environmental and human health hazard and a public nuisance; and enacts the Plastic Microbeads Nuisance Prevention Law. (PRC § 42360)

7) Prohibits the sale of personal care products that contain plastic microbeads on and after January 1, 2020. (PRC § 42360 et seq.)

8) Requires the State Water Board to adopt a definition of microplastics in drinking water by July 1, 2020; adopt a standard methodology to test drinking water for microplastics; and, adopt testing and reporting requirements. (Health & Safety Code § 116376)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "AB 1724 is an important step in reducing microplastics in California. These microfibers end up in freshwater systems or in the ocean and are often found in tap water, bottled water, fish, and table salt. Requiring a microfiber filter on state-owned washing machines would be an effective way of stopping microfibers from entering our freshwater systems and ocean."

Natural and synthetic fibers: Natural fibers, such as wool and cotton, are spun together into yarn, which can be knit into textiles. Synthetic fibers are manufactured by reacting simple, petroleum-based chemical precursors into polymer plastics. This plastic is melted and spun into yarn. Polyester, nylon, microfiber, acrylic, and spandex are all examples of common synthetic fabrics. Natural materials can also be chemically modified to form semisynthetic fibers.

From 1950 to 2010, synthetic material use in textiles increased from 2.1 million tons to almost 50 million tons, accounting for almost 60% of total global fiber production. The bulk of synthetic fibers produced are either polyester or nylon. According to Tecnon OrbiChem, a company that provides data and analysis to the petrochemical industry, fiber production growth has been driven almost exclusively by increased polyester production in China, and they project that this trend will continue.

Microfibers: Over time, textiles shed small fibers through the normal process of wear, tear, and washing. These fibers are typically classified as microfibers when they are shorter than five millimeters. While all textiles seem to shed, studies conducted at academic laboratories and by the outdoor clothing and gear company, Patagonia, in collaboration with the University of California at Santa Barbara (Patagonia Study), indicate that many factors determine how much a textile sheds when washed. Textile age, washing machine type, detergent use, and textile weave can all play a role. For example, microfleece is a polyester fabric that is mechanically cut to create its velvety appearance. The Patagonia Study found that, on average, microfleece jackets release almost 2 grams of microfiber per wash.

Currently, washing machines are not equipped to filter out microfibers and up to 40% of microfibers pass through wastewater treatment plants. Therefore, large quantities (about 4 billion microfibers, an estimated 81 kilograms, per day at one treatment plant studied) are discharged into the environment.

One of the first studies to identify microfibers as a significant component of microplastic pollution back in 2011 noted that the proportion of polyester and acrylic fibers found in habitats receiving sewage discharge matched those in clothing.

Microfiber mega-pollution: Plastic microfibers and other microplastics are not biodegradable and can absorb toxic pollutants such as polychlorinated biphenyls, dichlorodiphenyltrichloro-ethane, commonly known as DDT, and polybrominated diphenyl ethers (PDBEs). Broken down by ultraviolet radiation and wave action, all plastic in the ocean eventually becomes microplastic, and plastics are estimated to comprise 60-80% of all marine debris. A 2017 study by the International Union for Conservation of Nature (IUCN) found that, of the 9.5 million tons of plastic waste flowing into the ocean each year, an estimated 15-30 percent comprises fibers shed from clothing.

Toxics in microfibers: Like many microplastics, microfibers can contain harmful chemical additives, such as flame retardants (PBDEs), stain/water repellents (per- and polyfluoroalkyl substances), and more. Once in the natural environment, they may absorb other harmful chemicals and, when ingested, the chemicals can be biomagnified up the food chain (Rochman et al., 2014). Hazards are not well known for microfibers (physical toxicity seems to be the dominant driver with chemical toxicity due to sorbed contaminants less certain), but it is reasonable to expect these materials to cause toxicity at similar levels to other microplastic shapes.

Wastewater: Studies show that a single load of laundry can release thousands of microfibers into washing machine effluent, and when washing effluent is carried to a wastewater treatment plant, some microfibers are released directly into aquatic ecosystems.

Researchers at the San Francisco Estuary Institute have recently determined that billions of microplastics flow through the San Francisco Bay Area's 40 wastewater treatment facilities each year. In fact, 17 billion microplastic fibers flow into the SF Bay via wastewater annually.

Even if wastewater treatment plants could filter out all microfibers, they may still make their way into the environment through sewage sludge applications. The study *Microplastics removal in wastewater treatment plants: a critical review* examined and quantified the removal efficacy of microplastics by wastewater treatment facilities. The authors found that secondary and tertiary wastewater treatment plants removed an average of 88% and 94% of microplastics, respectively. The majority of microplastics, 72% on average, were removed during preliminary and primary treatment. However, the majority of microplastics removed during wastewater treatment are likely to be present in sewage sludge. Although the removal of microplastics is high, wastewater treatment is still an important entry point into aquatic and terrestrial systems given the high volumes involved and the amount of sludge reused via land application (Paul U. Iyare, et al, 2020). That said, even if 90% is sequestered in sludge, the other 1 – 10% goes into the treated wastewater, and is directly emitted to aquatic ecosystems. This is still millions of particles – most of which are microfibers.

Can washing machine technology be a piece of the puzzle to solve the problem? While garments can and do shed during normal wear and tear, initial focus for mitigating microfiber pollution worldwide has included a heavy emphasis on the laundering stage of the apparel and textile lifecycle, particularly during washing. With a lack of filtration on current washing machines, there have been multiple first-to-market products offered to global consumers to take on the role of mitigation in their own personal laundry routine.

There are three different types of filters that can be used during laundering to capture microfibers:

1) **In-drum filters**: these filters are separate devices that consumers would use in the wash drum with each load of laundry.
2) **In-line filters**: these filters are also separate devices from the machine sold after-market and are affixed to the drain line.
3) **Built-in filters**: these would be built-in to the washing machine during manufacturing and require a technician to service.

In-drum filters are commercially available. Some garment manufactures, such as California companies Patagonia, Reformation, and Toad&Co, have sold their products with a washing bag (i.e., Guppyfriend Washing Bag, Cora Ball) developed to capture microfiber fragments during each load and reduce agitation in the wash load.

In the study, *The efficiency of devices intended to reduce microfibre release during clothes washing* (I. Napper, A. Barrett, R. Thompson, 2020), six different devices ranging from prototypes to commercially available products were compared for efficacy in capturing microfibers. The six devices were designed to either be placed inside the drum during the washing cycle or fitted externally to filter the effluent wastewater discharge. When compared to the amount of microfibers entering the wastewater without any device (control), the XFiltra filter was the most successful device. This device captured microfibers reducing their release to wastewater by around 78%. The Guppyfriend bag was the second most successful device, reducing microfiber release to wastewater by around 54%; it appeared to mainly work by reducing microfiber shedding from the clothing during the washing cycle.

The University of Toronto study, *Capturing microfibers – marketed technologies reduce microfiber emissions from washing machines* (Hayley K. McIlwraitha, et al, 2019), shows that after-market filters on washing machines significantly reduce microfibers in washing machine effluent. This shows that filters added to washing machines can capture and divert microfiber, keeping them out of the environment.

The University of Toronto also presented on a community-level research study currently taking place in the town of Parry Sound, Ontario, Canada. In this study, the University helped research participants install 100 filters in July 2019, about 10% of the homes connected to the municipal wastewater treatment plant, and evaluated the fiber fragment capture before and after installation. Initial results show that this solution is effective at mitigating fiber effluent, even at 10% implementation for this community.

It is critical to note that the efficacy of in-drum devices rely on consumers to actively using them in the washing drum with every load of laundry as they are not affixed to the washing machine.

In-line filters are also available. Companies, such as Filtrol and Lint LUV-R, are offering in-line filtration devices that consumers can install at home to mitigate the release of textile fiber from washing machines into municipal water systems. Results from research conducted at the University of Toronto showed that the Lint LUV-R captured 87% of the microfibers (by weight), and Fitrol captured 89% of the microfibers (by weight).

Is technology readily available? The Alliance of Home Appliance Manufacturers (AHAM), which represents residential appliance makers, including 70 global washing machine manufacturers, conducted laboratory testing on two in-line filters, including Filtrol, and found the efficacy is not reliable.

AHAM hired NSF International to do testing on two types of in-line filters to evaluate how effective they can be for microplastic fibers. (NSF is an independent, not-for-profit organization that develops consensus national standards, and provides product inspection, testing, and certification.) NSF did varied tests with different size laundry loads, different types of textiles, etc. The end result was that the filters caught, at most, 26% of fibers, not all of which were

plastic fibers. Not only did they not achieve a desired result for microfiber capture, they also come with technical challenges (requiring filter cleaning every 1-2 cycles).

As for built-in filtration devices, according to AHAM, built-in filters are not yet commercially available. However, PlanetCare, a Slovenian start-up, has developed a washing machine filter that reportedly captures 90% of microfibers before entering the waterways and is compatible with every type of washing machine. (PlanetCare is not a member of AHAM, and the efficacy of their technology has not been verified.)

The author contends that this bill will help encourage innovations in technology that are increasingly efficient and cost-effective. France announced in February 2020 that it would require all new washing machines sold in the country to include microfiber filtration by the end of 2025. At the time of that announcement, existing technology was available for the cost of $12 USD, with further studies done in the United States finding that U.S.-based technology is available and offers "a low-cost solution to mitigating microfiber pollution."

Clothing Dryers: It is worth noting dryers may also play a role is dispersing microplastic fibers into the environment. The results of the study, *Electric clothes dryers: An underestimated source of microfiber pollution* (K. Kapp, R. Miller, 2020) establish that electric clothes dryers are contributing a potentially large volume of synthetic and non-synthetic microfibers from clothing and home textiles into our environment, demonstrating a need to develop and implement strategies/equipment that reduce microfiber pollution from dryers. The author may wish to consider exploring whether comparable technologies are available for dryers to further address the issue of microplastic fiber from laundry.

Microplastics informational hearing: On March 2, 2021, the Assembly Environmental Safety & Toxic Materials Committee held an informational hearing on microplastics, where scientists from the State Water Board, University of California at Berkeley, University of Toronto, Utah State University, Imperial College London, and other academic institutions discussed microplastics in our environment and emphasized the magnitude of microplastic fibers and their impacts on aquatic species, aquatic ecosystems, and human health. Their presentations informed the Committee that people are exposed to microplastic fibers through a number of routes including seafood consumption, tap water, bottled water, household dust, and inhalation of airborne microfibers. Bioaccumulation of toxins from microplastics in seafood has raised concerns that consumption may be a route of exposure to toxins as well as plastic.

Various strategies will need to be employed with varying levels of urgency to mitigate the microplastics and microplastic fibers from entering our environment including, but not limited to, source reduction efforts, policy changes, consumer behavior shifts, and technological interventions.

This bill: AB 1724 proposes to require all state-owned washing machines to contain a microfiber filtration system with a mesh size of 100 microns or smaller. The bill is taking an incremental approach, starting with washing machines owned by the state. Depending on the efficacy of the technology employed at state facilities, it is possible that more microfiber filtration systems will enter the marketplace for both the commercial market and the consumer market.

A few issues to consider: Absent any change, the effective date of the bill is January 1, 2023, meaning at that time, all state-owned washing machines will need to be in compliance. The author and stakeholders may wish to consider if state facilities will need additional time. Additionally, the bill does not define what "state-owned" means. Obviously, this includes all washing machines owned by state agencies, including the correctional system, however does it also include washing machines on the campuses of the University of California system, the California State University System, the Community College system, and facilities at any K-12 school or facility? The bill does not place the requirements under a state agency, therefore no state agency will be tasked with monitoring for compliance. It is unclear how compliance and enforcement will be dealt with.

Arguments in Support: According to a group of supporters including Clean Water Action, Californians Against Waste, and the Surfrider Foundation, "Microfibers, tiny strands of plastic less than 5mm in length and smaller than 3 microns in width, are the product of a variety of synthetic textiles, including polyester, rayon, and acrylics. With each load of laundry, up to 1.5 million microfibers can be released from clothing and textiles into wastewater. However, as their name suggests, microfibers are small, and many wastewater treatment facilities are not equipped to filter particles of this size. As a result, microfibers are one of the most common forms of microplastic pollution reported globally.

Microplastics in the environment can lead to a variety of damaging outcomes. Once in our ocean and waterways, marine animals and other wildlife can ingest the microfibers, causing starvation and reproductive issues. While up to a trillion rubber fragments wash into the San Francisco Bay from nearby cities and streets, the vast majority of all microplastics found ingested by fish were fibers. Even more, synthetic microfibers do not biodegrade, and can bind with chemical pollutants in the water before making their way up the food chain to be ingested by humans.

Fortunately, ultra-fine particle capture devices already exist to prevent microfibers from being discharged into our rivers, lakes, and ocean. These filters are affordable and have demonstrated their efficacy to capture 90 percent of microfibers in laboratory and field trials."

Arguments in Opposition: According to the Association of Home Appliance Manufacturers (AHAM), "AHAM appreciates the opportunity to provide our views on AB 1724, relating to the issue of microfiber filtration in washing machines. We would like to express our opposition to AB 1724. We understand the interest and need to address microfiber pollution; however, a filter on a clothes washer is not the solution for many reasons. Appliance manufacturers are actively trying to find a solution to help reduce the release of microfibers, but no viable solution has been found. Therefore, AHAM opposes this bill because this method of addressing the release of microfibers into the environment is an inappropriate way to address the problem and technically impractical.

There are a number of technical challenges to placing a filter on a washing machine. Filters that capture particles of this size (100 microns) will inevitably clog, creating the need for bypass that will render them useless. From a lifecycle standpoint, the least efficient way to address the environmental impact of synthetic textiles is through minimizing those impacts during the use of the clothes washer (catching them mid-stream). Addressing the problem through textile design or through wastewater management systems (at the beginning or end of the lifecycle stream) is more effective."

It is important to note that the letter from AHAM was on a prior version of the bill and at the writing of this analysis the committee has not received an updated letter on the current version of the bill.

Related legislation:

1) AB 622 (Friedman, 2021). Would have required, on or before January 1, 2023, all washing machines sold as new in California to contain a microfiber filtration system with a mesh size of 100 microns or smaller. Additionally, would have required all state-owned washing machines to contain a microfiber filtration system. This bill was not heard in the Assembly Environmental Safety and Toxic Materials Committee and subsequently died on file.

2) AB 802 (Bloom, 2021). Would require the State Water Board to identify the best available control technology for filtering microfibers from an industrial, institutional, or commercial laundry facility. This bill was not heard in the Assembly Environmental Safety and Toxic Materials Committee and subsequently died on file.

3) AB 3232 (Friedman, 2020). Would have required that all washing machines for commercial sale in California contain a microfiber filtration system with a 90% or greater filtration rate. Held due to COVID-19 pandemic.

4) AB 129 (Bloom, 2020). Would have required the State Water Board to take specified actions relating to microfiber pollution on or before July 1, 2020, and would have required the State Water Board to identify best practices for clothing manufacturers to reduce the amount of microfibers released into the environment. Held due to COVID-19 pandemic.

5) AB 1952 (Stone, 2020). Would have required the Department of General Services to implement a pilot program for one year to assess the efficacy of microfiber filtration systems in removing microfiber from waste washwater from state-owned laundry facilities. Held due to COVID-19 pandemic.

6) AB 2297 (Bloom, 2020). Would have required the State Water Board to identify the best available control technology for filtering microfibers from an industrial, institutional, or commercial laundry facility. Held due to COVID-19 pandemic.

REGISTERED SUPPORT / OPPOSITION:

Support

5 Gyres Institute, The
7th Generation Advisors
Active San Gabriel Valley
Belong Wine Co.
California Coastkeeper Alliance
California Product Stewardship Council
California Water Association
Californians Against Waste
Clean Water Action
Coachella Valley Waterkeeper

(COARE) Center for Oceanic Awareness, research, and Education, The
Consumer Federation of California
Defenders of Wildlife
Environmental Working Group
Friends Committee on Legislation of California
Heal the Bay
Humboldt Baykeeper
Inland Empire Waterkeeper
Los Angeles Waterkeeper
Monterey Coastkeeper
Nature Conservancy; The
Northern California Recycling Association
Ocean Conservancy
Orange County Coastkeeper
Orange County Sanitation District
Plastic Oceans International
Plastic Pollution Coalition
Regional Water Authority
Russian Riverkeeper
San Diego Coastkeeper
San Francisco Baykeeper
Santa Barbara Channelkeeper
Save Our Shores
Save the Albatross Coalition
Sierra Club California
Sierra Nevada Brewing Company
Surfrider Foundation
Wholly H2O
Wishtoyo Chumash Foundation
Yuba River Waterkeeper
Zero Waste USA

Opposition

Association of Home Appliance Manufacturers
Coin Laundry Association

Analysis Prepared by: Josh Tooker / E.S. & T.M. /

Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 1931 (Luz Rivas) – As Amended April 21, 2022

SUBJECT: Community water systems: lead pipes

SUMMARY: Requires a community water system to create an inventory of lead service lines in its distribution system and create a timeline for the replacement or removal of lead services lines that the community water system owns. Requires a community water system to replace or remove all lead service lines that the community water system owns. Specifically, **this bill**:

1) Defines "lead service-line" as a service line made of any of the following: a lead pipe; a lead pigtail, lead gooseneck, or other lead fitting or connector that is connected to the service line; and a galvanized service line that is, was, or was likely connected to a lead pipe, lead pigtail, lead gooseneck, or other lead fitting or connector.

2) Defines "service-line" as the piping, tubing, connectors, and necessary appurtenances acting as a conduit from the water main or source of potable water supply to the building plumbing at the first shut-off valve inside the building, or 18 inches inside the building, whichever is shorter.

3) Defines "partial lead service-line replacement" as the replacement or removal of only a portion, or part, of a lead service line.

4) Requires a community water system to replace or remove all lead service lines that the community water system owns, in its service area.

5) Requires a community water system, when replacing or removing a lead service-line, to replace or remove the entire service line within 30 days of the start of construction. This requirement only applies to the part of the lead service line that the community water system owns.

6) Requires a community water system, if the community water system does not own the entire service line, to notify the owner of the line that their part of the line contains lead and should be replaced. Requires the community water system to assist the property owner in identifying state or federal funding to help the property owner pay for this replacement.

7) Requires a community water system to provide residents with kitchen area filters and replacement cartridges once every three months until the full lead service line is replaced.

8) Requires a community water system, before commencing a lead service-line replacement, removal, or disturbance to, at least 90 days before the replacement, removal, or disturbance, provide a written notice to the owner and residents of all buildings and units served by the line.

9) Requires a community water system, prior to and after, the replacement, removal, or disturbance of a lead service line to conduct at least one tap water test before and at least four follow-up water tests after.

10) Requires a community water system to create an inventory of known and unknown lead service lines in use in its distribution system; identify areas that have or may have had lead service lines in use in its distribution system; and, create a timeline for the replacement or removal of the known and unknown lead service lines for the service lines that the community water system owns.

11) Requires a community water system to provide the inventory of lead services lines, timeline for replacement or removal, and lead exposure prevention plan to the State Water Resources Control Board (State Water Board) by June 1, 2023.

12) Requires the State Water Board to review the inventory, timeline and lead exposure preventing plan submitted by a community water system and authorizes the State Water Board to approve the inventory, timeline and lead exposure prevention plan if it meets the requirements of this bill.

13) Requires the State Water Board to post, on or before August 1, 2023, each approved inventory, timeline and lead exposure prevention plan.

EXISTING LAW:

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

2) Requires any person who owns a public water system to ensure that the system does all of the following:

    a) Complies with primary and secondary drinking water standards;
    b) Will not be subject to backflow under normal operating conditions;
    c) Provides a reliable and adequate supply of pure, wholesome, healthful, and potable water;
    d) Employs or utilizes only water treatment operators or water treatment operators-in-training that have been certified by the State Water Board at the appropriate grade; and,
    e) Complies with the operator certification program. (HSC § 116555 (a))

3) Defines a "public water system" as a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year. (HSC § 116275)

4) Defines "Community water system" as a public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system. (HSC § 116275(i))

5) Defines "Service connection" as the point of connection between the customer's piping or constructed conveyance, and the water system's meter, service pipe, or constructed conveyance. (HSC § 116275(s))

6) Prohibits the use of any pipe, pipe or plumbing fitting or fixture, solder, or flux that is not "lead free" in the installation or repair of any public water system or any plumbing in a facility providing water for human consumption. (Health & Safety Code (HSC) § 116875(a))

7) Requires, by July 1, 2018, a public water system to compile an inventory of known lead user service lines in use in its distribution system and identify areas that may have lead user service lines in use in its distribution system. (HSC § 116885 (a))

8) Establishes as 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)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "AB 1931 is necessary to protect Californians from lead exposure that is caused by lead service line replacements. The state is taking important and necessary steps to replace toxic lead plumbing in our state, but it is vital that replacements are done properly and with safety precautions in place to avoid increased lead exposure. Replacing just part of a lead service line, such as a lead fitting, can release lead from other parts of the system, resulting in lead spikes in drinking water for months. Lead is a potent neurotoxin and is especially toxic to young children. Even low levels of exposure can interfere with thought processes, lower children's IQ, and cause attention and behavioral problems — all of which have compounding effects over the course of one's lifetime. Lead exposure hurts communities of color the most, and we know this to be true in California.

No amount of lead exposure is ever safe and we must ensure that California is doing all it can to protect its residents from lead exposure through polluted drinking water. Water is a precious resource in our drought-prone state and polluting this limited resource with lead and delivering it to homes is unacceptable."

Human right to water: In 2012, California became the first state to enact a Human Right to Water law, AB 685 (Eng, Chapter 524, Statutes of 2012). Public policy continues to be focused on the right of every human being to have safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitation. Water supply, contaminants, costs of treatment and distribution systems, the number and nature of small public water systems, especially in disadvantaged communities, and many other factors will continue to challenge progress in addressing the Human Right to Water.

Federal Safe Drinking Water Act (SDWA): The federal SDWA was enacted in 1974 to protect public health by regulating drinking water. California has enacted its own safe drinking water act to implement the federal law and establish state standards under the state SDWA. The US EPA enforces the federal SDWA at the national level. Most states, including California, have been granted "primacy" by the US EPA, giving them the authority to implement and enforce the federal SDWA at the state level. In accordance with the federal SDWA, the US EPA provides funds to states for their drinking water loan programs, conducts an annual oversight review of each state's program, and issues an annual program evaluation report.

California's drinking water program: The State Water Board regulates public water systems that provide water for human consumption and have 15 or more service connections, or regularly serve at least 25 individuals daily at least 60 days out of the year. The state does not regulate water systems with less than 15 connections; county health officers oversee those systems. At the local level, 30 of the 58 county environmental health departments in California have been delegated primacy—known as Local Primacy Agencies (LPAs)—by the State Water Board to regulate systems with between 15 and 200 connections within their jurisdiction. A "service connection" is usually the point of access between a water system's service pipe and a user's piping.

What is a public water system? A public water system is defined as a system that provides water for human consumption to 15 or more connections or regularly serves 25 or more people daily for at least 60 days out of the year. Many people think of public water systems as large city or regional water suppliers, but they also include small housing communities, businesses, and even schools and restaurants that provide water. A public water system is not necessarily a public entity, and most public water systems are privately owned.

Type of public water systems: There are three types of public water systems with legal distinctions: community, non-transient non-community, and transient. The type of water system is based on how often people consume the water. Drinking water regulations impose the most stringent monitoring requirements on community and non-transient non-community water systems because the people they serve obtain all or much of their water from that system each day. Community water systems are city, county, regulated utilities, regional water systems, and even small water companies and districts where people live. Non-community non-transient water systems are places like schools and businesses that provide their own water. The customers of non-community non-transient water systems have a regular opportunity to consume the water, but they do not reside there. Drinking water regulations impose the most stringent monitoring requirements on community and non-transient non-community water systems because the people they serve obtain all or much of their water from that system each day. Transient water systems include entities like rural gas stations, restaurants, and State and National parks that provide their own potable water, where most consumers neither nor regularly spend time there.

Lead in water: The most prevalent sources of lead in drinking water are from pipes, fixtures, and associated hardware from which the lead can leach. According to *Lead in Drinking Water and Human Blood Levels in the United States*, published by the National Center for Environmental Health in 2012, nearly all lead in users' tap water does not come from the primary water source or from the municipal treatment plant, but is a result of corrosion resulting from materials containing lead coming into contact with water after it leaves the treatment plant. Lead can enter a building's drinking water by leaching from lead service connections, from lead solder used in copper piping, and from brass fixtures. The amount of lead in tap water can depend on several factors, including the age and material of the pipes, concentration of lead in water delivered by the public utility, and corrosiveness of the water. More corrosive water can cause greater leaching from pipes.

Federal lead testing requirements: In 1991, the US EPA adopted the Lead and Copper Rule (LCR), which established "action levels" for lead of 15 µg/L (0.015 mg/L or 15 ppb). The LCR requires a public water system to test water at the tap at a sample of their customers served for

lead levels. Sample sizes vary based on population served. For example, if a school serves between 500-3,300 students, its sample size under the LCR is 20 tap sites (water fountains). If more than 10 percent of the samples collected are at or above the action level for lead, it can trigger 'actions' that include public education, water quality parameter monitoring, corrosion control treatment, source water monitoring/treatment, public education, and lead service line replacement. The LCR requires lead samples to be collected every 6 months.

California Lead and Copper Rule: The State Water Board, enforces the CA LCR, which is aligned with the US EPA's LCR. The CA LCR protects the public's drinking water from metals that can adversely affect public health by requiring water systems to monitor lead and copper levels at the consumer's taps. If action levels for lead or copper are exceeded, installation or modifications to corrosion control treatment is required. If the action level for lead is exceed, public notification is required.

LCR Revisions (LCRR): The US EPA issued revisions to the federal LCR on January 15, 2021. US EPA's new LCRR strengthen every aspect of the LCR to better protect communities and children in elementary schools and childcare facilities from the impacts of lead exposure. Over the next three years, the LCRR will require community water systems and non-transient non-community water systems throughout the United States (approximately 4,000 water systems in California) to conduct an inventory of service lines and determine the material of those lines and fittings. On January 20, 2021, federal Executive Order 13990 directed all federal agencies to undertake review and action, as appropriate, to address the promulgation of federal regulations and other actions during the prior four years. Of those actions, the LCRR was specifically identified as an agency action requiring review.

Consequently, US EPA delayed the effective and compliance dates established in the LCRR to December 16, 2021 and October 16, 2024, respectively. US EPA also engaged with local communities, states, local governments, utilities, and stakeholders for input regarding any changes that should be made to the LCRR and published Docket No. EPA-HQ-OW-2021-0255 on December 16, 2021 in the federal register.

The LCRR compliance and effective dates listed above, as well as the text from the January 15, 2021 regulation, were not changed and became effective. Within the Docket, US EPA committed to propose and revise the LCRR by October 2024 with the Lead and Copper Rule Improvements (LCRI). The LCRI is expected to delay the implementation of portions of the LCRR beyond the October 16, 2024 compliance date. US EPA will not delay the service line material inventory requirements in the LCRR.

New general requirements for lead service-line inventory in the LCRR: All community and non-transient non-community public supply systems must comply with the LCRR and must develop an initial service line material inventory to identify the materials of service lines connected to the public water distribution system by October 16, 2024. Though the LCRR do not define a "service line," they define a "lead service line" as "A portion of pipe that is made of lead, which connects the water main to the building inlet." The inventory must include all service lines connected to the water system's distribution system, regardless of ownership status. If the service line ownership is shared, the inventory would include both the portion of the service line owned by the water system and the customer-owned portion of the service line.

LCRR definition of a lead service line, gooseneck and galvanized line: Lead service line means a portion of pipe that is made of lead, which connects the water main to the building inlet. A lead service line may be owned by the water system, owned by the property owner, or both. A galvanized service line is considered a lead service line if it ever was or is currently downstream of any lead service line or service line of unknown material. If the only lead piping serving the home is a lead gooseneck, pigtail, or connector, and it is not a galvanized service line that is considered a lead service line, then the service line is not a lead service line. Gooseneck, pigtail, or connector is a short section of piping, typically not exceeding two feet, which can be bent and used for connections between rigid service piping. Lead goosenecks, pigtails, and connectors are not considered part of the lead service line but may be required to be replaced pursuant to 40 Code of Federal Regulation (CFR) section 141.84, subdivision (c). Galvanized service line means iron or steel piping that has been dipped in zinc to prevent corrosion and rusting.

Requirements of California Law versus the LCRR: SB 1398 (Leyva, Chapter 731, Statutes of 2016) which was amended by SB 427 (Leyva, Chapter 238, Statutes of 2017) required all community water systems to compile an inventory of known partial or total lead user service lines in use in its distribution system by July 1, 2018. The submission deadline for the final user service line inventory was July 1, 2020. The definition of "user service line" includes the service line from the water main to the meter, which is typically the water-system-owned portion of the line. The law requires that all lead from the water main to the meter be inventoried and replaced so that the State Water Board can continue to collect data on lead goosenecks. The data collected by community water systems can be used to complete a portion of the LCRR inventory requirements, but the LCRR inventory must also include the portion of the service line from the meter to the building inlet, or the customer-owned portion of the total service line. Also, if a lead gooseneck is connected to a galvanized pipe, that service line may need to be included in the water system's LCRR tap sampling plan pursuant to 40 CFR section 141.86 subdivision (a)(5).

Likely elements of proposed LCRI: US EPA intends to immediately begin to develop a proposed National Primary Drinking Water Regulation: Lead and Copper Rule Improvements (LCRI) to address key issues and opportunities identified in their review. US EPA aims to promulgate the LCRI prior to October 16, 2024. Following are the major areas the US EPA intends to focus on with the LCRI:

1) Replacing all Lead Service Lines. Replacing all lead service lines is an important public health goal. US EPA intends to propose requirements that, along with other actions, would replace all lead service lines as quickly as feasible. US EPA's proposal will fully consider the agency's statutory authority and required analyses, including an economic analysis.

2) Compliance Tap Sampling. US EPA intends to assess data to consider opportunities to strengthen compliance tap sampling requirements. Robust tap sampling methods are essential to identifying locations with elevated lead, whether the source of the lead is a lead service line or leaded plumbing materials within a residence.

3) Action and Trigger Levels. For the proposed rule, the agency plans to explore options to reduce the complexity and confusion associated with these levels with a focus on reducing health risks in more communities. The agency will also evaluate whether the trigger level requirements of the LCRR are still necessary with a proactive lead service line replacement and more protective action level.

4) Prioritizing Historically Underserved Communities. US EPA intends to explore how to replace lead service lines in a manner that prioritizes underserved communities. US EPA will evaluate options to prioritize the removal of lead service lines in communities disproportionately impacted by lead in drinking water. The goal of these potential lead service line replacement regulatory improvements—coupled with non-regulatory actions—is to more equitably protect public health.

Additional Actions to Reduce Lead in Drinking Water: US EPA concluded that there are additional actions outside of the SDWA regulatory framework for the Lead and Copper Rule that can further reduce lead in drinking water. They include:

1) Additional Infrastructure Funds. US EPA announced that it will allocate $2.9 billion in Bipartisan Infrastructure Law funding to states, Tribes, and territories to remove lead service lines. This 2022 allocation is the first of five allotments that will provide $15 billion in dedicated funding for lead serve line replacements. In addition to the dedicated investment in lead service lines, the Law provides an additional $11.7 billion in general funding through the Drinking Water State Revolving Fund (DWSRF), which can also be utilized for lead removal projects.

2) Equity in the Distribution of Funds. US EPA will seek opportunities to provide technical assistance to small and disadvantaged communities, promote awareness of the availability of these funding programs to address lead in drinking water and highlight case studies from communities that have successfully addressed concerns regarding the use of public funds for private-side lead service line replacements. Two US EPA programs central to US EPA's goal to accelerate lead service line replacements are pilot programs under the Justice 40 Initiative: DWSRF and the Water Infrastructure Improvements for the Nation Act Reducing Lead in Drinking Water Grant. US EPA is engaging with stakeholders to explore opportunities to maximize the benefits of these programs in disadvantaged communities, including their specific application to lead service line replacement projects.

3) Discourage Partial Lead Service Line Replacements and Encourage Full Replacements. US EPA will provide training, guidance, and tools on developing lead service line replacement programs, including how to ensure equitable implementation of removal projects. US EPA will provide guidance on available methods for replacing full lead service lines as safely and efficiently as possible.

This bill: AB 1931 is designed to have community water systems remove or replace all lead services lines within their territory. Additionally, the bill seeks to require community water systems to identify lead services lines that they do not own (the lines on the property of their customers) and to assist the property owners with removing or replacing these lead service lines. The bill is consistent with the LCRR and is also pushing community water systems to move towards elements that are likely to be in the LCRI, even though that rule has not been formally adopted.

Likely issues for further discussion: The matter of ensuring that drinking water systems are free of lead seems to be one of total agreement. The question, of course, is how to get there. As the bill moves through the process, the author and proponents will continue discussions on how to ensure that lead service lines on both the water system side and the customer side are identified

and safely removed or replaced. A future version of the bill may also include more information about any state or federal funding opportunities. One of the proposed elements of the LCRI, prioritizing historically underserved communities, is an additional component that the bill could address.

Arguments in Support: According to a coalition of organizations in support including Clean Water Action, the Environmental Working Group, and the Natural Resources Defense Council,

"The undersigned organizations are writing in support of AB 1931 (L. Rivas), a bill that would require California water agencies to complete full lead service line replacements, cease partial replacements and immediately employ safeguards to ensure that Californians are protected against lead exposure caused by lead service line replacement activity.

The removal of lead pipes, lead fittings, and galvanized pipes that are or were attached to those pipes or fittings, in our drinking water system is key to reducing public lead exposure. However, removal or disturbance of these leaded plumbing parts must be done carefully and with the use of safeguards that will prevent consumers from unwittingly ingesting lead released during and after the activity. As you may know, the CDC just reduced the blood lead reference value for children, and pediatricians will tell you that no amount of lead, a severe neurotoxin, in our water is safe.

Information received from Public Records Act requests indicates that California water utilities up and down the state are replacing lead pipes and fittings. These replacements are happening without timely, strong, or consistent health protections, and state regulators are allowing utilities to partially replace lead lines, the most hazardous method of lead pipe replacement. Lead service line removals are needed to get lead out of drinking water in the long run, but when lead plumbing is replaced improperly, or only partially, the activity can release high levels of lead into people's homes for up to 18 months.

Because partial replacements can release lead particles into drinking water, residents need to be informed about any activity done on these components or galvanized lines well before construction begins, and water testing and provision of filters are necessary to protect people from lead exposure via their home drinking water. Furthermore, California should prohibit the partial replacement of lead pipes, lead fittings, or galvanized lines that are or were attached to leaded pipes or components. These common sense, industry safeguards are in place in other states, such as Michigan, Illinois, and New Jersey, and are protective of public health.

Finally, several billion dollars of federal money is coming to California over the next five years to pay for lead service line removals. The United States Environmental Protection Agency's guidelines for the use of these funds require states to use the money to fully remove lead service lines, and allow funds to pay for removal of leaded fittings and galvanized lines that are or were attached to a lead component. These federal funds can also pay for any filters and drinking water testing provided to customers as part of a replacement project."

Arguments in Opposition: According to the California Municipal Utilities Association, "Unfortunately, AB 1931 is not the right approach to enhance lead-related public health protections. Existing state and federal law and regulations have established a comprehensive structure for addressing lead in water distribution systems - both on the water system and customer side - making this bill unnecessary. In addition, there are several provisions that are

duplicative, conflict with existing requirements, and some that violate other existing legal restrictions.

Many of the provisions in the LCRR will achieve the same outcomes as what is proposed in AB 1931 and are based on evidence and research. Further, in December 2021 EPA announced a plan for additional review and stronger regulation through proposed Lead and Copper Rule Improvements (LCRI) to strengthen the regulatory framework on lead in drinking water because they concluded that there are significant opportunities to improve the rule and support the overarching goal of proactively removing lead service lines and more equitably protecting public health. The current compliance date for the LCRR is October 16, 2024. Between now and that date, the State Water Board will need to revise the state's Lead and Copper Rule to comply with the federal requirements. Given this extensive work to protect public health and pending state actions to implement the federal requirements, AB 1931 is unnecessary and has the potential to conflict with or duplicate regulations already in place.

The proposed requirements related to sampling and providing filters are included without scientific backing. As written, the legislation requires extensive sampling and availability of filters beyond what has scientifically been proven necessary."

Related Legislation:

1) AB 2728 (Chen, 2018). Would have authorized the State Water Board to establish a grant program to provide funding for the replacement of corroded or lead-containing plumbing and service lines that adversely impact drinking water standards. This bill was held in the Assembly Appropriations Committee.

2) SB 1398 (Leyva, Chapter 731, Statutes of 2016). Requires community water systems to compile an inventory of all known leaded service lines used in their systems, identify areas that may have lead service lines in use in their systems, and establish a timeline for replacing those known leaded service lines.

3) SB 427 (Leyva, Chapter 238, Statutes of 2017). Makes clarifying changes to current law related to lead service line identification and replacement.

REGISTERED SUPPORT / OPPOSITION:

Support

CALPIRG, California Public Interest Research Group (Co-Sponsor)
Environmental Working Group (Co-Sponsor)
Natural Resources Defense Council (NRDC) (Co-Sponsor)
Active San Gabriel Valley
California Environmental Voters (formerly CLCV)
Center for Environmental Health
Center for Food Safety; the
Children Now
Clean Water Action
Coalition for Economic Survival (CES)
Coalition of California Welfare Rights Organizations
Environment California

Facts: Families Advocating for Chemical & Toxins Safety
Friends Committee on Legislation of California
LAANE (Los Angeles Alliance for A New Economy)
Lead and Environmental Hazards Association
Los Angeles Waterkeeper
Nontoxic Neighborhoods
Physicians for Social Responsibility - San Francisco Bay Area Chapter
Planning and Conservation League
Western Center on Law & Poverty

Opposition

California Municipal Utilities Association
Desert Water Agency

Analysis Prepared by: Josh Tooker / E.S. & T.M. /

Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 2208 (Kalra) – As Amended April 19, 2022

SUBJECT: Fluorescent lamps: sale and distribution: prohibition

SUMMARY: Bans the offering for final sale, final sale, or distribution of compact fluorescent lamps starting January 1, 2024, and linear fluorescent lamps starting January 1, 2025, and exempts relevant products and applications. Specifically, **this bill**:

1) Defines "compact fluorescent lamp" as a compact low-pressure, mercury-containing, electric-discharge light source in which a fluorescent coating transforms some of the ultraviolet energy generated by the mercury discharge into visible light, and includes all of the following characteristics:

   A) One base (end cap) of any type, including, but not limited to, screw, bayonet, two pins, and four pins;

   B) Integrally ballasted or non-integrally ballasted;

   C) Light emission between a correlated color temperature of 1700 Kelvin (K) and 24000K and a Delta u, v (Duv) of +0.024 and -0.024 in the International Commission on Illumination (CIE) Uniform Color Space (CAM02-UCS);

   D) All tube diameters and all tube lengths; and

   E) All lamp sizes and shapes for directional and nondirectional installations, including, but not limited to, PL, spiral, twin tube, triple twin, 2D, U-bend, and circular.

2) Defines "linear fluorescent lamp" as a low-pressure, mercury-containing, electric-discharge light source in which a fluorescent coating transforms some of the ultraviolet energy generated by the mercury discharge into visible light, and includes all of the following characteristics:

   A) Two bases (end caps) of any type, including, but not limited to, single-pin, two-pin, and recessed double contact;

   B) Light emission between a correlated color temperature of 1700K and 24000K and a Duv of +0.024 and -0.024 in the CIE CAM02-UCS;

   C) All tube diameters, including, but not limited to, T5, T8, T10, and T12;

   D) All tube lengths from 0.5 to 8.0 feet, inclusive; and,

   E) All lamp shapes, including, but not limited to, linear, U-bend, and circular.

3) Prohibits, on and after January 1, 2024, the offering for final sale, final sale, or distribution in the state as a new manufactured product of a compact fluorescent lamp.

4) Prohibits, on and after January 1, 2025, the offering for final sale, final sale, or distribution in the state of a linear fluorescent lamp as a new manufactured product.

5) Exempts the following from the above provisions:

   A) A lamp used for image capture and projection, including photocopying, printing, directly or in preprocessing, lithography, film and video projection, and holography;

   B) A lamp that has a high proportion of ultraviolet light emission and is one of the following:

      a. A lamp with high ultraviolet content that has ultraviolet power greater than two milliwatts per kilolumen (mW/klm);

      b. A lamp for germicidal use, such as the destruction of DNA, that emits a peak radiation of approximately 253.7 nanometers;

      c. A lamp used for disinfection or fly trapping from which either the radiation power emitted between 250 and 315 nanometers represents at least 5 percent of, or the radiation power emitted between 315 and 400 nanometers represents at least 20 percent of, the total radiation power emitted between 250 and 800 nanometers;

      d. A lamp used for the generation of ozone where the primary purpose is to emit radiation at approximately 185.1 nanometers; or,

      e. A lamp used for coral zooxanthellae symbiosis from which the radiation power emitted between 400 and 480 nanometers represents at least 40 percent of the total radiation power emitted between 250 and 800 nanometers.

   C) Any lamp used in a sunlamp product, defined as any electronic product designed to incorporate one or more ultraviolet lamps and intended for irradiation of any part of the living human body, by ultraviolet radiation with wavelengths in air between 200 and 400 nanometers, to induce skin tanning (as defined in 21 Code of Federal Regulations 1040.20(b)(9));

   D) A lamp used for medical or veterinary diagnosis or treatment, or used in a medical device;

   E) A lamp used in pharmaceutical product manufacturing or quality control; and,

   F) A lamp used for spectroscopy and photometric applications, such as, for example, UV-visible spectroscopy, molecular spectroscopy, atomic absorption spectroscopy, nondispersive infrared (NDIR), Fourier transform infrared (FTIR), medical analysis, ellipsometry, layer thickness measurement, process monitoring, or environmental monitoring.

EXISTING LAW:

1) Establishes the Lighting Toxics Reduction Act which, starting January 1, 2010, prohibits the manufacture, offer for sale, or sale of general purpose lights in the state that contain levels of hazardous substances that would result in the prohibition of that general purpose light in the

European Union pursuant to the Restriction of Hazardous Substances (RoHS) Directive 2002/95/EC. (Health and Safety Code (HSC) § 25210.9 et seq.)

2) Specifies that mercury-containing fluorescent lamps are exempt from management requirements for hazardous waste and are instead managed as universal waste. (22 California Code of Regulations (CCR) § 66261.9)

3) Defines "universal waste" as any waste listed in 22 CCR § 66261.9. (22 CCR § 66273.9)

4) Specifies regulations that apply to universal waste handlers for mercury-containing lamps. (22 CCR § 66273.33)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "Now that safe, energy-efficient LEDs are widely available, fluorescent lamps are no longer the best lighting option for California. In order to function, fluorescents must contain mercury, a potent toxin with the ability to do serious and permanent neurological damage to anyone who comes in contact with it. The effects are especially severe in children, who can suffer irreparable setbacks in their cognitive development after being exposed to mercury. If a fluorescent lamp breaks, it will release mercury vapor that can easily injure entire families.

We can no longer sit idly by and let fluorescent lamps poison our communities and harm our environment. By phasing out the sale of fluorescent lamps, AB 2208 will allow better alternatives to light the way to a safer, more energy-efficient future."

Mercury in products: Mercury is a metallic element (chemical symbol: Hg) and the only such element to be liquid at standard temperature and pressure. As outlined below, mercury is both naturally occurring and anthropogenically released into the environment and has significant health effects on humans and wildlife. Nonetheless, mercury is present in many 'everyday' products, including batteries (in the U.S. the only remaining batteries containing mercury are button cell and mercuric oxide batteries), thermometers and barometers, electric switches and relays, fluorescent and other lamps, dental amalgams (a mercury and metal alloy mixture used for dental fillings), skin-lightening products and other cosmetics, and pharmaceuticals. Mercury can occur or be incorporated in various forms and has different toxicities and bioavailability depending on these. Thus, some products, such as thermometers containing mercury, are considered hazardous waste, but dental amalgams have been in use across the world for over 150 years. Fluorescent lamps, specifically, contain mercury in vaporized form, elevating inhalation risk significantly in the event a lamp breaks.

Neurotoxicity of mercury: According to the World Health Organization (WHO), exposure to mercury, even in small amounts, can cause serious health problems and be a particular threat to child development in the womb and early life. All humans are exposed to some level of mercury and the factors that determine whether health effects occur and their severity include the type of mercury to which a person was exposed (e.g. inorganic, organic, etc.); the dose; the age or developmental stage; the duration of exposure; and, the exposure route.

Fetuses are most susceptible to the toxic effects of mercury. Such exposure most commonly results from the mother's consumption of fish and shellfish containing methylmercury. Methylmercury easily travels in the bloodstream and has the ability to cross the blood-brain barrier. Primarily, mercury exposure at this early stage leads to impaired nervous system development, but may also affect other organ systems. Fetal mercury exposure can lead to impairments in cognition, memory, attention, language skills, and fine motor and visual spatial skills. In its most severe form, fetal mercury poisoning leads to Minamata disease, the clinical manifestations of which include the inability to move purposefully, numbness in the extremities, general muscle weakness, and impaired vision, hearing, and speech. The most severe cases of Minamata disease can also cause paralysis, coma, and death. Chronic exposure to high levels of mercury, for example in communities that rely on subsistence fishing, has been shown to result in mild intellectual disability in children.

Minamata disease was named after the city of Minamata in Japan, which was contaminated by industrial discharges containing methylmercury from a chemical factory owned by Chisso Corporation from 1932 to 1968. The methylmercury bioaccumulated and biomagnified (i.e., successively higher concentrations in organisms higher up the food chain) in Manamata Bay, which served as a critical food source to nearby communities. At least 50,000 people were affected to some extent and over 2,000 cases were officially certified; 1,784 deaths were officially reported. Despite mercury poisoning and deaths being observed for 36 years, the local government and Chisso Corporation did little to prevent this tragedy.

Another major disaster linked to methylmercury poisoning occurred in Iraq in 1971 after rural residents consumed seed grain that had been treated with a methylmercury-containing fungicide. The grain was imported from the United States and Mexico and had not been intended for human consumption. However, due to late distribution of the grain during the growing cycle and foreign-language labeling, among other factors, the contaminated product was consumed directly by rural Iraqi communities resulting in at least 459 deaths, though it has been suggested that the real number could be 10 times larger.

According to the WHO, "[t]here are several ways to prevent adverse health effects, including promoting clean energy, stopping the use of mercury in gold mining, eliminating the mining of mercury and phasing out non-essential mercury-containing products." The California Legislature has taken action to ban or limit several such non-essential products, including mercury thermostats (Pavley, Chapter 626, Statutes of 2004), mercury relays and switches (Pavley, Chapter 578, Statutes of 2006), and mercury from cosmetic products (Muratsuchi, Chapter 314, Statutes of 2020). AB 2208 would ban mercury-containing compact and linear fluorescent lamps, except in applications that rely on such lamps.

Mercury in the environment: Mercury occurs naturally in the earth's crust and can be released into the environment from volcanic eruptions, weathering of rocks, forest fires, and as a result of human activity, the primary source of environmental mercury release. Coal-fired power plants, residential coal burning for heating and cooking, industrial processes, waste incineration, and mining can all release mercury.

Once released into the atmosphere, mercury can travel hundreds of miles with the wind and can remain in the air, deposit on soil, or end up in water bodies and sediment. Mercury persists in the environment by cycling between air and soil in different chemical forms. Inorganic

elemental mercury has an atmospheric lifetime of up to two years; methylmercury, an organic form of mercury, can persist in soil for decades.

Methylmercury is produced by anaerobic bacteria in marine environments that have the ability to convert inorganic mercury into organic forms. The methylmercury then moves up the food chain and biomagnifies, resulting in especially high levels of methylmercury in specific fish and shellfish species, such as swordfish, king mackerel, tilefish, and shark. In addition to the risk methylmercury poses to human health, wildlife that consume fish, such as loons, eagles, and otters may also be at risk. Methylmercury poisoning primarily affects reproduction in birds, but birds and mammals may also suffer from neurobehavioral effects and liver and kidney damage.

Alternatives to fluorescent lamps: Despite the known health effects of mercury, fluorescent lamps were long hailed as an important energy-saving alternative to incandescent lamps. Incandescent lamps lose 90% of the energy they draw to heat, as they are designed to heat a metal wire filament (e.g., tungsten) to such high temperatures that it starts glowing. Because of the significant loss of energy to dissipated heat, incandescent lamps are expensive over their lifespan and contribute to environmental pollution if the electricity to power them is derived from fossil fuels. Mercury pollution, specifically, is exacerbated by energy-inefficient light bulbs if the energy is derived from coal-burning power plants. According to the Union of Concerned Scientists, 42% of all anthropogenic emissions of mercury in the U.S. are from coal burned for energy generation.

In a fluorescent lamp, the electrical current ionizes the mercury, which then gives off light in the UV spectrum. The emitted UV light then interacts with the phosphor coating on the inside of the lamp to give off light in the visible spectrum (commonly referred to as white light). This is a much more energy-efficient process. However, fluorescent lamps come with concerns of mercury release upon breakage and improper disposal.

Light emitting diodes (LEDs) produce light when an electrical current passes through the semiconductor light source. LEDs emit light in specific colors, so white light is obtained by either combining LEDs that emit different colors or placing a phosphor coating over the LEDs. LED lighting setups may require more sophisticated engineering due to the directionality of the light emitted by LEDs (as opposed to shining light in all directions). However, the different colors and directionality can also be leveraged in a multitude of applications while remaining energy efficient.

Importantly, LEDs have a much longer lifespan than incandescent and fluorescent lamps, as they do not 'burn out'. Rather, the brightness of LEDs slowly decreases over time (known as lumen depreciation). Lumen depreciation can be mitigated by designing LEDs with proper heat sinks, as heat is the driving factor for this phenomenon. According to Energy Star, thermal management is the single most important factor for the successful performance of an LED over its lifetime.

One key difference for consumers is that with LEDs the traditional 'wattage' signage will no longer correlate with the brightness of a lamp. Rather, LED brightness is rated in lumens. For example, a 40 watt (W) incandescent lamp produces the same brightness as a 450 lumen LED. However, that same LED lamp would only use 6-9W of energy. The significant drop in energy use will both be environmentally friendlier and reduce costs on consumers.

LEDs, like any other lamps, are not perfect. Some of the disadvantages of LEDs include their impact on wildlife such as insects with potential impacts on food webs as the insects become disoriented and exposed to predators, and turtle hatchlings that may be disoriented by LED-emitted light; their greater contribution to light pollution compared to sodium vapor lamps; limitations as area light sources; and, issues as traffic control lights during snow events as they do not dissipate much heat and are therefore more susceptible to snow cover.

Why ban fluorescent lamps now?: While the relative energy efficiency of LEDs has been known, cost was a significant barrier to broad uptake and a ban such as that proposed in AB 2208 would have raised important equity concerns not long ago. The cost of LEDs has dropped significantly, however. Due to energy cost savings, LEDs will be more economical over their lifetime, even if upfront costs may be higher. As policies to phase out fluorescent lamps take effect around the world, LEDs will continue to become more affordable. To align cost considerations with market estimates, the author of AB 2208 bans linear fluorescent lamps starting 2025 to allow for replacement LEDs to further drop in price. The phase-out of mercury-containing lamps in the European Union will also likely reduce the cost of LED lamps and ramp up supply.

European Union (EU) regulations: As the Lighting Toxics Reduction Act (AB 1109, Huffman, 2007) aligned California with some of the EU's regulations, it seems sensible to update California law to reflect advances in technology and continue its alignment with the European single market. The EU regulates light sources and control gears (not just fluorescent lamps) through the Ecodesign Directive (most recently Commission Regulation (EU) 2019/2020) and hazardous substances, including those in lamps, through RoHS directives. In recent RoHS directives, the EU has started the phase-out of mercury-containing lamps over several years. For compact fluorescent lamps and linear fluorescent lamp, Directives 2022/277/EU and 2022/284/EU establish bans between February and August of 2023, respectively.

Exemptions: The bill makes several important exemptions, many of which are modeled after the list of exemptions outlined in the EU's most recent Ecodesign Directive. Upon request by the Committee, the author's office and sponsor are further soliciting information from the academic research community on uses of fluorescent lamps for research purposes that would not be covered by current exemptions. If such uses are identified, the Committee encourages the author to include those in the measure moving forward.

The bill also purposefully does not cover high-intensity discharge (HID) lamps, which also contain mercury and are used where large areas require illumination, such as street lights, parking lots, and stadiums. According to the sponsor, these are being replaced by LEDs for various reasons.

Enforcement: The enforcement mechanism of this bill remains an open question. The author's office and sponsor have been in conversation with Committee staff to discuss this issue. The Committee recommends changing the placement of this bill from the Public Resources Code to the Health and Safety Code. Within the Health and Safety Code, the authors may wish to consider either placing enforcement authority with DTSC, or leaving it up to the Attorney General to prosecute violators.

Arguments in support: A coalition of supporters, including the sponsor of AB 2208, the National Stewardship Action Council, write, "We support AB 2208 because:

1) **Mercury-free alternatives are readily available, making the sale of CFLS and LFLs unnecessary:** Mercury and its compounds are highly toxic to humans and the World Health Organization puts mercury in the top ten most problematic chemicals for public health. Much more energy-efficient, mercury-free light emitting diode (LED) technology can easily and affordably replace fluorescent lamps and are readily available.

2) **LED alternatives are better for the environment**: LED replacements for fluorescent lamps do not contain any mercury, use approximately half the electricity as fluorescents to produce the same amount of light, and last 2-3 times longer.

3) **It will save Californians money**: According to estimates from the Appliance Standards Awareness Project (ASAP), by 2030 California residential, commercial, and industrial consumers would save about $1 billion annually on their utility bills by transitioning from the most common fluorescent lamps to LEDs.

AB 2208 would not only help protect Californians from the unnecessary threat of mercury exposure from fluorescent lamps, but it is also an important climate protection initiative that would accelerate the transition to a low-carbon economy through increased use of energy-efficient LED lighting solutions."

Related legislation:

1) AB 707 (Quirk, Chapter 703, Statutes of 2021). Revises the Mercury Thermostat Collection Act of 2008 and establishes it as the Mercury Thermostat Act of 2021. Revises the funding structure and requires thermostat manufacturers to contract with a qualified third party that meets specified criteria to implement the thermostat collection program statewide.

2) AB 2762 (Muratsuchi, Chapter 314, Statutes of 2020). Prohibits, commencing January 1, 2025, the manufacture, sale, delivery, holding or offering for sale in commerce of any cosmetic product containing specific intentionally added ingredients, including mercury.

3) AB 1109 (Huffman, Chapter 534, Statutes of 2007). Enacts the Lighting Toxics Reduction Act which, starting January 1, 2010, prohibits the manufacture, offer for sale, or sale of general purpose lights in the state that contain levels of hazardous substances that would result in the prohibition of that general purpose light in the European Union pursuant to the Restriction of Hazardous Substances (RoHS) Directive 2002/95/EC.

4) AB 1415 (Pavley, Chapter 578, Statutes of 2006). Bans the sale and distribution in the state of all products with mercury-containing switches, relays, measuring devices, and gastrointestinal tubes with specified exceptions.

5) AB 1369 (Pavley, Chapter 626, Statutes of 2004). Prohibits, on and after January 1, 2006, a person from selling, offering to sell, or distributing for promotional purposes in the state a mercury-added thermostat, unless it meets specified criteria.

REGISTERED SUPPORT / OPPOSITION:

Support

National Stewardship Action Council (Sponsor)
7th Generation Advisors
Active San Gabriel Valley
American Illumination, INC.
American Suntanning Association
California Electronic Asset Recovery (CEAR)
California Product Stewardship Council
Californians Against Waste
Center for Environmental Health
City of Sunnyvale
Clean Water Action
County of Santa Clara
Ecology Center
Environmental Working Group
Greenwaste Recovery
Natural Resources Defense Council (NRDC)
Responsible Purchasing Network
Rethinkwaste
Safer States
San Francisco Baykeeper
Sea Hugger
Sierra Club California
Soltech LLC
The Atrium
The Story of Stuff Project
Tri-ced Community Recycling
Turtle Island Restoration Network
Zero Waste Sonoma

Opposition

None on file.

Analysis Prepared by: Manar Zaghlula / E.S. & T.M. /

Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 2214 (Cristina Garcia) – As Amended April 25, 2022

SUBJECT: California Environmental Quality Act: schoolsites: acquisition of property: school districts, charter schools, and private schools

SUMMARY: Requires charter schools and private schools to follow the same siting requirements as public schools for evaluating a school-site for potential hazardous substances, hazardous emissions, or hazardous waste.

EXISTING LAW:

1) Prohibits the governing board of a school district from approving a project involving the acquisition of a school site unless the school district, as the lead agency, determines that the property to be built upon is not a current or former hazardous waste site or a hazardous substances release site and the school district has consulted with state and local agencies and made a finding that the health risks or other pollution sources do not and will not constitute an actual or potential endangerment of public health to persons who would attend or be employed at the school. (Education Code (EDC) § 17213)

2) Requires the governing board of a school district, as a condition of receiving state funding, prior to the acquisition of a school-site to conduct a Phase I environmental assessment or a preliminary endangerment assessment of the proposed school-site. (EDC § 17213.1)

3) Creates the Hazardous Waste Control Law (HWCL), which authorizes the Department of Toxic Substances Control (DTSC) to regulate the management of hazardous wastes in California. (Health and Safety Code (HSC) § 25100 et. seq.)

4) Establishes the Carpenter-Presley-Tanner Hazardous Substance Account Act (HSAA) program to provide for response authority for releases of hazardous substances, including spills and hazardous waste disposal sites that pose a threat to public health or the environment. (HSC § 25300 et seq.)

5) Requires DTSC to publish and revise, at least annually, a listing of hazardous release sites selected for a response action under the HSAA. (HSC § 25356)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "Private and some charter schools are not required to meet the same siting requirements as public schools, before building a new school. These schools can be built in unsafe locations near sources of hazardous emissions, substances, or waste. As a result, the public health and safety of the students, teachers, and school employees could be put at risk.

AB 2214 would keep students safe by requiring private and charter schools to follow the same laws as public schools to identify nearby sources of air pollution, consult with their local air districts, and evaluate school sites for potential hazardous emissions, substances, or waste. This bill simply requires parity so that all students whether they attend a public school or a private/charter school attend a school site free from hazardous waste or admissions."

California Hazardous Waste Control Law (HWCL): The HWCL is the state's program that implements and enforces federal hazardous waste law in California. HWCL statute directs DTSC to oversee and implement the state's HWCL. Any person who stores, treats, or disposes of hazardous waste must obtain a permit from DTSC. The HWCL covers the entire management of hazardous waste, from the point the hazardous waste is generated, to management, transportation, and ultimately disposal into a state or federal authorized facility. Current law prohibits a public school from being built on a hazardous waste site permitted by DTSC. This bill would apply that prohibition to school sites for private and charter schools as well.

Carpenter-Presley-Tanner Hazardous Substances Account Act (HSAA): State law provides DTSC with general administrative responsibility for overseeing the state's responses to spills or releases of hazardous substances, and for overseeing hazardous waste disposal sites that pose a threat to public health or the environment. The HSAA provides DTSC with the authority, procedures, and standards to investigate, remove, and remediate contamination at sites; to issue and enforce a removal or remedial action order to any responsible party; and, to impose administrative or civil penalties for noncompliance with an order. DTSC utilizes the HSAA for cleanup of contaminated sites and the HWCL for the regulation of hazardous waste sites. Current law prohibits a public school from being built on a hazardous waste site permitted by DTSC or a site with hazardous substances on a list compiled by DTSC. This bill would apply that prohibition to school sites for private and charter schools as well.

Evaluation of proposed school-sites for potential hazardous substance contamination: All proposed school-sites that receive state funding for acquisition or construction are required to go through a rigorous environmental review and cleanup process under DTSC's oversight. School districts conduct environmental assessments to provide basic information for determining if there has been a release of hazardous material at the sites, or if a naturally occurring hazardous material that presents a risk to human health or the environment may be present. Outreach activities integrated into the process allow a more active role for stakeholders in the selection process for school-sites.

This bill: AB 2214 amends existing law to require charter schools and private schools to perform the same evaluation for a proposed school-site as is required for public schools. It seems very reasonable to provide the students and employees of charter schools and private schools with the same protections from hazardous chemicals at a potential school-site that is afforded to those who attend public schools. There are thousands of known contaminated sites in California, however, estimates of unknown contaminated sites in the state are in the tens of thousands. A site may have been an industrial site in the early 1900's and then been vacant for decades, and its potential of containing hazardous substances remains unknown until there is an environmental assessment of the property. It is important that potential school-sites, regardless of whether the school is a public school, private school, or charter school, be properly evaluated in order to protect the health and well-being of the future students who will attend that school.

Arguments in Support: According to the Bay Area Air Quality Management District, "On behalf of the Bay Area Air Quality Management District (Bay Area AQMD), I wish to inform you of our sponsorship and support of AB 2214 (C. Garcia and Lee), which will ensure the public health and safety of all students and school employees in California by requiring that private schools and charter schools meet the same siting requirements as public schools. Existing law requires public schools to follow certain requirements before approving and building a new school. Given that private and charter schools are not held to the same requirements as public schools before building new schools, there are cases in California where schools have been built in a potentially unsafe location near sources of hazardous emissions, substances, or waste, unbeknownst to the children, their parents, and school employees. Consequently, the public health and safety of all students and school employees in California at these schools could be at risk."

Arguments in Opposition: According to the California Charter Schools Association (CCSA), "On behalf of the CCSA, a membership organization representing the nearly 1,300 charter public schools in the state, I am writing to you regarding AB 2214 by Assemblymember Garcia. CCSA opposes this legislation. California charter public schools already must overcome immense challenges to develop school facilities in a timely and cost-effective manner. If enacted, this legislation would only increase those challenges and result in fewer quality public school options for California students. AB 2214 would significantly increase projects costs and delays. School construction in California is already incredibly expensive and time consuming. The real estate market in many California communities is currently red hot, and charter public schools already struggle to compete with other real estate buyers in ultra-competitive markets. This legislation would make an already challenging market worse for charter schools and the communities that they hope to serve. However, if the Legislature is committed to exploring new approaches to finding suitable school facilities locations for charter public school students, CCSA would welcome the opportunity to collaborate on legislation to provide solutions. Well documented enrollment decline at many of California's largest school districts has resulted in substantial excess capacity at existing district facilities. Given that these facilities have already been approved for school use, and are already publicly owned, the redevelopment of these sites for charter public school use would accomplish multiple policy goals."

Dual referral: This bill passed out of the Assembly Education Committee on April 20, 2022, on a 5–1 vote.

Related legislation:

1) AB 762 (Lee), 2021). Would have required charter schools and private schools to follow the same siting requirements as public schools for evaluating a schoolsite for potential hazardous substances, hazardous emissions, or hazardous waste. Would have required the evaluation, under the California Environmental Quality Act (CEQA), of a potential charter schoolsite to follow the same CEQA process as public schools. This bill was held on the suspense file in the Senate Appropriations Committee.

2) AB 2882 (Chu, 2020). Would have required charter schools and private schools to follow the same siting requirements as public schools for evaluating a schoolsite for potential hazardous substances, hazardous emissions, or hazardous waste. Would have required the evaluation of a potential charter schoolsite under CEQA to follow the same process as public schools under CEQA. This bill was held in the Senate Environmental Quality Committee.

3) AB 2825 (Ruskin, 2006). Would have required a school district, in preparing the Environmental Impact Report (EIR) on a proposed schoolsite, to identify any proposed facilities that emit hazardous air emissions or handle specified hazardous substances within a one-fourth mile of the proposed site. This bill was vetoed by Governor Schwarzenegger.

4) SB 1224 (Ortiz, 2004). Would have required school districts to contact DTSC if a potential health risk to students caused by a hazardous material is discovered. Would have allowed DTSC to oversee, review, and approve a site investigation and remediation for such a risk, and would have allowed deferred maintenance funding to be used for the investigation, mitigation, and removal of hazardous materials. This bill was held in the Senate Education Committee.

5) SB 352 (Escutia, Chapter 668, Statutes of 2003). Prohibits a local educational agency from approving the acquisition of a schoolsite within 500 feet of a busy roadway unless the air quality at the site does not pose a health risk to pupils or staff.

REGISTERED SUPPORT / OPPOSITION:

Support

Bay Area Air Quality Management District (Sponsor)
California Safe Schools
California School Employees Association
Communities for A Better Environment
Cossart-Daly Law, A.P.C.
Cudahy Alliance for Justice
San Diego; County of

Opposition

California Charter Schools Association
California Coalition for Adequate School Housing (CASH)

Analysis Prepared by: Josh Tooker / E.S. & T.M. /

Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 2419 (Bryan) – As Amended April 19, 2022

SUBJECT: Environmental justice: federal Infrastructure Investment and Jobs Act: Justice40 Oversight Committee

SUMMARY: Requires a state agency administering federal funds under the federal Infrastructure Investment and Jobs Act to allocate a minimum of 40 percent of those funds to projects that provide a direct benefit to disadvantaged communities and an additional 10 percent of those funds to projects that provide direct benefits to low-income households. Specifically, **this bill**:

1) Defines "covered program" as a federal government program as outlined in the Interim Implementation Guidance for the Justice40 Initiative (Justice40 Initiative) that makes covered investment benefits in one or more of the following areas:

    a) Climate change;

    b) Clean energy and energy efficiency;

    c) Clean transportation;

    d) Affordable and sustainable housing;

    e) Training and workforce development related to climate, natural disasters, environment, clean energy, clean transportation, housing, water and wastewater infrastructure, and legacy pollution reduction;

    f) Remediation and reduction of legacy pollution; and,

    g) Critical clean water and waste infrastructure.

2) Defines "federal act" as the federal Infrastructure Investment and Jobs Act (Public Law 117-58).

3) Defines "federal funds" as money received by the state under the federal act and other federal money received for covered programs.

4) Requires a state agency, when administrating federal funds appropriated by the Legislature, to allocate a minimum of 40 percent of those funds to projects that provide direct benefits to disadvantaged communities in the state.

5) Requires a state agency, when administrating federal funds appropriated by the Legislature, to allocate a minimum of an additional 10 percent of those funds to projects that provide direct benefits to low-income households in the state or to projects that provide direct benefits to low-income communities in the state.

6) Requires a state agency, when administering federal funds appropriated by the Legislature to do all of the following:

   a) Maximize benefits for disadvantaged communities, low-income households, and low-income communities in alignment with the framework established by the investment plan developed by the California Air Resources Board;

   b) Conduct, or participate in, outreach and engagement and require qualifying projects to demonstrate community support to improve funding accessibility, to maximize participation by, and benefits to, disadvantaged communities, low-income communities, and low-income households;

   c) Consider a project's potential impacts on goals that include, but are not limited to, advancing environmental justice, reducing emissions of greenhouse gases, promoting climate adaptation and resilience, meaningfully consulting with and incorporating input from communities, promoting registered apprenticeship and preapprenticeship programs, and creating high-road jobs; and,

   d) Annually report on, and make available to the public, the state agency's activities and progress toward meeting the requirements of 40 percent of the funds to benefit disadvantage communities and 10 percent to benefit low-income households, including implementing the Justice40 Oversight Committee (Committee)'s recommendations once released, the use of federal funds for projects, the total amount of federal funds disbursed, the entities that received federal funds, and the projects funded by the federal funds.

7) Creates the Committee within the Strategic Growth Council (Council) and requires the Committee to do the following:

   a) Identify infrastructure deficiencies in disadvantaged communities and low-income communities throughout the state;

   b) Recommend projects under any covered program for federal funding; and,

   c) Recommend climate and labor standards for projects that receive federal funds.

8) Requires the Committee to consist of at least eight members appointed by the Governor, with specified requirements, one member appointed by the Speaker of the Assembly and one member appointed by the Senate Committee on Rules.

9) Requires each state agency receiving federal funds appropriated by the Legislature to provide to the Council information in an annual report required by the bill. Requires the Council to make that information available to the Committee and to the public on the Council's internet website.

10) Requires, on or before December 31, 2024, the Committee to submit an interim report to the Legislature and to the Council at a public meeting of the Council that identifies infrastructure deficiencies in disadvantaged communities, recommends infrastructure projects, provides agency guidelines on the climate and labor standards developed by the Committee, and reports on the expenditure of federal funds.

11) Requires, on or before December 31, 2027, the Committee to submit a final report to the Legislature and to the Council at a public meeting of the Council, on the expenditure of federal funds and an evaluation of state agencies' success in meeting the climate and labor standards developed by the Committee.

12) Sunsets the provisions of the bill on January 1, 2031, or on January 1 of the year following the date of the submission of the final report, whichever is earlier.

EXISTING LAW:

1) Creates, under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), a Federal "Superfund" to clean up uncontrolled or abandoned hazardous waste sites, as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Provides the United States Environmental Protection Agency (US EPA) with the authority to seek out those parties responsible for any release and assure their cooperation in the cleanup. (42 United States Code (U.S.C.) § 9601 et seq.)

2) Establishes, pursuant to the Carpenter-Presley-Tanner Hazardous Substance Account Act (HSAA), a program to provide for response authority for releases of hazardous substances, including spills and hazardous waste disposal sites that pose a threat to public health or the environment. (Health and Safety Code (HSC) § 25300 et seq.)

3) Establishes the California Safe Drinking Water Act (SDWA) and requires the State Water Resources Control Board (State Water Board) to maintain a drinking water program. (HSC § 116270, *et seq*.)

4) Establishes as 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)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "President Biden's Justice40 Initiative is a remarkable federal goal for 40% of federal Infrastructure dollars to go to disadvantaged communities. States will ultimately determine if these investments are implemented equitably. Without deliberate attention to ensure high-road outcomes, these investments run the risk of repeating inequitable infrastructure development and inadvertently funding a race-to-the-bottom approach that hurts vulnerable Californians and undermines labor and climate goals. By implementing this Committee, the communities that are most vulnerable to the health hazards of development but which are in need of investment will have leaders making sure that the harmful choices of the past are not repeated, and that the investment of the State's future is not unduly bore on those same communities' backs.

As a global leader on climate policy, California is in the position to model best practices. When President Biden announced the Justice 40 Initiative, and Governor Newsom accepted the call, the responsibility then fell on the legislature to craft the framework that will allow us to invest the resources we need in the communities that have been starving for them for far too long."

Infrastructure Investment and Jobs Act: In the fall of 2021, Congress passed and the President signed the Infrastructure and Investment and Jobs Act (Public Law 117-58). This bipartisan infrastructure law, provides $1.2 trillion to rebuild America's roads, bridges and rails, expand access to clean drinking water, ensure every American has access to high-speed internet, tackle the climate crisis, advance environmental justice, and invest in communities that have too often been left behind. The Infrastructure and Investment and Jobs Act will invest $55 billion to expand access to clean drinking water for households, business, schools, and child care centers all across the county. Additionally, it will invest in water infrastructure and eliminate lead service pipes, including in Tribal Nations and disadvantaged communities. The Infrastructure and Investment and Jobs Act will invest $21 billion to cleanup Superfund and brownfield sites, reclaim abandoned mine land and cap orphaned oil and gas wells.

Executive Order tackling the Climate Crisis: On January 27, 2021, President Biden signed Executive Order 14008 on Tackling the Climate Crisis at Home and Abroad. Within this Executive Order was the creation of the Justice40 Initiative. The order states, "Within 120 days of the date of this order, the Chair of the Council on Environmental Quality, the Director of the Office of Management and Budget, and the National Climate Advisor, in consultation with the Advisory Council, shall jointly publish recommendations on how certain Federal investments might be made toward a goal that 40 percent of the overall benefits flow to disadvantaged communities. The recommendations shall focus on investments in the areas of clean energy and energy efficiency; clean transit; affordable and sustainable housing; training and workforce development; the remediation and reduction of legacy pollution; and the development of critical clean water infrastructure. The recommendations shall reflect existing authorities the agencies may possess for achieving the 40-percent goal as well as recommendations on any legislation needed to achieve the 40-percent goal."

Guidance to federal agencies on the Justice40 Initiative: On July 20, 2021 President Biden sent a memorandum to the heads of departments and agencies informing them that he, "Directed the Director of the Office of Management and Budget (OMB), the Chair of the Council on Environmental Quality (CEQ), and the National Climate Advisor, in consultation with the White House Environmental Justice Advisory Council (WHEJAC), to jointly publish guidance on how certain Federal investments might be made toward a goal that 40 percent of the overall benefits of such investments flow to disadvantaged communities – the Justice40 Initiative. The Justice40 Initiative is a critical part of the Administration's whole-of-government approach to advancing environmental justice. The Executive branch should implement this guidance in accordance with existing authorities in order achieve the 40-percent goal. This interim guidance includes a set of actions required of agencies that manage covered Justice40 programs. These actions include identifying the benefits of covered programs, determining how covered programs distribute benefits, and calculating and reporting on reaching the 40-percent goal of the Justice40 Initiative."

Examples of covered programs benefits: Under the guidance for the Justice40 Initiative examples of benefits of covered programs include direct and indirect investments (and program outcomes) that positively impact disadvantaged communities. For projects under the remediation and reduction of legacy pollution category, examples include: reduction of criteria air pollutant and toxic air pollutant exposure; reduction in farmworker exposure to pesticides; brownfield redevelopment; remediation of Superfund sites; community engagement training; capacity support for reduction strategies; reclamation of abandoned mine lands; and, capping orphan oil and gas wells.

For projects under the category of the development of critical clean water infrastructure, examples include: replacement of lead service lines; increased access to safe drinking water and sanitary sewer services; reduction in waterborne and respiratory illnesses; reduction in the quantity of raw sewage discharged; and, increase in the number of community water systems that meet applicable health-based standards.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): CERCLA, or Superfund, provides a Federal "Superfund" to clean up uncontrolled or abandoned hazardous waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. Through CERCLA, the United States Environmental Protection Agency (US EPA) has given authority to seek out those parties responsible for any release and assure their cooperation in the cleanup. The US EPA cleans up orphan sites when potentially responsible parties cannot be identified or located, or when they fail to act.

Carpenter-Presley-Tanner Hazardous Substances Account Act (HSAA): State law provides the Department of Toxic Substances Control (DTSC) with general administrative responsibility for overseeing the state's responses to spills or releases of hazardous substances, and for hazardous waste disposal sites that pose a threat to public health or the environment. The HSAA provides DTSC with the authority to investigate, remove, and remediate contamination at sites; to issue and enforce a removal or remedial action order to any responsible party; and, to impose administrative or civil penalties for noncompliance with an order. Federal and state laws also authorize DTSC to recover costs and expenses it incurs in carrying out these activities. DTSC will use both CERCLA and the HSAA to clean up legacy pollution with funding under the Infrastructure Investment and Jobs Act.

Legacy pollution in California: Nearly a third of people in California live less than a mile from a cleanup site DTSC oversees. Forty-six percent of these sites are in environmental justice communities. Currently, DTSC oversees approximately 1,800 sites, or only 1 percent of the estimated 200,000 undiscovered contamination sites in California. Additionally, 15,000 known contaminated sites need assessment and potential cleanup, including 8,600 dry cleaner sites whose chemical legacy can threaten groundwater and people in nearby structures. There will be many sites eligible for funding under the Infrastructure and Jobs Act. AB 2419 will require 40 percent of the federal funds for cleaning up legacy pollution provide direct benefits to disadvantaged communities and an additional 10 percent of the funds provide a direct benefit to low-income households.

Economic benefit of cleaning up legacy pollution: According to the US EPA, 22,987 people worked at businesses on 39 Superfund sites, creating $2.5 billion in worker income. Brownfield cleanups increase residential property values up to 11.5 percent, aiding local governments. A study of brownfield developments shows up to a 57 percent reduction in vehicle miles traveled compared to previously undeveloped areas, thereby lowering emissions.

Human right to water: In 2012, California became the first state to enact a Human Right to Water law, AB 685 (Eng, Chapter 524, Statutes of 2012). Public policy continues to be focused on the right of every human being to have safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitation. Water supply, contaminants, costs of treatment and distribution systems, the number and nature of small public water systems, especially in disadvantaged communities, and many other factors will continue to challenge progress in addressing the Human Right to Water.

Regulation of drinking water: The federal SDWA was enacted in 1974 to protect public health by regulating drinking water. California has enacted its own SDWA to implement the federal law and establish state standards. The United States Environmental Protection Agency (U.S. EPA) enforces the federal SDWA at the national level. However, most states, including California, have been granted "primacy" by the U.S. EPA, giving them authority to implement and enforce the federal SDWA at the state level.

Lack of clean safe drinking water: Although most of the state's residents receive drinking water that meets federal and state drinking water standards, many drinking water systems in the state consistently fail to provide safe drinking water to their customers. Lack of safe drinking water is a problem that disproportionately affects residents of California's disadvantaged communities.

Disadvantaged communities often lack the rate base, as well as the technical, managerial, and financial capacity to show they can afford and effectively manage operations and maintenance costs related to water treatment. Being unable to pay for maintenance, these communities are effectively barred from accessing capital improvement funding. In contrast, larger water systems have the financial capacity both to pay treatment costs and to provide for a well-trained and technically competent workforce of water system operators. The requirements of AB 2419 will mean that the State Water Board, when allocating funds, including funds for safe drinking water, under the Infrastructure Investment and Job Act will ensure that 40 percent of those funds provide a direct benefit to disadvantaged communities and an additional 10 percent of the funds provide a direct benefit to low-income households.

This bill: AB 2419 not only implements the Justice40 initiative in California, it goes a step further by requiring state agencies to allocate 40 percent of funds to projects that provide a direct benefit to disadvantaged communities and an additional 10 percent of funds to projects that provide a direct benefit to low-income households. As articulated by the Biden Administration, this is a very worthy endeavor.

Further refinement: As of the writing of this analysis, there were still some elements of the guidance of the Justice40 Initiative that were being crafted. As the bill moves through the process, the author and stakeholders will need to work with federal partners to make any additional changes necessary to synchronize the bill to the federal guidance, once finalized. Additionally, the author may want to add detail or structure to the Committee, including whether they should meet a certain number of times and whether they should meet and hear from the public.

Arguments in Support: According to a coalition in support, "On behalf of the California Green New Deal Coalition, Strategic Concepts in Organizing and Policy Education (SCOPE), the Asian Pacific Environmental Network (APEN), the Greenlining Institute, and the undersigned organizations, we respectfully write to express our support for AB 2419: the California Justice40 Act.

Throughout the history of the United States, many infrastructure policies and investments have cemented inequities in housing, education, economic opportunity, health, and environmental pollution. In California, we are directly witnessing the ways that under-investment in disadvantaged communities results in disproportionate burdens on the one hand, and a lack of

opportunity on the other. These highly impacted and disadvantaged communities are overwhelmingly low-income communities of color.

This is the purpose of President Biden's Justice40 Initiative, which established the federal goal of delivering 40 percent of the overall benefits of federal climate and infrastructure investments to disadvantaged communities. When President Biden signed into law the $1.2 trillion Infrastructure Investment and Jobs Act (IIJA), his implementation guidance made it clear that the Justice40 Initiative applied to the infrastructure funds.

AB 2419 commits California to the Justice40 Initiative by requiring at least 40% of federal climate, clean energy, and infrastructure funds go to projects that provide direct benefits to disadvantaged communities, and an additional 10% of funds provide benefits to low-income communities and households. By putting investment targets into law, AB 2419 makes sure that federal climate and infrastructure funds will address decades of underinvestment, especially in highly impacted, low-income communities of color that have been historically disadvantaged through policy choices. AB 2419 also ensures that these investments create good jobs by requiring all investments with federal funds to uphold high-road labor standards. AB 2419 will also establish an Oversight Committee to ensure community representation, public accountability, and oversight over the use of federal funds.

Without AB 2419, California risks reproducing the same inequitable outcomes that exist now from decades of neglect and disinvestment. This bill puts the state on a path for infrastructure to be a driver of inclusive economic opportunity."

Arguments in Opposition: According to the Association of California Water Agencies (AWCA) writing in an "oppose unless amended" position, "AB 2419 would exclude many low-income communities in California, particularly in Northern California, that have historically been prioritized for water and wastewater funding. The bill would define a disadvantaged community as those communities identified in the Office of Environmental Health Hazard Assessment's California Communities Environmental Health Screening Tool (CalEnviroScreen). The Department of Water Resources and the State Water Resources Control Board use the definition of "disadvantaged community" as defined in Section 75005 of the Public Resources Code, which defines disadvantaged community as a community with a median household income less than 80% of the statewide average. ACWA looks forward to working with the author on refining AB 2419 with the following amendments: broaden the definition of disadvantaged community to incorporate the definition from the Public Resources Code and establish this bill as a goal to align with the federal initiative."

Dual referral: This bill passed out of the Assembly Natural Resources Committee on April 4, 2022, on a 6–2 vote.

REGISTERED SUPPORT / OPPOSITION:

Support

Asian Pacific Environmental Network (Co-Sponsor)
Coalition for A California Green New Deal (Co-Sponsor)
Greenlining Institute; the (Co-Sponsor)
SCOPE (Co-Sponsor)

350 Bay Area Action
350 Conejo / San Fernando Valley
350 South Bay Los Angeles
350 Southland Legislative Alliance
350 Ventura County Climate Hub
Active San Gabriel Valley
Advancement Project
Advancment Project California
Asian Pacific Environmental Network
Black Women for Wellness
CA Coalition for Clean Air
California Calls
California Environmental Voters
California Environmental Voters (formerly CLCV)
CEJA Action
Center for Climate Change & Health
Center for Climate Change and Health
Center for Community Action & Environmental Justice
Center for Community Action and Environmental Justice
Center for Environmental Health
Center on Race, Poverty & the Environment
Central Valley Partnership
Ceres
Climate Action Campaign
Climate Equity Policy Center
Climate Reality Project, San Fernando Valley
Climateplan
Cloverdale Indivisible
Coalition for Clean Air
Communities for A Better Environment
Communitiy Water Center
Courage California
Del Paso Heights Growers' Alliance
Emerald Cities Collaborative
Environmental Defense Fund
Esperanza Community Housing Corporation
Green for All
Grid Alternatives
I Am Green, Inc.
Idle No More Sf Bay
Indivisible Alta Pasadena
Indivisible California Green Team
Indivisible Marin
Indivisible Media City Burbank
Indivisible Mendocino
Indivisible Riverside
Indivisible Sacramento
Indivisible San Jose
Indivisible Sonoma County

Indivisible South Bay LA
Indivisible Stanislaus
Indivisible Ventura
Inglewood; City of
Jobs With Justice San Francisco
LA Waterkeeper
Latino Coalition for A Healthy California
Let's Green CA!
Liberty Hill Foundation
Little Manila Rising
Livermore Indivisible
Long Beach Alliance for Clean Energy
Los Angeles Alliance for A New Economy
Move LA
Move LA, a Project of Community Partners
Natural Resources Defense Council
Nextgen California
Pacoima Beautiful
Physicians for Social Responsibility - Los Angeles
PODER
Policylink
Public Advocates INC.
Richmond Our Power Coalition
Rising Sun Center for Opportunity
Romero Institute
Rooted in Resistance
San Diego 350
San Diego Green New Deal Alliance
San Diego 350
Sierra Club California
Stand Strong LA Indivisible
Strategic Concepts in Organizing and Policy Education
The Climate Center
The Greenlining Institute
Union of Concerned Scientists
Upte Local 9
Valley Women's Club of San Lorenzo Valley
Vote Solar

Opposition

Association of California Water Agencies (ACWA)

Analysis Prepared by: Josh Tooker / E.S. & T.M. /

Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 2041 (Eduardo Garcia) – As Amended April 18, 2022

SUBJECT: California Safe Drinking Water Act: primary drinking water standards: compliance

SUMMARY: Requires the State Water Resources Control Board (State Water Board) to work with public water systems it has determined may not be able to comply with a future primary drinking water standard without receiving financial assistance to develop a compliance plan for those water systems. Specifically, **this bill**:

1) Requires the State Water Board, if it adopts a primary drinking water standard pursuant to Health and Safety Code (HSC) § 116365 with a compliance period for which public water systems (PWS) are given a designated period of time to comply with, but without being held in violation of, the primary drinking water standard, to do both of the following:

   A) Determine which PWS may not be able to comply with the primary drinking water standard without receiving financial assistance based upon information the State Water Board obtained during the development of the standard, to the extent feasible; and,

   B) Work with any system identified and develop a compliance plan that includes, but is not limited to, a financial plan to assist the PWS in complying with the primary drinking water standard.

2) Requires the State Water Board to take into consideration whether or not a PWS implemented the compliance plan, if a PWS is in violation of the primary drinking water standard after the compliance period, in addition to any other law or regulation.

EXISTING LAW:

1) Establishes the California Safe Drinking Water Act (SDWA) and requires the State Water Board to maintain a drinking water program. (HSC § 116270 *et seq.*)

2) 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 (U.S. EPA) or the State Water Board. (HSC § 116270 *et seq.*)

3) Requires the State Water Board to adopt primary drinking water standards for contaminants in drinking water that are not less stringent than the national primary drinking water standards and are based on all of the following:

   A) The public health goal (PHG) for the contaminant published by the Office of Environmental Health Hazard Assessment (OEHHA);

B) The national primary drinking water standard for the contaminant, if any, adopted by the U.S. EPA; and,

C) The technological and economic feasibility of compliance with the proposed primary drinking water standard. (HSC § 116365)

4) Requires the State Water Board to consider the costs of compliance to public water systems, customers, and other affected parties with the proposed primary drinking water standard, including the cost per customer and aggregate cost of compliance, using best available technology, when determining economic feasibility of a primary drinking water standard. (HSC § 116365(b)(3)).

5) Requires OEHHA to base a PHG exclusively on public health considerations. (HSC § 116365(c)(1)).

6) Requires any person who owns a public water system to ensure that the system does all of the following:

A) Complies with primary and secondary drinking water standards;

B) Will not be subject to backflow under normal operating conditions;

C) Provides a reliable and adequate supply of pure, wholesome, healthful, and potable water;

D) Employs or utilizes only water treatment operators or water treatment operators-in-training that have been certified by the State Water Board at the appropriate grade; and,

E) Complies with the operator certification program. (HSC § 116555(a))

7) Defines a "public water system" as a system for the provision of water for human consumption through pipes or other constructed conveyances that has 15 or more service connections or regularly serves at least 25 individuals daily at least 60 days out of the year. (HSC § 116275)

8) Defines "Community water system" as a public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents of the area served by the system. (HSC § 116275(i))

9) Defines "Service connection" as the point of connection between the customer's piping or constructed conveyance, and the water system's meter, service pipe, or constructed conveyance. (HSC § 116275(s))

10) Establishes as 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)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "Compliance with a new MCL can be costly and difficult, especially for smaller water systems serving disadvantaged communities. Therefore, the steps necessary to reach compliance may be unaffordable. This bill will create a mechanism for smaller water systems to work with the state water board to create a financial plan in order to comply with new safe drinking water standards."

Public water systems: A public water system (PWS) is defined as a system that provides water for human consumption to 15 or more connections or regularly serves 25 or more people daily for at least 60 days out of the year. PWS are usually thought of as large city or regional water suppliers, but they also include small housing communities, businesses, and even schools and restaurants that provide water. A PWS is not necessarily a public entity, and most are privately owned. There are three types of PWS with legal distinctions: community, non-transient non-community, and transient. The type of water system is based on how often people consume the water. Drinking water regulations impose the most stringent monitoring requirements on community and non-transient non-community water systems because the people they serve obtain all or much of their water from that system each day.

Community water systems are city, county, regulated utilities, regional water systems, and even small water companies and districts where people live. Non-community non-transient water systems are places like schools and businesses that provide their own water. The customers of non-community non-transient water systems have a regular opportunity to consume the water, but they do not reside there. Transient water systems include entities like rural gas stations, restaurants, and State and National parks that provide their own potable water, where most consumers neither live nor regularly spend time.

There are approximately 7,500 PWS in California. About one-third of these systems have between 15 and 200 service connections. The number of smaller systems – specifically, those with 14 or fewer connections – is unknown but estimated to be in the thousands.

Federal Safe Drinking Water Act (SDWA): The federal SDWA was enacted in 1974 to protect public health by regulating drinking water. California has enacted its own safe drinking water act to implement the federal law and establish state standards under the state SDWA. The U.S. EPA enforces the federal SDWA at the national level. Most states, including California, have been granted "primacy" by the US EPA, giving them the authority to implement and enforce the federal SDWA at the state level.

California's drinking water program: Through its Division of Drinking Water (DDW), the State Water Board is responsible for enforcing federal and state drinking water statutes and regulating PWS. The State Water Board directly enforces the federal SDWA for all water systems with 200 or more service connections. For water systems with less than 200 connections, regulatory authority can be delegated to local health departments. The State Water Board adopts regulations for drinking water standards, monitoring requirements, cross-connections, design and operational standards, and operator certification.

The SAFER and Arrearage Programs: According to the State Water Board's report *Safe Drinking Water Plan for California*, the state's public policy continues to focus on the right of every human being to have safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitation, as enacted by AB 685 (Chapter 524, Statutes of 2012). Challenges remain to achieve this goal, including the need for an adequate supply of drinking

water, the removal of a number of contaminants, the costs of constructing and maintaining treatment and distribution systems, and the number and nature of small public water systems that serve those in economically disadvantaged communities. According to a 2020 State Water Board fact sheet, more than half a million Californians (served by more than 500 small and rural water systems) are without clean drinking water due to systems that contain contaminants such as arsenic, nitrates, and 1,2,3-Trichloropropane (1,2,3-TCP). These communities are often served by water systems that are least likely to be able to afford necessary upgrades or absorb the cost of consolidating with another water system.

The Safe and Affordable Financing for Equity and Resilience (SAFER) program is a recent safe drinking water initiative established by AB 2501 (Chapter 871, Statutes of 2018) and stably funded through 2030 by SB 200 (Chapter 120, Statutes of 2019). The goal of the SAFER program is to resolve drinking water issues faced by disadvantaged communities, while also addressing broader drinking water concerns of households and communities not served by PWS. The State Water Board states that the "primary purpose of the SAFER Program is to bring true environmental justice to California and address the continuing disproportionate burdens in the state by assisting with providing safe drinking water in every California community, for every Californian. SAFER funds will help water systems provide a safe, accessible, and affordable supply of drinking water [...] by accelerating implementation of short- and long-term drinking water solutions, moving water systems to more efficient modes of operation, providing short-term operation and maintenance support as a bridge until long-term sustainable solutions are in place, and providing long-term operation and maintenance support when necessary."

The State Water Board is also currently administering the California Water and Wastewater Arrearage Payment Program (Arrearage Program) to provide community water systems with financial relief for unpaid water bill debt from their residential and commercial customers who struggled to pay water bills due to job loss and other hardships linked to the COVID-19 pandemic. The Arrearage Program will allocate $985 million in federal funding and will prioritize debt related to drinking water.

Public health goals (PHGs) and maximum contaminant levels (MCLs): A PHG is the concentration of a contaminant in drinking water that is estimated to pose no significant health risk to individuals consuming the water on a daily basis over a lifetime. OEHHA scientists perform extensive reviews of the available literature on a drinking water contaminant to set PHGs based on the most sensitive health effects. The final PHG values then serve as guideposts to the State Water Board in setting the MCL, also known as primary drinking water standard. A drinking water contaminant's MCL must be established at a level as close to its PHG as is technologically and economically feasible. While MCLs place primary emphasis on public health, they must also account for factors such as detectability, treatability, and cost of treatment. Once the State Water Board establishes an MCL through the regulatory process, PWS must meet it within the prescribed compliance period, though the State Water Board is not required to provide such a compliance period upon adoption of an MCL.

Hexavalent Chromium MCL: Hexavalent Chromium, also known as Chrome-6 or Cr(VI), is one form (oxidation state) of the element chromium. Cr(VI) is a known carcinogen and targets the respiratory system, kidneys, liver, eyes, and skin. Cr(VI) can occur naturally but is also released into the environment through discharges of dye and paint pigments, wood preservatives, chrome plating wastes, and leaching from hazardous waste sites. According to the 2015 study "Cr(VI) occurrence and geochemistry in water from public-supply wells in California" by Izbicki and

colleagues, the state's geology, hydrology, and geochemistry combine to yield especially high occurrences of Cr(VI) in the (western) Central Valley and deserts in the south of the state.

In 2001, the California Legislature charged the Department of Health Services (now Department of Public Health, or DPH) to develop an MCL for Cr(VI) by 2003. In 2011, OEHHA published the PHG for Cr(VI) at 0.02 micrograms per liter, the equivalent of 0.02 parts per billion (ppb). DPH then proceeded to set an MCL for Cr(VI) at 10ppb. This MCL was challenged in court and the Sacramento Superior Court ruled in 2017 that the MCL established by DPH, and defended by the State Water Board (since the Drinking Water Program had been transferred from DPH in 2014), failed to adequately consider the economic feasibility of the MCL. As "economic feasibility" is not defined in state law, the State Water Board argued that the term is not synonymous with "affordable". However, the court stated that "economically feasible has to mean something, and it is difficult to conceive of a definition that does not at least consider affordability."

Proposed Cr(VI) MCL compliance schedules: In March 2022, the State Water Board published a Hexavalent Chromium MCL Administrative Draft and held two public workshops with opportunities for public comment in early April 2022. In the draft proposal, the new proposed Cr(VI) MCL is 10ppb, the same as previously determined. However, in the draft the State Water Board outlines cost estimates and compliance schedules based on the size of the PWS. According to the proposal, the compliance schedules would be as follows:

A. Systems with more than 10,000 service connections would be required to comply with the MCL within two years of rule adoption.
B. Systems with 1,000 to 10,000 service connections would be required to comply with the MCL within three years of rule adoption.
C. Systems with less than 1,000 service connections would be required to comply with the MCL within four years of rule adoption.

Such staggered compliance schedules are likely to drive down cost of implementation technologies for smaller water systems, while ensuring that the majority of Californians who are served by larger PWS have access to drinking water that meets the MCL within a shorter timeframe.

Implications for the future: Future MCLs are likely to be costly, but necessary to protect public health. The State Water Board has the opportunity to learn from the implementation of the proposed compliance schedules, which may help smaller systems with affordability, while ensuring that larger systems that can afford to adopt technologies do so within a reasonable timeframe. Of particular interest will be MCLs for chemicals in the class of per- and polyfluoroalkyl substances (PFAS). PFAS are highly persistent chemicals that are known to have contaminated surface water and groundwater resources that serve as drinking water supplies. An analysis by CalMatters from late 2020 found that at least 146 PWS, serving almost 16 million Californians, had detected two PFAS chemicals, PFOA and PFOS, in their well water. OEHHA has proposed PHGs for PFOA and PFOS in drinking water at 0.007 and 1 parts per trillion, respectively. MCLs for these or other PFAS chemicals have not been proposed by the State Water Board yet.

This bill: AB 2041 aims to ensure that all water systems can comply with MCLs adopted by the State Water Board with a compliance period. The State Water Board evaluates sampling data for a drinking water contaminant from PWS throughout the state as part of the regulatory process. The bill would require the State Water Board to then make a determination based on these data

which water systems are most likely to be out of compliance with an MCL and which of those would be unable to cover the cost of coming into compliance. AB 2041 puts the onus on the State Water Board to work with those water systems to develop a compliance plan, which may include a financial plan.

In the past, the Legislature has passed a compliance plan framework that permitted PWS to submit a compliance plan specific to the circumstances of that system to meet the MCL for Cr(VI) to the State Water Board for approval (SB 385, Hueso, Chapter 272, Statutes of 2015). That statute included a provision that it would be repealed January 1, 2020. The Committee has no knowledge of a PWS having submitted such a compliance plan to the State Water Board, considering also that the 2017 Superior Court ruling revoked that primary drinking water standard. AB 2041 would take a different approach and require the State Water Board to work with PWS on a compliance and a financial plan.

Work in progress: While the amendments from April 18, 2022 focus the requirements of AB 2041 to help address the financial challenges faced by some water systems, the author will continue conversations with stakeholders, including the State Water Board, to refine the language. In its current form, the bill remains vague on several aspects and these stakeholder conversations could make improvements in the following area:

1) Clarifying whether there are specific types of information the State Water Board should rely on when making determinations about compliance ability in (a)(1);

2) Clarifying what types of information the State Water Board may be granted authority to review, and by whom, in order to make such determinations (for example, detailed financial information);

3) Clarifying the duties of the State Water Board and the duties of the water system in the development of the compliance plan in (a)(2);

4) Clarifying whether the financial plan should include specific details or whether it must reflect availability of a grant or other types of funding at the time of financial plan development;

5) Clarifying whether the State Water Board has authority to impose the compliance and/or financial plan that was developed; and,

6) Clarifying the obligations or consequences, if any, for a PWS that worked with the State Water Board on a compliance plan, but fails to comply with the MCL regardless.

Arguments in Support:

The California Association of Mutual Water Companies, a co-sponsor of AB 2041, writes, "In 2020, the State Water Resources Control Board indicated that they would not be conducting an economic feasibility study in proposing a new Chromium 6 MCL. This creates great uncertainty for water suppliers that must comply with new drinking water standards threatened by potential stranded costs. Enacting AB 2041 would require that DDW evaluate which water systems can and cannot afford compliance with a new standard, and formulate a funding plan to help water systems that otherwise cannot afford compliance. Our hope is that AB 2041 will thwart

challenges to new drinking water regulations because economic feasibility would be built-in to the passage of a regulation. This increases certainty for water suppliers that especially the smallest water systems need.

Arguments that AB2041 is not needed because of the establishment of the SAFER Program for failing water systems do not address how the costs of new drinking water regulations will be managed. For example, if the standard for Chromium 6 had not been invalidated in 2017, the number of water systems at risk of not complying with safe drinking water standards would be over 500, double the number that exists today without a Chromium 6 MCL. In the absence of an economic feasibility study on Chromium 6 and other contaminants, many small water systems may end up moribund and unable to comply. Current funding under the SAFER Program would not be sufficient and would have to be re-prioritized. Having a compliance plan with funding is the best solution to uncertainty in the quest for safe drinking water."

The Community Water Systems Alliance, a co-sponsor of AB 2041, writes, "In the first year of this legislative session, CWSA supported AB 588 to establish statutory authority for the Water Board to set a period for affected water systems to accomplish steps necessary to comply with new drinking water regulations. It is now our understanding that the operative legal opinion is the Water Board has this authority to set a compliance period. Although our members would prefer greater assurance from seeing this authority in state law, we turn our support to the second important aspect of last year's bill, which is to ensure a viable path to achieve compliance with a drinking water regulation deemed unaffordable at the community water system level.

The importance of affordability is in fact state law, as stated in the Human Right to Water Act (Water Code Sec 106.3 (a) added from AB 685, 2012). A plain reading of this landmark law places affordability on an equal plane as "safe," "clean," and "accessible." AB 2041 will make this state policy operational by requiring the Water Board to:

> a) Determine which public water systems will require financial assistance in order to afford to be able to procure and install the necessary measures to comply with the primary drinking water standard. Determine funding to help small water systems comply with new drinking water regulatory standards; and
>
> b) For any public water system identified under [the preceding] paragraph [...], develop a financial plan to assist the public water system in procuring and installing the necessary measures to comply with the primary drinking water standard.

Recent history since the adoption of the Human Right to Water law suggests that affordability is not given the consideration state policy requires."

Related legislation:

1) AB 588 (E. Garcia, 2021). Would have required the State Water Board to identify a compliance period or periods, when it adopts a primary drinking water standard, of not less than 30 days and no more than 3 years, and to consider specified criteria when identifying the compliance period. Would have required the State Water Board to take actions necessary to assist specified water systems to achieve compliance within any compliance period established. This bill was not heard in the Assembly Environmental Safety and Toxic Materials 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 PFAS and requires municipalities to notify consumers for PFAS detected above notification levels.

3) SB 385 (Hueso, Chapter 272, Statutes of 2015). Authorized the State Water Board to grant a public water system additional time to meet the drinking water standard for hexavalent chromium by approving a compliance plan. This statute had a provision that repealed it on January 1, 2020.

4) SB 351 (Ortiz, Chapter 602, Statutes of 2001). Required the State Department of Health Services to adopt a primary drinking water standard for hexavalent chromium by January 1, 2004. Required a report on the progress of developing the standard to the Legislature by January 1, 2003.

REGISTERED SUPPORT / OPPOSITION:

Support

California Association of Mutual Water Companies (Co-Sponsor)
Community Water Systems Alliance (Co-Sponsor)
Gill Creek Mutual Water Company (Co-Sponsor)
Bighorn Desert View Water Agency
Cabazon Water District
California Catholic Conference
Covina Irrigating Company
Cuerno Largo Mutual Water Company
Harbor View Mutual Water Company
Hartley Mutual Water Company
Humboldt Woodlands Mutual Water Company
Jubilee Mutual Water Company
LA Cumbre Mutual Water Company
Lakeshore Villa Mutual Water Company
Lakeside Woods Mutual Water Company
Las Flores Water Company
Lincoln Ave Water Company
Los Prietos Water Association
Maywood Mutual Water Company
Maywood Mutual Water Company No. 3
Mesa Water District
Midway City Mutual Water Company
Montebello Land and Water Company
Oak Glen Domestic Water Company
Oak Trail Estates Mutual Water Company
Ollin Strategies
Palo Alto Park Mutual Water Company
San Antonio Water Company
South Mesa Water Company
Spaulding Eagle Lake Mutual Water Company
Sundale Mutual Water Company

Sunny Slope Water Company
The Farm Mutual Water Company
Twentynine Palms Water District
Valencia Heights Water Company
Valley View Mutual Water Company
Webb Oak Mutual Water Company
Wendell Lane Mutual Water Company
Western Heights Water Co
Willowside Mutual Water Company

Opposition

None on file.

Analysis Prepared by: Manar Zaghlula / E.S. & T.M. /

Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 2877 (Eduardo Garcia) – As Amended April 19, 2022

SUBJECT: Safe and Affordable Drinking Water Fund: tribes

SUMMARY: Requires the State Water Resources Control Board (State Water Board) when administering funds under the Safe and Affordable Drinking Water Fund (Fund) to work with tribes to remove barriers for those tribes to accessing funding under the Fund. Additionally, provides that a limited waiver of tribal sovereignty is not required for a tribe that is an eligible recipient to access funding under the Fund. **Specifically**, this bill:

1) Provides that a waiver of tribal sovereignty is not required for a tribe that is an eligible recipient to access funding under the Fund.

2) Requires the State Water Board to work with tribes that are eligible recipients to remove any barriers for those tribes to accessing funding. Authorizes the State Water Board to use a professional service agreement, service contract or other mechanism with each eligible tribe.

3) Requires the State Water Board to ensure an equitable distribution of funds under the Fund, including funds to eligible recipients that are federally recognized California Native American tribes or nonfederally recognized Native American tribes.

4) Requires the State Water Board to post on its internet website, and update annually, the number of applications for funding received from tribes and the total amount of funding granted to tribes each year.

EXISTING LAW:

1) Establishes the California Safe Drinking Water Act (SDWA) and requires the State Water Board to maintain a drinking water program. (Health & Safety Code (HSC) § 116270, *et seq.*)

2) Requires the State Water Board to submit to the Legislature a comprehensive Safe Drinking Water Plan for California every five years. (HSC § 116355 (a))

3) Creates the Safe and Affordable Drinking Water Fund in the State Treasury to help water systems provide an adequate and affordable supply of safe drinking water in both the near and long terms. (HSC § 116766)

4) Establishes as 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)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "Ensuring tribes have equitable access to the SAFER Program would help California meet its promise of providing every person in the state the right to safe, clean, affordable, and accessible water."

Human right to water: In 2012, California became the first state to enact a Human Right to Water law, AB 685 (Eng, Chapter 524, Statutes of 2012). Public policy continues to be focused on the right of every human being to have safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitation. Water supply, contaminants, costs of treatment and distribution systems, the number and nature of small public water systems, especially in disadvantaged communities, and many other factors will continue to challenge progress in addressing the Human Right to Water.

Regulation of drinking water: The federal SDWA was enacted in 1974 to protect public health by regulating drinking water. California has enacted its own SDWA to implement the federal law and establish state standards. The United States Environmental Protection Agency (U.S. EPA) enforces the federal SDWA at the national level. However, most states, including California, have been granted "primacy" by the U.S. EPA, giving them authority to implement and enforce the federal SDWA at the state level.

Lack of clean safe drinking water: Although most of the state's residents receive drinking water that meets federal and state drinking water standards, many drinking water systems in the state consistently fail to provide safe drinking water to their customers. Lack of safe drinking water is a problem that disproportionately affects residents of California's disadvantaged communities.

Disadvantaged communities often lack the rate base, as well as the technical, managerial, and financial capacity to show they can afford and effectively manage operations and maintenance costs related to water treatment. Being unable to pay for maintenance, these communities are effectively barred from accessing capital improvement funding. In contrast, larger water systems have the financial capacity both to pay treatment costs and to provide for a well-trained and technically competent workforce of water system operators.

The Safe and Affordable Funding for Equity and Resilience (SAFER) program: SB 200 (Monning, Chapter 120, Statutes of 2019) created SAFER and the Safe and Affordable Drinking Water Fund (Fund). The SAFER program supports permanent and sustainable drinking water solutions that ensure all Californians have access to safe, affordable, and reliable drinking water. The Fund was established to address funding gaps and provide solutions to water systems, especially those serving disadvantaged communities, to address both their short- and long-term drinking water needs. SB 200 requires the annual transfer of 5 percent of the Greenhouse Gas Reduction Fund (GGRF) (up to $130 million) into the Fund until June 30, 2030. Money transferred into the Fund is continuously appropriated and must be expended consistent with the Expenditure Plan (Plan), which is adopted annually by the State Water Board. The Plan is based on a drinking water needs assessment and will document past and planned expenditures and prioritize projects for funding. Potential options for funding include consolidation with larger water systems, operations and maintenance costs, building local technical and managerial capacity, providing interim replacement water, and administrators to run the small systems. Additionally, SAFER funds will provide short-term operation and maintenance support as a bridge until long-term sustainable solutions are in place, and providing long-term operation and maintenance support when necessary.

Expenditure Plan: The Safe and Affordable Drinking Water Fund Expenditure Plan (Plan) is adopted annually by the State Water Board, and directs how money from the Fund can be spent. The Plan will be based on a drinking water needs assessment, documents past and planned expenditures, and prioritizes projects for funding.

Recent Plan: Based on the 2021 Needs Assessment and building on previously established priorities and policies, the expenditures from the Fund for fiscal year 2021-2022 will focus on solutions for small disadvantaged communities and low-income households. These priorities expand on those established in the adopted fiscal year 2020-21 Fund Expenditure Plan to specify that expenditures from the Fund will focus on solutions for small disadvantaged communities and low-income households, address emergency or urgent funding needs expeditiously, address community water systems and school water systems at-risk of failing, promote regional-scale consolidations, and add a priority related to expediting planning through use of technical assistance. A new priority was also added for consistency with the State Water Board's proposed Racial Equity Resolution and associated Racial Equity Action Plan.

AB 2877 seems to be consistent with the State Water Board's Racial Equity Resolution and Racial Equity Action plan: State Water Board Racial Equity Resolution: On November 16, 2021 the State Water Board adopted resolution number 2021-0050: Condemning racism, xenophobia, bigotry, and racial injustice and strengthening commitment to racial equity, diversity, inclusion, access, and anti-racism. As part of the resolution, the resolution stated, "As a result, California Native American Tribes continue to face barriers to defining, quantifying, accessing, protecting, and controlling their ancestral lands, water rights, instream flows, cultural resources, and beneficial uses. Redistribution of water has reduced or eliminated access to healthy traditional food sources such as smelt, salmon, freshwater mussels, and freshwater plants. Disconnection from traditional ancestral land and water and the unavailability of traditional foods have been linked to serious and pervasive health issues. In addition, low or non-existent instream flows, and associated water quality problems, impair or prevent water-related cultural, spiritual, and subsistence practices. These injustices are exacerbated by climate change and complex water resource and watershed management processes." Additionally, the State Water Board resolved to accomplish several things, among them, the State Water Board, "Reaffirms our commitment to improving communication, working relationships, and co-management practices with all California Native American Tribes, including seeking input and consultation on the Water Boards' rules, regulations, policies, and programs to advance decisions and policies that better protect California's water resources. The State Water Board recognizes our parallel relationship to the people we serve and values tribes' traditional ecological knowledge and historic experience with managing California's water resources since time immemorial."

Recent funding: The Budget Act of 2021 and subsequent related budget bills included four appropriations that directly impact the larger SAFER Program. The funding includes:

1) $985 million in Federal funding from the Coronavirus Fiscal Recovery Fund of 2021 to address COVID-19 pandemic related community water system customer arrearages;
2) $1.3 billion in General Fund local assistance for drinking water and wastewater infrastructure;
3) $650 million towards drinking water infrastructure and $650 million towards wastewater infrastructure;

4) $10 million in General Fund local assistance for interim or immediate solutions to drinking water drought emergencies; and,
5) $30 million in General Fund local assistance for technical and financial assistance to drinking water systems to address Per- and Polyfluoroalkyl Substances (PFAS).

Overall, over $2.1 billion, at least $1.1 billion of which is available for capital projects, is anticipated to be available for use in fiscal year 2021-2022 from complementary funding sources that make up the larger SAFER Program. *This bill is designed to ensure that tribes can at least access these funds.*

Tribal considerations within the expenditure plan: According to the "Policy for Developing the Fund Expenditure Plan for the Safe and Affordable Drinking Water Fund, October 19, 2021", the State Water Board included the following tribal considerations, "Engagement with California Native American Tribes will be prioritized in outreach, program design and funding elements of the SAFER Program. California Native American Tribes are eligible recipients of monies from the Fund. The water system needs of California Native American Tribes will be evaluated for funding based on the same criteria as other eligible recipients. All State Water Board funding agreements contain compliance obligations, such as monitoring, reporting, inspection, and accounting. These compliance obligations ensure that the State Water Board complies with statutory requirements and responsibly administers state funds. Federally recognized Native American Tribes are also eligible to receive SAFER funding and staff will work with them to try to ensure that they can also benefit from the SAFER Program. In order to fund a project with a federally recognized Native American Tribe, the State Water Board may require a limited waiver of sovereign immunity strictly to ensure compliance with the terms of the financial assistance agreement. In addition, the State Water Board will work cooperatively with California Native American Tribes to access water quality data and water system operational information, if available." *According to the author and proponents of this bill, the requirement of a limited waiver of sovereign immunity has prevented tribes from being able to access these funds. The goal of AB 2877 is to eliminate this barrier to enable the tribes to access these funds as intended under SB 200.*

This bill: AB 2877 is designed to address current barriers tribes face when attempting to access funds under the Safe and Affordable Drinking Water Fund. Additionally, this bill sets up a requirement for the State Water Board to post on its internet website the applications received by tribes and the total funding granted to tribes each year. When the Legislature passed SB 200, the bill contained language stating that eligible recipients of the Safe and Affordable Drinking Water Fund include tribes. Since the passage and subsequent implementation of SB 200, it has become apparent that there are barriers preventing tribes from being able to access these funds. It is important that as this bill moves through the process, the author and stakeholders continue discussions with the Administration to effectively address these barriers.

Arguments in Support: According to the Rincon Band of Luiseño Indians, "As you are well aware, tribes for far too long have fought for our rights to water access. Federal, state, and local regulations have led to the diversion of precious resources away from our reservations towards local cities and towns. Due to this, many of our water basins have all but dried up, leaving us with scarce water supplies. In 2019, Governor Gavin Newsom signed SB 200 (Monning) into law, creating the Safe and Affordable Drinking Water Fund, which provides the legal structure and process for funding safe drinking water solutions for disadvantaged communities in California that currently do not have that access. This provides up to $130

million annually until 2030 to support these communities who have long felt the effects of little access to water. This [bill] is critical because tribes are often overlooked when it comes to providing assistance to disadvantaged communities. This legislation will help ensure we meet the water needs of our tribal members so that we can continue to thrive for generations to come."

Related Legislation:

1) AB 2108 (R. Rivas). Requires the State Water Board and the Regional Water Quality Control Boards (Regional Boards) to ensure that at least one member of the State Water Board and each of the Regional Water Boards has specialized experience to represent environmental justice or tribal communities. Additionally, requires the State Water Board to include an analysis of environmental justice impacts or racial equity concerns when issuing statewide, regional or otherwise significant waste discharge requirements. This bill is pending action in the Assembly Water Parks and Wildlife Committee.

2) SB 200 (Monning, Chapter 120, Statutes of 2019). Created SAFER and the Fund to help water systems provide an adequate and affordable supply of safe drinking water in both the near and long-term. Requires the State Water Board to develop a fund expenditure plan and provide funding according to that expenditure plan to identify failing water systems and provide safe and affordable drinking water in the short- and long-term to those who rely on drinking water from those failing water systems.

3) AB 217 (E. Garcia, 2019). Would have created the Safe Drinking Water for All Act which would have established the Safe and Affordable Drinking Water Fund (Fund) to provide a source of funding for safe drinking water for all Californians, and long-term sustainability of drinking water systems. Would have imposed several fees on agricultural activities and a charge on retail water systems that together would provide the source of revenue to the Fund. This bill was subsequently amended into another subject.

4) SB 669 (Caballero, 2019). Would have established the Safe Drinking Water Fund to assist community water systems in disadvantaged communities that are chronically noncompliant. Would have created the Safe Drinking Water Trust Fund to receive funding from the state and provide the fund source to the Safe Drinking Water Fund. This bill was held in the Senate Appropriations Committee.

5) SB 623 (Monning, 2017). Would have created the Safe and Affordable Drinking Water Fund, administered by the State Water Board, and would have imposed water, fertilizer, and dairy fees to fund safe drinking water programs. This bill was held in the Assembly Rules Committee.

REGISTERED SUPPORT / OPPOSITION:

Support

Clean Water Action
Community Water Center
Leadership Counsel for Justice & Accountability
Rincon San Luiseño Band of Indians; the
Tule River Tribe

Opposition

None on file.

Analysis Prepared by: Josh Tooker / E.S. & T.M. /

Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 2247 (Bloom) – As Amended April 20, 2022

SUBJECT: Perfluoroalkyl and polyfluoroalkyl substances (PFAS) and PFAS products and product components: publicly accessible reporting platform

SUMMARY: Requires, on or before July 1, 2024, a manufacturer of perfluoroalkyl and polyfluoroalkyl substances (PFAS) or a product or product component containing regulated PFAS that is sold, offered for sale, or distributed into the state to register the PFAS or the product or product component containing regulated PFAS on the publicly accessible reporting platform created by the Department of Toxic Substances Control (DTSC) and the Interstate Chemicals Clearinghouse (ICC). Specifically, **this bill**:

1) Defines "manufacturer" as any of the following:

   a) A person or entity who manufactures PFAS or imports PFAS into the state;

   b) A person or entity who manufactures a product or product component containing regulated PFAS or imports a product or product component containing regulated PFAS into the state, or whose name appears on the product label; and,

   c) A person or entity for whom the PFAS or product or product component containing regulated PFAS is manufactured or distributed, as identified by the product label pursuant to the federal Fair Packaging and Labeling Act (15 United States Code § 1451 et seq.).

2) Provides that a "manufacturer" does not include a state agency or a local agency.

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

4) Defines "Regulated perfluoroalkyl and polyfluoroalkyl substances" or "regulated PFAS" as either of the following:

   a) PFAS that a manufacturer has intentionally added to a product and that have a functional or technical effect in the product, including the PFAS components of intentionally added chemicals and PFAS that are intentional breakdown products of an added chemical that also have a functional or technical effect in the product; or,

   b) The presence of PFAS, as measured in total organic fluorine, in a product or product component at or above the limit of quantification.

5) Defines "product" as an item, including its product components, that is manufactured, assembled, packaged, or otherwise prepared for sale or distributed, including for personal, residential, commercial, or industrial use, or for use in making other products.

6) Defines "product component" as a component of a product, including the product's ingredients or a part of the product.

7) Requires DTSC, on or before January 1, 2024, to work with the ICC to establish a publicly accessible reporting platform to collect information about PFAS and products or product components containing regulated PFAS being sold, offered for sale, distributed, or offered for promotional purposes in, or imported into, the state.

8) Requires, on or before July 1, 2024, and on or before July 1 each year thereafter, a manufacturer of PFAS or a product or product component containing regulated PFAS that is sold, offered for sale, distributed, or offered for promotion purposes in, or imported into, the state to register the PFAS or the product or product component containing regulated PFAS on the publicly accessible reporting platform created by the ICC along with specified information.

EXISTING LAW:

1) Requires, commencing January 1, 2022, a person that sells firefighter personal protective equipment to provide a written notice to the purchaser if the firefighter personal protective equipment contains intentionally added PFAS chemicals. (Health and Safety Code (HSC) § 13029. (b)(1))

2) Prohibits, commencing January 1, 2022, a manufacturer of class B firefighting foam from manufacturing, or knowingly selling, offering for sale, distributing for sale, or distributing for use, and a person from using, class B firefighting foam containing intentionally added PFAS chemicals. (HSC § 13061 (b)(1))

3) Prohibits, on and after July 1, 2023, a person, including, but not limited to, a manufacturer, from selling or distributing in commerce in this state any new, not previously owned, juvenile product that contains regulated PFAS chemicals. (HSC § 108946)

4) Prohibits, commencing January 1, 2025, a person or entity from manufacturing, selling, delivering, holding, or offering for sale, in commerce any cosmetic product that contains any of specified intentionally added ingredients. (HSC § 108980 (a))

5) Prohibits, commencing on January 1, 2023, a person from distributing, selling, or offering for sale in the state any food packaging that contains regulated PFAS. (HSC § 109000)

6) Authorizes the State Water Resources Control Board (State Water Board) to order a public water system to monitor for PFAS, 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)

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

8) Requires DTSC to adopt regulations to establish a process to evaluate chemicals of concern in consumer products, and their potential alternatives, to determine how to best limit exposure or to reduce the level of hazard posed by a chemical of concern. (HSC § 25253 (a))

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "PFAS are harmful to the health and wellbeing of all Californians. It's unconscionable that PFAS are polluting our drinking water systems and impacting some of our most vulnerable communities. AB 2247 will help us accurately identify how much PFAS is coming into the State of California. Giving the State the authority to collect this data will enable us to explore how best to mitigate its harmful impacts. Without this information, we cannot take meaningful steps toward protecting the health of Californians and our environment in the long-term."

Perfluoroalkyl and polyfluoroalkyl substances (PFAS): PFAS are a class of synthetic chemicals that have been in use in industrial and consumer products since the 1940s for their heat, water, and lipid resistance properties. PFAS are synthetic fluorinated organic compounds that contain at least one fully fluorinated carbon atom that share one common trait – extremely stable carbon-fluorine bonds that make them or their final degradation products highly persistent in the environment. Most PFAS are mobile and some are volatile, leading to contamination of soils and groundwater far from the source of the PFAS emission. PFAS have been detected in all corners of the globe, from penguin eggs in Antarctica to polar bears in the Arctic.

PFAS 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, apparel, paper packaging for food, non-stick cookware, and other products designed to be waterproof or water resistant; grease, heat and stain resistant; or, non-stick. Applications span many sectors of the economy, including aerospace, apparel, automotive, building and construction, chemicals and pharmaceuticals, electronics and semiconductors, energy, oil and gas exploration, first responder safety, and health care. During production, use, and disposal, PFAS can migrate into the soil, water, and air.

As of September 2020, more than 9,000 PFAS chemicals were included in the United States Environmental Protection Agency's (US EPA's) Master List of PFAS Substances. Of all PFAS compounds, perfluoroalkyl acids (PFAAs), which include perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA), are the most extensively studied and are associated with a number of health hazards, including endocrine disruption, developmental and reproductive toxicity, and immune dysregulation. PFOA, most commonly known as the chemical that had been used to produce Teflon, and PFOS, formerly used in Scotchgard, are known as "long-chain" chemicals, meaning they have six or more carbon molecules. These chemicals 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. According to DTSC, the majority (~85%) of PFAS are PFAA precursors, meaning they can degrade or metabolize into PFAAs in the environment or in living organisms.

While the use of PFOS, PFOA, and other long-chain PFAS has recently declined, short-chain PFAS, including short-chain PFAAs, are widely used as alternatives to long-chain PFAS. Emerging data on these newer chemicals indicate that they are also highly persistent in the environment; behave in asimilar fashion in the human body, particularly at the cellular level, as long-chain PFAS; and, are even more mobile in the environment than long-chain PFAS. This means that they travel even more easily, can be harder to clean up, and are more likely to be released from consumer products than long-chain PFAS.

PFAS are ubiquitous, and are found in indoor and outdoor environments, plants, wildlife, companion animals, production animals, food, drinking water, and humans. 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. Nonetheless, the National Health and Nutrition Examination Survey still routinely detects several PFAS in the blood of nearly all participants. As the number of PFAS compounds continues to grow, exposure to these new chemicals is difficult to assess.

Exposure to PFAS: The main route of exposure to PFAS is through ingestion of contaminated food or liquid (accounting for up to half of total exposure), and through inhalation and ingestion of contaminated indoor air and dust. Food can become contaminated with PFAS through contaminated soil and water used to grow the food, food packaging containing PFAS, and equipment that uses PFAS during food processing. Some foods, such as fish, meat, eggs and leafy vegetables, may contain PFAS due to bioaccumulation and crop uptake. Studies have shown that PFAS can transfer from pregnant mothers to their fetuses via the placenta during gestation, as well as transfer from nursing mothers to their infants via breastfeeding. Dermal exposure is also possible when people touch products treated with PFAS, such as carpets or clothing. Young children may be susceptible to higher levels of exposure than adults because they ingest more dust containing PFAS and mouth PFAS-treated consumer products. Workers, such as carpet installers, carpet cleaners, firefighters, and workers in furniture, furnishings, outdoor clothing, and carpet stores, may also experience above average PFAS exposure levels.

Exposure to PFAS in drinking water is an escalating concern due to the persistence of PFAS chemicals in the environment and their tendency to accumulate in groundwater. Groundwater PFAS contamination typically has been associated with industrial facilities where these chemicals were manufactured or used in other products, and in airfields where the chemicals have been used for firefighting. PFAS chemicals can also enter the environment and drinking water through composting, landfilling, recycling, and incineration of products containing PFAS. The State Water Board indicates that the four major sources of PFAS in drinking water in California are fire training/fire response sites, industrial sites, landfills, and wastewater treatment plants/biosolids. The State Water Board notes that because of their presence and persistence in many drinking water supplies, PFAS remain a serious source of exposure decades after their release into the environment.

Like humans, wildlife is exposed to PFAS by consuming contaminated water or food. Within aquatic food webs, PFAS were found to increase in concentration from ambient water to plankton and further up the food chain.

Hazard traits of PFAS: According to DTSC, all PFAS display at least one of the hazard traits identified in California's Safer Consumer Products (Green Chemistry) Hazard Traits Regulations (22 C.C.R § 69401 et seq.). An intrinsic property of PFAS is the extreme environmental persistence of either the individual compounds or their degradation products or both, resulting in their classification "forever chemicals." Most PFAS are mobile in environmental media such as air and water, and thus are widespread in living organisms and the environment. Several PFAS bioaccumulate significantly in animals or plants and emerging evidence points to their phytotoxicity, aquatic toxicity, and terrestrial ecotoxicity.

DTSC contends that exposure to PFAS can lead to adverse health outcomes in humans. If humans are exposed to PFAS through diet, drinking water, or inhalation, some of these chemicals remain in the body for a long time. As people continue to be exposed to PFAS, the

PFAS levels in their bodies may increase to the point where they suffer from adverse health effects. According to the US EPA, current peer-reviewed scientific studies have shown that exposure to certain levels of PFAS may lead to: reproductive effects such as decreased fertility or increased high blood pressure in pregnant women; developmental effects or delays in children, including low birth weight, accelerated puberty, bone variations, or behavioral changes; increased risk of some cancers, including prostate, kidney, and testicular cancers; reduced ability of the body's immune system to fight infections, including reduced vaccine response; interference with the body's natural hormones; and, increased cholesterol levels and/or risk of obesity.

Regulating PFAS as a class: DTSC, through its SCP Program has adopted a rationale for regulating PFAS chemicals as a class, concluding, "it is both ineffective and impractical to regulate this complex class of chemicals with a piecemeal approach." This rationale was presented in the February, 2021, *Environmental Health Perspectives* article, "Regulating PFAS as a Chemical Class under the California Safer Consumer Products Program." The authors of the article state,

> "The widespread use, large number, and diverse chemical structures of PFAS pose challenges to any sufficiently protective regulation, emissions reduction, and remediation at contaminated sites. Regulating only a subset of PFAS has led to their replacement with other members of the class with similar hazards, that is, regrettable substitutions. Regulations that focus solely on perfluoroalkyl acids (PFAAs) are ineffective, given that nearly all other PFAS can generate PFAAs in the environment… We at the California DTSC propose regulating certain consumer products if they contain any member of the class of PFAS because: *a*) all PFAS, or their degradation, reaction, or metabolism products, display at least one common hazard trait according to the California Code of Regulations, namely environmental persistence; and *b*) certain key PFAS that are the degradation, reaction or metabolism products, or impurities of nearly all other PFAS display additional hazard traits, including toxicity; are widespread in the environment, humans, and biota; and will continue to cause adverse impacts for as long as any PFAS continue to be used. Regulating PFAS as a class is thus logical, necessary, and forward-thinking."

Other researchers have also recently made the case for managing PFAS as a chemical class, including in "Scientific Basis for Managing PFAS as a Chemical Class" published in June, 2020, in *Environmental Science & Technology Letters* and "Strategies for grouping per- and polyfluoroalkyl substances (PFAS) to protect human and environmental health" also published in June, 2020, in *Environmental Science: Processes & Impacts.*

Historic US action on PFAS: Federal interest in PFAS has spanned decades, and manufacturers have been aware of the PFAS' adverse impact potential since the 1970s or 1980s. In 2005, the US EPA's Office of Pollution Prevention and Toxics Science Advisory Board labeled PFOA a 'likely' carcinogen in humans. In 2007, the CDC published the results of two studies of human exposure to 11 PFAS. In both studies, PFOS and PFOA, as well as another PFAS, perfluorohexane sulfonic acid (PFHxS), were detected in approximately 98% of the population.

While research on PFOA was being compiled by federal agencies, in 2004, the US EPA took administrative action against DuPont, a manufacturer of PFOA, for violating the law for repeatedly failing to report known information to US EPA about substantial risk of injury to human health or the environment from PFOA from 1981 through 2001. In 2005, the US EPA

settled with DuPont for violations related to PFOA exposure for the largest civil administrative penalty US EPA had ever obtained under any federal environmental statute.

Beginning in 2003, the US EPA negotiated with multiple parties to produce missing information on PFOA through enforceable consent agreements, memoranda of understanding, and voluntary commitments. In January 2006, the US EPA and eight prominent companies in the industry, including 3M and DuPont, created the 2010/15 PFOA Stewardship Program. Under the program, the companies committed to voluntarily reduce emissions and product content of PFOA and related chemicals on a global basis by 95 percent by 2010, and to work toward eliminating emissions and product content of these chemicals by 2015.

According to the US EPA's website, all participating companies state that they met the PFOA Stewardship Program goals. Companies reported that to meet the program goals, most stopped the manufacture and import of long-chain PFAS, and then transitioned to alternative chemicals. Many of these alternatives were other PFAS. Other companies exited the PFAS industry altogether.

State action on PFAS: California has undertaken efforts to address PFAS substances across several state agencies.

At DTSC, all PFAS chemicals are "Candidate Chemicals" under the Safer Consumer Products (SCP, previously known as 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 to its list of priority chemicals.

On July 1, 2021, DTSC designated carpets and rugs containing PFAS as a "Priority Product." A Priority Product is a consumer product identified by DTSC that contains one or more Candidate Chemicals and that has the potential to contribute to significant or widespread adverse impacts to humans or the environment. The Priority Product designation required domestic and foreign carpet and rug manufacturers that use PFAS and related chemicals in their products to submit a Priority Product Notification (PPN), which names all of the manufacturer's products that contain PFAS and are sold in California, by August 30, 2021. Manufacturers were then required to show intent to remove or replace PFAS in their products, remove the product from the market, or identify potential alternatives to PFAS to be used in the product by December 28, 2021.

In regulations that will go into effect on April 1, 2022, DTSC also designated treatments containing PFAS for use on converted textiles or leathers such as carpets, upholstery, clothing, and shoes as a new Priority Product. Domestic and foreign manufacturers of treatments for converted textiles or leathers that contain any member of the class of PFAS selling their products in California must submit a PPN for those products by May 31, 2022. After submitting the PPN, manufacturers will then be required to show intent to mitigate exposure to PFAS in their products by September 28, 2022.

DTSC has also proposed investigating artificial turf with PFAS in their Draft Priority Product Work Plan for 2021-2023. Previously, DTSC proposed investigating PFAS in other product categories, such as food packaging and children's products, but during the investigative period the Legislature prohibited PFAS in those product categories and it appears DTSC has shifted its resources to investigating other products/ chemical combinations.

The State Water Board has taken a number of additional recent actions related to PFAS in drinking water, including, in July 2020, issuing investigative orders to publicly owned treatment works (POTW) that receive PFAS in their influent wastewater flow to include sampling for 31 PFAS compounds. It also issued a General Order, in August 2020, for public water systems to sample for and report PFAS.

Recently, the State Legislature has taken action on PFAS by enacting a ban on food packaging that contains PFAS (AB 1200, Ting, Chapter 503, Statutes of 2021); a ban on new juvenile products that contain PFAS (AB 652, Freidman, Chapter 500, Statutes of 2021); and, a ban on firefighting foam containing PFAS (SB 1044, Allen, Chapter 308, Statutes of 2020). The Legislature also authorized the State Water Board to order public water systems to monitor for PFAS and required municipalities to notify consumers for PFAS detected above notification levels (AB 756, C. Garcia, Chapter 162, Statutes of 2019).

Existing authority for DTSC to request PFAS information: Under the Safer Consumer Products statute, DTSC has authority to request information from manufacturers and others. Specifically, California Code of Regulations, title 22, section 69501.4(b) authorizes DTSC to request information from product or chemical manufacturers, importers, assemblers, or retailers that it determines necessary to implement the Safer Consumer Products Program's framework regulations, via an information call-in. DTSC may use the information obtained through call-ins for several purposes, including identifying product-chemical combinations to evaluate as potential Priority Products; identifying and analyzing alternatives to eliminate or reduce potential exposures and adverse impacts; and filling data gaps to improve understanding and reduce research time. *It is important to note that the statute authorizes DTSC to "request" this chemical information, however there are no requirements on businesses to actually provide this information to DTSC. In fact, some of DTSC's research related to chemicals in products is through the use of internet search tools.*

Potential enhancement of DTSC's chemical call-in authority: There is current legislation, SB 502 (Allen) that has passed the Senate and is pending referral in the Assembly and would grant DTSC expanded authority. This would enable DTSC to require manufacturers to provide specific information including: information on ingredient chemical identity, concentration, and functional use; existing information, if any, related to the use of the products by children, pregnant women, or other sensitive populations; and, data on state product sales, or national product sales in the absence of state product sales data. *It is important to note, that a similar effort to grant DTSC this same authority was attempted in SB 392 (Allen) from the 2019-2020 session. SB 392 died on the Assembly Third Reading File. Additionally, the opposition to AB 2247 suggests that the authority in SB 502 is preferable to this bill; none of the groups opposed to this bill are supporting SB 502.*

Proposed action by the United States Environmental Protection Agency (US EPA) on reporting PFAS: On June 27, 2021, the US EPA announced a proposed rule for reporting and recordkeeping requirements for PFAS. The US EPA proposes to require certain persons that manufacture (including import) or have manufactured PFAS in any year since January 1, 2011, to electronically report information regarding PFAS uses, production volumes, disposal, exposures, and hazards. US EPA is requesting public comment on all aspects of this proposed rule and has also identified items of particular interest for public input. In addition to fulfilling statutory obligations under the Toxic Substances Control Act (TSCA), this document will enable US EPA to better characterize the sources and quantities of manufactured PFAS in the United

States. *AB 2247 seems consistent with the recent US EPA action and if the proposed rule becomes final, it could make it easier for companies to report the information required under AB 2247 since they will have had to provide that information to the US EPA. Additionally, the database envisioned under AB 2247 could also assist US EPA in verifying compliance with their rule, if finalized.*

Interstate Chemicals Clearinghouse (ICC): The ICC is an association of state, local, and tribal governments that promotes a clean environment, healthy communities, and a vital economy through the development and use of safer chemicals and products. The goals of the ICC are to: avoid duplication and enhance efficiency and effectiveness of agency initiatives on chemicals through collaboration and coordination; build governmental capacity to identify and promote safer chemicals and products; and, ensure that agencies, businesses, and the public have ready access to high quality and authoritative chemicals data, information, and assessment methods.

The functions of the ICC include: supporting health and environmental agencies with development and implementation of programs to promote use of safer chemicals and products; supporting the development of alternatives assessment methods and identification of safer alternatives; sharing data and information on use, hazard, exposure, and alternatives; sharing strategies and outcomes on chemicals prioritization initiatives; building the capacity of agencies by sharing materials, strategies, and trainings; and, assisting agencies in meeting the relevant information needs of businesses, consumers, and the public.

The ICC is a program of the Northeast Waste Management Official's Association (NEWMOA). NEWMOA provides management and staff support for ICC and serves as its fiscal agent. The ICC has Board of Directors to oversee ICC programs and activities, conduct strategic planning, set priorities and establish the annual workplan, establish the budget and spending priorities, and manage other critical matters affecting the ICC. The Board of Directors meets a minimum of two times per year with the ICC Council and may meet additional times with or without the Council.

The ICC has established the ICC Council to support the mission and goals of the ICC and to provide a forum for collaboration and sharing professional advice and expertise among representatives of the ICC members, supporting members and the Board of Directors. The functions of the ICC Council include: providing a venue for discussions and exchange among ICC Members, supporting members, and the Board of Directors; recommending priorities and focus areas for ICC workgroups, programs, and activities; assisting with recruiting members for ICC workgroups and participate in workgroup activities; assisting with planning ICC events and promoting ICC initiatives; sharing information on international, federal, state, tribal, and local chemical policies and proposals; sharing technical information resources and databases related to chemicals in commerce and identifying technical expertise related to focus areas; and, assisting with funding ICC activities

Current ICC members include:

1. California Environmental Protection Agency
2. Connecticut Department of Energy and Environmental Protection
3. King County Local Hazardous Waste Management Program
4. Maine Department of Environmental Protection

5. Massachusetts Department of Environmental Protection
6. Metro (Portland, OR)
7. Minnesota Department of Health
8. Minnesota Pollution Control Agency
9. New York State Department of Environmental Conservation
10. Oregon Department of Environmental Quality
11. Oregon Health Authority
12. San Francisco Department of the Environment
13. Vermont Department of Health
14. Washington Department of Ecology

Who would use the information being disclosed in the bill? An important question is who would use the database being created by the bill that contains information about manufacturers of products with PFAS in California and which products sold in California contain PFAS. The first group of interested parties are likely local, state, and federal regulators who would likely be very interested in this information. Businesses would also be interested, as it is possible that some manufacturers either receive parts of their product from a supplier or use a lubricating or other cleaning product that may contain PFAS and that they are unaware of. Having this information could help businesses make informed choices when choosing which products to sell or suppliers to use.

Many products containing PFAS have been banned. Which products/uses remain? According to the 2020 paper "An overview of the uses of per- and polyfluoroalkyl substances (PFAS)" by Glüge and colleagues in *Environmental Science: Processes and Impacts*, the possible uses of PFAS include, but are not limited to:

- The production of chlorine and caustic soda;
- Cable and wire insulation;
- Chrome, nickel, copper, and tin plating;
- Manufacture of basic metals and fabricated metal products;
- Cleaning of metal surfaces;
- Separation of plastic mould and moulded material;
- Antifoaming agent
- Ammunition
- Automotive waxes, windshield wiper fluid, engine oil coolers;
- Cleaning compositions for hard surfaces, carpet and upholstery cleaners, dry cleaning fluids;
- Etching and polishing of glass, surface treatments for glass;

- Manufacture of genuine or synthetic leather;
- Lubricants and greases;
- Manufacturing of paper;
- Insecticide against ants and cockroaches;
- Sealants, silicone rubber seals, and adhesives; and,
- Ski wax, sailing boat equipment, and fishing lines.

This bill: AB 2247 seeks to require public disclosure for anyone that manufactures PFAS in California or that sells a product or product component containing regulated PFAS in California. In addition to being "forever chemicals," meaning once they are produced they will persist in the environment [forever], they also cause serious health effects in humans. The proponents contend that there are uses of PFAS that are "essential," and that PFAS may be used in many products or manufacturing processes, but we just do not know where or in what products. It is difficult to determine if the use of PFAS is essential or not or if there is an exposure pathway to human health or the environment if we do not know where or how the PFAS is being used. The Legislature has enacted several bans of products containing PFAS and in doing so determined that these uses are not essential. The information being sought in AB 2247 will be useful for state, local and federal regulators as well as informative for future Legislatures.

Issues for consideration: The bill is attempting to capture a large volume of information on PFAS and that is a complicated task. The author and stakeholders will likely be discussing some ways to improve or further clarify the bill such as:

- Clarifying that the ICC will be creating the database of PFAS and not DTSC;
- Looking at the definition of "regulated PFAS". The definition currently does not have any exemptions and several industries are making a case to the author for an exemption. Additionally, this definition includes a product that has PFAS at or above the quantification limit. This is a phrase not defined in statue and may benefit from further clarification.
- Timeframes in the bill. Is one year enough time for the ICC to develop the database contemplated in the bill? Also, given the complexities of the supply chain, and the fact that some product manufacturers or sellers of products containing regulated PFAS may not know if their product contains PFAS, is 6 months from the creation of the database enough time for them to provide this information to the ICC?

Arguments in Support: According to the California Association of Sanitation Agencies, the California Municipal Utilities Association, and the League of California Cities,

"This is important and necessary information that will inform state and local decision making regarding the management of PFAS in our watersheds and the environment. Our coalition represents a variety of political subdivisions in the state including cities, counties, special districts engaged in the provision of water and wastewater services in California's local communities.

Per- and Polyfluoroalkyl substance (PFAS) have recently become a topic of public concern, due to their high mobility and resistance to breaking down naturally in the environment, as well as the persistent detection of PFAS compounds in people's bodies. The State is comprehensively investigating levels of PFAS in our environment, with a particular focus on water and wastewater resources. While significant progress is being made towards identifying pathways of PFAS in our water and sewersheds, additional information is needed for agencies to be able to make efficient management decisions: local water and wastewater agencies need to know what exactly they are looking for in order to implement effective source reduction policies to limit PFAS inputs into our systems. AB 2247 would allow us to use the PFAS disclosure data required from manufacturers of PFAS or products containing PFAS to optimize pollution prevention programs at the local level through our local pre-treatment programs, and this information would generate consumer awareness about the chemicals used in everyday products and how they impact the environment. We need data to support practical and cost effective management solutions, and AB 2247 is an important first step towards this end goal.

It's important to note that PFAS chemicals are both ubiquitous and indestructible. Without better information about sources of PFAS to support source control, local water management options are limited and costly, leading to affordability concerns for the delivery of essential public services. In some cases PFAS can be removed from water and wastewater at the end of the cycle through advanced treatment technology. However, there is no technologically feasible method for the large-scale destruction of PFAS compounds. Instead, once removed, PFAS residuals are merely displaced and transferred to another waste stream and typically cycle back through the waste management process."

Arguments in Opposition: According to a coalition in opposition, including the California Chamber of Commerce, the Chemical Industry Council, and the Household & Commercial Products Association, "Collectively, we support the responsible production, use and management of fluorinated substances, including regulatory requirements that are protective of human health and the environment, taking into consideration the diversity of physical and chemical properties and the environmental and health profiles of these substances.

With respect to AB 2247, we have several concerns including:

- An overly broad definition of PFAS that does not consider differing health/safety profiles, uses or potential for exposure.
- Overlap and redundancy with new PFAS reporting requirements underway at the US EPA.
- Ability for DTSC to address these types of issues under existing authority and the potential for expanded authority under legislation (SB 502 – Allen) currently moving in the Legislature.
- Lack of clarity on how this information will presented to the public to ensure information is presented in an unbiased, scientifically sound manner that does not cause unnecessary concern.
- Lack of any confidential business information/trade secret protections.
- Impractical implementation timelines."

According to the Animal Health Institute, writing in an "oppose unless amended" position, "On behalf of the Animal Health Institute (AHI), respectfully I am writing to request animal medicines, including drugs, vaccines, pesticide products and diagnostics (collectively, veterinary medicinal products or VMPs) be exempt from AB 2247. Unfortunately, without this exemption AHI must be oppose unless amended to AB 2247. The definition of PFAS in the bill is very broad and will likely lead to unintended and potentially farreaching consequences. Not only

would it include raw materials and process chemicals used to manufacture VMPs, certain active pharmaceutical ingredients (APIs) in these VMPs would also be considered as PFAS since they contain fluorine. These raw materials, process chemicals, and/or APIs are critical to veterinary medicinal products, and due to the unique and beneficial biochemical properties of fluorine (e.g., replacing a hydrogen atom with a fluorine atom can increase the therapeutic index of a drug), finding a direct substitute is virtually impossible. While we understand that this bill only requires reporting, our experience shows such data collection, especially without appropriate context, can lead to further constraints or misuse of the information. VMPs are already subject to a thorough and rigorous regulatory review by the U.S. Food and Drug Administration under the Federal Food, Drug and Cosmetic Act, by the U.S. Department of Agriculture under the Virus, Serum, Toxins Act, and by the Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act. They can only enter the market after successful completion of a scientific assessment, including evaluation of safety and an environmental assessment, and approval by the agency. It is critical for animal health and public health that substances used in or for veterinary medicines be differentiated from high volume industrial chemicals and not subject to the same requirements."

Related legislation:

1. AB 1817 (Ting). Prohibits, beginning January 1, 2024, a person from distributing, selling, or offering for sale in the state a textile article, as defined, that contains regulated PFAS, and requires a manufacturer to use the least toxic alternative when removing regulated PFAS in textile articles to comply with the provisions of this bill. This bill is pending action on the Assembly Floor.

2. AB 1200 (Ting, Chapter 503, Statutes of 2021). Prohibits, commencing January 1, 2023, the sale of food packaging that contains PFAS; requires, commencing January 1, 2024, cookware manufacturers to label their product if it contains an intentionally added chemical on specified lists; and prohibits, commencing January 1, 2023, for the internet and January 1, 2024, for the cookware package, a cookware manufacturer from making a claim that cookware is free of a chemical, unless no chemical from that chemical class is intentionally added to the cookware.

3. AB 652 (Freidman, Chapter 500, Statutes of 2021). Prohibits, on or after July 1, 2023, a person from selling or distributing in commerce any new juvenile products that contain PFAS.

4. SB 1044 (Allen, Chapter 308, Statutes of 2020). Prohibits the manufacture, sale, distribution, and use of firefighting foam containing PFAS chemicals by January 1, 2022, with some exceptions, and requires notification of the presence of PFAS in the protective equipment of firefighters.

5. SB 1056 (Portantino, 2020). 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.

6. 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 PFAS and requires municipalities to notify consumers for PFAS detected above notification levels.

7. AB 841 (Ting, Chapter 372, Statutes of 2019). As heard by the Assembly, would have required OEHHA to assess PFAS substances, especially as they might be found in drinking water, to determine which might pose a potential risk to human health. The contents of this bill were deleted in the Senate and amended with unrelated content.

8. 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 in the product. This bill was held on the Senate Floor.

9. SB 1313 (Corbett, 2008). Would have prohibited the manufacture, sale, or distribution of any food contact substance, as defined, which contains perfluorinated compounds, as defined, in any concentration exceeding 10 parts per billion. This bill was vetoed by Governor Arnold Schwarzenegger whose veto message said, "I have signed AB 1879 (Feuer) and SB 509 (Simitian) which mark the beginning of California's historic Green Chemistry Initiative. It is within this process that chemicals like PFCs should be addressed."

REGISTERED SUPPORT / OPPOSITION:

Support

California Association of Sanitation Agencies (CASA) (Co-Sponsor)
Environmental Working Group (Co-Sponsor)
Clean Water Action (Co-Sponsor)
Active San Gabriel Valley
Alliance of Nurses for Healthy Environments
Association of California Water Agencies (ACWA)
Ban Sup (Single Use Plastic)
Bay Area Pollution Prevention Group
Breast Cancer Over Time
Breast Cancer Prevention Partners
California Coastkeeper Alliance
California Environmental Voters
California Indian Environmental Alliance
California Municipal Utilities Association
California Product Stewardship Council
CALPIRG, California Public Interest Research Group
Camarillo Sanitary District
Camarillo; City of
Carpinteria Sanitary District
Center for Biological Diversity
Center for Environmental Health
Center for Food Safety; the
Center for Oceanic Awareness, Research, & Education
Center for Public Environmental Oversight
Central California Asthma Collaborative

Central Contra Costa Sanitary District
Central Marin Sanitation Agency
City of Camarillo
City of Roseville
City of Santa Rosa
City of Thousand Oaks
Clean Production Action
Communitiy Water Center
Consumer Federation of America
Consumer Federation of California
Crestline Sanitation District
Defend Our Health (formerly Environmental Health Strategy Center)
Delta Diablo
Dublin San Ramon Services District
East Bay Dischargers Authority
East Bay Municipal Utility District
Eastern Municipal Water District
Educate.advocate.
Elsinore Valley Municipal Water District
Erin Brockovich Foundation
Families Advocating for Chemical and Toxics Safety
Friends Committee on Legislation of California
Friends of The Earth U.S.
Goleta Sanitary Water Resource Recovery District
Green Science Policy Institute
Heal the Bay
Indivisible Alta Pasadena
Integrated Resource Management
Las Gallinas Valley Sanitary District
Las Virgenes Municipal Water District
League of California Cities
Leucadia Wastewater District
Los Angeles County Sanitation Districts
Made Safe
Mt. View Sanitary District
National Association of Environmental Medicine (NAEM)
National Resources Defense Council
National Stewardship Action Council
Nontoxic Neighborhoods
Northern California Recycling Association
Olivenhain Municipal Water District
Orange County Sanitation District
Oro Loma Sanitary District
Physicians for Social Responsibility - Los Angeles
Plastic Oceans International
Plastic Pollution Coalition
Rancho California Water District
Republic Services - Western Region
Responsible Purchasing Network

Rethink Disposable
Sacramento Regional County Sanitation District
San Francisco Bay Physicians for Social Responsibility
San Francisco Baykeeper
San Francisco Public Utilities Commission
San Jose; City of
Save Our Shores
Save the Albatross Coalition
Seventh Generation Advisors
Sierra Club California
South Tahoe Public Utility District
Surfrider Foundation
Synagro Technologies
The 5 Gyres Institute
Town of Windsor - Public Works
Truckee Sanitary District
Upstream
Vallejo Flood and Wastewater District
WateReuse Association
West County Wastewater District
Western Municipal Water District
Wholly H20
Wishtoyo Chumash Foundation
Worksafe
Zero Waste USA

Opposition

Advanced Medical Technology Association (ADVAMED)
Air Conditioning, Heating and Refrigeration Institute
Alliance for Automotive Innovation
American Chemistry Council
American Coatings Association
American Forest & Paper Association
Animal Health Institute
Association of Home Appliance Manufacturers
California Chamber of Commerce
California Manufacturers & Technology Association
Chemical Industry Council of California
Consumer Technology Association
Household and Commercial Products Association
Industrial Environmental Association
Juvenile Products Manufacturers Association
National Association of Chemical Distributors
National Electrical Manufacturers Association (NEMA)
Pine Chemicals Association International
Rockwell Automation
The Toy Association

Analysis Prepared by: Josh Tooker / E.S. & T.M. /

Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 2638 (Bloom) – As Amended April 21, 2022

SUBJECT: School facilities: drinking water: water bottle filling stations

SUMMARY: Requires that a new school construction or school modernization project submitted to the Division of State Architect by a school district or governing body of a charter school includes one or more water bottle filling stations, as specified. Specifically, **this bill**:

1) Makes legislative findings and declarations that highlight the role of drinking water to support children's health; positively impact children's cognitive performance; prevent excess weight gain; reduce sugary drink consumption; and, that state that inadequate hydration has been found to be more prevalent among boys, non-Hispanic Black, and younger children.

2) Defines a "water bottle filling station" as a water dispenser accessible to all people in compliance with the federal Americans with Disabilities Act (42 United States Code Sec. 12101 *et seq.*) that dispenses clean drinking water directly into a water bottle or other drinking container.

3) Requires a school district or governing body of a charter school to include a water bottle refilling station(s) in a new construction project or modernization project submitted to the Division of State Architect three months after voter approval of a statewide school facilities general obligation bond that provides funds for K-12 school facilities.

4) Specifies that a school undergoing modernization must have a minimum of one water bottle filling station at the school.

5) Specifies that a newly constructed school must have a minimum of one water bottle filling station per 350 people at the school.

6) Requires that water bottle filling stations be placed in or near high traffic and common areas, such as hallways; gymnasiums; school food service areas; outdoor recreation areas; and, faculty lounges.

7) Requires water bottle filling stations to meet all of the following criteria:

   A) Dispense drinking water that meets primary drinking water standards and secondary drinking water standards (as defined in Section 116275 of the Health and Safety Code (HSC)) or dispense filtered water if necessary to meet these standards;

   B) Be regularly cleaned to maintain sanitary conditions; and,

   C) Be maintained regularly to ensure proper functioning.

8) Specifies that a water bottle filling station may be combined with drinking fountains.

9) Encourages school districts and governing bodies of charter schools to install touchless water bottle filling stations for sanitary reasons.

10) Encourages school districts and governing bodies of charter schools to install water bottle filling stations that dispense cooled water if the filling stations are located near an electrical source.

11) Clarifies that an existing water bottle filling station that was installed at a school before enactment of this bill counts toward the specified minimum number of water bottle filling stations.

12) Specifies that an existing water bottle filling station that was installed at a school before enactment of this bill, but does not meet the specified requirements, may be repaired or improved by a school to meet the requirements. Upon repair or improvement to meet the requirements, the water bottle filling station may be counted toward the specified minimum number of water bottle filling stations.

13) Requires a school district or governing body of a charter school to allow pupils, teachers, and staff to bring and carry water bottles.

14) Specifies that water bottles may be excluded from places where it is deemed dangerous to have drinking water, such as libraries, computer labs, and science labs.

15) Encourages school districts and governing bodies of charter schools to develop and adopt policies about the type of water bottles that may be carried.

16) Requires administrators of a school district or the governing body of a charter school to inform teachers, staff, parents, and pupils about their rights enacted by this bill, including by the provision of information in pupil and employee handbooks and on the internet website of the school district or charter school.

17) Requires administrators of a school district or governing body of a charter school to encourage water consumption through promotional and educational activities and signage that focus on the benefits of drinking water and highlight water bottle filling stations throughout schools.

18) Requires that, if the Commission on State Mandates determines that this act contains costs mandated by the state, reimbursements to local agencies and school districts for those costs be made.

EXISTING LAW:

1) Establishes the California Safe Drinking Water Act (SDWA) and requires the State Water Resources Control Board (State Water Board) to maintain a drinking water program. (HSC § 116270, *et seq.*)

2) 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 (U.S. EPA) or the State Water Board. (HSC § 116270 *et seq.*)

3) Prohibits the use of any pipe, pipe or plumbing fitting or fixture, solder, or flux that is not "lead free" in the installation or repair of any public water system or any plumbing in a

facility providing water for human consumption. (HSC § 116875(a))

4) Requires a school district to provide access to free, fresh drinking water during meal times in the food service areas of the schools under its jurisdiction, including, but not necessarily limited to, areas where reimbursable meals under the National School Lunch Program or the federal School Breakfast Program are served or consumed. Authorizes a school district to comply with this requirement by, among other means, providing cups and containers of water or soliciting or receiving donated bottled water. (Education Code (EDC) § 38086)

5) Requires the California Department of Education (CDE) to consult with the California Department of Public Health (CDPH), the Department of Water Resources (DWR), and the State Water Board to identify available sources of funding, including, but not limited to, funding from Proposition 1, approved by the voters at the November 4, 2014, statewide General Election; funds for safe drinking water programs administered by the CDE, CDPH, DWR, and the State Water Board; other state funding; and, federal funding available to fund school water quality and infrastructure. (EDC § 38086.1)

6) Establishes as 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)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "Children are not consuming the amount of water they need to be healthy. On average, kids drink about 2.4 ounces of water when they drink directly from a water fountain, which is about the size of a condiment cup. When they have access to water bottle filling stations, they can increase their water intake by as much as triple. [...] On a given day, children who do not drink any water consume twice the calories from sugary drinks when compared to children who drink water. [...] Consumption of sugary drinks is linked to chronic diseases such as type 2 diabetes and heart disease and is a risk factor for dental caries. For some children, school may be their most reliable source of safe and appealing drinking water.

Drinking water benefits children's health. It helps children's muscles, joints, and tissues; improves their digestive system; and keeps their bodies hydrated. Drinking water can also positively impact children's cognitive performance, particularly their short-term memory. Increased access to free, safe, and appealing drinking water leads to increased consumption, which has numerous proven health benefits and leads to improved health outcomes. [...] AB 2638 will ensure that every California public K-12 student, teacher, and staff member has access to free, safe, and appealing drinking water by requiring the installation of water bottle filling stations in schools that are easily accessible."

California's drinking water program: According to the State Water Board's report *Safe Drinking Water Plan for California*, the state's public policy continues to focus on the right of every human being, as enacted by AB 685 (Chapter 524, Statutes of 2012), to have safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitation. Challenges remain to achieving this goal, including the need for an adequate supply of water for

drinking, the removal of a number of contaminants, the costs of constructing and maintaining treatment and distribution systems, and the number and nature of small public water systems that serve especially those in economically disadvantaged communities.

The Safe and Affordable Financing for Equity and Resilience (SAFER) program is a recent safe drinking water initiative established by AB 2501 (Chapter 871, Statutes of 2018) and stably funded through 2030 by SB 200 (Chapter 120, Statutes of 2019). The goal of the SAFER program is to resolve drinking water issues faced by disadvantaged communities, while also addressing broader drinking water issues faced by households and communities not served by public water systems. When Governor Newsom signed SB 200 in July 2019, he issued the following statement: "The fact that more than a million Californians can't rely on clean water to drink or bathe in is a moral disgrace… Parents shouldn't have to worry about their kids drinking from the water fountain at school, and families shouldn't have to dump water over their heads to shower every day."

Health effects of inadequate hydration: According to "Prevalence of Inadequate Hydration Among US Children and Disparities by Gender and Race/Ethnicity: National Health and Nutrition Examination Survey, 2009–2012" published in 2015 by Kenney and colleagues in the *American Journal of Public Health*, adequate hydration is crucial for the proper function of several physiological processes, including circulatory function, metabolism, temperature regulation, and waste removal. Mild dehydration is associated with headache, irritability, poorer physical performance, and reduced cognitive functioning in children and adults. Increased hydration has also been found to track with better performance on cognitive tests in children. The authors found that inadequate hydration is a prevalent, yet understudied, health problem among U.S. children and adolescents, and affects boys more than girls, and non-Hispanic Black children more than non-Hispanic White children.

Moreover, a lack of access to safe and appealing drinking water often leads to increased consumption of sugar-sweetened beverages. Intake of high amounts of added sugars can contribute to increased risks of weight gain, obesity, and diabetes. In 2017-2019, obesity affected a staggering 14.4 million children and adolescents aged 2-19 in the U.S. Notably, obesity rates are higher among Hispanic (25.6%) and non-Hispanic Black (24.2%) children, than non-Hispanic White (16.1%) and non-Hispanic Asian (8.7%) children, clearly highlighting racial and ethnic disparities."

Increasing access to drinking water in schools: While drinking fountains in schools are often the primary access point for drinking water for pupils, there are several factors that support the installation of water bottle filling stations for improved access and increased consumption of water at schools. According to a presentation by the University of California Nutrition Policy Institute and Stanford University, these factors include:

1. Low water pressure at existing drinking fountains, reducing the overall volume of water consumed;

2. Difficulty of refilling water bottles, leading to an increased purchase of water in plastic bottles;

3. Convenience of access to sugar-sweetened beverages through vending machines, which can contribute to negative health outcomes;

4. Unsanitary uses of water fountains by others;

5. Worries that water from fountains is unsafe for consumption; and,

6. Insufficient time between periods to access an adequate amount of drinking water, leading to an under-hydration (as shown by urine testing).

To address these concerns, SB 828 (Chapter 29, Statutes of 2016) and SB 862 (Chapter 449, Statutes of 2018) made budget allocations to establish a grant program within the State Water Board, administered in consultation with CDE, to award grants to local educational agencies to improve access to and quality of drinking water in public schools serving K-12, preschools, and child daycare facilities on public school property. Schools serving disadvantaged students and projects that would have a high effectiveness in increasing access to safe drinking water at schools were prioritized for the grants.

According to a 2019 pilot study, "Agua4All: Providing Safe Drinking Water in Rural California Communities" published by Patel and colleagues, "it was observed that there was an increase in water consumption when water bottle refilling stations, along with a promotional campaign, were provided." Also, according to the study which was conducted in 2 rural San Joaquin Valley communities, "increasing the number of water bottle refilling stations present a promising avenue to address issues of safe drinking water access, which commonly affect disadvantaged communities and communities of color the most."

This bill: AB 2638 would increase access to safe drinking water dispensed in a form that is likely to support improved hydration in school-aged children. Water bottle filling stations have several benefits over traditional water fountains and this bill would ensure that funds allocated to school modernization projects and newly constructed schools also contribute to improved access to drinking water. As noted by the Assembly Committee on Education, the installation of water bottle filling station is costly ($10,000 or more) and statewide mandates for all public and charter schools are impractical. To further improve access for disadvantaged communities in which a modernization project or new school construction may be a barrier, grant programs should be leveraged to increase access to safe and appealing drinking water most effectively.

Arguments in Support: According to the American Heart Association, the sponsor of AB 2638, "Increasing access to safe and clean drinking water in schools is a key strategy to build healthy habits that children will use for life to maintain a healthy body weight and to support overall health. [...] It makes children healthier by helping their muscles, joints and tissues develop properly; improving their digestion; and keeping their growing bodies hydrated. Healthy children learn better, perform better academically, and behave better. When children don't have enough water to drink, their health and their performance at school may suffer. Children who are dehydrated often have a harder time concentrating and remembering school lessons they just learned. Research shows that many children do not drink enough water. A national survey published in 2015 showed that more than half of school-aged children did not drink enough water. This survey also reflected disparities by race and gender. Inadequate hydration was more prevalent among boys, non-Hispanic black, and younger children, compared to girls, non-Hispanic white and older children. Furthermore, low-income and minority children report more negative perceptions about tap water and have poorer beverage intake habits. When children do not have access to water, they tend to have more sugary drinks [...]. When water is available from a drinking water fountain, children drink about 2.4 ounces of water (about the size

of a condiment cup). When they have access to water bottle filling stations, they can increase their water intake by as much as triple."

Double referral: This bill was previously heard by the Assembly Committee on Education where it passed on a 7–0 vote on April 20, 2022.

Related Legislation:

1) AB 1953 (Maienschein). Requires, by January 1, 2025, the owner or operator of a transit hub, local park, public building, publicly owned building, shopping mall, or golf course to install and maintain at least one, or maintain at least one existing, accessible water bottle refill station at the site. This bill is pending action in the Assembly Appropriations Committee.

2) AB 2060 (Holden, 2020). Requires end use plumbing fixtures to meet a performance standard to meet conditions of "lead-free". This bill was held on the suspense file in the Senate Appropriations Committee.

3) AB 567 (Quirk-Silva, 2017). Requires a school district to ensure that every drinking water fountain at each school is equipped with both a water fountain and a spigot, or a combination water fountain and spigot, for filling water bottles. This bill was held in the Assembly Education Committee.

4) AB 746 (Gonzalez, Chapter 746, Statutes of 2017). Requires, at least once a year, a local education agency (LEA) to test for lead in the potable water system at every schoolsite with a building constructed before January 1, 1993, including preschool locations, within the jurisdiction of the LEA. The bill requires testing at schoolsites built after 1993 at least once every three years.

5) AB 496 (Rendon, Chapter 664, Statutes of 2015). Requires CDE to identify sources of funds for safe drinking water programs and post the information on its website.

6) SB 1413 (Leno, Chapter 558, Statutes of 2010). Required, by July 1, 2011, a school district to provide access to free, fresh drinking water during meal times in the food service areas of the schools under its jurisdiction, including, but not necessarily limited to, areas where reimbursable meals under the National School Lunch Program or the federal School Breakfast Program are served or consumed. The bill authorizes a school district to comply with this requirement by, among other means, providing cups and containers of water or soliciting or receiving donated bottled water.

REGISTERED SUPPORT / OPPOSITION:

Support

American Heart Association (Sponsor)
American Cancer Society Cancer Action Network INC.
American Diabetes Association
Asian Pacific Partners for Empowerment, Advocacy and Leadership (APPEAL)
Californians Against Waste
Climate Reality Project, San Fernando Valley

Cultiva LA Salud
Garden Valley Elementary (TRUSD)
Monterey Bay Aquarium Foundation
United States Healthful Food Council Inc., DBA Eat Real

Opposition

None on file.

Analysis Prepared by: Manar Zaghlula / E.S. & T.M. /

Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 1879 (Mathis) – As Amended April 21, 2022

SUBJECT: California regional water quality control boards: unfounded or frivolous complaints

SUMMARY: Authorizes a Regional Water Quality Control Board (Regional Water Board) to develop a plan or policy to address unfounded or frivolous complaints. Specifically, **this bill**:

1) Authorizes a Regional Water Board to develop a plan or policy to address unfounded or frivolous complaints.

2) Defines "frivolous" as the same as defined in Section 128.5 of the Code of Civil Procedure.

3) Defines "unfounded" as the same as defined in Section 832.5 of the Penal Code.

EXISTING LAW:

1) Establishes the federal Clean Water Act (CWA) to regulate discharges of pollutants into the waters of the United States and to regulate quality standards for surface waters. (33 United States Code §1251 et seq.)

2) Defines "frivolous" as totally and completely without merit or for the sole purpose of harassing an opposing party. (Code of Civil Procedure § 128.5)

3) Defines "unfounded" as that the investigation clearly established that the allegation is not true. (Penal Code § 832.5)

4) Establishes the Porter-Cologne Water Quality Control Act, which prohibits the discharge of pollutants to surface waters unless the discharger obtains a permit from the State Water Resources Control Board (State Water Board). (Water Code (WC) § 13000 et seq.)

5) Delegates to the Regional Water Boards the ability to adopt water quality standards within their region of jurisdiction. (WC § 13240)

6) Authorizes a Regional Water Board, in establishing or reviewing any water quality control plan or waste discharge requirements, or in connection with any action relating to any plan or requirement, to investigate the quality of any waters of the state within its region. (WC § 13267)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "AB 1879 would grant California Regional Water Quality Control Boards the authority and discretion to choose not to investigate a complaint if the board determines it is unwarranted, or has been made fraudulently. In providing the regional water quality control boards with the necessary discretion and authority, this measure will save

local businesses and the regional water board time, money and resources which could be better utilized on addressing legitimate problems and improve the state's already scare water supply and usage. AB 1879 balances the need to identify and correct genuine violations, whilst still addressing those individuals or groups which falsely and maliciously file multiple unwarranted, unnecessarily time consuming, and wasteful complaints."

Federal Clean Water Act (CWA): The federal CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under the CWA, the US EPA has implemented pollution control programs, including setting wastewater standards for industrial facilities, as well as setting water quality standards for all contaminants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters without a permit. Industrial, municipal, and other facilities must obtain a permit under the National Pollutant Discharge Elimination System in order to discharge into surface water.

Regional Water Boards: There are nine regional water quality control boards statewide. Each Regional Water Board makes water quality decisions for its region, including setting standards, issuing waste discharge requirements, determining compliance with those requirements, and taking appropriate enforcement actions.

State Water Board enforcement priorities: The State Water Board's Water Quality Enforcement Policy recommends that the Office of Enforcement propose enforcement priorities and vet them with the Regional Water Board enforcement teams. Some of the enforcement priorities may become statewide enforcement initiatives. The Enforcement Policy also recommends that, on an annual basis, enforcement staff for each Regional Water Board seek input at a regularly noticed public meeting of the Regional Water Board and consider identifying general enforcement priorities based on input from members of the public and Regional Water Board members. According to the policy, enforcement priorities for the State Water Board include:

1) Prioritize for enforcement water quality violations that impact or threaten drinking water sources, with the highest priority for enforcement and compliance assistance being given to disadvantaged communities or communities with financial hardship;

2) Enforce storm water discharge violations with the highest adverse water quality impacts, followed by violations that threaten the integrity of the regulatory program;

3) Support irrigated lands regulatory programs with formal enforcement actions aimed at obtaining substantial enrollment and compliance with current regulatory requirements; and,

4) Improve enrollment in and compliance with the Cannabis General Order and Small Irrigation Use Registration through formal enforcement (in coordination with other state and local public agencies) for violations associated with illegal cannabis cultivation sites.

State Water Board enforcement: The State Water Board and Regional Water Boards enforce the pollution control and cleanup requirements that are established for discharges and contaminated sites. Where violations of regulatory requirements are detected, enforcement actions of varying types and levels of stringency are taken. For the most serious violations, penalties are often imposed. The State Water Board also collaborates with federal, state, and local law enforcement, as well as other environmental agencies, to address violations. In all cases, the principal goal of

enforcement is to encourage compliance with requirements so that water quality is protected. According to the State Water Board during Fiscal Year 2019-2020 there were approximately 3,820 enforcement actions, with approximately $12 million in penalties assessed.

Potential water quality violations: The author of the bill is concerned about a particular facility in his district that was the subject of an enforcement action by the Regional Water Board. Since that enforcement action was resolved there appears to be a resident who lives near the facility that continues to lodge complaints to the Regional Water Board. It is unclear at the writing of this analysis, there may be other situations in other regions. AB 1879 is designed to address this issue by authorizing a Regional Water Board to develop a plan or policy to address unfounded or frivolous complaints.

Arguments in Support: None received.

Arguments in Opposition: According to the San Francisco Bay Keeper, "Baykeeper opposes AB 1879 as limiting the Regional Water Boards' investigation discretion will impair the Regional Water Board's ability to investigate repeat violators. Moreover, AB 1879 is unnecessary because the Regional Water Boards' chronic understaffing effectively requires them to use their discretion regarding how and when to investigate violations. A determination by the Regional Water Board staff to direct limited agency resources to conduct multiple investigations of a single violator should not be taken lightly, as this is often an indicator of a bad actor requiring frequent regulatory oversight. Regional Water Board staff knows how to prioritize its work without arbitrary limitations."

Note: The letter by the San Francisco Bay Keeper was on a prior version of the bill and as of the writing of this analysis the committee has not received any new correspondence from them.

Related Legislation:

AB 377 (Robert Rivas, 2021). Would have required, by January 1, 2025, the State Water Board and the Regional Water Boards to evaluate impaired state surface waters and report to the Legislature a plan to bring all water segments into attainment by January 1, 2050. Would have required, by January 1, 2023, the State Water Board and Regional Water Boards to prioritize enforcement of water quality standard violations that are causing or contributing to an exceedance of a water quality standard in a surface water of the state. This bill was not heard in the Assembly Appropriations Committee and subsequently died on file.

REGISTERED SUPPORT / OPPOSITION:

Support

None on file.

Opposition

San Francisco Bay Keeper

Analysis Prepared by: Josh Tooker / E.S. & T.M. /

Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 2639 (Quirk) – As Amended April 19, 2022

SUBJECT: San Francisco Bay/Sacramento-San Joaquin Delta Estuary: water quality control plan: water right permits

SUMMARY: Requires the State Water Resources Control Board (State Water Board) to complete an update and implementation, as specified, of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary Water Quality Control Plan (Bay-Delta Plan) by December 31, 2023, and places a moratorium on new water rights permits resulting in increased diversions in the Sacramento River/San Joaquin River watershed after January 1, 2024, unless and until the update and implementation are completed. Specifically, **this bill**:

1) Requires the State Water Board to, on or before December 31, 2023, adopt a final update of the Bay-Delta Plan, which was adopted by the State Water Board pursuant to Resolution No. 95-24 on May 22, 1995, and amended on December 13, 2006 (relating to the Sacramento River).

2) Requires the State Water Board to, on or before December 31, 2023, through regulation or other appropriate implementation methods, implement the amendments to the Bay-Delta Plan, which were adopted by the State Water Board pursuant to Resolution No. 2018-0059 on December 12, 2018 (relating to the San Joaquin River).

3) Prohibits the State Water Board, on or after January 1, 2024, from approving any new water rights permits that would result in new or increased diversions to surface water storage from the Sacramento River/San Joaquin River watershed until and unless the State Water Board has taken the actions described in in the two provisions above.

EXISTING LAW:

1) Establishes as Legislative intent that the health, safety and welfare of the people of the state requires that there be a statewide program for the control of the quality of all the waters of the state; that the state must be prepared to exercise its full power and jurisdiction to protect the quality of waters in the state from degradation originating inside or outside the boundaries of the state; …and that the statewide program for water quality control can be most effectively administered regionally, within a framework of statewide coordination and policy. (Water Code (WC) § 13000)

2) Establishes as Legislative intent that the State Water Board and each regional water quality control board (Regional Water Board) shall be the principal state agencies with primary responsibility for the coordination and control of water quality. (WC § 13001)

3) Defines "beneficial uses" of the waters of the state that may be protected against quality degradation to include, but not be limited to, domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. (WC § 13050 (f))

4) Provides that a "water quality control plan" consists of a designation or establishment for the waters within a specified area of all of the following: beneficial uses to be protected; water quality objectives; and, a program of implementation needed for achieving water quality objectives. (WC § 13050 (j))

5) Requires state policy for water quality control to be periodically reviewed and authorizes it to be revised. (WC § 13143)

6) Authorizes the State Water Board to adopt water quality control plans for waters for which water quality standards are required by the Federal Water Pollution Control Act. Provides that such plans, when adopted, supersede any regional water quality control plans for the same waters to the extent of any conflict. (WC § 13170)

7) Requires each Regional Water Board to formulate and adopt water quality control plans for all areas within the region, as specified. Requires the Regional Water Boards, during the process of formulating the plans, to consult with and consider the recommendations of affected state and local agencies. Requires that the plans are periodically reviewed and authorizes revision. (WC § 13240)

8) Requires each Regional Water Board to establish water quality objectives in water quality control plans that, in its judgement, will ensure the reasonable protection of beneficial uses and the prevention of nuisance, as specified. (WC § 13241)

9) Requires a Regional Water Board, when establishing the above mentioned water quality objectives, to include the following factors: past, present and probable future beneficial uses of water; environmental characteristics of the hydrographic unit under consideration, including the quality of available water; water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area; economic considerations; the need to develop housing; and, the need to develop and use recycled water. (WC § 13241)

10) Requires the program of implementation for achieving water quality objectives to include, but not be limited to: a description of the nature of actions that are necessary to achieve the objectives, including recommendations for appropriate action by any entity, public or private; a time schedule for the actions to be taken; and, a description of surveillance to be undertaken to determine compliance with objectives. (WC § 13242)

11) Prohibits a Regional Water Board from adopting any water quality control plan unless a public hearing is first held. (WC § 13244)

12) Prohibits a water quality control plan, or a revision thereof adopted by a Regional Water Board, from becoming effective unless and until it is approved by the State Water Board. (WC § 13245)

13) Requires the State Water Board to act, as specified, upon any water quality control plan not later than 60 days from the date the Regional Water Board submitted the plan to the State Water Board, or 90 days from the date of resubmission of the plan. (WC § 13246)

14) Requires the Governor of a State or the State water pollution control agency of such State to, from time to time (but at least once each three year period beginning October 18, 1972) hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards. (33 United States Code (U.S.C.) § 1313 (c)(1)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author,

> "The Bay-Delta watershed is of great environmental and economic importance to California, but prolonged droughts, higher average temperatures, less predictable precipitation and other factors have degraded water quality in the Bay-Delta. This degradation has driven native fish populations to the point of near extinction and threatens a water resource that is vital for California's drinking water and irrigation. The [State Water Board] is responsible for protecting the water in the Bay-Delta by adopting and implementing water quality objectives as part of the Bay-Delta Water Quality Control Plan (Bay-Delta Plan). However, the last major updates to this plan were adopted in 1995 and the process to update the current standards began in 2009.
>
> Updates to the Bay-Delta Plan are urgently needed to protect California's drinking water, fish, and the watershed itself from worsening threats imposed by climate change. This bill codifies the current goal of the State Water Board to adopt and implement an update to the Bay-Delta Plan by the end of 2023. If the Water Board misses the deadline, this bill pauses issuing new water rights that would divert additional flow away from the Bay-Delta to surface water storage. This narrow moratorium would only be in effect until the Water Board updates the Bay-Delta Plan, so that these water rights permits can be assessed using contemporary water quality standards."

Water quality management in California: California's Porter-Cologne Water Quality Control Act (Porter-Cologne Act, 1969), which became Division Seven ("Water Quality") of the State Water Code, establishes the responsibilities and authorities of the nine Regional Water Boards and the State Water Board. The Porter-Cologne Act names the Regional and State Water Boards, "... the principal State agencies with primary responsibility for the coordination and control of water quality" (WC § 13001). Under this authority, the State Water Board establishes statewide water quality control policy and regulation; coordinates Regional Water Board efforts; and, reviews Regional Water Board actions for consistency with statewide policy and regulation. The Regional Water Boards are semi-autonomous and make critical water quality decisions for their region. All duties and responsibilities of the Regional Water Boards are to be directed at providing reasonable protection and enhancement of the quality of both surface and ground waters in the region.

Water Quality Control Plans: Under California statute, each Regional Water Board is directed to, "...formulate and adopt water quality control plans for all areas within the region" (WC § 13240). A water quality control plan is statutorily defined as having three components: beneficial uses to be protected; water quality objectives that protect those uses; and, a program of implementation needed to achieve the water quality objectives (WC § 13050). Further, statute states that, "such plans shall be periodically reviewed and may be revised" (WC § 13240). The

State Water Board is also authorized to adopt water quality control plans on its own initiative (WC § 13170). When the State Water Board adopts a water quality control plan, that plan supersedes regional water quality control plans for the same waters to the extent of any conflict (WC § 13170).

A water quality control plan is the State or Regional Water Board's master water quality control planning document and typically begins by listing the various water uses (beneficial uses). Then, it describes the water quality that must be maintained to allow for those uses (water quality objectives). Together, the beneficial uses and the water quality objectives established to reasonably protect the beneficial uses are called water quality standards under the terminology of the federal Clean Water Act. Next, the water quality control plan outlines the implementation plan and describes the programs, projects, and other actions necessary to achieve the standards established in the water quality control plan.

The objective of water quality control plans is to determine how the quality of surface water and groundwater in the region should be managed to provide the highest water quality reasonably possible. Water uses and water benefits vary, and water quality is an important factor in determining use and benefit. For example, drinking water has to be of higher quality than the water used to irrigate pastures. Both are legitimate uses, but the quality requirements for irrigation are different from those for domestic use. The water quality control plan recognizes such variations.

Bay-Delta system: According to the United States Geological Survey, the San Francisco Bay and the Sacramento-San Joaquin Delta, which together are referred to as the "Bay-Delta," covers more than 1,600 square miles and forms the largest estuary on the west coast of the Americas. The Bay-Delta is home to nearly 10 million people and is valued for its beauty, Mediterranean climate, and recreational opportunities. The estuary is also home to a diverse community of plants and animals and is the hub of California's freshwater-delivery system to move water from the northern to the southern part of the State. It drains a watershed of more than 75,000 square miles that covers more than 40 percent of California. This system is a source of drinking water for more than 25 million Californians and irrigation for more than 4 million acres of farmland in the Sacramento-San Joaquin (Central) Valley. The health of the Bay-Delta Estuary is important to the natural environment and economy of California.

Challenges facing the Bay-Delta: The 2018 Bay-Delta Plan document notes that historic and current human activities (e.g., water development, land use, wastewater discharges, introduced species, and harvesting), amplified by variations in natural conditions, have degraded the beneficial uses of the Bay-Delta, as evidenced by the declines in populations of many biological resources of the Bay-Delta. The California Department of Water Resources (DWR) also states that the long-term sustainability of the Sacramento-San Joaquin Delta system is threatened by floods, rising sea levels, earthquake damage, aging levees, invasive species, and contaminants. DWR notes that the Delta ecosystem is facing threats that impact native plants, animals, migratory waterfowl, and fish. Iconic Delta smelt, indicators of the estuary's health, are on state and federal agencies' threatened and endangered lists. Equally iconic Chinook salmon and other native fish species also are in trouble as a result of engineered stream flows and disturbances caused by the water pumps in the system.

Bay-Delta Plan: According to the State Water Board, "protecting the Bay-Delta watershed and its many beneficial uses is one of [its] primary responsibilities and top priorities." The State

Water Board is responsible for adopting and updating the Bay-Delta Plan, which establishes water quality control measures and flow requirements needed to provide reasonable protection of beneficial uses in the watershed. The State Water Board states that it, "is now engaged in urgent efforts to address prolonged and precipitous declines of native aquatic species in the Bay-Delta and the ecosystem they depend upon."

The Bay-Delta Plan is currently being updated through two separate processes. First, on December 12, 2018, through State Water Board Resolution No. 2018-0059, the State Water Board adopted the Bay-Delta Plan amendments and related documents establishing the Lower San Joaquin River flow objectives and revised southern Delta salinity objectives. The State Water Board notes that on February 25, 2019, the Office of Administrative Law approved these Bay-Delta Plan amendments, which are now in effect. Second, the State Water Board is considering Bay-Delta Plan amendments focused on the Sacramento River and its tributaries, Delta eastside tributaries (including the Calaveras, Cosumnes, and Mokelumne rivers), Delta outflows, and interior Delta flows.

Updates to the Bay-Delta Plan: A February 3, 2022 paper entitled, "Updating California Water Laws to Address Drought and Climate Change" (paper), which was drafted by water law experts convened by the Planning & Conservation League, lays out the following background and timelines of the Bay-Delta Plan development and updates.

As mentioned above, existing state statute provides that water quality control plans "shall be periodically reviewed and may be revised" (WC § 13240). Additionally, Section 303(c)(1) of the federal Clean Water Act mandates that, "The Governor of a State or the State water pollution control agency of such State shall from time to time (but at least once each three-year period beginning with the date of enactment of the Federal Water Pollution Control Act Amendments of 1972) hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards" (33 U.S.C. § 1313 (c)(1)).

Since 1978, the State Board has invoked its displacing power under WC § 13170 and has adopted water quality control plans for the Bay-Delta watershed (the Bay-Delta Plan) that have superseded the Central Valley and San Francisco Bay Regional Water Boards' planning authority, where the plans conflict. Under this authority, the State Board adopted water quality control plans in 1978 and in 1995 for the Sacramento-San Joaquin Delta watershed setting flow objectives to protect fishery beneficial uses. The paper states that the State Board has not comprehensively revised these objectives since 1995.

According to the paper, over the decades, the State Water Board has held numerous public meetings and workshops, released multiple technical reports for public comment, and revised the Bay-Delta Plan, but no new water quality objectives have been adopted in subsequent revisions. In 2018 the State Water Board issued a document entitled "July 2018 Framework for the Sacramento/Delta Update to the Bay-Delta Plan" that recognized the need for "urgent efforts in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta) to address prolonged and precipitous declines of native aquatic species and the ecosystem they depend upon." The document then described the two separate processes "that are critically important to the health and survival of the Bay-Delta ecosystem." Those are the two processes described above: the update to the water quality objectives for the Lower San Joaquin River and the Southern Delta (San Joaquin River update); and the update to the objectives for the Sacramento River and its

tributaries, Delta eastside tributaries, Delta outflows, and interior Delta flows (Sacramento River update).

The paper notes that on December 12, 2018, the State Board adopted the San Joaquin River/Southern Delta update, materially revising the fishery flow objectives for Lower San Joaquin River and imposing new agricultural salinity objectives for the Southern Delta, but those objectives have not yet been implemented. In 2019, the Newsom administration moved forward with talks among Bay-Delta stakeholders aimed at voluntary stakeholder agreements that proponents argued would offer legally and scientifically defensible alternatives to the new objectives. After almost three years of talks, the Newsom administration, in an October 20, 2021 letter, acknowledged the talks had not produced defensible objectives for the San Joaquin River and its tributaries and directed the State Water Board to "resume all activities necessary to implement the flow objectives established by the 2018 Bay-Delta Plan for the Lower San Joaquin River and its three major tributaries, the Stanislaus, Tuolumne, and Merced rivers."

Recommendations for a Bay-Delta Plan update: The paper argues, "Considering the demonstrated decline in the state's native fisheries and the state's clear authority to address this decline, the state's failure during the last quarter of a century to adopt and implement revised fishery flow objectives for the Bay-Delta Estuary represents an unacceptable public policy failure. To remedy this failure, we recommend the following legislative reforms[:]

- The State Water Board shall adopt a final Sacramento River/Delta update of the 1995 Bay-Delta Plan as amended by the 2006 Bay-Delta Plan by December 31, 2023.

- The State Water Board shall implement the final San Joaquin River/Southern Delta update of the 1995 Bay-Delta Plan as amended by the 2006 Bay-Delta Plan through State Water Board regulations or other appropriate implementation methods by December 31, 2023.

- The State Board shall not approve any new water right permits or extensions of time for any existing permits resulting in new or increased diversions to surface water storage from the Sacramento River/San Joaquin River watershed until the State Board has adopted a final Sacramento River/Delta update and has implemented the San Joaquin River/Southern Delta update through State Water Board regulations or other appropriate implementation methods."

This bill: According to the author's office, "This bill acts directly on a recommendation from a group of water law experts convened by the Planning & Conservation League to set a hard deadline for adopting and implementing updates to the Bay-Delta Plan."

The provisions of AB 2639 closely align with the recommendations in the paper. First, the bill requires the State Water Board to, on or before December 31, 2023, through regulation or other appropriate implementation methods, implement the amendments to the Bay-Delta Plan adopted by the State Water Board pursuant to Resolution No. 2018-0059 on December 12, 2018. This is the process related to the San Joaquin River.

Second, it requires the State Water Board to, on or before December 31, 2023, adopt a final update of the 1995 Bay-Delta Plan adopted by the State Water Board in Resolution No. 95-24 on

May 22, 1995, and amended by the State Water Board in Resolution No. 2006-0098 on December 13, 2006. This is the process relating to the Sacramento River.

Finally, the bill prohibits the State Water Board, on or after January 1, 2024, from approving any new water right permits that would result in new or increased diversions to surface water storage from the Sacramento River/San Joaquin River watershed until and unless the State Water Board has taken the actions described in in the two provisions above.

In support of potential legislative action on the Bay-Delta Plan, the Legislative Analyst Office's "2022- 23 State Water Resources Control Board— Bay-Delta Plan Update" argues, "Updating the water quality objectives for the Delta watershed is long overdue and should be a high priority for the state to complete. As noted, the last major update was nearly 30 years ago… (G)iven the prolonged time line for and importance of updating the plan, the Legislature may want to consider whether it could take steps to help expedite [the State Water Board's] progress. Such steps could include providing additional funding, further increasing staffing levels, or adopting statutory guidance or deadlines."

The author notes that the deadlines in the bill are also supported by a State Water Board staff presentation at the State Water Board's December 8, 2021, meeting regarding the Bay-Delta planning process. During the presentation, State Water Board staff described the process for implementing Bay-Delta Plan updates through State Water Board regulations rather than through amendments to water right permits and licenses. Subject to State Water Board approval of this approach, staff projected final adoption of the California Environmental Quality Act document on regulations implementing the San Joaquin River/Southern Delta update by spring 2023 and the submittal of final regulations to the Office of Administrative Law by summer 2023. Staff further estimated that the State Water Board adoption of the final Sacramento River/Delta update to the Bay-Delta Plan could happen by late fall 2023.

Arguments in support: A coalition of dozens of supporters argues, "It has been 27 years since the [State Water Board] updated the [Bay-Delta Plan]. The State [Water] Board itself recognized the need for "urgent efforts in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay Delta) to address prolonged and precipitous declines in native aquatic species and the ecosystem they depend on." Those declines now include several species on the precipice of extinction.

In addition, California is poised to make billions of dollars of investments in new water infrastructure. That includes storage projects, groundwater recharge and wetlands restoration. Updated standards are required for the [State Water Board] to make decisions on what projects will serve the best and highest uses. Without updated standards proposed projects will be caught in bureaucratic limbo that could last many years if not decades.

In January of this year, the Legislative Analyst's Office found that, "updating the Water Quality Objectives for the Delta Watershed is long overdue and should be a high priority for the state to complete."

On December 8, 2021 the [State Water Board] staff publicly stated to the [State Water Board] that they could complete the update by late fall of 2023. That is within the schedule in AB 2639."

Arguments in opposition: A coalition of dozens of opponents argues, "While completion of the Plan update is important, the proposed December 31, 2023 deadline (in subdivision (a)) for adoption of the final Bay-Delta Plan update is not workable… While our organizations appreciate the need for the process to come to a conclusion, rushing things at the end can work against engagement with the public in important public processes…

The proposed December 31, 2023 deadline in subdivision (b) for implementation of the final San Joaquin River/Southern Delta update of the Bay-Delta Plan is not workable and would be counter-productive. First, proposed subdivision (b) ignores that there are multiple lawsuits pending relative to the final San Joaquin River/Southern Delta update. Second, the proposed deadline could have the effect of negatively refocusing the State Water Board's implementation efforts and weakening due process in this complex area. As proposed, subdivision (b) could have the unintended effect of redirecting State Water Board resources away from completing ongoing negotiations with interested Lower San Joaquin River tributaries…

The proposed prohibition on any new water right permits resulting in new or increased diversions to surface water storage from the Sacramento River/San Joaquin River Watershed until the State Water Board's two actions are completed would have profound negative impacts on water management and should be deleted. Water agencies proactively evaluate the needs of their service areas for decades to come, and, as a result, many ACWA members have water right applications currently pending before the State Water Board. Other applications are under development. Obtaining these rights is necessary to meet future demands from a growing population, respond to climate change, diversify water supplies, and more. Artificially tying these applications to the Bay-Delta Plan process endangers this forward-thinking approach and the ability of agencies to provide water for their customers and the environment."

The opposition coalition has proposed amendments to the bill that would, among other things, delete the deadline by which the State Water Board must adopt a final update to the Sacramento River portion of the Bay-Delta Plan (and instead require a report to the Legislature); delete the requirement that that State Water Board implement the San Joaquin River portion of the Bay-Delta Plan (and instead require the release of a draft environmental review); and, delete provisions that enact a moratorium on new water rights permits if the State Water Board fails to adhere to the deadlines in the bill.

Dual referral: This bill passed out of the Assembly Water, Parks, and Wildlife Committee on April 5, 2022, on a 9–4 vote.

Related legislation:

1) AB 1242 (Gray, 2015). Would have required the State Water Board to consider any groundwater sustainability plan in formulating state policy for water quality control or adopting or approving a water quality control plan. AB 1242 died in the Senate Rules Committee.

2) SBx7 1 (Simitian, Chapter 5, Statutes of 2009-10 Seventh Extraordinary Session). Requires, among other provisions, the State Water Board to develop new flow criteria for the Delta ecosystem necessary to protect public trust resources within nine months (i.e., by fall 2010), to inform planning decisions in the Delta Plan (developed by the Delta Stewardship Council) and the Bay Delta Conservation Plan.

REGISTERED SUPPORT / OPPOSITION:

Support

American Rivers
American Whitewater
California Outdoors
California Sportfishing Protection Alliance
California Water Impact Network
California Water Research
Center for Biological Diversity
Coast Action Group
Communitiy Water Center
Defenders of Wildlife
Early Childhood Matters
Environmental Justice Coalition for Water
Environmental Water Caucus
Foothill Conservancy
Friends of The River
Golden State Salmon Association
Natural Resources Defense Council
Nontoxic Neighborhoods
O.A.R.S.
Pacific Coast Federation of Fishermen's Associations
Planning and Conservation League
Protect American River Canyons
Restore the Delta
Save California Salmon
Save the American River Association
Sierra Club California
South Yuba River Citizens League
Southern California Watershed Alliance
Tuolumne River Trust
Water Climate Trust
Winnemem Wintu Tribe

Opposition

Amador Water Agency
American Council of Engineering Companies of California
Anderson-Cottonwood Irrigation District
Association of California Water Agencies (ACWA)
Bella Vista Water District
California Chamber of Commerce
California Farm Bureau
California Municipal Utilities Association (CMUA)
Calleguas Municipal Water District
Coachella Valley Water District

Coastside County Water District
Cucamonga Valley Water District
El Dorado Irrigation District
Elsinore Valley Municipal Water District
Foothill Municipal Water District
Fresno Irrigation District
Glenn-Colusa Irrigation District
Kinneloa Irrigation District
Lake Arrowhead Community Services District
Las Virgenes Municipal Water District
Mercy Springs Water District
Modesto Irrigation District
Mojave Water Agency
Northern California Water Association
Oakdale Irrigation District
Panoche Water District
Regional Water Authority
Rowland Water District
San Gabriel Valley Municipal Water District
Three Valleys Municipal Water District
Turlock Irrigation District
Upper San Gabriel Valley Municipal Water District
Valley Center Municipal Water District
Western Canal Water District
Western Growers Association
Western Municipal Water District

Analysis Prepared by: Shannon McKinney / E.S. & T.M. /

Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 2787 (Quirk) – As Amended April 7, 2022

SUBJECT: Microplastics in products

SUMMARY: Prohibits a person from selling, distributing, or offering for promotional purposes specified products that contain intentionally added microplastics. Specifically, **this bill**:

1) Defines "intentionally added microplastic" as a microplastic that a manufacturer has intentionally added to a product and that has a functional, technical, or decorative effect in the product.

2) Defines "microbead" as a microplastic used in a mixture as an abrasive to exfoliate, polish, or clean.

3) Defines "microplastic" as a material consisting of solid polymer-containing particles, to which chemical additives or other substances may have been added, and 1 percent weight by weight (w/w) or more of the particles are either of the following sizes:

   a) Five millimeters (mm) or less in all dimensions; or,

   b) For fibers, three nanometers (nm) to 15 mm, inclusive, in length and a length to a diameter ratio of greater than three.

4) Exempts from the definition of "microplastic" a polymer that occurs in nature and that has not been chemically modified, other than by hydrolysis.

5) Prohibits a person from selling, distributing in commerce, or offering for promotional purposes in this state any of the following products, on or after the date specified, if the product contains intentionally added microplastics:

   a) Rinse-off cosmetic products not subject to regulation pursuant to the Plastic Microbeads Nuisance Prevention Law, on or after January 1, 2027;

   b) Leave-on cosmetic products, on or after January 1, 2029;

   c) Detergents containing microbeads, encapsulated fragrance, or other microplastics, on or after January 1, 2028; and,

   d) Waxes and polishes, on or after January 1, 2028.

6) Exempts the following products from the prohibitions in this bill:

   a) A product consisting, in whole or in part, of a substance or mixture containing microplastics where the microplastic meets both of the following conditions:

i. The microplastic is contained by technical means throughout the whole lifecycle to prevent releases of microplastic to the environment; and,

ii. Any microplastic-containing wastes arising are incinerated or disposed of as hazardous waste;

b) A product consisting, in whole or in part, of a substance or mixture containing microplastics where the physical properties of the microplastic are permanently modified when the substance or mixture is used so that the polymers no longer fall within the definition of microplastic, as defined in this bill; and,

c) A product consisting, in whole or in part, of a substance or mixture containing microplastics where the microplastic is permanently incorporated into a solid matrix when used.

7) Provides that a person who violates, or threatens to violate, the prohibitions in this bill may be enjoined in any court of competent jurisdiction.

8) Provides that a person who violates, or threatens to violate, the prohibitions in this bill is liable for a civil penalty not to exceed $2,500 per day for each violation, in addition to any other penalty established by law. Authorizes that civil penalty to be assessed and recovered in a civil action brought in any court of competent jurisdiction.

9) Requires a court, in assessing the amount of a civil penalty for a violation of the prohibitions in this bill, to consider all of the following: the nature and extent of the violation; the number and severity of the violations; the economic effect of the penalty on the violator; whether the violator took good faith measures to comply with the requirements of this bill and when these measures were taken; the deterrent effect that the imposition of the penalty would have on both the violator and the regulated community as a whole; and, any other factors that justice may require.

10) Authorizes the Attorney General, a district attorney, a city attorney, or a city prosecutor, as specified, to bring actions pursuant to the provisions of the bill.

11) Requires that civil penalties collected pursuant to the provisions of this bill be paid to the office that brought the action.

EXISTING LAW:

1) Requires, on or before December 31, 2024, the Ocean Protection Council (OPC), to the extent funding is available, to adopt and implement a Statewide Microplastics Strategy (OPC Strategy) related to microplastic materials that pose an emerging concern to ocean health. Requires OPC to work with the State Water Resources Control Board (State Water Board), the Office of Environmental Health Hazard Assessment, and other interested entities in developing the OPC Strategy. Establishes that the goal of the OPC Strategy is to increase understanding of the scale and risks of microplastic materials on the marine environment and identify solutions to address the impacts of microplastic materials, to the extent feasible. (Public Resources Code (PRC) § 35635)

2) Establishes the Plastic Microbeads Nuisance Prevention Law, which prohibits, on or after January 1, 2020, the sale or offering for promotional purposes of any personal care products containing plastic microbeads that are used to exfoliate or cleanse in a rinse-off product, including but not limited to, toothpaste. Defines "plastic microbead" as an intentionally added solid plastic particle measuring 5 millimeters (mm) or less in every dimension. (PRC § 42360 et seq.)

3) Requires the State Water Board to:

   a) Adopt a definition of microplastics for drinking water;

   b) Adopt a standard methodology to be used in the testing of drinking water for microplastics;

   c) Adopt requirements for four years of testing and reporting of microplastics in drinking water, including public disclosure;

   d) Consider, if appropriate, issuing a notification level or other guidance to aid consumer interpretations of the results of the testing; and,

   e) Accredit qualified laboratories in California to analyze microplastics. (Health and Safety Code (HSC) § 116376)

4) Requires the State Water Board and the regional water quality control boards to, by January 1, 2009, implement a program to control discharges of preproduction plastic (nurdles) from point and nonpoint sources. Requires the program control measures to, at a minimum, include waste discharge, monitoring, and reporting requirements that target plastic manufacturing, handling, and transportation facilities. (Water Code § 13367))

5) Establishes the Microbead-Free Waters Act of 2015, which prohibits the manufacturing, packaging, and distribution of rinse-off cosmetics, including toothpaste, containing plastic microbeads. Defines "plastic microbead" as any solid plastic particle that is less than five millimeters in size and is intended to be used to exfoliate or cleanse the human body or any part thereof. Preempts state action on microbeads. (21 United States Code § 331)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "Microplastic pollution is an extremely pervasive environmental problem. Microplastics have been found in air, water, and soil around the world and studies have found that over 180 species ingest microplastics—including humans. The California legislature has taken significant steps to curb microplastic pollution, including AB 888 (Bloom, 2015) which banned the sale of rinse-off personal care products that contained microbeads (microplastics that are used as scrubbing agents).

However, microplastics are still widely used in many consumer products including cosmetics, detergents, and cleaning products. Continued, non-essential use of microplastics in products allows microplastics to be flushed down the drain and released to water and soil, including farmland. In February 2022, the Ocean Protection Council adopted the Statewide Microplastics

Strategy, which recommended expanding AB 888 (Bloom, 2015) to ban microplastics in additional products. This bill directly acts on that recommendation to prohibit the sale of cosmetics, detergents, and certain cleaning products that contain intentionally-added microplastics to prevent further microplastic pollution."

Plastics: According to a 2017 article in *Science Advances*, researchers found that by 2015, humans had generated 8.3 billion metric tons of plastics, 6.3 billion tons of which had already become waste. Of that waste total, only 9 percent was recycled, 12 percent was incinerated and 79 percent accumulated in landfills or the natural environment. If current trends continue, roughly 12 billion metric tons of plastic waste will be in landfills or the natural environment by 2050. A 2020 article in *Science Advances* found that the U.S. produces more plastic waste than any other country, a portion of which is inadequately managed through exports to other countries. In fact, the article notes, the United States is the second largest exporter of plastic scrap globally.

The 2020 *Science Advances* article states that plastic waste contaminates all major ecosystems on the planet, and, as smaller and more widespread plastic particles are identified in both the natural and built environments, concern is rising about the potential impact of plastic waste on wildlife and human health. According to Jenna Jambeck, PhD, co-author of both *Science Advances* studies noted above, "Most plastics don't biodegrade in any meaningful sense, so the plastic waste humans have generated could be with us for hundreds or even thousands of years." Over time, however, plastics can break down into pieces of ever-decreasing size, and typically those less than 5 mm in size are known as microplastics.

Microplastics: The Ocean Protection Council's February 2022 "Statewide Microplastic Strategy," (OPC Strategy) explains that microplastics fall into two general categories: primary microplastics manufactured at a small size (e.g., preproduction plastic pellets used in manufacturing or microbeads in personal care products) or secondary microplastics that result from the breakdown of larger plastics. Microplastics have a range of polymer types, sizes, shapes, and associated chemicals, with irregular shapes and fibers.

Microplastic uses: According to the Department of Toxic Substances Control's report, "Green Ribbon Science Panel Background Document: Microplastics, November 2021," (DTSC report) microplastics are used in a wide range of consumer products, including rinse-off and leave-on cosmetics, household and industrial detergents, medical devices and medications, food products, paints and industrial coatings, waxes, polishes, decorative glitters, and textiles. They are also used in a variety of applications in the oil and gas industry, in abrasive blasting, in adhesives, and in 3D printing. Laser printer toner is mostly made of granulated plastic particles. Microplastics are also used in controlled-release fertilizer applications.

Microplastics fill a variety of functions in cosmetics including exfoliating and cleansing, controlling opacity, providing an illuminating effect on skin, and imparting a smooth and silky feel. In detergents, microplastics act as abrasives, fragrance encapsulations, opacifying agents, and anti-foaming agents. In medical devices microplastics may function as polymeric fillers, adsorbers, and reagents. Microplastics are also used in controlled-release medications and to mask unpleasant tastes in certain food products such as vitamins. Microplastics function in paints to facilitate film formation. They are also used in architectural and industrial coatings to provide surface texture, enhance matting, resist abrasion and scratching, and provide sheen control.

Microplastic pollution: The OPC Strategy reports that worldwide, an estimated 11 million metric tons of plastic enter the ocean each year, and without any intervention, this amount is anticipated to triple by 2040. Plastics are recognized globally as the most harmful and persistent fraction of marine litter, accounting for at least 85 percent of total marine waste.

In California, microplastics have been observed in Monterey Bay, San Francisco Bay, the Greater Farallones National Marine Sanctuary, Lake Tahoe, and in Southern California waterways. Microplastics have been found increasingly in marine organisms, including mammals, fish, mollusks, and crustacean.

The OPC Strategy notes that microplastics are not only a marine pollution problem. Microplastics have been found nearly everywhere scientists have looked, from pristine mountain streams to agricultural soil, and within human placenta, stool samples, and lung tissue.

The DTSC report describes that microplastics are ubiquitous in the environment, as they are found in air, water, soil, and sediment in a variety of ecosystems. Stormwater is likely a large source of microplastics and rubber fragments that enter water bodies. Microplastics are emitted from motor vehicle tires as tire wear particles. Soil erosion and surface runoff from landfills where plastic has been discarded are other major sources of microplastics reaching oceans.

The DTSC report states that there is specific concern about the release of microplastics into the environment because they tend to persist for long periods of time; may be ingested by animals and transfer within food chains; have been documented in many different environments; and, are considered a pervasive global pollutant.

Microplastics exposure concerns: According to the DTSC report, ingestion is the primary exposure route for microplastics, and inhalation is a secondary route of exposure. More than 180 species have been shown to ingest microplastics, including humans, birds, turtles, shellfish, fish, and various marine organisms.

The DTSC report states that humans are exposed to microplastics through drinking water, air, and food, and plastics have been identified in human feces, confirming exposure. Recent research suggests that plastic accumulation in foods is likely underestimated. Additional studies on ingestion, retention, and depuration rates of microplastics and their chemical additives under environmentally realistic conditions are needed to further evaluate the overall trophic transfer of microplastic.

Human health impacts of microplastics: The OPC Strategy notes that microplastics can enter the food web, where plastic particles can transfer into tissue and expose humans to plastic-associated and endocrine disrupting chemicals. In toxicity studies, the OPC Strategy reports, microplastic exposures have been shown to cause adverse effects, including tissue inflammation, impaired growth, developmental anomalies, and reproductive difficulties.

The DTSC report describes that chronic exposure to microplastics may cause adverse impacts to human health and the environment due to potential hazards associated with microplastic particles and their associated chemicals. The study argues that exposure to microplastic particles can cause growth inhibition and behavior alteration through oxidative stress and inflammatory responses. Chemical additives associated with microplastic particles (e.g., PAHs, PCBs, DDT, PBDEs, heavy metals, etc.) can also leach out and harm exposed organisms (e.g., through cytotoxicity).

Recent California action on microplastics: California has taken several initial steps to address the microplastics pollution problem. AB 888 (Bloom, 2015) prohibits, on or after January 1, 2020, any person from selling or offering for promotional purposes in California any personal care products containing plastic microbeads that are used to exfoliate or cleanse in any rinse-off product.

SB 1422 (Portantino, 2018) requires the State Water Board to adopt a definition of microplastics in drinking water on or before July 1, 2020. The bill also requires the State Water Board, on or before July 1, 2021, to adopt standard methodology to be used in the testing of drinking water for microplastics, and requires four years of testing and reporting of microplastics in drinking water. In response, on July 27, 2020, the State Water Board adopted, through Resolution No. 2020-0021, a definition of microplastics in drinking water as, "solid polymeric materials to which chemical additives or other substances may have been added, which are particles which have at least three dimensions that are greater than 1 nm and less than 5,000 micrometers (µm). Polymers that are derived in nature that have not been chemically modified (other than by hydrolysis) are excluded."

SB 1263 (Portantino, 2018) requires the OPC to adopt and implement a Statewide Microplastics Strategy related to microplastic materials that pose an emerging concern for ocean health. The bill requires the OPC to submit the Statewide Microplastics Strategy to the Legislature on or before December 31, 2021, and to report on the implementation of the strategy, including findings, recommended policy changes, and any potential need for additional research, on or before December 31, 2025. The OPC released its Statewide Microplastics Strategy in February, 2022.

Federal action on microplastics: The Microbead-Free Waters Act of 2015 prohibits the manufacturing, packaging, and distribution of rinse-off cosmetics containing plastic microbeads (Pallone, 2015). The Microbead-Free Waters Act of 2015 preempts states from implementing more stringent regulations regarding the manufacture and use of microplastics in rinse-off cosmetics.

Recent recommendations to address microplastic pollution: Responding to the requirement in SB 1263 to develop a Statewide Microplastics Strategy, the OPC funded the California Ocean Science Trust (OST) to convene a working group of scientific experts to develop a risk assessment framework for microplastic pollution in California's marine environment and to provide scientific guidance to inform source reduction activities. On April 2021, the OST released "Microplastic Pollution in California: A Precautionary Framework and Scientific Guidance to Assess and Address Risk to the Marine Environment," which recommended, "True source reduction of plastic materials may be the most effective precautionary strategy to reduce and prevent microplastic pollution, given lack of feasible microplastic cleanup strategies."

The OPC's resultant final report on microplastics, the February 2022 "Statewide Microplastic Strategy," recommends that lawmakers, "Expand the statewide microbead ban enacted by Assembly Bill 888 (Bloom, 2015) to include microplastics that are intentionally added to specific consumer products, such as cosmetics, household and industrial detergents, and cleaning products by 2023."

This bill: This bill responds directly to the OTC guidance and the OPC Strategy's recommendation by prohibiting a person from selling, distributing, or offering specified products that contain intentionally added microplastics by certain time frames. The products covered under the microplastic prohibitions in this bill are in line with the OPC recommendation and include: rinse-off cosmetic products not subject to regulation pursuant to the Microbeads Nuisance Prevention Law (on or after January 1, 2027); leave-on cosmetic products (on or after January 1, 2029); detergents containing microbeads, encapsulated fragrance, or other microplastics (on or after January 1, 2028); and, waxes and polishes (on or after January 1, 2028).

Policy consideration: As this bill corresponds directly with the OPC Strategy's recommendation to, "expand the statewide microbead ban enacted by Assembly Bill 888 (Bloom, 2015)," it follows the structure of existing California statute for microbead prohibitions enacted by AB 888. Current statute prohibits the sale or offering for promotional purposes of any rinse- off personal care products containing plastic microbeads (PRC § 42360 et seq.) Neither current statue on microbeads nor this bill ban the manufacture of the prohibited products. However, the federal Microbead-Free Waters Act of 2015, which came into effect after the California bill, does prohibit the manufacture of a rinse-off cosmetic that contains plastic microbeads. Given that the federal law is now in effect, should the author wish to include a prohibition on the manufacture of microplastics in the specified products, the state statute would be consistent with federal law, and would also prevent the unintended consequence of microplastics manufactured in California being exported for sale and use elsewhere.

Arguments in support: The California Association of Sanitation Agencies writes, "[W]e actively promote source reduction policies that promote pollution prevention as the most cost-effective solution for preventable contamination of our watersheds. Wastewater treatment facilities have varying degrees of microplastics removal efficacy, and even with some of the most sophisticated treatment technology, microplastics can still end up in effluent and be discharged. For the microplastics that are removed in treatment, they are not destroyed but rather displaced to another part of the waste stream. At this time there is no technically feasible technology for removing or destroying microplastics in wastewater influent, effluent or biosolids."
A coalition of environmental organizations writes, "Microplastics are an extremely persistent and pervasive environmental contaminant. Microplastics have been found in air, water, and soil around the world and studies have shown that over 180 species, including humans, ingest microplastics. Once ingested, microplastics can enter into tissue, exposing animals and humans to chemicals including known endocrine disruptors. Multiple studies have demonstrated negative effects of microplastic pollution on marine life, and concerns have been raised about the potential impacts to human health."

Arguments in opposition: A coalition of industry organizations takes an "opposed unless amended" position and writes, "Based on data from the European Union, all of industries contribution to microplastic pollution amounts to only 0.2% of the total microplastic burden in Western Europe. Further, the contribution of fragrance encapsulation in detergent, which AB 2787 specifically includes, amounts to only 0.0004%. Additionally, more than 99% of perfume encapsulate polymers entering the wastewater system will be entrained in sludge solids and removed by skimmers or settling resulting in a low release into the aquatic environment… AB 2787 is unlikely to have a significant impact on the quantity of microplastics in the environment. We are not seeking continued use microplastics based on low volume, rather we are seeking exemptions to enable use of next generation biodegradable encapsulates."

The industry coalition has submitted proposed amendments to the bill that include: the addition of a microplastics minimum size threshold and a de minimis threshold; an exemption for leave-on cosmetics from the prohibitions in the bill; deletion of the prohibition of encapsulated fragrance in detergents; and, an exemption for biodegradable microplastics from the prohibitions in the bill.

Dual referral: This bill passed out of the Assembly Natural Resources Committee on April 4, 2022, on a 7–3 vote.

Related legislation:

1) SB 1263 (Portantino, Chapter 609, Statutes of 2018). Requires the OPC to submit a Statewide Microplastics Strategy to the Legislature on or before December 31, 2021, and to report to the Legislature on the implementation and findings of the Statewide Microplastics Strategy, and on recommendations for policy changes or additional research, on or before December 31, 2025.

2) SB 1422 (Portantino, Chapter 902, Statutes of 2018). Requires the State Water Board to, on or before July 1, 2020, adopt a definition of microplastics in drinking water, and on or before July 1, 2021, adopt a standard methodology to be used in the testing of drinking water for microplastics and requirements for 4 years of testing and reporting of microplastics in drinking water.

3) AB 888 (Bloom, Chapter 594, Statutes of 2015). Prohibits, on and after January 1, 2020, the sale, or offering for promotional purposes, rinse-off personal care products containing plastic microbeads.

4) AB 1699 (Bloom, 2014). Would have prohibited the sale of microbead-containing products in California, as specified. Failed passage on the Senate Floor.

5) AB 258 (Krekorian, Chapter 735, Statutes of 2007). Establishes a plastic debris eradication program to reduce the amount of preproduction plastics (nurdles) entering the marine environment.

REGISTERED SUPPORT / OPPOSITION:

Support

California Association of Sanitation Agencies
California Municipal Utilities Association
California Water Association
Californians Against Waste
Climate Reality Project, San Fernando Valley
East Bay Municipal Utility District
Los Angeles County Sanitation Districts
Orange County Sanitation District
WateReuse Association

Opposition

American Chemistry Council
American Cleaning Institute
California Chamber of Commerce
California Life Sciences Association
California Manufacturers & Technology Association
Fragrance Creators Association
Fragrance Science & Advocacy Council
Household and Commercial Products Association
Personal Care Products Council
Plastics Industry Association

Analysis Prepared by: Shannon McKinney / E.S. & T.M. /

Date of Hearing: April 26, 2022

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 2758 (O'Donnell) – As Amended April 19, 2022

SUBJECT: Southern Los Angeles: ocean dumpsites: chemical waste

SUMMARY: Requires the California Environmental Protection Agency (CalEPA) to hold public meetings, with relevant local, state, and federal agencies on efforts to study and mitigate DDT off the coast of California. Specifically, **this bill**:

1) Defines "DDT" as dichlorodiphenyltrichloroethane or any metabolite or byproduct thereof.

2) Defines "Dumpsite-1" as the waters of the San Pedro Basin, off the coast of Los Angeles, approximately 10 nautical miles northwest of Catalina Island where chemical waste, including, but not limited to DDT, was known to be dumped and has been detected.

3) Defines "Dumpsite-2" as the water of the San Pedro Basin, off the coast of Los Angeles, where chemical waste, including, but not limited to, DDT, has been detected.

4) Defines "Southern California Bight" as the open embayment of the Pacific Ocean bounded on the east by the reach of the North American coastline extending from Point Conception, California, to Cabo Colnett, Baja California, Mexico, and on the west by the California Current, within which 14 known historic dumpsites for chemical waste exist.

5) Requires CalEPA to convene at least four public meetings annually, with the first meeting to be held on or before March 31, 2023, to provide members of the public with current information on CalEPA's efforts to study and mitigate DDT and other chemical waste at Dumpsite-1 and Dumpsite-2 and to receive input from the public through written and oral comments regarding dumped chemical waste and its effects on the Southern California Bight.

6) Requires CalEPA, when holding public meetings on efforts to study and mitigate DDT, to request representatives from the relevant local, state, and federal agencies to attend. Requires that these meetings are held in areas with coastlines reasonably close to Dumpsite-1 and Dumpsite-2.

7) Requires CalEPA, on or before June 30, 2025, to submit policy recommendations to the Legislature aimed at further mitigating the negative impacts of anthropogenic chemical waste deposits at or from Dumpsite-1 and Dumpsite-2, especially those impacts on the Southern California Bight. In developing the report, CalEPA shall consider:

   a) The impacts of policy recommendations on the environment, local communities, Indigenous cultures, and public health;

   b) The technical and financial feasibility of the policy recommendations; and,

   c) The impact on the environment, local communities, Indigenous cultures, and public health of taking no action to mitigate the effects of chemical waste at Dumpsite-1 and Dumpsite-2.

8) Sunsets the provisions of the bill on January 1, 2027.

EXISTING LAW:

1) Provides, pursuant to the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), also known as the federal Superfund law, the United States Environmental Protection Agency (US EPA) with authority over the remediation of uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. (42 United States Code (USC) § 9601, et seq.)

2) Prohibits, pursuant to the Marine Protection, Research, and Sanctuaries Act (MPRSA, also known as the Ocean Dumping Act), the dumping of material into the ocean that would unreasonably degrade or endanger human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities. (33 USC § 1401 et seq).

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "California's coastal and marine waters are among the state's most precious resources and their conservation is essential to the preservation of both marine wildlife and California's thriving ocean economy. Since the rediscovery of chemical waste in the San Pedro Basin off the coast of Los Angeles, California's Environmental Protection Agency has been working with scientists and federal partners to determine next steps in dealing with these pollutants. However, despite significant public interest and concern, little information has been made available to the public on the dangers the chemical waste presents, what questions remain unanswered, and what next steps policymakers, researchers, and the general public should be taking to mitigate the damage from this waste site. AB 2758 requires the California Environmental Protection Agency to convene meetings of agency representatives, local leaders, and the public to hear their concerns and disclose the agency's progress. The bill would also require the agency to report to the Legislature on potential mitigation strategies. This will help educate the public on how best to protect themselves and ensure that the development of any mitigation efforts at the waste site is a transparent and collaborative process."

What is DDT? Dichloro-diphenyl-trichloroethane, commonly known as DDT, is a colorless, tasteless, and almost odorless insecticide. Starting in the late 1940s, DDT was extensively used to combat insect-borne diseases like malaria and typhus around the world. It was credited with eradicating malaria in the United States and was also widely used in agricultural and commercial settings for pest control. Unlike most pesticides, whose effectiveness is limited to destroying one or two types of insects, DDT was capable of killing hundreds of different kinds at once.

In 1962, Rachel Carson's book *Silent Spring* meticulously described how DDT entered the food chain and accumulated in the fatty tissues of animals, including human beings, and caused cancer and genetic damage. A single application on a crop, she wrote, killed insects for weeks and months—not only the targeted insects but countless more—and remained toxic in the environment even after it was diluted by rainwater.

DDT has been shown to cause liver cancer in laboratory animals. It is stored in fatty tissues which results in biomagnification. Biomagnification means that DDT levels in animals increase in concentration farther up the food chain. DDT is highly acutely toxic to fish and aquatic invertebrates. Even though DDT is only slightly acutely toxic to birds, it can cause significant reproductive problems. Notably, one of the breakdown products of DDT causes the eggshells of birds to become thinner. This makes the eggs of birds crack under the weight of adult birds, interfering with birds' ability to reproduce and damaging bird populations.

According to the Centers for Disease Control and Prevention (CDC), human health effects of DDT at low levels in the environment are unknown. However, DDT is listed as a possible human carcinogen and a growing number of studies have linked it to endocrine disrupting effects like increased incidences of obesity and early onset of menstruation. It is possible that these effects could impact future generations (even if they are exposed to lower levels of DDT) as studies linked DDT levels in mothers during and just after pregnancy to impacts on those women and subsequent generations. These effects included breast cancer in the mothers themselves, obesity in their adult daughters, and obesity and early onset of menstruation in their granddaughters. Exposure to high doses of DDT can result in vomiting, tremors, and seizures.

DDT is highly persistent in the environment and has a half-life of 150 years in the aquatic environment, meaning that it will take hundreds of years to break down. Before it was banned for use in the United States by the US EPA, approximately 675,000 tons of DDT were applied domestically. Due to it widespread usage and persistence, DDT contamination is still a relevant environmental concern.

Rising concerns about carcinogenicity, bioaccumulation, and health effects on wildlife led to a ban on DDT use in the United States in 1972.

Perhaps Joni Mitchel cemented the concern about DDT in 1970 when she sang, "Hey farmer, farmer, put away your DDT. I don't care about spots on my apples, leave me the birds and the bees." The public has been aware of the concerns with DDT for more than half a century, yet is still dealing with its toxic footprint today.

Legacy of DDT manufacturing: The Montrose Chemical Corporation of California was the largest producer of the insecticide DDT in the United States from 1947 until it stopped production in 1982. Even though DDT was banned for use in the United States after 1972, production continued in order to export DDT to other countries.

Between the late 1950s and early 1970s, the company was responsible for discharging an estimated 870-1450 tons of DDT into the ocean via the county's sewer system, which contaminated sediment on the ocean floor off the coast of Los Angeles on the Palos Verdes Shelf. In 1971, the last year Montrose used the county sewers, an estimated 50,500 pounds of DDT were discharged from the outfalls. PCBs, another persistent hazardous substance, also formed part of the industrial waste stream that was discharged to the sewer system until their ban in 1976. After these persistent pollutants ceased to dominate the waste steam, Los Angeles County Sanitation District continued discharging treated waste onto Palos Verdes Shelf. This created a layer of cleaner sediment on top of the DDT- and PCB-contaminated sediment.

The US EPA added the Montrose Chemical Corporation site to the Superfund National Priorities List in 1989. The site includes the former main plant near Torrance, California, stormwater

pathways near the former plant, and a section of the Palos Verdes shelf. The cleanup of the Palos Verdes Shelf is still ongoing.

The San Pedro Bay Dominguez Channel was another recipient of runoff from Montrose. Consolidated Slip, the part of Inner Harbor immediately downstream of Dominguez Channel, continues to exhibit a very impacted benthic (bottom feeder) invertebrate community.

In the 1980s, it was discovered that Montrose Chemical Corporation contracted with California Salvage to dispose of acid waste from the DDT manufacturing process by dumping it off the coast of California. Records indicated that hundreds of thousands of barrels containing waste laced with DDT were dumped at a deep sea site located between the California coast and Santa Catalina Island between 1947 and 1961. In April 2021, researchers at the Scripps Institution of Oceanography at the University of California San Diego and the National Oceanic and Atmospheric Administration (NOAA) conducted a survey to map the dump site. They found more than 27,000 barrels of what potentially could be DDT on the ocean floor between the Palos Verdes Peninsula and Catalina Island. The survey, conducted from March 10 to 24, 2021, mapped more than 36,000 acres of seafloor — at depths of up to 3,000 feet, and about 12 miles offshore from the Palos Verdes Peninsula and eight miles from Catalina — in an area where scientists had previously discovered an accumulation of DDT. But, the mapping sonars cannot determine the contents of the barrels, which remains unknown.

Impacts to wildlife of Southern California: The rediscovered DDT waste dumping site off the north coast of Santa Catalina Island represents a significant threat to the health of marine life in those waters and all animals in the food chain dependent on that marine life. DDT is highly persistent and moves from contaminated sediments into the water. Therefore, although the dumping of DDT stopped in 1982, the Palos Verdes Shelf remains contaminated to date and the recently rediscovered dumping site is still contaminated as well.

Since 1985, fish consumption advisories and health warnings have been posted in Southern California because of elevated DDT and other contaminant levels. Bottom-feeding fish are particularly at risk for high levels of contamination. Consumption of white croaker, which has the highest contamination levels, should be avoided and commercial fishing of white croaker has been banned in the area since 1990. Other bottom-feeding fish, including kelp bass, rockfish, queenfish, black croaker, sheepshead, surfperches, and sculpin, are also highly contaminated.

The high DDT levels in fish are reflected in predators that eat fish as well, including dolphins and birds of prey. A 2015 study by researchers from San Diego State University found high levels of DDT and other human-made chemicals in the blubber of bottlenose dolphins that died of natural causes. The Institute for Wildlife Studies, a conservation organization on Catalina Island, has worked to restore bald eagles to the island on Santa Catalina Island Conservancy land since the late 1970s. Bald eagles had been common on the island until the 1960s, when it is believed that the effects of dumping DDT off the coast of Southern California made it impossible for eagles to successfully hatch their young. Until as recently as 2007, bald eagles on the Island were unable to reproduce.

This bill: AB 2758 requires CalEPA to hold public meetings, with relevant local, state and federal agencies to provide current information to the public on efforts to mitigate and study DDT at Dumpsite-1 and Dumpsite-2. Additionally, by holding these meetings, CalEPA may also hear from other scientists and academic researchers with information on DDT and

Dumpsite-1 and Dumpsite-2. While there are several different local, state, and federal agencies working to study and mitigate DDT at Dumpsite-1 and Dumpsite-2, there does not seem to be one entity, at least in California, that is responsible for providing centralized and updated information to the public.

Arguments in Support: According to Heal the Bay, "Heal the Bay is pleased to sponsor and offer its strong support for AB 2758 (O'Donnell) which will establish public meetings on the ocean dumping of toxic DDT off the coast of Southern California. Currently, there is not a clear or easy way for the public or for stakeholders to get updates on this critical issue, to voice concerns, or to understand progress and next steps to protect public and environmental health. AB 2758 is a critical first step in increasing transparency, rebuilding public trust, and tackling this massive problem that has repercussions for human and environmental health. The California Environmental Protection Agency to convene public meetings will allow the public and stakeholders to be informed, have a voice, and help promote progress in addressing this overwhelming environmental and public health disaster. With an issue of such urgency, centralized public efforts are needed to ensure good communication and accountability on progress."

Related legislation:

1) AB 1553 (O'Donnell, 2021). Would have established the Southern Los Angeles Ocean Chemical Waste Community Oversight Council (Council) under CalEPA to oversee the study and mitigation of the toxic waste at "Dumpsite-2," the DDT dumpsite off the California coast. This bill was not heard in the Assembly Appropriations Committee and subsequently died on file.

2) AJR 2 (O' Donnell, Chapter 142, Statutes of 2021). Requests that the United States Congress and US EPA take all measures necessary to ensure that the DDT waste dumped near Santa Catalina Island does not cause further harm to the citizens, wildlife, and natural resources of California.

REGISTERED SUPPORT / OPPOSITION:

Support

Heal the Bay (Sponsor)
Los Angeles County Sanitation Districts
Surfrider Foundation

Opposition

None on file.

Analysis Prepared by: Josh Tooker / E.S. & T.M. /