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Assembly
California Legislature

ASSEMBLY COMMITTEE ON
ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
BILL QUIRK, CHAIR
ASSEMBLYMEMBER, TWENTIETH DISTRICT

AGENDA

Tuesday, March 26, 2019
1:30 p.m. -- State Capitol, Room 444

SPECIAL ORDER OF BUSINESS

1. A.B. 217 E. Garcia. Safe Drinking Water for All Act.
2. A.B. 134* Bloom. Safe, clean, affordable, and accessible drinking water.

HEARD IN SIGN-IN ORDER

3. A.B. 274 Mathis. Water treatment facility: grant.
4. A.B. 733 Quirk. Hazardous waste: identification: testing. (Proposed Consent)
5. A.B. 756 C. Garcia. Public water systems: contaminants.
6. A.B. 841 Ting. Drinking water: contaminants: perfluoroalkyl and polyfluoroalkyl substances.
7. A.B. 912 Muratsuchi. Marine invasive species: ballast water & biofouling management requirements.
8. A.B. 1123 Reyes. Safe Drinking and Toxic Enforcement Act of 1986: appeal: notice to the Attorney General.
9. A.B. 1180 Friedman. Water: recycled water.
10. A.B. 1357 Quirk. Deptartment of Toxic Substances Control: public meetings. (Proposed Consent)
11. A.B. 1500 Carrillo. Hazardous substances.
12. A.B. 1597 Committee on Environmental Safety and Toxic Materials. Hazardous waste: transportation: electronic manifests. (Proposed Consent)
13. A.B. 1788 Bloom. Pesticides: use of anticoagulants.

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*Pending re-referral pursuant to suspension of A.R. 56 (March 21, 2019)

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 217 (Eduardo Garcia) – As Amended March 19, 2019

SUBJECT: Safe Drinking Water for All Act

SUMMARY: Creates the Safe Drinking Water for All Act (Act), which establishes a Safe and Affordable Drinking Water Fund (Fund) to provide a source of funding to secure access to safe drinking water for all Californians, while also ensuring long-term sustainability of drinking water systems. Imposes several fees on agricultural activities and creates a trust fund using investments from the state General Fund that together would provide the source of revenue to the Fund. Specifically, **this bill**:

1) Requires, beginning in the 2021 calendar year, each producer owning a nondairy confined animal facility to pay annually to the Secretary of the Department of Food and Agriculture (Secretary) a safe drinking water fee. Requires the amount of the fee to be one thousand dollars ($1,000) for a producer that owns a single nondairy confined animal facility. Requires the amount of the fee, for a producer that owns more than one nondairy confined animal facility, to be one thousand dollars ($1,000) for the first facility and seven hundred fifty dollars ($750) for each facility thereafter owned by the same producer.

2) Authorizes the Secretary to prescribe, adopt, and enforce regulations relating to the assessing, collecting, and imposition of the safe drinking water fee on producers owning a nondairy confined animal facility.

3) States that the intent of the Legislature is to require licensees of bulk fertilizing materials, and to authorize licensees of packaged fertilizing materials, to pass the fertilizer safe drinking water fee on to the end user of the fertilizer.

4) Requires a licensee whose name appears on the label of bulk or packaged fertilizing materials to pay to the Secretary a fertilizer safe drinking water fee of six mills ($0.006) per dollar of sales for all sales of fertilizing materials.

5) Authorizes the Secretary to prescribe, adopt, and enforce regulations relating to the administration and enforcement of a safe drinking water fee on bulk or packaged fertilizing materials.

6) Authorizes the Secretary, up until June 30, 2022, to retain up to four percent of moneys collected from the safe drinking water fee on bulk or packaged fertilizing materials for implementation and enforcement of administering and collecting the fee and after July 1, 2022, the Secretary may retain up to two percent for implementation and enforcement of administering and collecting the fee.

7) Requires each handler, including a producer-handler, beginning January 1, 2022, to deduct the sum of one cent and three hundred fifty five mills ($0.01355) per hundredweight of milk from payments made to producers of milk, including the handler's own production, as a dairy safe drinking water fee.

8) Requires the Secretary to adopt regulations necessary for the proper administration and enforcement of the dairy safe drinking water fee.

9) Requires a handler to pay the dairy safe drinking water fee to the Secretary on or before the 45th day following the last day of the month in which the milk was received.

10) Authorizes the Secretary, up until June 30, 2022, to retain up to four percent of moneys collected from the dairy safe drinking water fee for reasonable costs associated with implementation and enforcement, and after July 1, 2022, to retain up to two percent for reasonable costs associated with implementation and enforcement.

11) Defines "eligible applicant" as a public water system, including but not limited to, a mutual water company; a public utility; a public agency, including but not limited to, a local educational agency that owns or operates a public water system; a nonprofit organization; a federally recognized Indian tribe; a state Indian tribe listed on the Native American Heritage Commission's California Tribal Consultation List; an administrator; or, a groundwater sustainability agency.

12) Defines "Fund" as the Safe and Affordable Drinking Water Fund.

13) Creates the Fund in the State Treasury. Provides that all moneys in the Fund are continuously appropriated to the State Water Resources Control Board (State Water Board) without regard to fiscal year.

14) Prohibits moneys in the Fund from appropriation or borrowing for use for any purpose not established pursuant to this bill, unless that use of the moneys receives an affirmative vote of two-thirds of the membership of each house of the Legislature.

15) Requires the State Water Board to administer the Fund to provide a source of funding to secure access to safe drinking water for all Californians, while also ensuring long-term sustainability of drinking water service and infrastructure.

16) Requires the State Water Board to prioritize the use of the Fund to assist disadvantaged communities and low-income households served by a state small water system or a domestic well.

17) Requires the State Water Board to prioritize use of the Fund for costs other than those related to capital construction costs, except for capital construction costs associated with consolidation and service extension, to reduce the ongoing unit cost of service and to increase sustainability of drinking water infrastructure and service delivery.

18) Requires, beginning January 1, 2020, expenditures from the Fund to be consistent with the annual fund implementation plan.

19) Requires the State Water Board to expend moneys in the fund for grants, loans, contracts, or services to assist eligible applicants with any of the following:

    a) The provision of replacement water, to ensure immediate protection of health and safety as a short-term solution;

b) The development, implementation, and sustainability of long-term drinking water solutions;

c) Identifying and providing outreach to Californians who are eligible to receive assistance from the Fund;

d) Testing the drinking water quality of domestic wells serving low-income households in high-risk areas identified by the State Water Board;

e) The provision of administrative and managerial services; and,

f) The provision of wastewater treatment plant operations and maintenance for areas in which polluted water originates from outside of the state.

20) Requires the State Water Board, in administering the Fund, to make reasonable efforts to ensure both of the following:

a) That funds are used to secure the long-term sustainability of drinking water service and infrastructure, including, but not limited to, requiring adequate technical, managerial, and financial capacity of eligible applicants as part of funding agreement outcomes; and,

b) That funds are not used to subsidize large-scale nonpotable use.

21) Requires the State Water Board, in administering the Fund, to ensure that all moneys deposited from the safe drinking water fee for nondairy confined animal facilities, the fertilizer safe drinking water fee, and the dairy safe drinking water fee are used to address nitrate-related contamination issues.

22) Requires the State Water Board, at least once every ten years, to conduct a public review and assessment of the Fund to determine all of the following:

a) The effectiveness of the Fund in securing access to safe drinking water for all Californians, while also ensuring the long-term sustainability of drinking water service and infrastructure;

b) If the fees deposited into the Fund have been appropriately expended;

c) For community water systems that have received funding for ten years or more and for which self-sufficiency has not been achieved, the actions that have been taken, the reason why self-sufficiency has not been achieved, and if available, ways in which the community water system may become self-sufficient; and,

d) What other actions are necessary to carry out the purposes of the Act.

23) Requires the State Water Board to convene an environmental justice advisory committee, consisting of at least three members, to advise the State Water Board in conducting the public review and assessment of the Fund.

24) Requires the State Water Board, by July 1 each year, to do all of the following:

a) Prepare and make available a report of expenditures from the Fund;

b) Adopt, after a public hearing, an assessment of funding need, based on available data; and,

c) Adopt, after a public hearing, a fund implementation plan and policy handbook with priorities and guidelines for expenditures of the Fund.

25) Requires the State Water Board, by January 1, 2021, in consultation with local health officers and other relevant stakeholders, to use available data to make available a map of aquifers that are at high risk of containing contaminants; that exceed primary federal and state drinking water standards; and, that are used or likely to be used as a source of drinking water for a state small water system or a domestic well. Requires the State Water Board to update the map at least annually based on any newly available data and shall make the map available on its internet website.

26) Sunsets the drinking water fee, if, on or before January 1, 2023, the Legislative Analyst determines that at least three billion dollars ($3,000,000) has been made available in an interest bearing account in the State Treasury with a goal of at least one hundred million dollars ($100,000,000) in interest revenues per year made available for purposes of the Fund.

27) Requires the State Water Board to adopt, by regulation, a schedule of fees and deposit those fees into the Fund.

28) States that the intent of the Legislature is to establish a region-specific program to address the purposes of the Act.

29) Authorizes the State Water Board to distribute funds for any purpose of the Act through its drinking water regional offices. Prohibits the State Water Board from distributing more than 20 percent of the annual expenditures from the Fund pursuant to this regional distribution.

30) Creates the Safe and Affordable Drinking Water Trust Fund (Trust Fund) in the State Treasury and states that the intent of the Legislature is that moneys in the Trust Fund remain for the purposes of the trust in perpetuity.

31) Provides that on January 1 of each year, investment income derived from the Trust Fund is hereby transferred to the Fund.

32) Requires the sum of two hundred million dollars ($200,000,000) to be transferred into the Trust Fund by the Legislature each year for five years for the purpose of establishing a one-billion-dollar ($1,000,000,000) Trust Fund to derive interest revenues to fund the Act.

EXISTING LAW:

1) Establishes the California Safe Drinking Water Act (California 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) Authorizes the State Water Board, where a public water system or a state small water system serving a disadvantaged community consistently fails to provide an adequate supply of safe drinking water, to order a physical or operational consolidation with a receiving water system. (HSC § 116682 (a))

4) Authorizes the State Water Board, in order to provide affordable, safe drinking water to disadvantaged communities and to prevent fraud, waste, and abuse, to:

   a) Contract with an administrator to provide administrative and managerial services to a designated public water system to assist the designated public water system with the provision of an adequate and affordable supply of safe drinking water; and,

   b) Order the designated public water system to accept administrative and managerial services, including full management and control, from an administrator selected by the State Water Board. (HSC § 116686 (a))

5) 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)

6) Establishes Maximum Contaminant Levels (MCLs) for the various forms of nitrate. (California Code of Regulations § 63341)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "More than one million Californians are living without access to safe, reliable drinking water. It is unacceptable that the world's 5th largest economy cannot ensure this essential resource and fundamental human right to all its residents. This is a public health emergency impacting our families and students. We must rise together and commit to an equitable and importantly a sustainable safe drinking water solution that will work for all Californians. We must get this done."

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 (PWSs), 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 State 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.

MCLs are health-based drinking water standards that public water systems are required to meet. MCLs take into account the health risk, detectability, treatability, and costs of treatment associated with a pollutant. Agencies responsible for regulating water quality enforce these standards.

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. (A "service connection" is usually the point of access between a water system's service pipe and a user's piping.) The state does not regulate water systems with less than 15 connections; county health officers oversee them. 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. For investor-owned water utilities under the jurisdiction of California Public Utilities Commission (CPUC), the State Water Board or LPAs share water quality regulatory authority with CPUC.

The State Water Board regulates approximately 7,500 water systems. 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.

Multiple causes of unsafe drinking water: The causes of unsafe drinking water can generally be separated into two categories: (1) contamination caused by human action, and (2) naturally occurring contaminants. In some areas, there are both human caused and natural contaminants in the drinking water.

Three of the most commonly detected pollutants in contaminated water in California are arsenic, perchlorate, and nitrates. While arsenic is naturally occurring, perchlorate contamination is generally a result of military and industrial uses. High concentrations of nitrate in groundwater are primarily caused by human activities, including fertilizer application (synthetic and manure), animal operations, industrial sources (wastewater treatment and food processing facilities), and septic systems. Agricultural fertilizers and animal wastes applied to cropland are by far the largest regional sources of nitrate in groundwater, although other sources can be important in certain areas.

Drinking water contamination in disadvantaged communities: According to the State Water Board report, "*Communities that Rely on Contaminated Groundwater*," released in January 2013, 682 community public water systems, which serve nearly 21 million people, rely on contaminated groundwater as a primary source of drinking water. The report points out that an additional two million Californians rely on groundwater from either a private domestic well or a smaller groundwater-reliant system that is not regulated by the state, the water quality of which is uncertain. The findings from State Water Board report, and a 2012 University of California at Davis study, "*Addressing Nitrate in California's Drinking Water*," suggest that drinking water contamination in California disproportionally affects small, rural, and low-income communities that depend mostly on groundwater as their drinking water source. These numbers could be even greater today.

Nitrates: Nitrate is commonly used in fertilizers because plants need nitrates to live and grow. Nitrogen is applied to cropland in the form of synthetic fertilizers or as animal manure. The

nitrogen in these fertilizers transforms to nitrate and is carried to groundwater by the percolation of water through the soil column, any time water from irrigation or rainfall percolates below the root zone.

Once consumed, nitrate is converted into nitrite in the body. Nitrite can interfere with the ability of red blood cells to carry oxygen to the tissues of the body, producing a condition called methemoglobinemia. The greatest threat is to infants, whose immature stomach environment enables conversion of nitrate to nitrite, which is then absorbed into the blood stream. The effects of nitrite are often referred to as the "blue baby syndrome" because their bodies are not absorbing enough oxygen. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.

Legal limits on nitrates: The current state MCLs for nitrates were adopted by the California Department of Health Services in 1994 based on the U.S. EPA's MCLs promulgated in 1991.

The Office of Environmental Health Hazard Assessment (OEHHA) established its public health goals (PHGs) for nitrate and nitrite in 1997. The PHGs, based on methemoglobinemia in infants, are 45 parts per million (ppm) for nitrate (equivalent to 10 ppm nitrate-nitrogen), 1 ppm for nitrite-nitrogen, and 10 ppm for joint nitrate/nitrite (expressed as nitrogen) in drinking water. The PHGs are the same as the drinking water MCLs. Typically PHGs inform the development of MCLs. In this case, the MCL predated the PHG.

Where is nitrate contamination? Nitrate in drinking water is widespread throughout the state. Public water systems (PWS), because they are regulated by the State Water Board (unlike private wells), are required to analyze drinking water sources for nitrates and report the results to the State Water Board's Division of Drinking Water. Among regulated contaminants detected at levels greater than their MCLs in California, nitrates rank high.

The 2012 University of California at Davis (UC Davis) report, "*Addressing Nitrate in California's Drinking Water,*" indicated that about 2.6 million people in the four-county Tulare Lake Basin and the Monterey County portion of the Salinas Valley rely on groundwater for drinking water, including those in some of the poorest communities in California. The report found that nitrate contamination is increasing and currently poses public health concerns for about 254,000 people in the study area. Again these numbers could be even greater today.

Costs for nitrate cleanup: The 2012 UC Davis nitrate report calculated that up to $36 million per year is needed for safe drinking water solutions to address nitrate contamination. The report elaborated that, "Costs for safe drinking water solutions to nitrate contamination in the Tulare Lake Basin and Salinas Valley are roughly $20 and $36 million per year for the short- and long-term solutions, respectively. About $17 to $34 million per year will be needed to provide safe drinking water for 85 identified community public and state small water systems in the study area that exceed the nitrate drinking water MCL (serving an estimated 220,000 people). The annualized cost of providing nitrate-compliant drinking water to an estimated 10,000 affected rural households (34,000 people) using private domestic wells or local small water systems is estimated to be at least $2.5 million for point-of-use treatment for drinking use only. The total cost for alternative solutions translates to $80 to $142 per affected person per year, $5 to $9 per irrigated acre per year, or $100 to $180 per ton of fertilizer nitrogen applied in these groundwater basins."

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. More than 300 drinking water systems in disadvantaged communities, serving approximately 200,000 people, are unable to provide safe drinking water. These systems include 30 schools and daycare centers that serve over 12,000 children.

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. Without being able 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.

Current sources of financial assistance, such as Proposition 1, the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Rendon, Chapter 188, Statutes of 2014), and the safe drinking water state revolving fund (SDWSRF), do not provide financial assistance for the long-term operation and maintenance costs of drinking water systems, which the community must provide in order to qualify for the capital improvement funding that is available from those sources. Disadvantaged communities often lack the rate base to pay for operation and maintenance costs, meaning that they are effectively prohibited from accessing capital improvement funding.

Urban disadvantaged water systems: A March 15, 2019 briefing paper (Paper) from the UCLA Water Resources Group noted that the legislature and Governor have made a strong commitment to rural water systems, but have not provided as much information about urban disadvantaged water systems. The Paper noted that Los Angeles County (LA County) has 210 community water systems, with 64 water systems serving either disadvantaged or severely disadvantaged communities. It estimates that these 64 disadvantaged urban water systems could be serving close to 1,000,000 people. One of the key points of the Paper is that there is very little information about these urban water systems, and whether or not they have the technical and managerial expertise to provide clean safe drinking water to their customers. In one recent example in Compton, that State Water Board appointed LA County to take over the administration of the Sativa Water District (District), and LA County discovered that the water system operated by the District was failing and that the District had a compliance order that would take 12 years of its revenues for compliance costs.

Consolidation of water systems: According to the US EPA, restructuring can be an effective means to help small water systems achieve and maintain technical, managerial, and financial capacity, and to reduce the oversight and resources that states need to devote to these systems. The State Water Board maintains that consolidating PWS and extending service from existing public water systems to communities and areas that currently rely on under-performing or failing small water systems, as well as private wells, reduces costs and improves reliability. Consolidation does this by extending costs to a larger pool of ratepayers.

Authority to require consolidation and the appointment of an administrator: Effective June 24, 2015, SB 88 (Senate Committee on Budget and Fiscal Review, Chapter 27, Statutes of 2015) authorized the State Water Board, when a PWS or state small water system serving a

disadvantaged community consistently fails to provide an adequate supply of safe drinking water, to order that system (referred to as a subsumed water system) to consolidate with, or receive an extension of service from, a compliant public water system (referred to as the receiving system). While for many years the state's drinking water program had encouraged voluntary consolidation of public water systems, the authority granted by SB 88 allows the state to mandate the consolidation of water systems where appropriate.

The following year, SB 552 (Wolk, Chapter 773, Statutes of 2016) expanded the State Water Board's authority by enabling it to, in order to provide affordable, safe drinking water to disadvantaged communities and to prevent fraud, waste, and abuse, contract with a competent administrator to provide managerial and technical expertise to that system, if sufficient funding is available. SB 552 also authorizes the State Water Board to order the designated public water system to accept administrative and managerial services, including full management and control, from an administrator selected by the State Water Board.

Since 2016 the State Water Board has ordered the consolidation of 3 PWSs with an additional five water systems consolidating voluntarily.

Recent approaches to address lack of funding to provide safe drinking water to disadvantaged communities: SB 623 (Monning, 2017) would have created the Safe and Affordable Drinking Water Fund, administered by the State Water Board, and sought to impose water, fertilizer and dairy fees to fund safe drinking water programs. The bill would have imposed a Safe and Affordable Drinking Water Fee (water fee) on each customer of a PWS. Additionally, it would have required the State Water Board, in consultation with local health officers and other relevant stakeholders, to develop and annually update a map of aquifers at high risk of containing contaminants that exceed state and federal primary drinking water standards. SB 623 would have prohibited the State Water Board or regional water quality board from specified enforcement actions against agricultural operations for exceeding nitrate groundwater objectives or other groundwater pollution standards if the operation demonstrates certain mitigation requirements are met, including the timely payment of the fertilizer or dairy fee. SB 623 was held in the Assembly Rules Committee.

Governor Newsom's proposal: The proposal by Governor Newsom as part of his 2019-2020 proposed budget is substantially similar to SB 623 (Monning). It would also impose a water fee and similar agriculture related fees. The proposal also provides similar enforcement protections for agricultural operations that exceeded nitrate groundwater objectives.

Current approach to address these issues within AB 217: AB 217 is similar to both SB 623 and Governor Newsom's proposal in that it also imposes fees on agricultural activities. However, AB 217 does not sunset the agricultural related fees and does not provide the agricultural enforcement protections contained in SB 623 or the Governor's proposal. Additionally, AB 217 takes a hybrid approach to raising funds by seeking to impose a water fee as well as establishing a Trust Fund of $1 billion whereby investment income is used annually for the purposes of the bill. AB 217 also seeks to take a regional approach by acknowledging the fact that disadvantaged communities reside in urban communities as well as rural communities.

Policy options for consideration: Is there a need for a sustainable, ongoing fund to provide assistance to communities with contaminated drinking water throughout the state? Yes, and this does not seem to be in dispute. What is the estimated annual need? Well, that is a challenging

question. A private consulting firm, Blue Sky Consulting, recently estimated an annual need of approximately $140 million (roughly $30 million of that amount was estimated to be needed for nitrate contamination). However, this estimate was based upon methodologies that included the size of the water system, the number of violations and income of that water system, among other factors. Some could argue that this estimate is too high, while others would argue this number is far too low. The State Water Board is currently required (SB 862, Budget Committee, Chapter 449, Statutes of 2018) to conduct a needs analysis of drinking water systems; however, this will not be completed until the fall of 2020. It is important to note that included in this need for an ongoing funding stream is the reality that the funding will be needed to assist some public water systems with ongoing operations and maintenance costs, as opposed to one-time capital improvements.

What is the correct funding source? As a funding option for assisting disadvantaged communities with contaminated drinking water, there of course is the state's General Fund and the state has had several years of a surplus in revenue. That surplus will not last forever. While the General Fund can provide both capital costs and ongoing operations and maintenance costs, the biggest question is once revenue dips (and history shows it will dip), then what? During previous budget crises, discretionary funding was the first to go – but would drinking water funding be discretionary? It would be competing with all of the other very important budgetary needs from education, to health and human services, to corrections and public safety. So, the General Fund is a good option in prosperous times. AB 217 seems to seize on this concept by setting up a Trust Fund during these current (and likely temporary) prosperous times.

Revenues from a Trust Fund: AB 217 proposes to transfer $200 million from the state's General Fund into the Trust Fund for each year for the next five years and commit investment income earned from the Trust Fund to the Fund. According to a recent analysis by the Legislative Analyst Office (LAO), a trust fund, utilizing a similar rate of return as the state's Pooled Money Investment Account (PMIA), would generate approximately 3.5 % in investment income each year. The analysis concluded that the proposed trust fund in AB 217 would generate several million dollars of investment income in the first year, rising to approximately $35 million in investment income once all five payments totaling $1 billion have been achieved. Using the same rate of return as the PMIA, a trust fund would require $4 billion in order to generate $140 million in investment income annually, as proposed in the Governor's budget. It is important to note that this analysis uses the PMIA because the State Constitution prohibits the state from investing in stocks or other equity instruments. Creating a trust fund does not protect the money in the fund from being taken or redirected for other uses by a future legislature. If the goal is to protect the trust then a constitutional amendment is the best alternative to ensure that the funds stay within the Trust Fund.

What are other funding options? In many environmental programs throughout California, there is a consistent theme – the polluter pays. Requiring those that have contributed to nitrate contamination, as envisioned in AB 217 (as well as SB 623 and the Governor Newsom proposal), seems to be an approach consistent with that principle. In the lean budget years, would these nitrate related fees be enough? Should there be more? The water fee, as contemplated in AB 217, and also in SB 623 and the Governor's proposal, would augment the nitrate fees by asking all Californians who pay a water bill to contribute a little bit each month (about $0.95). The need seems to be clear, but is this fair? There are approximately 39 million people living in California and the reality is many of us move around the state. Wouldn't we expect to have safe drinking water regardless of where we lived? Can we all afford it?

One of the criticisms of the Governor's proposal and SB 623 is that public water agencies believe the water fee that they would be imposing on their drinking water customers would be costly for them to impose and overburden the agency with additional regulatory costs and fees. Additionally, one of the reasons many of these water systems have a need for this ongoing funding source is that their water system serves a disadvantaged community and their ratepayers cannot afford any further rate increases. There are existing programs, such as those the electric utilities provide, that offer reduced rates for low-income customers. Such programs do not exist for drinking water customers. If AB 217 imposes a water fee, could it include an exemption for low-income households? Is there a more efficient way of imposing a water fee to make collection by the water agencies more efficient and less costly to implement?

There is a wildcard in this ongoing funding question: eliminating failing water systems and creating sustainable water systems. AB 217 includes in the priorities for funding long-term sustainability of the PWS. One of the ways to achieve this sustainability is by consolidating water systems. If the state forces consolidation, as it has done in a few cases, it pays for the costs to consolidate and the State Water Board has limited funding for this. However, if this new funding stream would flood the State Water Board with resources to use its consolidation authority to address those failing water systems, then there would be a short-term increase in funding for this purpose with a long-term goal of reduced state costs by creating a sustainable PWS.

AB 217 also highlights a need that is not explicitly raised in the Governor's proposal or in SB 623, that of regional needs. It is a reality that there are disadvantaged communities throughout California in the north, the south, the rural, the urban – we have it all (so to speak). How the funding should be allocated to address this reality is not an easy task; however, in order to provide for all Californians, as the bill strives for, then this regional approach is a key aspect that needs to be explored further. The State Water Board's needs assessment could shed some light on the needs of the urban disadvantaged communities.

Given that almost one million Californians lack access to clean drinking water, one thing is very clear: waiting is not an option. The problem is known and it is real. AB 217 moves the state closer to a sustainable approach to address the lack of clean drinking water facing way too many Californians. The bill contains a diversified approach of both fees and General Funds contributing to a Trust Fund, as well as recognizing the many needs of both our rural communities and our urban communities.

Arguments in Support: According to a coalition letter which includes public health organizations, environmental groups, and environmental justice advocates, "As is well understood by now, California has a statewide safe drinking water crisis that affects one million Californians each year. Additionally, roughly 2 million Californians rely on domestic wells and state small water systems not regulated by the state and ineligible for most assistance programs, leaving them particularly vulnerable. California's drinking water crisis proportionately impacts low-income communities and communities of color and can be found in every corner of the state. Existing state and federal funding sources cannot be used to address significant funding gaps such as operations and maintenance costs necessary to sustain treatment systems, and for assistance to Californians not served by a public water system. As a result, small, rural or socioeconomically disadvantaged communities and households throughout the state are either forced to pay exorbitant rates for drinking water or buy bottled water, because they cannot afford the treatment costs or secure long-term financing due to a lack of a demonstrated long-term

funding source. We urge the Legislature to address California's drinking water crisis THIS YEAR in a manner that is not merely a band-aid approach or that lacks funding certainty but that instead solves this crisis once and for all."

Arguments in Opposition: According to a coalition letter of groups, including Scotts Miracle-Gro and the Household and Commercial Products Association, they have taken an oppose unless amended position on AB 217, "...as it would impose a fee on all fertilizer materials to be paid by licensees who sell or distribute bulk and packaged fertilizer material. We strongly encourage the committee to adopt the fertilizer fee formula as outlined in SB 844 (Monning, 2018). The language in SB 844 proposed a $0.004 fee for every dollar sold of packaged non-commercial fertilizer materials, until 2034 at which time the fee is lowered to $0.002. These products are sold in small quantities, typically used by homeowners in lawns and gardens. They are not significantly contributing to water quality impairments. The fees on commercial fertilizer were proposed to be assessed at a higher level to achieve the total funding amount the previous administration sought. We appreciate the concerns of communities that lack reliable drinking water systems and support the goal of ensuring community access to safe, clean and affordable water. Unfortunately, the current language in AB 217 creates a disproportionate fiscal impact on non-ag fertilizer producers. We believe there are more equitable funding formulas that could be used to raise the necessary funds for safe and affordable drinking water, as it relates to nitrate contamination. Given these concerns, we request AB 217 be amended to replace the current fertilizer fee language with the language in AB 844 (2018)."

Potential amendments: The author and committee may wish to add some detail to the proposed safe and affordable drinking water fee. Specifically, the bill could be amended to impose a 50 cent per connection fee on all PWS and require the PWSs to remit the fee to the State Water Board. Additionally, the bill could be amended to clarify that the fertilizer fee contemplated in the bill does not include compost.

Related legislation:

1) AB 134 (Bloom). Requires that the Governor's annual budget show expenditures from Safe and Affordable Drinking Water Fund (Fund) and that the LAO review the effectiveness of expenditures from the Fund. This bill is set to be heard in the Assembly Environmental Safety and Toxic Materials Committee on March 26, 2019.

2) SB 200 (Monning). Creates the Safe and Affordable Drinking Water Fund, administered by the State Water Board, to assist communities and individual domestic well users to address contaminants in drinking water that exceed safe drinking water standards. This bill passed the Senate Environmental Quality Committee on March 20, 2019 and has been referred to the Senate Committee on Natural Resources and Water.

3) SB 669 (Caballero). Establishes the Safe Drinking Water Fund to assist community water systems in disadvantaged communities that are chronically noncompliant. Creates Safe Drinking Water Trust Fund to receive funding from the state and provide the fund source to the Safe Drinking Water Fund. This bill is set for hearing in the Senate Environmental Quality Committee on April 9, 2019.

4) 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

Alliance Of Child And Family Services
American Heart Association
American Rivers
American Stroke Association
Arvin Community Services District
Asian Pacific Environment Network
Asociación De Gente Unida Por El Agua
Audubon California
California Alliance of Child And Family Services
California Bicycle Coalition
California Environmental Justice Alliance
California Food Policy Advocates
California League of Conservation Voters
California Rural Legal Assistance Foundation
California Water Service
Carbon Cycle Institute
Central Valley Air Quality (CVAQ) Coalition
Ceres
Clean Water Action
Coalition For Humane Immigrant Rights (CHIRLA)
Community Alliance for Agroecology
Community Water Center
Dolores Huerta Foundation
Environmental Defense Fund
Environmental Health Coalition
Esperanza Community Housing Corp
Faith In The Valley
Friends Committee On Legislation Of California
Leadership Council For Justice And Accountability
Lutheran Office of Public Policy - California
Martin Luther King Jr Freedom Center
Mi Familia Vota
NextGen California
Pesticide Action Network North America
Physicians for Social Responsibility - Los Angeles
PICO California
Planning And Conservation League
PODER
Policylink
Professional Engineers In California Government
Public Health Advocates
Pueblo Unido Community Development Coordinator

RCAC
Self-Help Enterprises
Service Employees International Union (SEIU)
The Nature Conservancy
Water Foundation
Western Center On Law And Poverty

Opposition

Central Garden and Pet
Harrell's LLC
Household and Commercial Products Association
Lawn & Horticulture Products Work Group
Scotts Miracle-Gro Company

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

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 134 (Bloom) – As Proposed to be Amended

SUBJECT: Safe, clean, affordable, and accessible drinking water

SUMMARY: Requires funding from a Safe Drinking Water Fund (Fund) or Safe and Affordable Drinking Water Fund (Fund) to be displayed in the Governor's annual budget and requires at least every five years the Legislative Analyst Office's (LAO) to provide an assessment of the effectiveness of expenditures from the Fund.

EXISTING LAW:

1) Establishes the California Safe Drinking Water Act (California SDWA) and requires the State Water Resources Control Board (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) 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, "Across California, hundreds of thousands of people do not have access to safe and affordable drinking water. Roughly 300 public water systems are currently out of compliance with drinking water standards, putting almost 700,000 people at risk, including 12,000 children who are served by schools and daycare centers that use contaminated water. Addressing the needs of disadvantaged communities through a Safe and Affordable Drinking Water Fund is critical and long-overdue. Ensuring that funds are used transparently and judiciously is also important and this bill ensures that that will happen. This year alone, several measures, including AB 217 and SB 200, as well as the Governor's Budget, propose to create such a fund. AB 134 creates several important reporting requirements for a future Safe and Affordable Drinking Water fund."

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 (PWSs), 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.

Maximum contaminant levels (MCLs) are health-based drinking water standards that public water systems are required to meet. MCLs take into account the health risk, detectability, treatability, and costs of treatment associated with a pollutant. Agencies responsible for regulating water quality enforce these standards.

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. (A "service connection" is usually the point of access between a water system's service pipe and a user's piping.) The state does not regulate water systems with less than 15 connections; county health officers oversee them. 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. For investor-owned water utilities under the jurisdiction of California Public Utilities Commission (CPUC), the State Water Board or LPAs share water quality regulatory authority with CPUC.

The State Water Board regulates approximately 7,500 water systems. 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.

Multiple causes of unsafe drinking water: The causes of unsafe drinking water can generally be separated into two categories: (1) contamination caused by human action, and (2) naturally occurring contaminants. In some areas, there are both human caused and natural contaminants in the drinking water.

Three of the most commonly detected pollutants in contaminated water in California are arsenic, perchlorate, and nitrates. While arsenic is naturally occurring, perchlorate contamination is generally a result of military and industrial uses. High concentrations of nitrate in groundwater are primarily caused by human activities, including fertilizer application (synthetic and manure), animal operations, industrial sources (wastewater treatment and food processing facilities), and septic systems. Agricultural fertilizers and animal wastes applied to cropland are by far the largest regional sources of nitrate in groundwater, although other sources can be important in certain areas.

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. More than 300 drinking water systems in disadvantaged communities, serving approximately 200,000 people, are unable to provide safe drinking water. These systems include 30 schools and daycare centers that serve over 12,000 children.

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. Without being able 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.

Current sources of financial assistance, such as Proposition 1, the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Rendon, Chapter 188, Statutes of 2014), and the safe drinking water state revolving fund (SDWSRF), do not provide financial assistance for the long-term operation and maintenance costs of drinking water systems, which the community must provide in order to qualify for the capital improvement funding that is available from those sources. Disadvantaged communities often lack the rate base to pay for operation and maintenance costs, meaning that they are effectively prohibited from accessing capital improvement funding.

Recent approaches to address lack of funding to provide safe drinking water to disadvantaged communities: SB 623 (Monning, 2017) would have created the Safe and Affordable Drinking Water Fund, administered by the State Water Board, and sought to impose water, fertilizer, and dairy fees to fund safe drinking water programs. The bill would have imposed a Safe and Affordable Drinking Water Fee (water fee) on each customer of a PWS. Additionally, it would have required the State Water Board, in consultation with local health officers and other relevant stakeholders, to develop and annually update a map of aquifers at high risk of containing contaminants that exceed state and federal primary drinking water standards. SB 623 would have prohibited the State Water Board or regional water quality board from specified enforcement actions against agricultural operations for exceeding nitrate groundwater objectives or other groundwater pollution standards if the operation demonstrates certain mitigation requirements are met, including the timely payment of the fertilizer or dairy fee. That bill was held in the Assembly Rules Committee.

Governor Newsom's proposal: The proposal by Governor Newsom as part of his 2019-2020 budget is substantially similar to SB 623 (Monning) by also imposing a water fee and similar agriculture related fees. The proposal also provides similar enforcement protections for agricultural operations that exceeded nitrate groundwater objectives.

Current legislative approaches: Three bills have be introduced in 2019 to address the issues raised by SB 623 and Governor Newsom's budget proposal.

AB 217 (Eduardo Garcia) would create the Safe Drinking Water for All Act (Act) to establish a Safe and Affordable Drinking Water Fund (Fund) to provide a source of funding to secure access to safe drinking water for all Californians, while also ensuring long-term sustainability of drinking water systems. The bill would impose several fees on agricultural activities and create a trust fund using investments from the state General Fund that, together, would provide the source of revenue to the Fund.

SB 200 (Monning) would create the Safe and Affordable Drinking Water Fund, administered by the State Water Board, to assist communities and individual domestic well users to address contaminants in drinking water that exceed safe drinking water standards.

SB 669 (Caballero) would create the Safe Drinking Water Fund to assist community water systems in disadvantaged communities that are chronically noncompliant with safe drinking water standards. The bill would create the Safe Drinking Water Trust Fund to receive funding from the state and provide the fund source to the Safe Drinking Water Fund.

AB 134 seeks to ensure that there is transparency in the annual budget process associated with a Safe Drinking Water Fund or Safe and Affordable Drinking Water Fund, regardless of which Fund is established. Moreover, this bill provides additional oversight of the Fund by requiring the LAO to assess the effectiveness of the expenditures from the Fund. This is a very prudent approach to ensure that the Legislature and the Administration have the proper information to ensure implementation of an effective program that provides funding to reduce and eliminate contamination from drinking water systems.

Related legislation:

1) AB 217 (Eduardo Garcia). Creates the Safe Drinking Water for All Act (Act) which establishes a Safe and Affordable Drinking Water Fund (Fund) to provide a source of funding to secure access to safe drinking water for all Californians, while also ensuring long-term sustainability of drinking water systems. Imposes several fees on agricultural activities and creates a trust fund utilizing investments from the state General Fund that together would provide the source of revenue to the Fund. This bill is set to be heard in the Assembly Environmental Safety and Toxic Materials Committee on March 26, 2019.

2) SB 200 (Monning). Creates the Safe and Affordable Drinking Water Fund, administered by the State Water Board, to assist communities and individual domestic well users to address contaminants in drinking water that exceed safe drinking water standards. This bill passed the Senate Environmental Quality Committee on March 20, 2019 and was been referred to the Senate Committee on Natural Resources and Water and is set for hearing on April 23, 2019.

3) SB 669 (Caballero). Establishes the Safe Drinking Water Fund to assist community water systems in disadvantaged communities that are chronically noncompliant. Creates Safe Drinking Water Trust Fund to receive funding from the state and provide the fund source to the Safe Drinking Water Fund. This bill is set for hearing in the Senate Environmental Quality Committee on April 9, 2019.

4) 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

None on file.

Opposition

None on file.

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

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 274 (Mathis) – As Amended March 18, 2019

SUBJECT: Water treatment facility: grant

SUMMARY: Appropriates $20,000,000 from the General Fund to an unknown entity in order for that entity to provide a grant of $20,000,000 to a joint powers authority comprised of the Tule River Tribe and the City of Porterville for a water treatment facility to be operated by the joint powers authority.

EXISTING LAW:

1) Establishes the Cleanup and Abatement Account (Account) within the State Water Quality Control Fund, which is administered by the State Water Resources Control Board (State Water Board). (Water Code (WC) § 13440)

2) Authorizes the State Water Board to approve grants, from the Account, to any eligible entity to assist in cleaning up a waste, abating the effects of a waste on waters of the state, or addressing an urgent drinking water need. Eligible entities include: a public agency, a tribal government, a not-for-profit organization serving a disadvantaged community, or a community water system that serves a disadvantaged community. (WC § 13442)

3) 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. (WC § 106.3 (a))

4) Requires all relevant state agencies, including the Department of Water Resources (DWR), the State Water Board, and the State Department of Public Health, to consider the above "human right to water" state policy when revising, adopting, or establishing policies, regulations, and grant criteria when those policies, regulations, and criteria are pertinent to the uses of water, as defined. (WC § 106.3 (b))

5) Establishes the federal Safe Drinking Water Act (SDWA) to provide for the establishment of a perpetual drinking water revolving fund, which will be partially capitalized by federal contributions. (42 U.S.C. Sec. 300j et seq.)

6) Enacts the Drinking Water State Revolving Fund (DWSRF) law to authorize the state to establish and implement a state drinking water revolving fund that will meet federal conditions for receipt of federal funds. (Health and Safety Code § 116760.10 (a))

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "The city of Porterville has been plagued with water crisis after water crisis. This bill seeks to further efforts to provide clean drinking water to the City of Porterville."

Drinking water needs: According to the State Water Board, 98% of Californians are served by public water systems' drinking water that meets federal and state drinking water standards, which leaves 2% of Californians with drinking water that fails to meet state and federal drinking water standards.

Nitrates, hexavalent chromium, perchlorate, arsenic, and other contaminants are present in water supplies across the state, and water treatment can be costly. It is estimated that more than one million California residents who live in mostly rural areas have unreliable access to safe drinking water. Similarly, according to the United States Environmental Protection Agency's (US EPA) *Small Drinking Water Systems* research, drinking water treatment challenges are likely to disproportionately affect small drinking water systems due to limited resources and treatment options, among other factors.

Drinking water funding needs: The US EPA has estimated that California will need more than $40 billion dollars in drinking water infrastructure improvements over the next 20 years. Consistent with that, based on the *2011 Drinking Water Infrastructure Needs Survey*, California drinking water needs are more than $2.2 billion per year for the next 20 years.

Given California's ongoing water quality challenges, and the fact state resources are limited for investment in drinking water improvements, state funds have to be spent carefully and thoughtfully on the communities that most need help achieving compliance with drinking water standards.

Safe Drinking Water State Revolving Fund (DWSRF): Congress established the DWSRF as part of the 1996 Safe Drinking Water Act Amendments to better enable public water systems to comply with national primary drinking water standards and to protect public health. The DWSRF provides financial assistance in the form of capitalization grants to states to provide low interest loans and other assistance to public water systems. In order to receive these funds, states must provide a state match equal to 20 percent of the federal capitalization grants and must create a drinking water state revolving fund program for public water system infrastructure needs and other drinking water-related activities. In response, California established the DWSRF through SB 1307 (Costa-Thompson, Chapter 734, Statutes of 1997) to help fund the state's drinking water needs. In California, the State Water Board's Division of Financial Assistance administers the DWSRF Program.

Communities without access to clean drinking water: When it comes to drinking water supply diminished by the drought, East Porterville, an unincorporated community in Tulare County (County), became the poster child of California communities without water. As of January 2015, the County had reported that 896 private wells had gone completely dry, which meant approximately 3,251 people were out of water – roughly 73% of the community. The challenge to drilling new wells for the residents, beside cost, was the lack of viable locations to drill without nitrate-contaminated water. On February 18, 2015, the Assembly Environmental Safety and Toxic Materials Committee (Committee) held an informational hearing on the impacts of the drought on drinking water supplies, and how the state has coordinated with local governments to disperse and utilize the emergency drought funding from the California Disaster Assistance Act. The hearing specifically focused on East Porterville and how state assistance provided short-term and long-term drinking water to the residents without any reliable water supply.

The Committee learned that the permanent solution for East Porterville was that the County was completing a feasibility study to understand the options for hooking East Porterville up to the City of Porterville's municipal water system. Disadvantaged communities in the Tulare Lake Basin region face widespread drinking water and wastewater challenges predominantly complicated by nitrate contamination.

Tulare Lake Basin Disadvantaged Community Water Study (Study): In August 2014, the County of Tulare submitted the Tulare Lake Basin Disadvantaged Community Water Study to the DWR. The Study was compiled to develop an integrated water quality and wastewater treatment program plan to address the drinking water and wastewater needs of disadvantaged communities in the Tulare Lake Basin. The objectives of the Study include:

1) Developing a plan that provides rural, disadvantaged communities with a safe, clean, and affordable potable water supply and effective and affordable wastewater treatment and disposal;

2) Recommendations for planning, infrastructure, and other water management actions, as well as specific recommendations for regional drinking water facilities, regional wastewater treatment facilities, conjunctive use sites and groundwater recharge, groundwater for surface water exchanges, related infrastructure, project sustainability, and cost sharing mechanisms; and,

3) Identifying projects and programs that will create long-term reliability, while optimizing the ongoing operation and maintenance and management costs for small water and wastewater systems.

The Tulare Lake Basin Study Area encompasses most of the four-county area, including Fresno, Kern, Kings, and Tulare Counties. The Study focused on the drinking water and wastewater needs of rural and unincorporated communities that meet the Proposition 84 definition of "disadvantaged community", which is a community whose median household income is 80 percent or less of the statewide median household income. The Study includes community water systems, wastewater systems, and rural communities with private wells and septic systems. Approximately 353 of the 530 communities identified within the Tulare Lake Basin Study Area are considered to be disadvantaged or severely disadvantaged. Among the recommended solutions was the inclusion of creating a joint powers authority that could look at both drinking water and wastewater systems.

The Study included recommendations on how it could be integrated into existing federal, state, and local planning and funding processes, and disseminated to the appropriate agencies. The Study also makes recommendations on how state, federal, and local agencies can provide funding, and other resources, and support to assist communities with implementing the solutions presented in each of the pilot projects.

On the heels of the work done on the Study, the Committee recognized that other regions in the state are in need of similar coordination and conflict resolution with issues of nitrate-contaminated drinking water supplies.

With lessons learned in the Tulare Lake Basin, the local agencies and non-profit organizations that partnered on the Study helped inform other municipalities around the state grappling with the same water quality challenges, including the Monterey County Regional Water Management Group, which was in the midst of developing an integrated plan to address drinking water and wastewater needs of the disadvantaged communities in the Salinas Valley.

Joint Powers Authority: Inter-agency contracts can involve the creation of a new entity by cooperation between several existing entities, which allows each of the member agencies to continue to exist as independent entities. Inter-agency contracts would most likely be in the form of a joint powers agreement that can form a joint powers authority (JPA).
The new entity formed through the joint powers agreement provides one or more services for all participating entities; however, the remaining services of each entity remain the responsibility of the individual agency. For example, the JPA may create a shared system management structure, while each participating entity continues to operate its own system. Some examples explained below.

City of Porterville: The City of Porterville (City), founded in 1849 and incorporated in 1902, is located in the central southern area of Tulare County. The City of Porterville operates under the Council-Manager form of government, and became a Charter City in 1926. According to a City municipal review update from 2014, "the City provides the following services that are subject to a municipal service review: public safety (police and fire protection), domestic water, sanitary sewer collection, treatment and disposal, transportation, and solid waste collection and disposal."

The City of Porterville relies solely on groundwater for supplying municipal water to its residents. A series of groundwater wells generally scattered in the area extract water from the aquifers underlying the City, which are recharged from rainfall and runoff from the Western Sierra Nevada. The primary water system contributing to the recharge of the Tule Basin Aquifer underlying Porterville is the Tule River. The City has also purchased water rights for about 900 acre feet annually from the Pioneer Ditch Company and Porter Slough Ditch Company, but historically this water is not used by the City

Tule River Tribe (Tribe): The Tule River Tribe, located in central California, is seeking to relocate Eagle Mountain Casino (Casino) from the Tule River Tribe Reservation (Reservation) to a location within the City of Porterville, in Tulare County, California. Both the City and the Tribe are severely impacted by drought, scarce water resources and high unemployment and the relocation of the Casino helps the Tribe and the City partner to address these critical issues. The Tribe suffers from a lack of sufficient and reliable potable water supply to serve the Reservation. The water shortage has significantly affected the quality of life on the Reservation and limited development, including the development of much needed residential housing. The lack of water availability has caused the wells on the Reservation to often run dry for up to a week at a time during the summer months and the Tribe has been forced to place a moratorium on residential development on the Reservation. Relocating the Casino will allow the Tribe to allocate the water supply the Casino is currently using to other development on the Reservation in order to meet the housing needs of the Tribe.

As part of the relocation project, the Tribe intends to develop a tertiary wastewater treatment plant (Water Plant) under a development agreement with the City. Under the development agreement, the Tribe would be responsible for constructing the Water Plant. The Water Plant will meet the needs of the Casino project and also provide recycled water to the Porterville

Sports Complex (Sports Complex), which is currently using potable water for irrigation. Replacing potable water used at the Sports Complex will help address the City's water supply shortage and reduce overall potable water demands within the City. The Water Plant will produce recycled water from the City's wastewater system for the relocated Casino and will replace potable water currently used for irrigating the Sports Complex. The Tribe and the City plan to enter into an agreement to form a JPA, which will own and operate the Water Plant. The JPA may issue bonds backed by revenues from the sale of recycled water. The bond proceeds will be used to reimburse the Tribe, in part, for the upfront cost of constructing the Water Plant; however, reimbursement is not guaranteed.

In lieu of drawing additional water from scarce potable water sources, the Water Plant will more than offset its potable water use, which will ensure no net increase in potable water demand in the Porterville area as a result of the relocation of the Casino. The City has experienced severe water supply restrictions in the last several years and currently uses potable water to irrigate the fields in its Sports Complex. Under the development agreement, the secondary effluent from the City flowing near the Casino's proposed location will be treated by the Water Plant for use in irrigating the Sports Complex and for similar purposes in lieu of using potable water. By providing recycled water in sufficient quantities to meet the City's needs, the City will no longer have to use precious potable groundwater to irrigate its Sports Complex. Moreover, the City will gain the ability to treat its own effluent and provide the treated water for higher value uses.

Issues for the Author to consider: If the committee passes the bill, the author may wish to continue to work with the State Water Board to elaborate on the project and provide some detail as to the use of the funds.

Potential amendments for the author and committee to consider: The author and committee may wish to fill in the blank in the bill, by specifying that the General Fund appropriation shall be made to the State Water Board.

Double-Referral: Should this bill pass the Assembly Environmental Safety and Toxic Materials Committee it will be re-referred to the Assembly Committee on Local Government.

Related Legislation:

1) AB 339 (Mathis, Chapter 439, Statues of 2017). Extends the ability of the State Water Resources Control Board (State Water Board) to fund projects addressing an urgent drinking water need from the Cleanup and Abatement Account by deleting the sunset for this provision.

2) AB 954 (Mathis, 2015). Would have appropriated $10 million dollars to a newly-created fund at the State Water Board to provide low-interest loans and grants to eligible applicants for water and wastewater. This bill was held on the suspense file of the Senate Appropriations Committee.

REGISTERED SUPPORT / OPPOSITION:

Support

Tule River Tribe (Sponsor)

Opposition

None on file.

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

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 733 (Quirk) – As Introduced February 19, 2019

SUBJECT: Hazardous waste: identification: testing

SUMMARY: Requires the Department of Toxic Substances and Control (DTSC) to evaluate the existence of alternate test methods that avoid the use of live vertebrate fish for hazardous and extremely hazardous waste identification, and, provided an adequate alternate test exists, requires DTSC to include it as an optional test method. Specifically, **this bill**:

1) Requires DTSC to review its acute toxicity criteria and guidelines for the identification of hazardous wastes and extremely hazardous wastes.

2) Requires DTSC to evaluate existence of alternate test methods that avoid the use of live vertebrate fish for the identification of hazardous wastes and extremely hazardous wastes.

3) Requires DTSC to update regulations, provided it finds an adequate alternate test, to include the alternate test method as an optional test method for the identification of hazardous wastes and extremely hazardous wastes.

EXISTING LAW:

1) Establishes the Resource Conservation and Recovery Act (RCRA) to authorize the United States Environmental Protection Agency (US EPA) to manage hazardous and non-hazardous wastes throughout its life cycle. (42 United States Code (U.S.C.) § 6901 et seq.)

2) Establishes the Hazardous Waste Control Law (HWCL) to authorize DTSC to regulate the management of hazardous wastes in California. (Health and Safety Code (HSC) § 25100 et seq.)

3) Defines "waste" as any solid, liquid, semisolid, or contained gaseous discarded material. (HSC § 25124)

4) Requires DTSC to develop and adopt regulatory criteria and guidelines for the identification of hazardous wastes and extremely hazardous wastes. (HSC § 25141(a))

5) Defines a "hazardous waste" as waste, because of its quantity, concentration, or physical, chemical, or infectious characteristics, that:

   a. Causes, or significantly contributes to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or,

   b. Poses a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bio

accumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed. (HSC § 25141(b))

6) Defines a "toxic hazardous waste" as waste that is identified as toxic by any one (or more) of the following: Toxicity Characteristic Leaching Procedure, Totals and Waste Extraction Test, Acute Oral Toxicity, Acute Dermal Toxicity, Acute Inhalation Toxicity, Acute Aquatic Toxicity, Carcinogenicity, or Experience or Testing. (California Code of Regulation (CCR) Title 22 § 66261.24)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author,

> "Waste generators are responsible for determining whether a waste is hazardous or nonhazardous. DTSC has a list of requirements generators must meet in order to handle waste as non-hazardous. One component of this determination is commonly referred to as the 'minnow test,' which proceeds by measuring the lethal dose of a waste to fish. The goal of the minnow test is to protect California's environment by making sure wastes that are toxic to aquatic life are handled appropriately. If a product passes this, and the other hazardous waste requirements, a company can avoid onerous handling of the product but cannot label it 'cruelty free' or 'not tested on animals.' Companies that are the concerned about animal testing chose not to use this minnow test and must treat their waste as hazardous by default. This allows companies to label their products 'cruelty free' or 'not tested on animals' but now they must treat their product differently for purposes of waste. Consequently, the lack of a humane option for hazardous waste identification leads to over-identification of hazardous waste. My bill could provide a humane and optional alternative to the minnow test, and as a result, lead to more accurate hazardous waste determinations."

Hazardous waste management: In California, DTSC is authorized by the US EPA to implement the RCRA requirements and its associated regulations. In addition to implementing RCRA, California implements additional state law hazardous waste requirements that are more stringent than those established under RCRA.

There are more than 100,000 businesses that generate hazardous waste in California. Waste generators are responsible for determining whether a waste is hazardous or non-hazardous and disposing of the waste accordingly. In California, a hazardous waste is any waste on a federally maintained RCRA list of hazardous wastes, that is derived from these wastes, or that is ignitable, corrosive, reactive, or toxic. In order to list a waste, US EPA assesses whether the waste:

1) Exhibits any of the characteristics, i.e., ignitability, corrosivity, reactivity, or toxicity;

2) Is fatal to humans or animals at low doses i.e. is acutely toxic; or,

3) Is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Toxic waste identification in California: In California, a waste is classified as hazardous due to toxic properties if it is identified as having one or more of eight types of toxicity, which includes acute oral toxicity, acute dermal toxicity, acute inhalation toxicity, acute aquatic toxicity, or carcinogenicity (CCR Title 22 § 66261.24). All of these types of toxicity can be determined using knowledge about the toxicity of constituent components of the waste, except for acute aquatic toxicity.

A waste is defined as having "acute aquatic toxicity" when less than 500 milligrams per liter kills 50% of the population (LC50) of fathead minnows (*Pimephales promelas*), rainbow trout (*Salmo gairdneri*) or golden shiners (*Notemigonus crysoleucas*) in 96 hours (CCR Title 22 § 66261.24). This test is most commonly performed on fathead minnows and is colloquially referred to as the "fish test." Other than Washington State, the committee is not aware of any other states that use acute aquatic toxicity testing as part of hazardous waste determination.

Fish test protocol: The fish test protocol for hazardous waste identification was developed as a special protocol for "materials that do not readily lend themselves to standard toxicity testing," such as oily samples and samples containing sediment, and draws from previously developed wastewater protocols. In concept, a waste fails the acute aquatic fish toxicity test if, in a tank containing fish and 500 mg of waste/L, 50% of the fish in the tank are dead after 96-hours. In order to produce reliable results, this procedure must be performed multiple times at the 500 mg/L concentration, and at concentrations above and below 500 mg/L, each time using a minimum of twenty fish. Along with wastes containing intuitively toxic substances, such as arsenic, based on data from the Draft Retail Waste Aquatic Toxicity Project available on DTSC's Internet Website, many household products fail this test as well, including ginko, ginger, zinc, and most if not all soaps and shampoos tested.

At present there is no single definable strain/stock of fathead minnows used in the various laboratories that test this species. Knowledge of the genetic composition of different stocks of fathead minnows could contribute to better understanding the basis of possible among-laboratory variations in responses to toxicants, as well as differences in responses between animals in the laboratory versus those in the field. Another measure that would help reduce within and among-laboratory variability in test data for fathead minnows would be standardization of diets (Ankley 2006).

DTSC selection of the fish test: According to DTSC's final statement of reasons justifying its criteria for hazardous waste identification (statement of reasons), issued in 1984, the US EPA established the toxicity criteria to define commercial substances which may pose a hazard if spilled or discharged into an aquatic environment (40 Code of Federal Regulations (CFR) 116). As part of those criteria, aquatically-toxic substances were defined as those which demonstrate a 96-hour LC50 of less than 500 milligrams per liter. Thus, DTSC also used this criteria to define aquatically-toxic wastes and materials because "numerous accidental and intentional discharges of toxic wastes into an aquatic environment have occurred, and the impacts are similar to that caused by commercial substances."

According to the statement of reasons, performing the test on readily available and commonly used fish is preferable because "it is not considered feasible, or necessary, to try to devise a bioassay method, or methods, which will anticipate waste pollution scenarios involving different conditions of water temperature and hardness of the exposure of any of the numerous species of common native fishes." The fathead minnow is not native to California, but is a common test organism that has been used historically in regulatory ecotoxicology for its sensitivity to a wide variety of chemicals and amenability to laboratory environments (The fathead minnow in aquatic toxicology: Past, present and future, Ankley 2006). All three fish species were chosen because of their common use in tests and readily available 96-hour LC50 data.

DTSC reasoned that testing on live organisms detects toxic characteristics of wastes that may not be captured in lists either because toxicity of constituent substances is unknown or because of synergistic toxicity of multiple constituent substances. In one example, a printing company dumped waste ink sludge at a municipal landfill not authorized to receive hazardous wastes. Analysis of the waste did not establish the presence of toxic materials; however, the acute aquatic fish toxicity test showed the sludge was highly toxic to fish. It was speculated that the ink contained a fungicide to prevent mildew. In several cases, DTSC noted that accidental or illegal discharge of hazardous waste resulted in fish kills. The statement of reasons also noted that the fish test may serve as an indicator of general toxicity of a waste, including to humans, in the view that fish are generally more sensitive to toxic substances than mammals.

Welfare concerns and fish: Fish have pain receptors (nociceptors), which are a prerequisite for pain sensation but do not rule out that apparent pain responses are essentially unexperienced and mechanical. When injected with an irritating, but not injurious, acid, fish eat less and do not flee objects they normally avoid. However, when also injected with morphine, their behavior remains closer to normal. However, laboratory experiments show that fish that naturally live in groups learn more slowly after having been kept in isolation.

The American Veterinary Medical Association's (AVMA) 2013 "Guidelines for the Euthanasia of Animals" state that, "Suggestions that finfish responses to pain merely represent simple reflexes have been refuted by studies demonstrating forebrain and midbrain electrical activity in response to stimulation and differing with type of nociceptor stimulation. Learning and memory consolidation in trials where finfish are taught to avoid noxious stimuli have moved the issue of finfish cognition and sentience forward to the point where the preponderance of accumulated evidence supports the position that finfish should be accorded the same considerations as terrestrial vertebrates in regard to relief from pain."

Consumer concern and over-classification of hazardous waste: While there is no legal definition of "Cruelty Free" and "Not Tested on Animals," many companies only use these labels if their products, when discarded, are not assessed using the fish test. Companies that do not test discarded products using the fish test treat their waste as hazardous by default, or risk liability. Violations of the HWCL can lead to penalties up to $70,000 per day for each violation (HSC § 25188). Consequently, the lack of a humane option for hazardous waste identification leads to over-identification of hazardous waste.

SB 423 (Bates, Chapter 771, Statutes of 2016) required DTSC to convene a Retail Waste Workgroup (Workgroup) tasked with identifying regulatory and policy directives that need clarification for managing consumer products. Over an eight-month period (October 2016 through May 2017), the Workgroup identified problems faced by the retail industry in applying

the hazardous waste management standards in California and worked to identify possible solutions. In the Workgroup's final report to the legislature, the regulated community estimated that, "About 30% of the total hazardous waste generated in California is 'California-only' hazardous waste [i.e., waste that is only classified as hazardous because of the fish test] that could fail the [fish test]. The percentages for retailer waste can be much higher, with some retailers managing up to 67% of their hazardous waste as 'California-only' hazardous waste." The Personal Care Products Council estimates that 25% of their products are hazardous waste when discarded under RCRA, but 100% of their products are considered hazardous under California law. The regulated community noted that managing this waste as hazardous is costly and reduces opportunities for recycling and identified fish embryo tests as a humane and modern alternative to the fish test.

Shift toward alternative test methods: Alternative test methods are methods that replace, reduce, or refine animal use in research and testing, a concept first described by William Russell and Rex Burch (The Principles of Humane Experimental Technique, 1959). California state law prohibits manufacturers and contract testing facilities from using traditional animal testing methods when an appropriate alternative test method has been scientifically validated and recommended by the Interagency Coordinating Center for the Validation of Alternative Methods (ICCVAM) (Civil Code Section 1834.9 (a)). Although this law exempts testing at regulatory agencies, there has been federal efforts to replace, reduce, or refine animal testing at federal agencies. The National Institutes of Health Revitalization Act of 1993, the ICCVAM Authorization Act of 2000, and the Frank R. Lautenberg Chemical Safety for the 21st Century Act require federal agencies to support the development of alternative test methods.

In 1997, US government agencies formed ICCVAM with several objectives, which includes ensuring that new and revised test methods are validated to meet the needs of U.S. federal agencies, and reducing, refining, or replacing the use of animals in testing where feasible. ICCVAM consists of 15 research and regulatory agencies, among which include the US EPA, the Food and Drug Administration (FDA), and the Agency for Toxic Substances and Disease Registry (ATSDR). These organizations provide or use toxicological information for risk assessment processes.

There have been significant efforts by both the research and regulatory communities to shift toward using alternative test methods. AB 733 further builds upon these efforts by requiring that DTSC evaluate existence of, and potentially adopt as an option, an alternative to the fish test. The technological and scientific advancements during the last few decades warrant an examination of high-throughput methods which may not only be more cost effective and accurate, but also more humane.

Related legislation:

1) AB 2474 (Quirk, 2018). Requires DTSC to evaluate, and adopt as optional tests if suitable, the fish embryo test and daphnid test as alternatives to the fish test used in hazardous waste identification. Vetoed.

2) SB 1249 (Galgiani, Chapter 899, Statutes of 2018). This bill made it unlawful for a manufacturer of cosmetic products to import for profit, sell, or offer for sale in this state, any cosmetic, if the cosmetic was developed or manufactured using an animal test that

was conducted or contracted by the manufacturer, or any supplier of the manufacturer, on or after January 1, 2020, as specified.

REGISTERED SUPPORT / OPPOSITION:

Support

Social Compassion in Legislation (Sponsor)
Physicians Committee for Responsible Medicine
159 Individuals

Opposition

None on file.

Analysis Prepared by: Pajau Vangay / E.S. & T.M. /

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 756 (Cristina Garcia) – As Amended March 13, 2019

SUBJECT: Public water systems: contaminants.

SUMMARY: Requires a public water system to monitor for perfluoroalkyl and polyfluoroalkyl substances (PFAS). Specifically, **this bill**:

1) Requires a public water system to monitor for PFAS chemicals.

2) Requires a public water system to publish and keep current on its internet website water quality information relating to regulated contaminates in the public water system's water.

3) Requires a public water system to notify each customer on the customer's next water bill.

4) Requires the public water system, before the next water bill is scheduled to be sent out, to request from each customer the customer's email address and, if a customer submits an email address, to provide that notification via email.

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, or MCLs) as set by the United States Environmental Protection Agency (US EPA) or the State Water Resources Control Board (State Water Board). (Health & Safety Code (HSC) § 116270, et seq.)

2) Requires a public water system, within 30-days of detection of a contaminant in exceedance of an MCL, notification level (NL), or a response level, to provide notification to its governing body of the detection. (HSC § 116455)

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

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

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author,

"This bill requires water systems to monitor for poly- and perfluoroalkyl substances, and adds customer notification requirements and requires water systems to publish and maintain current info about regulated contaminants on its website. PFAS is unregulated. There are currently no PHG or MCL for any PFAS. Only PFOS and PFOA have interim notification levels. For notification levels all customer notification is voluntary and is suggested to occur in the yearly consumer confidence report. This type of notification is not sufficient for vulnerable communities that may want to alter their water consumption. We don't know enough about where contamination is in California and how many different types of PFAS may be involved - the information we have is just the tip of the iceberg. To adequately address contamination, we should have that information."

Regulating water quality: Water is California's most precious resource. With a growing population of more than 39 million people, a limited supply of fresh water, and a range of impacts on both terrestrial and marine habitats and resources, the protection of water for beneficial uses is of paramount concern for all Californians. Water quality is a concern for all bodies of freshwater, both surface water and groundwater, and depends on a variety of chemical and biological factors regulated by a number of local, state, and federal agencies.

Risks to human health and the environment are managed by federal and state standards for permissible levels of certain contaminants, known as MCLs. The State Water Board adopts MCLs for contaminants, which are health protective drinking water standards to be met by public water systems. MCLs take into account not only a contaminant's health risks but also factors such as its detectability and treatability, as well as costs of treatment.

A drinking water contaminant's MCL is required to be established at a level as close to its public health goal (PHG) as is technologically and economically feasible, placing primary emphasis on the protection of public health. A PHG, which is established by OEHHA, is the level of a contaminant in drinking water that does not pose a significant risk to health. The process for establishing a PHG for a contaminant in drinking water is very rigorous. OEHHA scientists first compile all relevant scientific information available and perform health risk assessments in which they determine the levels of the contaminant in drinking water that could be associated with various adverse health effects. The State Water Board then goes through a lengthy, public regulatory process to develop the PHG into an MCL.

The State Water Board has an MCL for about 100 chemicals, all of which have a PHG.

In addition, the State Water Board has NLs, which are health-based advisory levels for contaminants in drinking water that do not have an MCL. When chemicals are found at concentrations greater than their NLs, certain requirements and recommendations apply. The level at which the State Water Board's Division of Drinking Water (DDW) recommends removal of a drinking water source from service is called the "response level."

Since the early 1980s, NLs for 93 contaminants have been established. Of those, 40 have gone through the formal regulatory process and now have MCLs.

Currently there are 29 contaminants with NLs. In addition, another 24 contaminants have archived advisory (notification) levels.

There are tens of thousands of additional chemicals and constituents that do not have an MCL or a NL and that we do not have enough information about to determine whether those constituents have a human health or environmental impact.

Perfluoroalkyl and polyfluoroalkyl substances, also known as PFAS chemicals: First, the chemistry: PFASs are a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom. A chemical is called a polyfluoroalkyl substance if hydrogen atoms on at least one of the carbon atoms have been replaced by fluorine atoms. If all of the hydrogen atoms attached to carbon atoms are replaced by fluorine atoms, the chemical is called a perfluoroalkyl substance.

Now, layperson's terms: PFASs are a group of man-made chemicals that have been synthesized for heat, water, and lipid resistance. They have been used extensively in consumer products such as carpets, clothing, fabrics for furniture, paper packaging for food, and other materials (e.g., cookware) designed to be waterproof, stain-resistant, or non-stick. In addition, they have been used in fire-retarding foam and various industrial processes.

There are currently no federal regulations on the production, monitoring, or pollution of the PFAS class of about 4,700 chemicals, which are manufactured and used in a wide variety of industries and products.

Perfluorooctanoic acid (PFOA), most commonly known as the chemical used to produce Teflon, and perfluorooctanesulfonic acid (PFOS), formerly used in Scotchgard, are "long-chain" chemicals, meaning they have six (for perfluoroalkyl sulfonic acids) or seven (for perfluoroalkyl carboxylic acids) or more carbon molecules. They are part of the PFASs group of substances, and are well-characterized in scientific literature.

PFOS and PFOA are extremely persistent in soil and water, and are resistant to typical environmental degradation processes due to their low volatility and ionic nature. PFOA and PFOS are bioaccumulative and highly persistent in human and animal tissues. Based on the currently available, peer-reviewed studies on laboratory animals and epidemiological evidence in human populations, the United States Environmental Protection Agency (US EPA) released the following statement:

> "These studies indicate that exposure to PFOA and PFOS over certain levels may result in adverse health effects, including developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes)."

From 2005-2013, a science panel carried out exposure and health studies in the Mid-Ohio Valley communities, which had been potentially affected by the releases of PFOA emitted since the 1950s from the Washington Works plant in Parkersburg, West Virginia. The data, based on a study of 69,000 people living near a West Virginia DuPont plant, indicate exposure is associated with kidney cancer, testicular cancer, thyroid disease, high cholesterol, and ulcerative colitis, among other problems, while animal studies show delays in development.

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

Short-chain PFASs are widely used as alternatives to long-chain PFASs. The limited but growing data on these newer chemicals indicate that they are of similar structure, are equally persistent in the environment, and behave in similar fashion in the human body, particularly at the cellular level.

PFASs accumulate in protein-rich compartments such as blood, liver, and kidney cells. Early studies found that bioaccumulation of PFASs were shown to depend on carbon chain length, and found increases in bioconcentration factors and half-lives with increasing perfluoroalkyl chain length in rainbow trout (Martin et al., 2003).

However, newer science continues to inform our understanding. The Scientific Guidance Panel (Panel), a panel of expert scientists from outside of state government that provide scientific advice to OEHHA on the state's Biomonitoring program, found that, "Given the wide range of new PFASs, many more replacement chemicals, precursors, or breakdown products might also be detected in human blood or other biological samples." The Panel recommended including the PFAS class as designated chemicals for Biomonitoring California, a state program to test people for chemical exposure.

Polyfluorinated compounds are often referred to as "precursors" to the perfluoroalkyl acids (PFAAs), as they biotransform to PFAAs as dead end environmental products. Examples can be seen in biological waste water treatment plants, where significantly more PFOA and PFOS are measured at the outflow than the inflow. The increase is explained by the fact that many PFAS compounds enter the sewage treatment plant uncharacterized and are biotransformed to PFAAs of various chain lengths with PFOS and PFOA often being the only analytes assessed.

According to the 2011 paper published in Environmental Toxicology and Chemistry, *Strong Associations of Short-Chain Perfluoroalkyl Acids with Serum Albumin and Investigation of Binding Mechniams*, Heather Bischel concluded, "Association constants determined for perfluorobutanesulfonate and perfluoropentanoate with bovine serum albumin (BSA) are on the order of those for long-chain PFAAs, suggesting that physiological implications of strong binding to albumin may be important for short-chain PFAAs." In other words, bioaccumulation of short chain PFASs are similar to that of long chain PFASs.

The US National Library of Medicine National Institutes of Health wrote in a paper on short-chain PFASs that short-chain PFASs are as persistent as long-chain PFASs yet have different, but not less alarming properties of concern, and are already widely distributed in the environment. It concluded that "Due to an increasing use of short-chain PFASs, an effective regulation is urgently needed."

State drinking water monitoring and notification levels: In response to a request from the State Water Board's DDW, OEHHA recommended interim NLs for PFOA (based on liver toxicity, as well as cancer risks) and for PFOS (based on immunotoxicity). OEHHA made these recommendations following its review of currently available health-based advisories, standards, and supporting documentation.

On July 13, 2018, under the authority of the Deputy Director of DDW, California issued drinking water NLs of 14 parts per trillion (ppt) for PFOA and 13 ppt for PFOS.

Generally, NLs are established as precautionary measures for contaminants that may be considered candidates for establishment of MCLs, but have not yet undergone or completed the regulatory standard setting process prescribed for the development of MCLs and are not drinking water standards.

The establishment of a NL does not require public water systems to monitor for the contaminant, except when the water systems are subject to the recycled water regulations.

Monitoring for NL is *not mandatory*. But, response to an exceedance of a NL is only required for those water systems who volunteer to monitor.

Public water systems that monitor for PFOA and PFOS NLs that find an exceedance must comply with the statute's notification requirements. Those notification requirements, per HSC § 116455, require timely notification by drinking water systems when a NL is exceeded in drinking water that is provided to consumers.

The level prompting a recommendation for source removal is the "response level," and depends upon the toxicological endpoint that is the basis for the NL.

The State Water Board uses the data collected from the NLs as more a qualitative review of how many systems, and thus, how many people are impacted by the contaminant. While a NL is not a precursor to an MCL, if the pollution is broad enough and cannot be addressed in other ways, then seeking a regulatory limit via an MCL could be warranted.

The State Water Board's DDW has some limited authority to order testing for NLs based on a potential threat to the public. Currently, they are working to gather information along this line in order to exercise this authority. Current data show 18 water sources have exceeded the PFOA NL and 25 water sources have exceeded the PFOA NL.

Federal drinking water monitoring and notification: In May 2016, the US EPA issued a lifetime health advisory for PFOS and PFOA for drinking water, advising municipalities that they should notify their customers of the presence of levels greater than 70 ppt in community water supplies. The US EPA recommended that the notification of customers include information on the increased risk to health, especially for sensitive populations.

The US EPA's health advisories are non-enforceable, non-regulatory, and provide technical information to states' agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination.

The US EPA uses the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the federal SDWA.

From 2013 to 2015, the US EPA, under the UCMR, required all large water systems (i.e., water systems serving more than 10,000 people) to collect and analyze more than 12,000 drinking water samples for PFOS and PFOA. In addition, some water systems serving fewer than 10,000 people reported approximately 400 drinking water results for PFOS and PFOA. Under the UCMR, the US EPA required laboratories to use EPA Method 537 v1.1 to analyze for six perfluorinated compounds. At that time, the minimum reporting levels for PFOS and PFOA were 0.04 µg/L and 0.02 µg/L, respectively.

The occurrence data that were reported identified 133 UCMR detections in California. Water utilities with the highest concentrations of PFAS chemicals have been publicly identified: 21 are in California, but the names of those systems with detectable PFAS chemical contamination between 10- to 90-ppt (levels less than the US EPA's reporting thresholds) were not released.

In California, there are data for 47 large public water systems – mostly in southern California – which submitted test results for PFOA.

Environmental Working Group (EWG) findings: EWG contracted with Eurofins Eaton Analytical to analyze a third of the nationwide samples submitted to the US EPA and found that 28% of the water utilities it tested contained PFAS chemicals (includes PFOA and PFOS) at concentrations in exceedance of 5 ppt. Independent scientific assessments found that levels in many water systems are "at least two orders of magnitude" higher than what the US EPA advises is safe, but EWG calculates that up to 110 million Americans could have PFASs in their water.

Looking at PFAS substances as a class: To date, both the US EPA and the State Water Board have looked at collecting detection data on two PFAS substances, but there is a case to be made for addressing the substances as a whole class.

At the joint legislative hearing with this committee and Senate Environmental Quality Committee on February 12, 2019, on California's Green Chemistry Program, this committee asked DTSC about its efforts to address PFAS chemicals in carpets and rugs as it relates to short chains or long chains.

Dr. Meredith Williams, Acting Director, DTSC, explained that DTSC is looking at all chain lengths as they look at the chemicals in the class of PFAS chemicals. She testified, "There's a reason for that. We have a shorthand expression that's 'all roads lead to perfluoroalkyl acids.' That is the subset of the PFAS family that is the most well-characterized and most well understood to have toxic effects. At the same time, if you look at the other sub classes, they either degrade to PFASs or PFASs are used to manufacture them … there are these interconnections between the chemicals in the class. Our concern about the PFASs was enough for us to say we are confident to look at these chemicals as a whole class. The distinction between the long chains and the shorter chains is, in some ways, arbitrary. The long chains are well characterized, and that's why people know about them. It's not that the others are safer, necessarily. It's just that they haven't been as widely characterized … If you look at the constant exposure, because [PFAS chemicals] are [so ubiquitous], they are going to be in people's systems at any given time."

In September 2018, a consortium of environmental and public health groups sent a letter to the State Water Board stating that "while there is limited toxicity data on many of the newer "short-chain" PFASs replacing PFOA and PFOS in various applications, evidence is growing quickly that they collectively pose similar threats to human health and the environment. As Scheringer, et.al. warned in 2014, "The levels of some fluorinated alternatives or their degradation products, such as perfluorobutane sulfonic acid (PFBS) or perfluorobutanoic acid (PFBA), have been shown to be rising in recent years in the environment and human tissues in Europe." This, and concerns with the environmental fate and persistence of short-chain alternative PFASs have led to a call from independent scientists from around the globe to address PFAS as a class both in terms of their impacts and in limiting their uses."

The letter continues by suggesting drinking water should be monitored for the class of chemicals, not just the two individual chemicals for which the State Water Board has issued NLs. The State Water Board has, in fact, regulated multiple drinking water contaminants as a class, including trihalomethanes, haloacetic acids, and dioxin.

Lastly, the Panel that provides guidance to OEHHA on biomonitoring recommended that the entire class of PFASs be added to the list of designated chemicals for Biomonitoring California. The Panel recognizes that listing this broad group would give the Biomonitoring Program the flexibility to choose new PFASs of potential health concern that would be appropriate to measure in response to market shifts. OEHHA, heeding that guidance, plans to evaluate new assays for toxicological evaluations of other PFAS substances as they understand whether these substances perturb the function of a cell or cellular components in the same manner as anchor chemicals. OEHHA acknowledges that it is likely that the 5,000 or so PFAS substances have similar or overlapping toxicological profiles.

State Water Board workshop on PFASs: On March 6, 2019, the State Water Board held a public meeting for federal and state agencies and non-governmental organizations to present information to the State Water Board and public on PFAS substances, potential sources, and potential risks to drinking water.

The US EPA started the meeting with a presentation explaining that, after drinking water tests showed dangerously high levels of PFASs in communities around the United States, particularly around military bases and fire stations, the US EPA, under the Obama Administration in 2016, proposed creating a national standard for limiting the levels in drinking water of two of the most prevalent varieties of PFAS chemicals, PFOA and PFOS.

The US EPA has a PFAS Action Plan, under which it is evaluating whether to regulate the broader class of PFAS chemicals. The next UCMR (version 5) proposes to include all PFASs.

The State Water Board announced that it is initiating a PFAS Phased Investigation Plan (Plan), under which staff will be doing investigative reporting to identify where toxic hot spots may be in California for PFOS/PFOA contamination, and then will conduct testing to see whether the contamination has impacted the drinking water supplies. Phase I of the Plan includes sampling at 31 airports, 578 drinking water wells (2-mile radius of each), 252 municipal solid waste landfills, another 353 drinking water wells (1-mile radius of each), and 389 impacted drinking water sources and adjacent small water systems. Testing results from Phase I are expected in September of this year. Phase II of the plan will include source investigation and nearby drinking water well sampling at primary manufacturing facilities, refineries, bulk terminals, and non-airport fire training areas.

Looking ahead to 2020, the State Water Board recognizes the potential for adjusting the existing NLs and/or establishing new NLs for additional contaminants, potentially regulating PFASs as a class, requesting a PHG from OEHHA, consideration of an MCL or MCLs, and, potential response strategies to PFAS detections.

Which brings us to AB 756: Current law requires a public water system, within 30-days of detection of a contaminant in exceedance of a NL to notify the authorities. All customer notification is voluntary and is suggested to occur in the annual consumer confidence report provided to water customers.

The author feels this type of notification is insufficient for vulnerable communities that may want to alter their water consumption, so AB 756 would require, when there is an exceedance of a NL, notification to all water customers. The bill also addresses some housekeeping; it would require a water provider to request customer's email addresses so the notifications on water quality can be provided via email.

The bill further requires all public water systems to monitor for PFAS substances. The author states that not enough is known about where PFAS contamination is in California or how many different types of PFAS may be involved. To adequately address contamination, she feels, there needs to be more information.

Under the current NLs, public water systems know at what level to monitor for PFOA and PFOS, and at what levels a response is required. AB 756 does not indicate what level(s) the different PFASs should be monitored for, and which levels data should be provided to the State Water Board, or that data should be transmitted at all, or at what levels response actions should take place.

Complicating the issue is that current commercially available analytical methodologies are not capable of quantifying the full suite of PFAS compounds that exist in water. For example, the fluorotelomers and the many other PFAS compounds that biotransform are left undetermined.

However, there are currently two detection methodologies being used for PFASs in drinking water. The US EPA's Method 537 v.1.1 can detect 14 PFASs.

There are 13 labs in California certified by the State Water Board's environmental laboratory accreditation program for Method 537 v. 1.1. The US EPA recently released Method 537.1, an updated version, to detect up to 18 PFASs, but there are not yet any certified labs that are certified for Method 537.1.

The second method is the Total Oxidizable Precursor (TOP) assay, which can measure the concentration of non-discrete and difficult to measure PFASs that are not determined by the Method 537 1.1. Assessment of TOP assay data may improve our understanding of potential PFASs in the environment.

Given the lack of detection methodologies, the requirement to monitor for all PFASs may be premature. The Committee would like to see the State Water Board's PFAS Investigative Plan move forward, review the data, and then determine the need for and ability to impose regulatory requirements for monitoring all PFASs. The Committee would also like to understand why the state has a detection method for identifying 14 (or 18) PFASs, but only has NLs for two PFASs. Further, the Committee would like to understand why the state is not requiring public water systems to monitor for the 14 PFASs we can detect now, and whether there are plans for NLs for those PFASs we can detect (other than PFOA and PFOS).

The author may wish to consider investigating these questions with the State Water Board and OEHHA and determine if there is an alternative approach to what is currently in AB 756, in order to get a better understanding of PFAS contamination in our drinking water sources.

Related legislation: AB 841 (Ting). Would require, on or before January 1, 2021, OEHHA to adopt a work plan to assess which substances in the class of PFAS substances should be tested as a risk to human health, and would require OEHHA, as part of the assessments, to determine

which of the PFAS substances are appropriate candidates for NLs to be adopted by the State Water Board. It will be heard in the Assembly Environmental Safety & Toxic Materials committee on March 26, 2019.

REGISTERED SUPPORT / OPPOSITION:

Support

American Congress of Obstetricians and Gynecologists - District IX
California Health Coalition Advocacy
Clean Water Action
Environmental Working Group (EWG)

Opposition

None on file.

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

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 841 (Ting) – As Amended March 20, 2019

SUBJECT: Drinking water: contaminants: perfluoroalkyl and polyfluoroalkyl substances

SUMMARY: Requires the Office of Environmental Health Hazard Assessment (OEHHA) to assess perfluoroalkyl and polyfluoroalkyl (PFAS) substances in drinking water. Specifically, **this bill**:

1) Requires, on or before January 1, 2021, OEHHA to adopt a work plan to assess which substances in the class of PFAS substances should be identified as a potential risk to human health, taking into account which substances have the potential to be detected in California waters based on prevalence of manufacturing of, manufacturing products with, or use of a PFAS substance in California, and which substances are technologically feasible to detect based on current detection methodologies.

2) Requires, on or before January 1, 2022, OEHHA to provide an update to the Legislature on its preliminary assessments included in the work plan.

3) Requires OEHHA to continue to annually assess PFAS substances as information, scientific research, and detection methodologies become available.

4) Requires OEHHA, as part of the assessments, to determine which of the PFAS substances are appropriate candidates for notification levels (NLs) to be adopted by the State Water Resources Control Board (State Water Board) in accordance with current law.

5) Authorizes OEHHA to use scientific data and research from other state or federal agencies and authoritative bodies that have scientific literature on PFAS substances.

6) Requires OEHHA to coordinate with the State Water Board to collect water monitoring data on PFASs, as provided by the federal Unregulated Contaminant Monitoring Rule (UCMR), or the State Water Board's investigative authority.

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, or MCLs) as set by the United States Environmental Protection Agency (US EPA) or the State Water Board. (Health & Safety Code (HSC) § 116270, et seq.)

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

3) Requires a public water system, within 30-days of detection of a contaminant in exceedance of an MCL, notification level (NL), or a response level, to provide notification to its governing body of the detection. (HSC § 116455)

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

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "Perfluoroalkyl or polyfluoroalkyl (PFAS) as synthetic chemicals with a variety of uses, including, but not limited to, nonstick pans, waterproof clothing, and firefighting foam. Due to the many military bases throughout California and the many wildfires that have devastated the state, PFAS chemicals have been found in our water systems because of the widespread use of firefighting foam … This bill requires the Office of Environmental Health Hazard Assessment (OEHHA) to adopt a work plan to determine which substances within the class of PFAS chemicals should be assessed as a risk to human health and whether or not notification levels should be adopted."

Regulating water quality: Water is California's most precious resource. With a growing population of more than 39 million people, a limited supply of fresh water, and a range of impacts on both terrestrial and marine habitats and resources, the protection of water for beneficial uses is of paramount concern for all Californians. Water quality is a concern for all bodies of freshwater, both surface water and groundwater, and depends on a variety of chemical and biological factors regulated by a number of local, state, and federal agencies.

Risks to human health and the environment are managed by federal and state standards for permissible levels of certain contaminants, known as MCLs. The State Water Board adopts MCLs for contaminants, which are health protective drinking water standards to be met by public water systems. MCLs take into account not only a contaminant's health risks but also factors such as its detectability and treatability, as well as costs of treatment.

A drinking water contaminant's MCL is required to be established at a level as close to its public health goal (PHG) as is technologically and economically feasible, placing primary emphasis on the protection of public health. A PHG, which is established by OEHHA, is the level of a contaminant in drinking water that does not pose a significant risk to health. The process for establishing a PHG for a contaminant in drinking water is very rigorous. OEHHA scientists first compile all relevant scientific information available and perform health risk assessments in which they determine the levels of the contaminant in drinking water that could be associated with various adverse health effects. The State Water Board then goes through a lengthy, public regulatory process to develop the PHG into an MCL.

The State Water Board has an MCL for about 100 chemicals, all of which have a PHG.

In addition, the State Water Board has NLs, which are health-based advisory levels for contaminants in drinking water that do not have an MCL. When chemicals are found at concentrations greater than their NLs, certain requirements and recommendations apply. The

level at which the State Water Board's Division of Drinking Water (DDW) recommends removal of a drinking water source from service is called the "response level."

Since the early 1980s, NLs for 93 contaminants have been established. Of those, 40 have gone through the formal regulatory process and now have MCLs.

Currently there are 29 contaminants with NLs. In addition, another 24 contaminants have archived advisory (notification) levels.

There are tens of thousands of additional chemicals and constituents that do not have an MCL or a NL and that we do not have enough information about to determine whether those constituents have a human health or environmental impact.

Perfluoroalkyl and polyfluoroalkyl substances, also known as PFAS chemicals: First, the chemistry: PFASs are a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom. A chemical is called a polyfluoroalkyl substance if hydrogen atoms on at least one of the carbon atoms have been replaced by fluorine atoms. If all of the hydrogen atoms attached to carbon atoms are replaced by fluorine atoms, the chemical is called a perfluoroalkyl substance.

Now, layperson's terms: PFASs are a group of man-made chemicals that have been synthesized for heat, water, and lipid resistance. They have been used extensively in consumer products such as carpets, clothing, fabrics for furniture, paper packaging for food, and other materials (e.g., cookware) designed to be waterproof, stain-resistant, or non-stick. In addition, they have been used in fire-retarding foam and various industrial processes.

There are currently no federal regulations on the production, monitoring, or pollution of the PFAS class of about 4,700 chemicals, which are manufactured and used in a wide variety of industries and products.

Perfluorooctanoic acid (PFOA), most commonly known as the chemical used to produce Teflon, and perfluorooctanesulfonic acid (PFOS), formerly used in Scotchgard, are "long-chain" chemicals, meaning they have six (for perfluoroalkyl sulfonic acids) or seven (for perfluoroalkyl carboxylic acids) or more carbon molecules. They are part of the PFASs group of substances, and are well-characterized in scientific literature.

PFOS and PFOA are extremely persistent in soil and water, and are resistant to typical environmental degradation processes due to their low volatility and ionic nature. PFOA and PFOS are bioaccumulative and highly persistent in human and animal tissues. Based on the currently available, peer-reviewed studies on laboratory animals and epidemiological evidence in human populations, the United States Environmental Protection Agency (US EPA) released the following statement:

> "These studies indicate that exposure to PFOA and PFOS over certain levels may result in adverse health effects, including developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes)."

From 2005-2013, a science panel carried out exposure and health studies in the Mid-Ohio Valley communities, which had been potentially affected by the releases of PFOA emitted since the 1950s from the Washington Works plant in Parkersburg, West Virginia. The data, based on a study of 69,000 people living near a West Virginia DuPont plant, indicate exposure is associated with kidney cancer, testicular cancer, thyroid disease, high cholesterol, and ulcerative colitis, among other problems, while animal studies show delays in development.

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

Short-chain PFASs are widely used as alternatives to long-chain PFASs. The limited but growing data on these newer chemicals indicate that they are of similar structure, are equally persistent in the environment, and behave in similar fashion in the human body, particularly at the cellular level.

PFASs accumulate in protein-rich compartments such as blood, liver, and kidney cells. Early studies found that bioaccumulation of PFASs were shown to depend on carbon chain length, and found increases in bioconcentration factors and half-lives with increasing perfluoroalkyl chain length in rainbow trout (Martin et al., 2003).

However, newer science continues to inform our understanding. The Scientific Guidance Panel (Panel), a panel of expert scientists from outside of state government that provide scientific advice to OEHHA on the state's Biomonitoring program, found that, "Given the wide range of new PFASs, many more replacement chemicals, precursors, or breakdown products might also be detected in human blood or other biological samples." The Panel recommended including the PFAS class as designated chemicals for Biomonitoring California, a state program to test people for chemical exposure.

Polyfluorinated compounds are often referred to as "precursors" to the perfluoroalkyl acids (PFAAs), as they biotransform to PFAAs as dead end environmental products. Examples can be seen in biological waste water treatment plants, where significantly more PFOA and PFOS are measured at the outflow than the inflow. The increase is explained by the fact that many PFAS compounds enter the sewage treatment plant uncharacterized and are biotransformed to PFAAs of various chain lengths with PFOS and PFOA often being the only analytes assessed.

According to the 2011 paper published in Environmental Toxicology and Chemistry, *Strong Associations of Short-Chain Perfluoroalkyl Acids with Serum Albumin and Investigation of Binding Mechniams*, Heather Bischel concluded, "Association constants determined for perfluorobutanesulfonate and perfluoropentanoate with bovine serum albumin (BSA) are on the order of those for long-chain PFAAs, suggesting that physiological implications of strong binding to albumin may be important for short-chain PFAAs." In other words, bioaccumulation of short chain PFASs are similar to that of long chain PFASs.

The US National Library of Medicine National Institutes of Health wrote in a paper on short-chain PFASs that short-chain PFASs are as persistent as long-chain PFASs yet have different,

but not less alarming properties of concern, and are already widely distributed in the environment. It concluded that "Due to an increasing use of short-chain PFASs, an effective regulation is urgently needed."

State drinking water monitoring and notification levels: In response to a request from the State Water Board's DDW, OEHHA recommended interim NLs for PFOA (based on liver toxicity, as well as cancer risks) and for PFOS (based on immunotoxicity). OEHHA made these recommendations following its review of currently available health-based advisories, standards, and supporting documentation.

On July 13, 2018, under the authority of the Deputy Director of DDW, California issued drinking water NLs of 14 parts per trillion (ppt) for PFOA and 13 ppt for PFOS.

Generally, NLs are established as precautionary measures for contaminants that may be considered candidates for establishment of MCLs, but have not yet undergone or completed the regulatory standard setting process prescribed for the development of MCLs and are not drinking water standards.

The establishment of a NL does not require public water systems to monitor for the contaminant, except when the water systems are subject to the recycled water regulations.

Monitoring for NL is *not mandatory*. But, response to an exceedance of a NL is only required for those water systems who volunteer to monitor.

Public water systems that monitor for PFOA and PFOS NLs that find an exceedance must comply with the statute's notification requirements. Those notification requirements, per HSC § 116455, require timely notification by drinking water systems when a NL is exceeded in drinking water that is provided to consumers.

The level prompting a recommendation for source removal is the "response level," and depends upon the toxicological endpoint that is the basis for the NL.

The State Water Board uses the data collected from the NLs as more a qualitative review of how many systems, and thus, how many people are impacted by the contaminant. While a NL is not a precursor to an MCL, if the pollution is broad enough and cannot be addressed in other ways, then seeking a regulatory limit via an MCL could be warranted.

The State Water Board's DDW has some limited authority to order testing for NLs based on a potential threat to the public. Currently, they are working to gather information along this line in order to exercise this authority. Current data show 18 water sources have exceeded the PFOA NL and 25 water sources have exceeded the PFOA NL.

Federal drinking water monitoring and notification: In May 2016, the US EPA issued a lifetime health advisory for PFOS and PFOA for drinking water, advising municipalities that they should notify their customers of the presence of levels greater than 70 ppt in community water supplies. The US EPA recommended that the notification of customers include information on the increased risk to health, especially for sensitive populations.

The US EPA's health advisories are non-enforceable, non-regulatory, and provide technical information to states' agencies and other public health officials on health effects, analytical methodologies, and treatment technologies associated with drinking water contamination.

The US EPA uses the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the federal SDWA.

From 2013 to 2015, the US EPA, under the UCMR, required all large water systems (i.e., water systems serving more than 10,000 people) to collect and analyze more than 12,000 drinking water samples for PFOS and PFOA. In addition, some water systems serving fewer than 10,000 people reported approximately 400 drinking water results for PFOS and PFOA. Under the UCMR, the US EPA required laboratories to use EPA Method 537 v1.1 to analyze for six perfluorinated compounds. At that time, the minimum reporting levels for PFOS and PFOA were 0.04 µg/L and 0.02 µg/L, respectively.

The occurrence data that were reported identified 133 UCMR detections in California. Water utilities with the highest concentrations of PFAS chemicals have been publicly identified: 21 are in California, but the names of those systems with detectable PFAS chemical contamination between 10- to 90-ppt (levels less than the US EPA's reporting thresholds) were not released.

In California, there are data for 47 large public water systems – mostly in southern California – which submitted test results for PFOA.

Environmental Working Group (EWG) findings: EWG contracted with Eurofins Eaton Analytical to analyze a third of the nationwide samples submitted to the US EPA and found that 28% of the water utilities it tested contained PFAS chemicals (includes PFOA and PFOS) at concentrations in exceedance of 5 ppt. Independent scientific assessments found that levels in many water systems are "at least two orders of magnitude" higher than what the US EPA advises is safe, but EWG calculates that up to 110 million Americans could have PFASs in their water.

Looking at PFAS substances as a class: To date, both the US EPA and the State Water Board have looked at collecting detection data on two PFAS substances, but there is a case to be made for addressing the substances as a whole class.

At the joint legislative hearing with this committee and Senate Environmental Quality Committee on February 12, 2019, on California's Green Chemistry Program, this committee asked DTSC about its efforts to address PFAS chemicals in carpets and rugs as it relates to short chains or long chains.

Dr. Meredith Williams, Acting Director, DTSC, explained that DTSC is looking at all chain lengths as they look at the chemicals in the class of PFAS chemicals. She testified, "There's a reason for that. We have a shorthand expression that's 'all roads lead to perfluoroalkyl acids.' That is the subset of the PFAS family that is the most well-characterized and most well understood to have toxic effects. At the same time, if you look at the other sub classes, they either degrade to PFASs or PFASs are used to manufacture them … there are these interconnections between the chemicals in the class. Our concern about the PFASs was enough for us to say we are confident to look at these chemicals as a whole class. The distinction between the long chains and the shorter chains is, in some ways, arbitrary. The long chains are well characterized, and that's why people know about them. It's not that the others are safer,

necessarily. It's just that they haven't been as widely characterized … If you look at the constant exposure, because [PFAS chemicals] are [so ubiquitous], they are going to be in people's systems at any given time."

In September 2018, a consortium of environmental and public health groups sent a letter to the State Water Board stating that "while there is limited toxicity data on many of the newer "short-chain" PFASs replacing PFOA and PFOS in various applications, evidence is growing quickly that they collectively pose similar threats to human health and the environment. As Scheringer, et.al. warned in 2014, "The levels of some fluorinated alternatives or their degradation products, such as perfluorobutane sulfonic acid (PFBS) or perfluorobutanoic acid (PFBA), have been shown to be rising in recent years in the environment and human tissues in Europe." This, and concerns with the environmental fate and persistence of short-chain alternative PFASs have led to a call from independent scientists from around the globe to address PFAS as a class both in terms of their impacts and in limiting their uses."

The letter continues by suggesting drinking water should be monitored for the class of chemicals, not just the two individual chemicals for which the State Water Board has issued NLs. The State Water Board has, in fact, regulated multiple drinking water contaminants as a class, including trihalomethanes, haloacetic acids, and dioxin.

Lastly, the Panel that provides guidance to OEHHA on biomonitoring recommended that the entire class of PFASs be added to the list of designated chemicals for Biomonitoring California. The Panel recognizes that listing this broad group would give the Biomonitoring Program the flexibility to choose new PFASs of potential health concern that would be appropriate to measure in response to market shifts. OEHHA, heeding that guidance, plans to evaluate new assays for toxicological evaluations of other PFAS substances as they understand whether these substances perturb the function of a cell or cellular components in the same manner as anchor chemicals. OEHHA acknowledges that it is likely that the 5,000 or so PFAS substances have similar or overlapping toxicological profiles.

State Water Board workshop on PFASs: On March 6, 2019, the State Water Board held a public meeting for federal and state agencies and non-governmental organizations to present information to the State Water Board and public on PFAS substances, potential sources, and potential risks to drinking water.

The US EPA started the meeting with a presentation explaining that, after drinking water tests showed dangerously high levels of PFASs in communities around the United States, particularly around military bases and fire stations, the US EPA, under the Obama Administration in 2016, proposed creating a national standard for limiting the levels in drinking water of two of the most prevalent varieties of PFAS chemicals, PFOA and PFOS.

The US EPA has a PFAS Action Plan, under which it is evaluating whether to regulate the broader class of PFAS chemicals. The next UCMR (version 5) proposes to include all PFASs.

The State Water Board announced that it is initiating a PFAS Phased Investigation Plan (Plan), under which staff will be doing investigative reporting to identify where toxic hot spots may be in California for PFOS/PFOA contamination, and then will conduct testing to see whether the contamination has impacted the drinking water supplies. Phase I of the Plan includes sampling at 31 airports, 578 drinking water wells (2-mile radius of each), 252 municipal solid waste

landfills, another 353 drinking water wells (1-mile radius of each), and 389 impacted drinking water sources and adjacent small water systems. Testing results from Phase I are expected in September of this year. Phase II of the plan will include source investigation and nearby drinking water well sampling at primary manufacturing facilities, refineries, bulk terminals, and non-airport fire training areas.

Looking ahead to 2020, the State Water Board recognizes the potential for adjusting the existing NLs and/or establishing new NLs for additional contaminants, potentially regulating PFASs as a class, requesting a PHG from OEHHA, consideration of an MCL or MCLs, and, potential response strategies to PFAS detections.

Which brings us to AB 841: This bill complements the state's currently planned efforts and requires OEHHA to further its understanding of PFAS contamination in our drinking water sources. It requires OEHHA to develop a work plan to assess which PFAS substances should be identified as a potential risk to human health and evaluate whether any other PFAS substance is a candidate for a NL.

While there is a great deal of scientific literature on PFOS and PFOA, the other chemicals in the PFAS class are not as widely characterized, and some may be uncharacterized at all. AB 841 recognizes it is important to address these substances as a group and acknowledges that there may be gaps in information on some, and a need to prioritize understanding on others based on prevalence of usage or potential risk for pollution in California.

This bill requires OEHHA's work plan to consider the PFASs used in California, which would eliminate a PFAS from the work plan if it is not manufactured in, manufactured with, or used in products or any industrial applications in California. The bill also requires the work plan to consider what is technologically feasible to detect. Lastly, the work plan authorizes OEHHA to use scientific literature from other authoritative institutions, and coordinate with the State Water Board, which is also trying to better understand the prevalence of PFASs using water testing data.

There are some sections of the bill where drafting could be cleaned up. For example, in § 116365.3 (e), the bill could be amended to clarify that OEHHA will not coordinate with the State Water Board to collect water monitoring data, rather that OEHHA could coordinate with the State Water Board to review the water monitoring data that is being collected pursuant to the UCMR and NLs, which could augment and inform OEHHA's research.

The author may wish to consider working with OEHHA to further refine how OEHHA should accomplish this task. For instance, prioritizing which substances to assess in the work plan will take quite of bit of investigative work for OEHHA, and OEHHA may not have access to information regarding which PFASs are involved in manufacturing or manufacturing products, as this information may be protected as confidential business information. Also, given the workload, the author may wish to work with OEHHA on appropriate deadlines for completing the assessments.

Related legislation:

1) AB 756 (C. Garcia). Would require a public water system to monitor for PFAS substances and require a public water system to provide notification to customers when there is a

detected exceedance of the NL for PFOA or PFOS. It will be heard in the Assembly Environmental Safety & Toxic Materials committee on March 26.

2) AB 958 (Ting, 2017). Would have required food packaging and cookware to be labelled if it contains a PFAS substance. It was held in the Senate Environmental Quality Committee.

REGISTERED SUPPORT / OPPOSITION:

Support

Educate. Advocate.
Empower Family California

Opposition

None on file.

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

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 912 (Muratsuchi) – As Introduced February 20, 2019

SUBJECT: Marine invasive species: ballast water and biofouling management requirements

SUMMARY: Delays, from January 1, 2030 to January 1, 2040, the requirement for an owner or operator of a vessel to meet the final California performance standard for the discharge of ballast water and requires the State Lands Commission (SLC) to adopt regulations implementing federal performance standards for the discharge of ballast water. Specifically, **this bill**:

1) Defines "land" as the material of the earth, whether soil, rock, or other substances, that sits landward of, or at an elevation higher than, the mean high-tide line of the ocean, including any rock outcroppings or islands located offshore.

2) Updates the definition of "Pacific Coast Region" to mean all coastal waters on the Pacific Coast of North America east of 154 degrees W longitude and north of *20* degrees N latitude, *inclusive,* of the Gulf of California, instead of the current statutory definition of all coastal waters on the Pacific Coast of North America east of 154 degrees W longitude and north of *25* degrees N latitude, *exclusive,* of the Gulf of California.

3) Deletes statutory provisions that authorize the SLC to modify the boundaries of the Pacific Coast Region through regulation.

4) Deletes past statutory requirements and deadlines relating to the management of nonindigenous species, including the following requirements:

   a) That, by January 1, 2012, the SLC develop and adopt regulations governing the management of biofouling;
   b) That, by July 1, 2005, the SLC adopt regulations governing the evaluation and approval of shipboard experimental ballast water treatment systems;
   c) That, by January 31, 2006, the SLC submit to the Legislature a report that recommends specific performance standards for the discharge of ballast water into the waters of the state; and,
   d) That, before July 1, 2005, a statutorily required advisory panel make recommendations regarding the content, issuance, and implementation of the performance standards to the SLC.

5) Requires the SLC to adopt regulations that do both of the following:

   a) Require an owner or operator of a vessel carrying, or capable of carrying, ballast water that operates in the waters of the state to implement the ballast water discharge performance standards set forth in Section 151.2030(a) of Title 33 of the Code of Federal Regulations (CFR), or as that regulation may be amended.
   b) Require an owner or operator of a vessel carrying or capable of carrying, ballast water that operates in the waters of the state to comply with, as specified, the performance standards set forth in Section 151.2035(b) of Title 33 of the CFR, unless it is extended, or as that regulation may be amended.

6) Delays, from first arrival at a California port (for vessels constructed on or after January 1, 2020) or as of the first drydocking on or after January 1, 2020 (for all other vessels) to January 1, 2030 for all vessels, the requirement for an owner or operator of a vessel capable of carrying ballast water to implement the interim performance standards for the discharge of ballast water.

7) Delays, from January 1, 2030 to January 1, 2040, the requirement for an owner or operator of a vessel capable of carrying ballast water to meet the final performance standard for the discharge of ballast water of zero detectable living organisms for all organism size classes.

8) Delays, from not less than 18 months prior to January 1, 2020 and January 1, 2030, to from not less than 18 months before January 1, 2030 and January 1, 2040, the requirement for the SLC, in consultation with specified entities, to prepare, or update, and submit to the legislature a report of the efficacy, availability, and environmental impacts of currently available technologies for ballast water treatment systems.

9) Delays the sunset, from January 1, 2024 to January 1, 2034, for the requirement for submitting a report on the interim performance standard, and from January 1, 2034 to January 1, 2044, for the requirement for submitting a report on the final performance standard.

10) Adds the United States Environmental Protection Agency (U.S. EPA) to those entities that the SLC must consult with when sponsoring pilot programs for the purpose of evaluating alternatives for treating and otherwise managing ballast water and biofouling.

11) Provides that a goal of establishing pilot programs is the meaningful participation of the State of California in federal rulemaking actions.

12) Authorizes the SLC to take samples of ballast water, sediment, and biofouling from arriving vessels for research purposes.

13) Makes other clarifying and conforming revisions to existing statute.

EXISTING LAW:

Under federal regulation:

1) Requires vessels employing a United States (U.S.) Coast Guard-approved ballast water management system to meet ballast water discharge standards, outlined in regulation, by specified dates. (33 CFR § 151.2030)

2) Requires, in order to discharge ballast water into waters of the United States, the master, owner, operator, agent, or person in charge of a vessel, as specified, to either ensure that the ballast water meets the ballast water discharge standard, as defined in regulation, or use an alternative management system, as described in regulation, or ballast exclusively with water from a U.S. public water system, as specified, according to the schedule outlined in regulation. (33 CFR § 151.2035)

3) Authorizes the U.S. Coast Guard to grant an extension to the ballast water discharge standard implementation schedule only in those cases where the master, owner, operator, agent, or

person in charge of a vessel can document that, despite all efforts, compliance with the ballast water requirement is not possible. (33 CFR § 151.2036)

Under state law:

1) Defines "Pacific Coast Region" as all coastal waters on the Pacific Coast of North America east of 154 degrees W longitude and north of 25 degrees N latitude, exclusive of the Gulf of California. Authorizes the SLC to modify these boundaries through regulation if the proponent for the boundary modification presents substantial scientific evidence that the proposed modification is equally or more effective at preventing the introduction of nonindigenous species through vessel vectors as the boundaries described in statute. (Public Resources Code (PRC) § 71200 (k))

2) Requires the master, owner, operator, or person in charge of a vessel carrying, or capable of carrying, ballast water, that operates in the waters of the state to take specified actions to minimize the uptake and release of nonindigenous species. (PRC § 71203, et seq.)

3) Requires the SLC to adopt regulations governing ballast water management practices for vessels arriving at a California port from a port outside of the Pacific Coast Region. (PRC § 71204.3 (a))

4) Requires the SLC to, on or before January 1, 2005, adopt regulations governing ballast water management practices for vessels arriving at a California port or place from a port or place within the Pacific Coast Region. (PRC § 71204.5)

5) Requires the SLC, on or before January 31, 2006, to submit to the legislature and make available to the public a report that recommends specific performance standards for the discharge of ballast water into the waters of the state, or into waters that may impact waters of the state. Requires the performance standards to be based on the best available technology economically achievable and to be designed to protect the beneficial uses of affected, and potentially affected, waters. (PRC § 71204.9 (a) (1))

6) Requires the SLC to adopt regulations that require an owner or operator of a vessel capable of carrying ballast water that operates in the waters of the state to implement the interim performance standards for the discharge of ballast water recommended in accordance with Table x-1 of the SLC *Report on Performance Standards for Ballast Water Discharges in California Waters*, as approved by the SLC on January 26, 2006. (PRC § 71205.3 (a)(1))

7) Requires the SLC to adopt regulations that require an owner or operator of a vessel capable of carrying ballast water that operates in the waters of the state to comply with the interim performance standards by the applicable following dates:

   a) Upon first arrival at a California port for new vessels constructed on or after January 1, 2020; or,
   b) As of the first scheduled drydocking on or after January 1, 2020, for all other vessels. (PRC § 71205.3 (a)(2))

8) Requires the SLC to adopt regulations that require an owner or operator of a vessel carrying, or capable of carrying, ballast water that operates in the waters of the state to meet the final

performance standard for the discharge of ballast water of zero detectable living organisms for all organism size classes by January 1, 2030. (PRC § 71205.3 (a)(3))

9) Requires the SLC, not less than 18 months prior to January 1, 2020, and January 1, 2030, to, in consultation with the State Water Resources Control Board (State Water Board), the U.S. Coast Guard, and the specified advisory panel, to prepare, or update, and submit to the Legislature a review of the efficacy, availability, and environmental impacts, including the effect on water quality, of currently available technologies for ballast water treatment systems. Provides that if technologies to meet the performance standards are determined in a review to be unavailable, the SLC shall include in that review an assessment of why the technologies are unavailable. (PRC § 71205.3(b)(1))

10) Requires the SLC, on or before January 31, 2005, and updated biennially, in consultation with the State Water Board, the Department of Fish and Wildlife, and the U.S. Coast Guard, to submit to the legislature, and make available to the public, a report about ballast discharge management. (PRC § 71212)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, the purpose of the bill is, "to change the implementation date of California's ballast water discharge performance standards owing to a lack of available technology that vessels can use to meet them, and to address impending federal preemption of California's standards. The purpose is also to authorize the [SLC] to sample ballast water and biofouling for research (the [SLC] currently only has authority to sample for compliance purposes). The bill will better position California to implement ballast water discharge standards to protect California waters from invasive species introductions, update the definition of Pacific Coast Region, and make technical changes to the Marine Invasive Species Act."

Nonindigenous species in California's waters: Nonindigenous aquatic plant and animal species can be transported, both intentionally and unintentionally, to new ecosystems and regions through human activities. According to the SLC, shipping is the most significant vector for the transport and introduction of aquatic nonindigenous species, contributing 79.5% of established aquatic nonindigenous species in North America and 74.1% across the globe.

Once a nonindigenous species is moved, becomes established in a new geographic location, and causes impacts, it is considered an invasive species. Invasive species cause ecological, economic, and human health harm in the receiving environment. Impacts of these species include disrupting agriculture, shipping, water delivery, and recreational and commercial fishing; undermining levees, docks and environmental restoration activities; impeding navigation and enjoyment of the state's waterways; and damaging native habitats and the species that depend on them. Nonindigenous species are believed to account for up to $120 billion per year in losses across the United States. California has more documented aquatic invasive species than any other state.

Commercial ships transport organisms through two primary vectors: vessel biofouling and ballast water. Vessel biofouling occurs when organisms, such as barnacles, algae, mussels, worms, crabs, and other invertebrates, attach to, or are associated with, the hard surfaces of the

vessel, then are transported to new environments that the vessel enters. Ballast water is sea water taken on, redistributed on, and discharged from large oceangoing vessels for functions related to stability, balance, and trim. Ballast water can contain millions of microscopic aquatic plants, animals, bacteria, and viruses. Each ballast water discharge has the potential to release over 21.2 million individual free-floating organisms. Prior to the implementation of ballast water management practices in the early 2000s, it was estimated that more than 7000 species were moved around the world on a daily basis in ships' ballast water.

The prevention of species introduction through the management of human activities, such as requirements related to biofouling and ballast water management, is considered the most protective and cost-effective way to address the dispersal of nonindigenous species.

California's ballast water management program: In order to address the threat of the introduction of aquatic nonindigenous species, the legislature enacted the Ballast Water Management for Control of Nonindigenous Species Act of 1999, AB 703 (Lempert, Chapter 849, Statutes of 1999), which established initial requirements for vessels to manage ballast water prior to discharge in California waters. The legislature reauthorized and expanded the program through the Marine Invasive Species Act of 2003, AB 433 (Nation, Chapter 491, Statutes of 2003), which mandated moving, "the state expeditiously toward elimination of the discharge of nonindigenous species into the waters of the state or into waters that may impact the waters of the state, based on the best available technology economically achievable" (PRC § 71201(d)). In 2006, the legislature established interim and final performance standards for the discharge of ballast water from large commercial ships through enactment of the Coastal Ecosystems Protection Act, SB 497 (Simitian, Chapter 292, Statutes of 2006).

California's ballast water performance standards: Among its provisions, SB 497 required the SLC, on or before January 1, 2008, to adopt regulations that require an owner or operator of a vessel carrying, or capable of carrying, ballast water that operates in the waters of the state to implement interim and final (zero detectable living organisms for all organism size classes) performance standards for eradicating organisms in ballast water before it is discharged. The SLC established California performance standards that were to be phased-in between 2009 and 2016 in order to allow for, and encourage, the development of technologies that would enable vessels to meet the standards.

SB 497 also requires the SLC, prior to implementing performance standards, to report to the legislature on the efficacy, availability, and environmental impacts, including the effect on water quality, of currently available technologies for ballast water treatment. SB 497 additionally requires the SLC, if it determines that technologies to meet the performance standards are unavailable, to include in the report an assessment of why the technologies are unavailable (PRC § 71205.3). In response to these reporting requirements, between 2007 and 2014, the SLC produced five reports (2007, 2009, 2010, 2013, and 2014) for the legislature, all of which indicated that ballast water treatment technologies were not available, at the time, to enable vessels to comply with the then existing performance standards. Therefore, the legislature updated and delayed implementation of the performance standards several times (SB 1781 (2008), SB 814 (2013), AB 1312 (2015)). The current implementation dates for the ballast water discharge performance standards, as enacted by AB 1312, are as follows:

1) Interim standards:

- Newly built vessels constructed on or after January 1, 2020: first arrival at a California port on or after January 1, 2020
- Existing vessels constructed prior to January 1, 2020: first scheduled drydocking on or after January 1, 2020

2) Final standards:
   - All vessels: January 1, 2030

In its December 2018 report, 2018 Assessment of the Efficacy, Availability, and Environmental Impacts of Ballast Water Treatment Technologies for Use in California Waters, the SLC reports, once again, that based on all available data, there are currently no ballast water treatment technologies available to enable vessels to meet the interim California performance standards.

AB 912 would further delay the implementation date for interim ballast water discharge standards to January 1, 2030 for all vessels, and delay the date for implementation for final ballast water discharge standards to January 1, 2040.

While California has endeavored to address its invasive species threat by leading the nation with stringent ballast water discharge standards, unfortunately, over the years the statutory standards and state regulations have not driven the development of ballast water treatment technology as the state had hoped. Does repeatedly delaying performance standards remove the incentive for technology development and compliance with the standards?

Federal ballast water performance standards: According to the SLC, for many years, the shipping industry has advocated for enactment of one uniform national standard for ballast water discharge to replace the perceived patchwork of state and federal ballast water management requirements. The legislation it sought, the federal Vessel Incidental Discharge Act (VIDA), failed repeatedly in recent years. The SLC opposed VIDA, as did other states, state attorneys general, and environmental groups, arguing that a one-size-fits-all federal approach to vessel discharge management ignores the unique environmental concerns in each state, usurps state authority, and weakens environmental protection. Nevertheless, in December 2018, President Trump signed VIDA into law. The SLC notes that VIDA, regrettably, will preempt California's authority to establish or implement state-specific ballast water management requirements once implementing federal regulations are adopted.

Under VIDA, the U.S. EPA is responsible for establishing a uniform national standard for ballast water discharge. The U.S. EPA has two years to adopt vessel discharge regulations, and the U.S. Coast Guard, the entity charged with implementing and enforcing the discharge standards established by the U.S. EPA, has two additional years to adopt implementation and enforcement regulations. State laws remain effective until the U.S. Coast Guard promulgates regulations establishing enforcement protocols. States, including California, may enforce the federal standard, inspect vessels, and collect fees and ballast water management reporting forms from vessels arriving at ports.

AB 912 requires the SLC to adopt regulations that require vessels employing an U.S. Coast Guard-approved ballast water management system to meet ballast water discharge standards, outlined in federal regulation, by specified dates. The bill also requires the SLC to adopt regulations that require, in order to discharge ballast water into waters of the United States, the master, owner, operator, agent, or person in charge of a vessel to either ensure that the ballast

water meets the federal ballast water discharge standard, use an alternative management system, or ballast exclusively with water from a U.S. public water system.

According to the SLC, the state's adoption of the federal standards would enable the SLC to assess vessel compliance to the federal discharge standard and hold non-compliant vessels accountable for violations.

AB 912 also authorizes the SLC to collect valuable real-world data on the operation of ballast water management systems that could inform implementation of California standards in the future.

Related legislation:

1) SB 69 (Wiener). Requires the State Water Board, instead of the SLC, to adopt ballast water discharge regulations that require an owner or operator of a vessel carrying ballast water to implement and comply with an interim performance standard and then the final performance standard of zero detectable living organisms by January 1, 2030. This bill was double referred to the Senate Committees on Natural Resources and Water, where it is set to be heard on April 9, 2019, and Environmental Quality.

2) AB 3116 (Cooley, 2018). Would have required the person in charge of vessels to minimize the uptake and release of nonindigenous species, including minimizing the uptake of ballast water in areas designated by the SLC. The hearing for this bill in the Assembly Committee on Environmental Safety and Toxic Materials was canceled at the request of author and the bill subsequently died on file.

3) AB 1312 (O'Donnell, Chapter 644, Statutes of 2015). Delayed the implementation of interim and final performance standards for eliminating living organisms in ships' discharged ballast water from 2016/ 2018 (interim standard) to 2020 and from 2020 to 2030 (final standard).

4) SB 814 (Committee on Natural Resources and Water, Chapter 472, Statutes of 2013). Delayed implementation of ballast water performance standards for vessels that carry, or are capable of carrying, ballast water into the state by two to six years, depending on when the ship was constructed and the vessel's ballast water capacity.

5) SB 935 (Committee on Environmental Quality, Chapter 550, Statutes of 2012). Delayed the date by which the SLC must approve a vessel operator's application to install an experimental ballast water treatment from January 2008 to January 2016.

6) SB 1781 (Committee on Environmental Quality, Chapter 696, Statutes of 2008). Delayed implementation of ballast water performance standards for new vessels with ballast water capacity less than 5000 metric tons from January 1, 2009, to January 1, 2010.

7) SB 497 (Simitian, Chapter 292, Statutes of 2006). Enacted the Coastal Ecosystems Protection Act, which established interim and final performance standards for the discharge of ballast water from large commercial ships. Required interim standards, which identified a range of thresholds for living organisms by class size, to begin to take effect January 1, 2009.

Required the final standards, a "zero detectable living organisms" standard for all organism size classes, to take effect January 1, 2020.

8) AB 433 (Nation, Chapter 491, Statutes of 2003). Consolidated law related to the management of ballast water into the Marine Invasive Species Act, and revised various requirements for ballast water management practices to minimize the release of nonindigenous species.

9) AB 703 (Lempert, Chapter 849, Statutes of 1999). Enacted the Ballast Water Management for Control of Nonindigenous Species Act, which established initial requirements for vessels to manage ballast water prior to discharge in California waters.

Double referral: Should the Assembly Environmental Safety and Toxic Materials Committee approve this bill, it will be referred to the Assembly Committee on Water, Parks, and Wildlife.

REGISTERED SUPPORT / OPPOSITION:

Support

California State Lands Commission (sponsor)

Opposition

None on file.

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

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 1123 (Reyes) – As Introduced February 21, 2019

SUBJECT: Safe Drinking and Toxic Enforcement Act of 1986: appeal: notice to the Attorney General

SUMMARY: Requires each party in an alleged violation, application, or construction of the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) at issue in a proceeding of an appellate court to serve a copy of their brief on the Attorney General prior to submission. Specifically, **this bill**:

1) Requires parties involved in an alleged violation, application, or construction of the provisions of Proposition 65 in proceedings at the Supreme Court, court of appeal, or appellate division of the superior court to serve a copy of the party's brief or brief and petition on the Attorney General.

2) Declares that service of the brief or brief and petition is accomplished by serving on the Proposition 65 coordinator at the service address designated on the Attorney General's internet website for Proposition 65 enforcement reporting.

3) Prohibits acceptance or filing of a brief unless the proof of service shows service on the Attorney General.

4) Requires that, if a party fails to comply to the above provisions, a reasonable opportunity is given to cure the failure before the court imposes sanction. Requires the court to allow the Attorney General reasonable additional time to file a brief in the matter.

EXISTING LAW:

1) Prohibits, under Proposition 65, a person in the course of doing business from knowingly discharging or releasing a chemical known to the state to cause cancer or reproductive toxicity into water or onto or into land where such chemical passes or probably will pass into any source of drinking water. (Health and Safety Code (HSC) § 25249.5)

2) Prohibits a person in the course of doing business from knowingly and intentionally exposing any individual to a chemical known to the state to cause cancer or reproductive toxicity without first giving clear and reasonable warning to such individual. (HSC § 25249.6)

3) Provides that any person who violates the above provisions may be enjoined in any court of competent jurisdiction and shall be liable for a civil penalty not to exceed $2,500 per day for each violation in addition to any other penalty established by law. (HSC § 25249.7)

4) Provides for a specified course of remediation for lawsuits alleging a violation of the clear and reasonable warning requirement for four specified exposures (lawfully permitted alcoholic beverages; chemicals resulting from food or beverage preparation; environmental tobacco smoke on premises where smoking is permitted; and, engine exhaust in parking facilities, as specified). Prohibits the person who files an action from exposure from doing

so until 14 days after she or he has served the alleged violator with a notice of alleged violation. Authorizes the person who served the notice of violation to file an action if the alleged violator failed to correct the alleged violation or failed to pay a civil penalty of $500. (HSC § 25249.7)

5) Requires the person who served the notice of violation to file a certificate of merit and sufficient factual information to establish the basis of merit. Authorizes the Attorney General to establish whether or not there is merit to the action. (HSC § 25249.7)

6) Authorizes the Attorney General to serve and file an amicus curiae brief within a specified time after the last appellant's reply brief is filed. (2019 California Rules of Court 8.200(c)(7) and 8.520(f)(8))

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author,

"The Attorney General has enforced Proposition 65 to reduce the public's exposure to toxic chemicals in food, nutritional supplements, infant formula, furniture, and a host of other consumer goods and products.

Private citizens can also enforce Proposition 65 in the public interest. Private enforcers must send a notice to an alleged violator and to the Attorney General advising of the alleged violation. Private enforcers must also report to the Attorney General when they file a complaint or settlement. These requirements allow the Attorney General to evaluate claims and ensure private enforcers' claims have a factual basis and that private settlements serve the public interest.

There is, however, no requirement that private enforcers or defendants report any other Proposition 65 activities to the Attorney General, including when an appeal is filed. As a result, the Attorney General may be unaware of pending appeals that address issues of statewide concern with respect to the enforcement or interpretation of Proposition 65. Without notice of an appeal, the Attorney General may miss the opportunity to apprise the court of the statewide interests that are implicated in a case. This occurred in two recent cases: *Post Foods, LLC et al. v. Superior Court* (2018) 25 Cal. App.5th 278, and *Charles v. Sutter Home Winery, Inc.* (2018) 23 Cal.App.5th 89. [(The Department of Justice)] DOJ learned about these appeals after the California Courts of Appeal had issued rulings that could have negatively impacted the Attorney General's enforcement and oversight of Proposition 65. The California Supreme Court depublished both cases after the Attorney General petitioned for depublication, but this might not have been necessary if DOJ had known about the appeals earlier and had an opportunity to participate by, for example, submitting an amicus brief.

AB 1123 would address this issue by ensuring DOJ receives notice of appeals in order to give the Attorney General the opportunity to participate in any litigation that could establish state-wide precedent regarding the interpretation or application of Proposition 65."

Proposition 65: In 1986, California voters approved a ballot initiative, the Safe Drinking Water and Toxic Enforcement Act of 1986, commonly referred to as Proposition 65, to address their concern that "hazardous chemicals pose a serious potential threat to their health and well-being, [and] that state government agencies have failed to provide them with adequate protection…" Proposition 65 requires the State to publish a list of chemicals known to cause cancer or birth defects or other reproductive harm. This list, which must be updated at least once a year, currently includes approximately 900 chemicals. The Office of Environmental Health Hazard Assessment (OEHHA) administers the Proposition 65 program, including evaluating all currently available scientific information on substances considered for placement on the Proposition 65 list.

Under Proposition 65, businesses in California are required to provide a "clear and reasonable" warning before knowingly and intentionally exposing anyone to a Proposition 65-listed chemical. Warnings can be made in many ways, including by labeling a consumer product, posting signs, distributing notices, or publishing notices in a newspaper. Once a chemical is listed, businesses have 12 months to comply with warning requirements.

Proposition 65 also prohibits companies that do business within California from knowingly discharging listed chemicals into sources of drinking water. Once a chemical is listed, businesses have 20 months to comply with the discharge prohibition.

Businesses with less than 10 employees and government agencies are exempt from Proposition 65's warning requirements and prohibition on discharges into drinking water sources. Businesses are also exempt from the warning requirement and discharge prohibition if the exposures they cause are so low as to create no significant risk of cancer or birth defects or other reproductive harm.

Enforcement of Proposition 65: The California Attorney General's Office enforces Proposition 65. Any district attorney or city attorney (for cities whose population exceeds 750,000) may also enforce Proposition 65. In addition, any individual acting in the public interest may enforce Proposition 65 by filing a lawsuit against a business alleged to be in violation of this law. Lawsuits have been filed by the Attorney General's Office, district attorneys, consumer advocacy groups, private citizens, and law firms. Penalties for violating Proposition 65 by failing to provide warning notices can be as high as $2,500 per violation per day. State law requires any person suing "in the public interest" to enforce Proposition 65, to notify the Attorney General of the lawsuit and outcome of the case. State law authorizes the Attorney General to determine if there is basis to the private action. All reports on Proposition 65 private actions must be filed electronically with the Attorney General's Office.

Appellate procedures in California: To start an appeal process after a decision has been made in a superior court, appellants are required to serve and file a notice of appeal with the superior court in which the decision was made. Once a complete superior court record is submitted and filed with the Court of Appeal, appellants and respondents are required to serve and file their respective briefs, which contain their legal arguments. To appeal a decision made in a Court of Appeal, appellants are required to file a petition for review with the California Supreme Court, and appellants and respondents are required to serve and file their respective briefs.

AB 1123 would require appellants and respondents to submit copies of their briefs or briefs and petitions to the Attorney General prior to filing their briefs in court. This measure would allow

the Attorney General to evaluate the case and its broader impact in the enforcement of Proposition 65, and if appropriate, file an amicus brief with the court before a decision is made. Because amicus briefs provide valuable information and can have significant impact on judicial decision-making, allowing the Attorney General to stay informed and intervene during appeal proceedings is critical in ensuring that Proposition 65 is "uniformly and adequately enforced".

Double referral: Should the Assembly Committee on Environmental Safety and Toxic Materials approve this bill, it will be referred to the Assembly Judiciary Committee.

Related legislation:

1) AB 1583 (Chau, Chapter 510, Statutes of 2017). Requires the Attorney General, if after reviewing the certificate of merit filed under Proposition 65 finds there is not merit to the action, to serve a letter to the noticing party and the alleged violator that the Attorney General believes there is not merit to the action.

2) AB 1621 (Allen, 2017). Would have required anyone bringing an action under Proposition 65 to provide the certificate of merit that is required to be provided to the Attorney General, to the alleged violator. This bill was held in the Assembly Environmental Safety and Toxic Materials Committee.

3) AB 1252 (Jones, 2015). Would have prohibited any person from bringing an enforcement action against a company that employs 25 people or less for failure to provide a warning for an exposure to a chemical known to the state to cause cancer or reproductive toxicity, in violation of Proposition 65, unless certain conditions are met. This bill was held in the Assembly Committee on Environmental Safety and Toxic Materials.

4) AB 2361 (Jones, 2014). Would have prohibited any person from bringing an enforcement action against a company that employs 25 people or less for failure to provide a warning for an exposure to a chemical known to the state to cause cancer or reproductive toxicity, in violation of Proposition 65, unless certain conditions are met. This bill was held in the Assembly Committee on Environmental Safety and Toxic Materials.

5) AB 227 (Gatto, Chapter 581 Statutes of 2013). Changes the enforcement provisions of Proposition 65 by limiting recovery by private citizen enforcement action for specified types of exposure to chemicals causing cancer, or birth defects, or other reproductive harm, in those circumstances when the failure to provide clear and reasonable warnings has been remedied and a penalty has been paid.

REGISTERED SUPPORT / OPPOSITION:

Support

None on file.

Opposition

None on file.

Analysis Prepared by: Pajau Vangay / E.S. & T.M. /

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 1180 (Friedman) – As Introduced February 21, 2019

SUBJECT: Water: recycled water

SUMMARY: Requires the State Water Resources Control Board (State Water Board), on or before January 1, 2023, to update the uniform statewide criteria for nonpotable recycled water uses. Specifically, **this bill**:

1) Makes legislative findings about the benefits of, and state law regarding, recycled water and backflow protection and cross-connection control.

2) Requires the State Water Board, if it adopts standards for backflow protection and cross-connection control through the adoption of a policy handbook, to include provisions for the use of a swivel or changeover device to supply potable water to a dual-plumbed system during an interruption in recycled water service.

3) Requires the allowable use of a swivel or changeover device to be consistent with any notification and backflow protection provisions contained in the policy handbook.

4) Requires the State Water Board, on or before January 1, 2023, to update the uniform statewide criteria for nonpotable recycled water uses established in Title 22 of the California Code of Regulations.

EXISTING LAW:

1) Defines "recycled water" as water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource. (Water Code (WC) § 13050(n))

2) Makes legislative findings that a substantial portion of the future water requirements of this state may be economically met by beneficial use of recycled water. Finds that the utilization of recycled water by local communities for domestic, agricultural, industrial, recreational, and fish and wildlife purposes will contribute to the peace, health, safety and welfare of the people of the state. States that the use of recycled water constitutes the development of "new basic water supplies," as defined. (WC § 13511)

3) Requires the State Water Board to establish uniform statewide recycling criteria for each varying type of use of recycled water where the use involves the protection of public health. (WC § 13521)

4) Makes legislative findings that the use of potable domestic water for nonpotable uses, including, but not limited to, cemeteries, golf courses, parks, highway landscaped areas, and industrial and irrigation uses, is a waste or an unreasonable use of the water if recycled water is available. (WC § 13550)

5) Requires the State Water Board, on or before December 31, 2023, to adopt uniform water recycling criteria for direct potable reuse through raw water augmentation. (WC § 13561.2)

6) Requires the State Water Board, on or before December 31, 2013, to adopt uniform water recycling criteria for indirect potable reuse for groundwater recharge. (WC § 13562 (a)(1))

7) Requires the State Water Board, on or before December 31, 2016, to develop and adopt uniform water recycling criteria for surface water augmentation. (WC § 13562 (2) (A))

8) Requires the State Water Board, no later than June 30, 2014, to adopt, by emergency regulations, requirements for groundwater replenishment using recycled water. (WC § 13562.5)

9) Requires the State Water Board, on or before January 1, 2020, to adopt standards for backflow protection and cross-connection control. (Health and Safety Code (HSC) § 116407 (a))

10) Authorizes the State Water Board to adopt standards for backflow protection and cross-connection control through the adoption of a policy handbook that is not subject to the Administrative Procedures Act. (HSC § 116407 (b))

11) Requires the water supplier to protect the public water supply from contamination by implementation of a cross-connection control program. (California Code of Regulations (CCR), Title 17, §7584)

12) Establishes uniform statewide criteria for recycled water. (CCR, Title 22, § 60301.050 et seq.)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "The California Code of Regulations, Title 22 regulates the use of recycled water in California. The regulations for California's vast network of purple pipes, which provide recycled water for non-potable uses in every county in the state, have not been updated for 19 years. An update to these regulations, incorporating the knowledge and lessons learned from nearly two decades of non-potable water recycling, will help the state to achieve its ambitious goals for recycled water use…

It also promotes recycled water for dual plumbed buildings and CII uses by specifically allowing for a changeover device, or "swivel ell," so that building owners can easily switch back and forth between potable and non-potable water when required for testing or other recycled water shutdowns. The ability to easily and cost-effectively make the switch to potable water will eliminate a barrier for building owners to bring recycled water used for landscape irrigation inside their buildings. Currently, Title 17 of the California Code of Regulations requires an air gap assembly for this purpose, which is costly and generally impractical for use in a building."

Water in California: The State Water Board notes, in its 2013 *Policy for Water Quality Control for Recycled Water* (2013 Recycled Water Policy), that California is facing an unprecedented water crisis. It says that the collapse of the Bay-Delta ecosystem, climate change, and continuing population growth have combined with a severe drought on the Colorado River and failing

levees in the Delta to create a new reality that challenges California's ability to provide the clean water needed for a healthy environment, a healthy population, and a healthy economy, both now and in the future. In the 2013 Recycled Water Policy policy, the State Water Board strongly encourages local and regional water agencies to move toward clean, abundant, local water for California by emphasizing appropriate water recycling, water conservation, and maintenance of supply infrastructure and the use of stormwater (including dry-weather urban runoff), as these sources of supply are drought-proof, reliable, minimize our carbon footprint, and can be sustained over the long-term.

Recycled water: Water Code § 13050(n) defines "recycled water" as water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource. Also known as reclamation or reuse, water recycling encompasses the process of treating wastewater and storing, distributing, and using recycled water.

Recycled water is most commonly used for nonpotable (not for drinking) purposes, such as agriculture, landscape, public parks, and golf course irrigation. Other nonpotable applications include cooling water for power plants and oil refineries; water for industrial processes for facilities such as paper mills and carpet dyers; toilet flushing; dust control; construction activities; concrete mixing; and, artificial lakes.

On December 11, 2018, the State Water Board adopted Resolution No. 2018-0057, amending the Recycled Water Policy. The Amendment will take effect once approved by the Office of Administrative Law. The amendment sets the goal of increasing the use of recycled water from 714,000 acre-feet per year in 2015 to 1.5 million acre-feet per by 2020 and to 2.5 million acre-feet per by 2030. It also sets a goal of maximizing the use of recycled water in areas where groundwater supplies are in a state of overdraft, to the extent that downstream water rights, instream flow requirements, and public trust resources are protected.

Recycled water regulation in California: The Uniform Statewide Recycling Criteria (CCR, Title 22, Division 4, Chapter 3) includes requirements for recycled water quality and wastewater treatment for the various types of allowed recycled water uses in California. For nonpotable reuse applications, there are four types of recycled water based on levels of treatment: non-disinfected secondary, disinfected secondary-23, disinfected secondary 2.2, and disinfected tertiary. The level of treatment used is based on the intended use of the recycled water. Non-disinfected secondary recycled water is water with the lowest level of treatment, suitable for applications that have minimal public exposure levels, such as irrigation for fodder crops. Disinfected tertiary recycled water is treated to higher levels sufficient for applications with more public exposure, such as the irrigation of parks, use in decorative fountains, or artificial snowmaking for commercial outdoor use. The regulatory requirements for nonpotable uses of recycled water have not been updated since 2000.

AB 1180 requires the State Water Board, on or before January 1, 2023, to update the uniform statewide criteria for nonpotable recycled water uses established in Title 22 of the California Code of Regulations.

Competing priorities: For years, the Department of Health Services administered the state's drinking water program. When the Department of Public Health (CDPH) became a stand-alone department (it had previously been under the authority of the Department of Health Services), it

assumed responsibility for administering the drinking water, and thus the recycled water and backflow prevention, programs. Unfortunately, many regulations related to drinking water were not updated for decades.

On July 1, 2014, the Legislature transferred the administration of the drinking water program from CDPH to the State Water Board. Since it received responsibility for administering the drinking water program (now called the Division of Drinking Water, or DDW), the State Water Board has made great progress in updating and advancing its many new programs and regulations, but it is contending with a backlog of programs and regulations that were not revised for many years. Among those outdated regulations are the cross-connection control and backflow prevention regulation and the recycled water for nonpotable uses regulation.

In order to better prioritize its many drinking water programs and regulations in need of updating, the State Water Board adopts resolutions to direct DDW staff. Some of these directed actions are statutorily mandated; others address current health and safety needs. The State Water Board directed the DDW to prioritize their work on drinking water regulations for the calendar year 2019 as follows:

1) Hexavalent Chromium MCL
2) Lead and Copper Rule
3) Revised Total Coliform Rule
4) Direct Potable Re-use
5) Cross-Connection and Backflow Protection Control Regulations
6) Environmental Laboratory Accreditation Program Regulations
7) Primacy Package Applications
8) Microplastics
9) Water Quality Standards for On-site Treatment and Reuse
10) Electronic Reporting of Drinking Water Quality Data
11) Investigation of Per- and Polyflouroalkyl Substances (PFAS)

AB 1180 requires the State Water Board, on or before January 1, 2023, to update the uniform statewide criteria for nonpotable recycled water uses. Should these provisions become law, with a date certain and without a corresponding increase in funding, the State Water Board will need to reevaluate its priorities, potentially delaying action on other priorities.

Backflow: Backflow is the undesirable reversal of the flow of liquid, gas, or solid into the potable water supply. Drinking water distribution systems contain points called cross-connections where nonpotable water can be connected to potable sources. Bypass arrangements, jumper connections, removable sections, swivel or changeover devices, or any other temporary or permanent connecting arrangements through which backflow may occur are considered to be cross-connections.

Water supply systems are maintained at a pressure significant enough to enable water to flow from the tap; however, when pressure fails or is reduced, which may happen if a water main bursts, pipes freeze, or there is unexpectedly high demand on the water system such as an emergency firefighting water drawdown, water or substances from the ground, storage, or other sources may be drawn up into the system. Additionally, nonpotable substances may be pushed into a potable water supply if the pressure in the downstream piping system exceeds the pressure in the potable water system. Either of these backflow conditions can enable contaminated water

or substances to enter the potable water distribution system, potentially endangering public health and safety.

Cross-connection control and backflow regulation in California: The California Code of Regulations, Title 17, contains the fundamental components of California's regulatory requirements for cross-connections and backflow prevention. The Department of Health Services promulgated the existing cross-connection and backflow regulations in Title 17 in 1987, when that department administered the state's drinking water program. The cross-connection and backflow regulations have not been updated since 1987.

In 2017 the legislature passed and Governor Brown signed AB 1671 (Caballero, Chapter 533, Statutes of 2017), which requires the State Water Board to, on or before January 1, 2020, adopt standards for backflow protection and cross-connection control. AB 1671 authorizes the State Water Board to adopt standards for backflow protection and cross-connection control through the adoption of a policy handbook that is not subject to the requirements of the Administrative Procedure Act.

The State Water Board indicates that it is on track to adopt standards, through the adoption of a policy handbook, for backflow protection and cross-connection control by January 1, 2020.

AB 1180 requires the State Water Board, if it adopts standards for backflow protection and cross-connection control through the adoption of a policy handbook, to include provisions for the use of a swivel or changeover device to supply potable water to a dual-plumbed system during an interruption in recycled water service.

The State Water Board relays that it is including the use of swivel or changeover devices in its upcoming backflow protection and cross-connection control standards, on track to be adopted by January, 2020.

Proposed amendment: In order to enable the State Water Board to determine how best to prioritize and work on its many drinking water and water quality programs and regulations, the author may wish to amend the bill to provide that the deadline imposed by this bill is mandatory only if the legislature has appropriated sufficient funds, as determined by the Executive Director of the State Water Board, to cover the State Water Board's costs associated with establishing uniform statewide criteria for nonpotable recycled water uses.

Related legislation:

1) SB 966 (Weiner, Chapter 890, Chapters of 2018). Requires the State Water Board to develop standards for onsite nonpotable water treatment and reuse and authorizes local jurisdictions to adopt programs to permit onsite nonpotable water treatment and reuse using those standards.

2) AB 574 (Quirk, Chapter 528, Statutes of 2017). Requires the State Water Board to, on or before December 31, 2023, adopt uniform water recycling criteria for potable reuse through raw water augmentation.

3) AB 1671 (Caballero, Chapter 533, Statutes of 2017). Requires the State Water Board to, on or before January 1, 2020, adopt standards for backflow protection and cross-connection control.

4) SB 740 (Weiner, 2017). Would have required the State Water Board, on or before December 1, 2018, and in consultation with other state agencies, to adopt regulations to provide comprehensive risk-based standards for local permitting programs for onsite water recycling. This bill was held in the Senate Appropriations Committee.

5) SB 163 (Hertzberg, 2016). Would have required, by January 1, 2023, holders of National Pollutant Discharge Elimination Systems permits to submit a plan to the State Water Board for the beneficial reuse of treated wastewater that would otherwise be discharged through ocean or bay outfalls. Would have required, by January 1, 2033, NPDES permit holders to beneficially reuse at least 50% of treated wastewater that would otherwise be discharged through ocean or bay outfalls. This bill was held in the Assembly Environmental Safety and Toxic Materials Committee.

6) SB 322 (Hueso, Chapter 637, Statutes of 2013). Adds additional requirements to the investigation and expert panel requirements in SB 918 (Pavley, Chapter 700, Statutes of 2010).

7) SB 918 (Pavley, Chapter 700, Statutes of 2010). Requires the Department of Public Health (the responsibility for recycled water has since been transferred to the State Water Board) to adopt uniform water recycling criteria for indirect potable water reuse for groundwater recharge by December 31, 2013; to develop and adopt uniform water recycling criteria for surface water augmentation by December 31, 2016; and, to investigate and report on the feasibility of developing uniform water recycling criteria for direct potable reuse.

REGISTERED SUPPORT / OPPOSITION:

Support

Association of California Water Agencies (ACWA)
California Municipal Utilities Association
Las Virgenes - Triunfo Joint Powers Authority
Las Virgenes Municipal Water District
Natural Systems Utilities
Upper San Gabriel Valley Municipal Water District
WateReuse Association

Opposition

None on file.

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

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 1357 (Quirk) – As Introduced February 22, 2019

SUBJECT: Department of Toxic Substances Control: public meetings

SUMMARY: Requires the Department of Toxic Substances Control (DTSC) to hold at least four public meetings each year and present on recent and upcoming decisions or actions relating to permitted hazardous waste facilities and cleanup sites.

EXISTING LAW:

1) Authorizes DTSC to issue permits for the use and operation of one or more hazardous waste management units at a facility that meets the standards adopted pursuant to the Hazardous Waste Control Law (HWCL). (Health and Safety Code (HSC) § 25200 (a))

2) Requires DTSC to impose conditions on each permit specifying the types of hazardous wastes that may be accepted for transfer, storage, treatment, or disposal. (HSC § 25200 (a))

3) 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 the public health or the environment. (HSC § 25300 et seq.)

4) 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.)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "Over the last five years the Legislature has held numerous oversight hearings over DTSC and one of the most common criticisms of DTSC is that there is not any transparency in DTSC's decision-making process. AB 1357 solves this problem by requiring DTSC to hold public meetings at least four times a year and provide public updates, including decisions on permits, cleanup sites, enforcement actions and regulations."

California Hazardous Waste Control Law (HWCL): The HWCL is the state's program that implements and enforces federal hazardous waste law in California and 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.

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 US EPA was 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 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. Additionally, DTSC ensures that the state meets the federal requirements that California pay 10 percent of cleanup costs for federal Superfund sites and 100 percent of the operation and maintenance costs after cleanup is complete. 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. Federal and state laws also authorize DTSC to recover costs and expenses it incurs in carrying out these activities.

Recent criticism of DTSC: Over the past decade or so, DTSC has received complaints from the public about its permitting program and held meetings with the public, the regulated community, and stakeholders to identify and understand concerns about its permitting program. Community groups that live near hazardous waste facilities are concerned that DTSC is not properly enforcing state and federal law and allowing facilities to operate with an expired permit or have numerous violations of state law and regulation. Additionally, the regulated community is concerned about the length of time it takes DTSC to process a permit, with processing a permit extending years beyond the expiration date of their permit, as well as the costs associated with processing a permit.

Currently, the only time the public is involved in the permit process is when there is a draft permit decision released by DTSC. If a permit application takes 10 years to review, that means it could have been 20 years since the public has been provided information about the permit for the hazardous waste facility in their community. For example, the permit for the facility Phibro-Tech located in Santa Fe Springs was issued in 1991 and expired in 1996, a permit decision has not yet been made, and the last public meeting regarding the permit was over 23 years ago.

Legislative Oversight: Specific incidents across California have exposed and continue to expose glaring failings in DTSC's implementation of its core programs as well as its support programs. The mishandling of the hazardous waste facility permitting and enforcement of the Exide and the Quemetco battery recycling facilities; neglected cost recovery efforts for cleanups across the state leading to an accumulation of 1,661 projects totaling almost $194 million in uncollected cleanup costs dating back 26 years; a growing backlog of applications to renew hazardous waste permits; delayed site remediation; failed public participation and transparency activities; and, personnel issues have all led to decreased stakeholder confidence and public trust in DTSC's ability to meet its mandate to protect public health and the environment.

Over the last five years, the Legislature has conducted numerous hearings on DTSC's internal controls, its business practices, and its basic statutory obligations. In those hearings, the budget and policy committees have evaluated the following four main areas: (1) reviewing and monitoring the department's strategic plan and reorganization; (2) auditing cost recovery at the department; (3) providing staffing to improve permit backlogs and business operations; and, (4) improving enforcement at the department.

Numerous statutory changes have been made to clarify and strengthen DTSC's statutes to help DTSC better achieve its mandates, and budget augmentations have been made to give DTSC resources to reduce backlogs and address outstanding programmatic failings. However, many of the underlying concerns about transparency, accountability, and long-term stability of DTSC programs remain.

DTSC Independent Review Panel (IRP): In 2015, the Legislature passed and the Governor signed SB 83 (Budget Committee, Chapter 24, Statutes of 2015), which established within DTSC a three-member IRP to review and make recommendations regarding improvements to DTSC's permitting, enforcement, public outreach, and fiscal management. The statute stipulates that IRP membership shall be comprised of a community representative, a person with scientific experience related to toxic materials, and a local government management expert. Pursuant to SB 83, the IRP was authorized until January 1, 2018. Over the course of its term, the IRP conducted 24 public meetings and released 11 progress and annual reports. On January 8, 2018 the IRP released its final report and recommendations concluding: "The Department has implemented, or is working on, most of the IRP's recommendations and has achieved, or partially achieved, many of the IRP's suggested performance metrics. However, there is more work to be done. In the absence of the IRP, the Governor and the Legislature should consider a DTSC governing board or other structural change to enhance transparency and accountability and regularly monitor the status of the IRP-suggested recommendations and performance metrics, as well as DTSC's ongoing initiatives and decision-making."

AB 1357 builds upon the oversight work done by the Legislature by bringing some transparency to DTSC's decision-making process. Holding public meetings to discuss regulatory work, the status of cleanup sites, or why a permit decision has been delayed for a decade or longer will at least provide stakeholders with access to information they otherwise would not have.

Related Legislation:

1) AB 2094 (Kalra, 2018) Hazardous waste facilities: inspections. Would have required DTSC to, on or before January 1, 2021, adopt regulations establishing inspection frequencies for permitted hazardous waste treatment, storage, and disposal facilities; hazardous waste generators; and, transporters. This bill was held in the Senate Appropriations Committee.

2) AB 2345 (Reyes, 2018) Hazardous waste: facilities: permits. As it was heard before the ESTM Committee, would have made statutory changes to improve the process for the permitting of hazardous waste facilities. This bill was later amended to require the California Energy Commission to require each large electrical corporation to establish a tariff or tariffs that provide for bill credits for electricity generated by eligible renewable generating facilities and exported to the electrical grid. This bill was held in Senate the Rules Committee.

3) AB 2606 (Fong) Hazardous waste: facilities: permits: renewals. Would have required DTSC to process a hazardous waste facility renewal permit in an expedited manner if DTSC determines certain conditions apply. This bill was held in the Senate Appropriations Committee.

4) AB 248 (Reyes, 2017) Hazardous waste: facilities: permits. Would have made statutory changes to improve the permitting process for hazardous waste facilities. This bill was vetoed by the Governor.

5) AB 1179 (Kalra, 2017) Hazardous waste facilities: inspections. Would have required DTSC to, on or before January 1, 2020, adopt regulations establishing inspection frequencies for permitted hazardous waste treatment, storage, and disposal facilities and for hazardous waste generators and transporters. This bill was vetoed by the Governor.

6) SB 774 (Leyva, 2017) Hazardous substances: California Toxic Substances Board. As it was heard before the ESTM Committee, would have created the California Toxic Substances Board within DTSC to provide oversight of California's hazardous waste management and the remediation of contaminated sites. This bill was later amended to require the California State University Trustees to oversee a competitive process to award funds to the Wildland and Wildland Urban Interface Wildfire Research Grant Program and appropriate $5 million from the General Fund to the Trustees in order to oversee the program. This bill was vetoed by the Governor.

7) SB 812 (De León, 2014) Hazardous waste. Would have modified the permitting process and public participation requirements for hazardous waste facilities. Would have established a Bureau of Internal Affairs to oversee DTSC and investigate departmental misconduct and a DTSC Citizen Oversight Committee to receive and review allegations of misconduct. This bill was vetoed by the Governor.

REGISTERED SUPPORT / OPPOSITION:

Support

None received.

Opposition

None received.

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

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 1500 (Carrillo) – As Introduced February 22, 2019

SUBJECT: Hazardous substances

SUMMARY: Authorizes a Certified Unified Program Agency (CUPA) or a local health officer (LHO) to temporarily suspend the permit, including the shutdown of a facility, if conditions at the facility pose an imminent or substantial endangerment to public health and safety. Clarifies the authority of a CUPA, subject to its jurisdiction, to fine or penalize a facility that is operating without a permit. Specifically, **this bill**:

1) Requires a permittee of a Unified Program to pay a permit fee and any fine or penalty associated with the permit.

2) Authorizes a Unified Program agency to withhold issuance, suspend, or revoke a permit if the permittee does not comply with the requirements to pay the permit fee, fines, and penalties associated with the permit.

3) Requires a permittee, if it does not have a valid Unified Program facility permit or the permit is suspended or revoked, to immediately discontinue operating that facility until the permit is issued, reinstated, or reissued.

4) Authorizes a permittee to request a hearing to appeal the withholding of the issuance of, or the suspension or revocation of, a permit using the procedures for appeal within the Unified Program.

5) Provides that the owner or operator of a Unified Program facility is liable for a civil or administrative penalty of not less than five hundred dollars ($500) and not more than five thousand dollars ($5,000) per day for failure to obtain or keep a Unified Program facility permit.

6) Authorizes a Unified Program agency to suspend, revoke, or withhold issuance of any unified program facility permit, if conditions exist at the unified program facility that the unified program agency considers an imminent or substantial threat to public health, safety, or the environment. Requires the permittee to immediately discontinue operating that facility or function of the facility to which the permit applies until the threat is abated and the permit is issued, reinstated, or reissued.

7) Provides that the unified program does not prevent the Unified Program agency from issuing an administrative enforcement order for the release of a hazardous substance.

8) Authorizes the Director of the Department of Health Care Services (Director) or local health officer, if a release, spill, escape, or entry of hazardous waste or a hazardous substance occurs and the Director or local health officer reasonably determines that the release, spill, escape, or entry poses an imminent or substantial endangerment to public health, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity,

bioaccumulative properties, or persistence in the air or environment, to take the following actions:

a) Issue an order to a responsible party to immediately suspend or discontinue the activity causing or contributing to the release, spill, escape, or entry of hazardous waste or hazardous substance; or,

b) Take any other action necessary to protect the public health, including, but not limited to, environmental investigations and temporary relief to, or relocation of, affected individuals.

9) Provides that a responsible party shall be liable for costs incurred by the local health officer utilizing the authority to suspend or discontinue the activity of a facility that caused a release, spill, escape, or entry of hazardous waste or hazardous substance.

10) States that a responsible party is not relieved from liability for damages by providing resident assistance and reimbursement for local health officer expenses. Prohibits a responsible party from conditioning assistance on, or requesting, a waiver of liability from a recipient of assistance.

EXISTING LAW:

1) Authorizes the Department of Toxic Substances Control (DTSC) to temporarily suspend any permit, registration, or certificate issued by DTSC prior to any hearing if DTSC determines that conditions may present an imminent and substantial endangerment to the public health or safety or the environment. (Health and Safety Code (HSC) § 25186.2)

2) Defines "Certified Unified Program Agency" or "CUPA" as the agency certified by the Secretary of the California Environmental Protection Agency (CalEPA) to implement the unified program within a jurisdiction. (HSC § 25404 (a)(1)(A)

3) Defines "Unified Program Agency" or "UPA" as the CUPA to implement or enforce a particular Unified Program element. The UPAs have the responsibility and authority to implement and enforce the unified program requirements and the regulations adopted to implement those. (HSC § 25404 (a)(1)(C))

4) Defines a "Unified program facility permit" as a permit issued pursuant to the unified program. (HSC § 25404 (a)(6))

5) Requires the Secretary of CalEPA to adopt implementing regulations and implement a unified hazardous waste and hazardous materials management regulatory program, which shall be known as the unified program. (HSC § 25404 (b)

6) Authorizes the Director to declare a health emergency or local health officer to declare a local health emergency in the jurisdiction or any area thereof affected by the threat to the public health, if a release, spill, escape, or entry of waste occurs and the Director or the local health officer reasonably determines that the waste is a hazardous waste or medical waste, or that it may become a hazardous waste or medical waste because of a combination or reaction with other substances or materials, and the Director or local health officer reasonably

determines that the release or escape is an immediate threat to the public health, or whenever there is an imminent and proximate threat of the introduction of any contagious, infectious, or communicable disease, chemical agent, noncommunicable biologic agent, toxin, or radioactive agent. (HSC § 101080)

7) Requires each County Board of Supervisors to appoint a county health officer. (HSC §101000)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author,

"In California, multiple regulatory authorities have jurisdiction over businesses that handle or generate hazardous waste and materials that pose a risk to public health and safety. This includes, for example, the South Coast Air Quality Management District (SCAQMD) and the California Department of Toxic Substances Control. Locally, a certified Unified Program Agency (CUPA) is responsible for implementing and enforcing hazardous materials and waste laws, and the Local Health Officer has general authority to protect the public's health and expanded authority in cases of a declared emergency.

Currently, some facilities that emit hazardous substances that pose a substantial endangerment to public health and safety can continue to operate because they do not meet regulatory minimum standards to cease operations immediately.

In August 2017, the SCAQMD air monitoring stations registered elevated levels of Chromium 6 emissions, a known carcinogen, in the City of Paramount. The SCAQMD determined that the elevated levels were high enough to cause long-term health risks, but since it did not pose an immediate risk to life and health, it did not direct the businesses to cease operations.

Since Chromium 6 is one of a very few chemicals that is scientifically proven to cause human cancer, Los Angeles County's Local Health Officer issued several public health directives to metal working facilities in the City of Paramount. Additionally, Los Angeles County's CUPA, which is responsible for implementing and enforcing hazardous materials and waste laws, issued notices of violation to certain business that contributed to the high Chromium 6 levels.

Despite this, neither the Local Health Officer nor the CUPA had the direct authority to direct the offending businesses to cease operations."

Certified Unified Program Agencies (CUPAs): The Secretary of the CalEPA oversees the "unified hazardous waste and hazardous materials management" regulatory program (Unified Program). Currently, there are 81 CUPAs in California. The Unified Program consolidates, coordinates the following six existing programs:

1) Hazardous Materials Release Response Plans and Inventories (Business Plans);
2) California Accidental Release Prevention (CalARP) Program;

3) Underground Storage Tank Program (USTP);
4) Aboveground Petroleum Storage Act (APSA);
5) Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs; and,
6) California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements.

State agencies involved in the implementation of the Unified Program are responsible for setting program element standards, working with CalEPA to ensure program consistency, and providing technical assistance to the CUPAs. The following state agencies are involved with the Unified Program:

1) CalEPA: The Secretary of the CalEPA is directly responsible for coordinating and evaluating the administration of the Unified Program and certifying UPAs. CUPAs are accountable for carrying out responsibilities previously handled by approximately 1,300 different state and local agencies.
2) Governor's Office of Emergency Services (Cal OES): The Cal OES evaluates and provides technical assistance for the Hazardous Material Release Response Plan (Business Plan) and the Area Plans for Hazardous Materials Emergencies.
3) Office of the State Fire Marshal (Office): The Office evaluates and provides technical assistance for the APSA Program.
4) State Water Resources Control Board (State Water Board): The State Water Board evaluates and provides technical assistance for the USTP under the USTA.
5) Department of Toxic Substances Control (DTSC): The Department of Toxic Substances Control evaluates and provides technical assistance for the Hazardous Waste Generator Program, including Onsite Treatment (Tiered Permitting).

Hazardous Materials Business Plan (Business Plan) program: The Business Plan program was enacted in 1986. Its purpose is to prevent or minimize the damage to public health and safety and the environment from a release or threatened release of hazardous materials. It also satisfies community right-to-know laws. This is accomplished by requiring businesses that handle hazardous materials to inventory their hazardous materials, develop a site map, develop an emergency plan, and implement a training program for employees.

California Accidental Release Prevention (CalARP) program: CalARP was implemented on January 1, 1997 and replaced the California Risk Management and Prevention Program (RMPP). The purpose of the CalARP program is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. This is accomplished by requiring businesses that handle more than a threshold quantity of a regulated substance listed in the regulations to develop a risk management plan (RMP). An RMP is a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. The RMP contains safety information, a hazard review, operating procedures, training requirements, maintenance requirements, compliance audits, and incident investigation procedures.

The CalARP program is implemented at the local government level by CUPAs and is designed so that the CUPAs work directly with the regulated businesses. The CUPAs determine the level of detail in the RMPs, review the RMPs, conduct facility inspections, and provide public access to most of the information. Confidential or trade secret information may be restricted.

Regulation of underground storage tanks (USTs): The State Water Board has established regulations governing the prevention of leaks from USTs. There are standards and requirements for installation, tank construction, tank testing, leak detection, spill containment, and overfill protection. California USTA and regulations give local agencies (counties, cities, or other local agencies) authority throughout the state to issue permits for tank operation and to enforce tank testing requirements within their jurisdiction.

The purpose of the USTP is to protect public health and safety and the environment from releases of petroleum and other hazardous substances from tanks. Leaking underground storage tanks are a significant source of petroleum impacts to groundwater and may pose the following potential threats to health and safety: exposure from impacts to soil and/or groundwater, contamination of drinking water aquifers, contamination of public or private drinking water wells, and inhalation of vapors.

Regulation of aboveground storage tanks: The Office is responsible for the implementation of the APSA program. APSA regulates facilities with aggregate aboveground petroleum storage capacities of 1,320 gallons or greater, which include aboveground storage containers or tanks with petroleum storage capacities of 55 gallons or greater. These facilities typically include large petroleum tank facilities, aboveground fuel tank stations, and vehicle repair shops with aboveground petroleum storage tanks. The APSA does not regulate non-petroleum products. Facilities with total petroleum storage quantities at or in exceedance of 10,000 gallons are inspected at least once every three years and have reporting and fee requirements, while facilities with petroleum storage quantities equal to or greater than 1,320 gallons but less than 10,000 gallons have reporting and fee requirements only.

Roles of CUPAs: UPAs or CUPAs regulate thousands of businesses; however, there are business facilities that pose a danger to public safety by operating outside of the regulatory framework and fail to obtain, renew, or pay their Unified Program permits. Additionally, UPAs have the authority to issue an administrative enforcement order to require businesses to comply with regulations, make corrective actions, and quarantine waste, among other actions. However, UPAs do not have the enforcement authority to require businesses to immediately discontinue or close facilities or portions of facilities even if they know the business poses an imminent danger to public health and safety. Without swift and strong enforcement actions and penalties against businesses that have not complied with the permitting requirements, public health and safety is left vulnerable.

Role of local health officers (LHOs): Current law authorizes LHOs to take any preventive measure that may be necessary to protect the public health from any public health hazard during any state of emergency. However, in the absence of a declared emergency, LHOs do not have the statutory authority to enforce public health directives against violators and to require those violators to take immediate action to stop the release of hazardous substances that threaten public health. This is not aligned with LHOs current authority to immediately order a temporary closure of a restaurant for confirmed or even suspected case of food-borne illness or any other violation of restaurant codes that may put the public's health at risk.

Explosion at a metal recycling facility in Maywood: In June of 2016, there was a three-alarm fire on the 3500 block of Fruitland Avenue which ripped through a pair of commercial buildings, sparking a series of strong explosions, and sending a thick plume of noxious smoke over the

region. Firefighters found flames shooting through the roofs of two structures, one of which was a metal-recycling plant. Crews began pouring water on the flames, but the oxygen from the water created a chemical reaction with the burning magnesium, one of the metals being stored at the facility and awaiting recycling, producing what one fire official described as "fireballs" and setting off strong explosions. Several hundred people had to be evacuated from nearby homes and businesses.

Dangerous conditions imposed by tons of chemicals at the site hampered firefighters' efforts to douse the flames. Firefighters were ordered to use a breathing apparatus because of the fumes from the magnesium and a number of other substances at the business. A hazardous-materials team was sent to the scene, and officials from the South Coast Air Quality Management District (SCAQMD) were notified. The SCAQMD later issued a smoke advisory, saying odor from the plume of smoke was prompting complaints across the region.

Hexavalent Chromium release in Southern California: Commonly referred to as chromium 6, hexavalent chromium is toxic and inhaling the substance for long periods increases the risk of lung and nasal cancers, as well as other respiratory issues. Exposure to the substance can also occur through eating or drinking contaminated foods or water and through direct skin contact.

In February 2017, the City of Long Beach began working with the SCAQMD after community members along the Paramount border began to complain of metallic smelling emissions. Additional complaints from the public began to surface regarding plants in Paramount, including complaints about Lubeco, a metal finishing plant in Long Beach. The city and the SCAQMD jointly conducted an inspection in Northeast Long Beach, where two facilities had been highlighted as potential sources for the spikes in hexavalent chromium leading to the petition against Lubeco. As a result of this investigation, the SCAQMD filed a petition for Lubeco, Inc. to abate or close down its operations.

Additionally, in December 2017, the SCAQMD ordered a Paramount metal finishing facility to shut down all operations and processes that emit hexavalent chromium. The SCAQMD ordered Anaplex Corp. to cease operating the equipment temporarily. The order remained in effect for a week while air tests could be conducted to show the levels of hexavalent chromium have decreased to acceptable levels.

These examples of dangerous threats from business handling hazardous chemicals highlight the dangers that CUPAs and LHOs confront. Additionally, in these examples the CUPAs and LHOs did not have authority to order a business to cease operations temporarily like the SCAQMD.

CUPAs and LHOs have to respond to a variety of urgent and emergency situations dealing with hazardous substances and chemicals that pose an immediate risk to human health and safety. However, they do not have authority to order a business to temporarily cease operations even if the conditions at the business pose an immediate threat to human health and safety.

AB 1500 provides CUPAs and LHOs with authority similar to other agencies with similar responsibilities such as the SCAQMD and DTSC, in order to best protect the human health and safety of the people of California. Absent this authority, a CUPA or LHO would need to persuade a local district attorney to go to court to seek an injunction against the offending business, even while the dangerous conditions persist. It is important to note that AB 1500 does contain procedures for due process for a facility to appeal the order to cease operations.

Items for further consideration: If the bill passes this committee, the author may wish to explore with stakeholders further clarifying what is a release (of a chemical or hazardous substance), what is meant by imminent and substantial endangerment, and ensure coordination among all relevant regulatory agencies. Some of these terms are defined in other places in state law, therefore continuing the dialogue with stakeholders to ensure a common understanding of the proposed changes within AB 1500 is suggested.

Technical suggestion: The author and committee may wish to amend the bill to clarify that when a LHO uses the authority proposed in the bill that they consult with the state or other local regulatory agency to ensure coordination.

Related legislation:

1) AB 1646 (Muratsuchi, Chapter 588, Statutes of 2017). Requires an implementing agency to, in coordination with local emergency management agencies, unified program agencies, local first response agencies, and the public, develop an integrated alerting and notification system to be used to notify the community surrounding a petroleum refinery in the event of an incident at the refinery.

2) AB 1689 (ESTM Committee, Chapter 159, Statutes of 2017). Adds combustible metals and metal alloys to the list of materials a business must include in its hazardous materials business plan.

3) AB 2902 (ESTM Committee, Chapter 721, Statutes of 2018). Makes technical changes to the Aboveground Petroleum Storage Tank Act, the Underground Storage Tank Act, and the Hazardous Materials Business Plan Program.

REGISTERED SUPPORT / OPPOSITION:

Support

Artesia Cemetery District
Breathe California of Los Angeles County (Breathe LA)
California Association of Environmental Health Administrators (CAEHA)
California Contract Cities Association (CCCA)
City of Artesia Councilmember, Rene J. Trevino
City of Bellflower
City of Hawaiian Gardens
City of Long Beach Councilmember, Roberto Uranga
City of Manhattan Beach, Councilmember Amy Thomas Howorth
City of Redondo Beach
City of Signal Hill
City of Torrance
Clean Air Coalition of North Whittier And Avocado Heights
Contra Costa County
County Health Executives Association of California (CHEAC)
Greater Long Beach Interfaith Community Organization
Los Angeles County Chief Executive Office

Opposition

None on file.

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

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 1597 (Committee on Environmental Safety and Toxic Materials) – As Introduced February 22, 2019

SUBJECT: Hazardous waste: transportation: electronic manifests

SUMMARY: Authorizes the state's hazardous waste management manifest requirements to be satisfied through the use of the United States Environmental Protection Agency (US EPA) electronic manifest (e-manifest) system. Specifically, **this bill**:

1) Authorizes a generator, transporter, facility operator, or anyone who is required to submit a copy of a manifest to the Department of Toxic Substances Control (DTSC), or store manifest information electronically, to use the e-manifest system developed and implemented by the US EPA to satisfy those manifest requirements.

2) Includes in the definition of "manifest" an e-manifest, which is the electronic format of a hazardous waste manifest, that is obtained from the US EPA e-manifest system and transmitted electronically to the system, and that is the legal equivalent of US EPA Forms 8700-22 (Manifest) and 8700-22A (Manifest Continuation Sheet).

3) Provides that any requirement under the hazardous waste control law (HWCL) to sign a manifest or manifest certification by hand, or to obtain a handwritten signature, is satisfied by signing with, or obtaining a valid and enforceable electronic signature in accordance with the e-manifest system developed and implemented by the US EPA.

4) States that any requirement to keep or retain a copy of a manifest is satisfied by retention of a signed electronic manifest in an account on the e-manifest system, provided that the copies are readily available for viewing and production if requested by an US EPA inspector or authorized state inspector.

5) Requires anyone who enters incomplete or erroneous information into the e-manifest system to correct the information in the e-manifest system within 30 days of being notified of incomplete or erroneous information by DTSC and to submit a $20 fee to DTSC.

EXISTING LAW:

1) Under HWCL, requires any person who generates, transports, or receives hazardous waste in California to use the Uniform Hazardous Waste Manifest. (Health and Safety Code (HSC) § 25100, et seq.)

2) Defines "manifest" as a shipping document originated and signed by a generator of hazardous waste that contains all of the information required by DTSC and that complies with all applicable federal and state regulations. (HSC § 25160)

3) Requires anyone who submits incomplete or erroneous information on a completed manifest to correct the information and to submit a $20 fee to DTSC. (HSC § 25160.5)

4) Authorizes the US EPA to implement a national electronic manifest system under the Hazardous Waste Electronic Manifest Establishment Act. (42 United States Code § 3024)

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: Current state law requires the use of a paper hazardous waste manifest to track the management of hazardous waste. The law also requires the use of a handwritten signature on the manifest. The US EPA recently developed and implemented an e-manifest system that shifted the hazardous waste manifest system from a paper system to an electronic system. However, current state law does not authorize the use of electronic manifests or electronic signatures. AB 1597 authorizes anyone in California that generates, treats, stores, or manages hazardous waste, and is required to use a hazardous waste manifest, to meet those manifest requirements with the use of the federal e-manifest system developed by the US EPA.

Uniform hazardous waste manifest: The Uniform Hazardous Waste Manifest is the shipping document that travels with hazardous waste from the point of generation, through transportation, to the final treatment, storage, and disposal facility. Each party in the chain of shipping hazardous waste, including the generator, signs and keeps one of the manifest copies, creating a "cradle-to-grave" tracking of the hazardous waste.

Current state law stipulates that the manifest is a paper document containing multiple copies of a single form. When completed, the form contains information on the type and quantity of the waste being transported, instructions for handling the waste, and signature lines for all parties involved in the disposal process. Each party that handles the waste signs the manifest and retains a copy for themselves. This ensures critical accountability in the transportation and disposal processes. Once the hazardous waste reaches its destination, the receiving facility returns a signed copy of the manifest to the generator, confirming that the waste has been received by the designated facility.

The Hazardous Waste Electronic Manifest Establishment Act: The Hazardous Waste Electronic Manifest Establishment Act, signed into law by President Obama on October 5, 2012, authorizes the US EPA to implement a national electronic manifest system. The US EPA worked with states, industry, and related stakeholders to develop a national electronic manifest system to facilitate the electronic transmission of the uniform manifest form and make the use of the manifest much more effective and convenient for users. The e-manifest extends to all federally and state-regulated wastes requiring manifests.

The US EPA fully implemented the e-manifest system on June 30, 2018. California law needs to be updated to allow the use of the federal e-manifest system in order to ensure that the state and those that ship hazardous waste in California remain in compliance with federal hazardous waste laws and regulations. Therefore, it is important that the statutory changes in AB 1597, authorizing the use of the e-manifest, move forward.

REGISTERED SUPPORT / OPPOSITION:

Support

None on file.

Opposition

None on file.

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

Date of Hearing: March 26, 2019

ASSEMBLY COMMITTEE ON ENVIRONMENTAL SAFETY AND TOXIC MATERIALS
Bill Quirk, Chair
AB 1788 (Bloom) – As Amended March 19, 2019

SUBJECT: Pesticides: use of anticoagulants

SUMMARY: Prohibits the use of second generation anticoagulant rodenticides (SGARs) throughout the state and also prohibits the use of first generation anticoagulant (FGARs) rodenticides on state-owned property. Specifically, **this bill**:

1) Makes legislative findings about the utility of wild predators in maintaining ecosystem health and about the deleterious impact of rodenticides on predatory species.

2) Declares that the provisions in the bill shall be known as the California Ecosystems Protection Act of 2019.

3) Prohibits the use, except as specified, of any pesticide that contains one or more of the following anticoagulants: brodifacoum, bromadiolone, difenacoum, and difethialone (SGARs).

4) Exempts from the prohibition on the use of SGARs a situation in which the local health authority determines that an emergency pest infestation poses an immediate threat to public health.

5) Requires the county agricultural commissioner, in the event that the local health authority determines that there is a public health emergency, to grant permission for licensed pest control operators, upon application, to use an SGAR. Requires that permission be granted for the limited time frame of the public health emergency.

6) Authorizes the county agricultural commissioner to impose additional conditions for public health emergency applications of a SGAR.

7) Exempts from the prohibition on the use of SGARs any governmental agency employee certified as a vector control technician who uses pesticides for public health activities, and a mosquito or vector control district that uses pesticides to protect the public health.

8) Exempts from the prohibition on the use of SGARs agricultural activities, including activities conducted in a warehouse used to store foods for human or animal consumption; an agricultural food production site, including, but not limited to, a slaughterhouse and cannery; and, a factory, brewery, or winery.

9) Prohibits the use, except as specified, of any pesticide that contains one or more of the following anticoagulants on any state-owned property in California: chlorophacinone, diphacinoneor warfarin (FGARs).

10) Directs state agencies to encourage federal agencies to comply with the prohibition on FGARs on state-owned property in California.

11) Exempts agricultural activities from the prohibition on the use of FGARs.

12) Provides that the prohibition on FGARs does not preempt or supersede any federal statute or the authority of any federal agency.

EXISTING LAW:

1) Authorizes the state's pesticide regulatory program and mandates the Department of Pesticide Regulation (DPR) to, among other things, provide for the proper, safe, and efficient use of pesticides essential for the production of food and fiber, for the protection of public health and safety, and for the protection of the environment from environmentally harmful pesticides by prohibiting, regulating, or ensuring proper stewardship of those pesticides. (Food and Agriculture Code (FAC) § 11401 et seq.)

2) Prohibits, except for use for agricultural activities, the use in a state park, state wildlife refuge, or state conservancy of any pesticide that contains one or more of the following second generation anticoagulant pesticides: brodifacoum, bromadiolone, difenacoum, and difethialone. (FAC § 12978.7)

3) Defines "agricultural activities" as those activities that generate products, including any horticultural, viticultural, aquacultural, forestry, dairy, livestock, poultry, bee, or farm product. (FAC § 564 and 54004)

4) Requires the director of DPR to control and otherwise regulate the use of restricted materials. (FAC § 14001)

5) Prohibits a person from using or possessing any pesticide designated as a restricted material for any agricultural use except under a written permit of the local agricultural commissioner. (FAC § 14006.5)

6) Prohibits, except as provided by regulation, the possession or use of a restricted material by any person except a certified private or commercial applicator, or someone under the direct supervision of a certified private or commercial applicator. (FAC § 14015)

7) Designates as restricted materials pesticides containing brodifacoum, bromadiolone, difenacoum, and difethialone. (Title 3 California Code of Regulations (CCR), § 6400 (2014))

8) Prohibits the use of brodifacoum, bromadiolone, difenacoum, and difethialone in any above ground bait more than 50 feet from a man-made structure unless there is a feature associated with the site that is harboring or attracting the pests targeted on the label between the 50-foot limit and the placement limit specified on the label. (Title 3 CCR § 6471 (2014))

FISCAL EFFECT: Unknown.

COMMENTS:

Need for the bill: According to the author, "Regulations enacted in 2014 by [DPR] to minimize harm from one subset of rodenticides—Second Generation Anticoagulant Rodenticides (SGARs)—by prohibiting their use by consumers, have proven ineffective. Necropsy data

performed by the California Department of Fish and Wildlife and other scientists have demonstrated that these toxins have been poisoning California ecosystems, and continue to pose a rampant threat to children, pets, and wildlife. First generation anticoagulant rodenticides (FGARs) are also harmful, though non-target lethal poisoning is more widespread with SGARs. To reduce the impacts of SGARs and FGARs, this legislation will ban SGARs throughout the state and ban use of FGARs on all state-owned properties."

Rodents: Many species of rodents inhabit California, including squirrels, chipmunks, beavers, gophers, rats, and mice. Rodents native to California play an important ecological role, and are a major food source for predators and scavengers, including hawks, eagles, foxes, coyotes, and bobcats. Rodents, however, are pests when they infest houses, threaten public health, and destroy property. According to the Centers for Disease Control and Prevention, rats and mice spread more than 35 diseases to humans worldwide. In North America, diseases that spread from rats and mice to humans include hantavirus and salmonellosis. Rodent infestations can also damage or destroy critical habitat, native plants and animals, crops, property, and food supplies.

Rodent control: According to the United States Environmental Protection (USEPA), the most important steps in eliminating and preventing rodent infestations are keeping living spaces clean; preventing rodent access; and, eliminating potential nesting areas. Other options to control rodent infestations include lethal traps, live traps, and chemical control (rodenticides).

Rodenticides: Rodenticides are pesticides designed to kill rodents, but the ingestion of, or sometimes contact with, rodenticides can have the same type of effect on any mammal. Contact with rodenticides can also affect birds and fish. Rodenticides are usually formulated as baits, which are designed to attract animals. Baits used in agriculture and natural areas may contain ground meat, vegetables, grains, or fruits, which may be attractive to non-target wildlife, children, and pets.

According to the USEPA, most of the rodenticides used today are anticoagulant compounds, either first or second generation, that interfere with blood clotting and cause death from excessive bleeding. Deaths typically occur between four days and two weeks after rodents begin to feed on the bait.

First-generation anticoagulants (FGARs) include the anticoagulants that were developed as rodenticides before 1970. These compounds are much more toxic when feeding occurs on several successive days rather than on one day only. Chlorpophacinone, diphacinone, and warfarin are FGARs that are registered to control rats and mice in the United States.

Second-generation anticoagulants (SGARs) were developed beginning in the 1970s to control rodents that were resistant to FGARs. SGARs are more likely than FGARs to kill after a single night's feeding, and tend to remain in animal tissues longer than do first-generation compounds. Because of this, SGARs pose greater risks to non-target species that might feed on bait only once or that might feed upon animals that have eaten the bait. Due to these risks, SGARS are no longer registered for use in products geared toward consumers and are registered only for the commercial pest control and structural pest control markets. SGARs registered in the United States include brodifacoum, bromadiolone, difenacoum, and difethialone.

The third category of rodenticides consists of those considered acute toxicants. Acute toxicant rodenticides have differing ways of affecting rodents, including affecting the nervous system,

causing heart and kidney failure, and reacting to stomach acid to cause rapid death. In this category, bromethalin, zinc phosphide, and strychnine kill rodents after one feeding, often within a few hours. Formulated as baits, they are highly toxic to people, pets, and wildlife. Cholecalciferol, another acute toxicant, usually requires multiple feedings to kill rodents, and can only be used by licensed pesticide applicators.

This bill prohibits the use of SGARS throughout the state and additionally prohibits the use of FGARs on state-owned property.

Dangers of rodenticides: According to the California Department of Fish and Wildlife (DFW), the use of poison baits to control rodents has injured and killed hundreds or thousands of wild animals and pets throughout California. Predatory and scavenging birds and mammals that eat dead or dying rodents that have consumed these baits will also be poisoned. Large predators, such as mountain lions, can be impacted by consuming smaller predators that have preyed upon poisoned rodents. Pets will also eat dead or dying rodents and unprotected bait.

Request for California-restricted materials designation for SGARs: In July 2011, DFW requested that DPR designate all SGARs as California-restricted materials in order to mitigate non-target wildlife exposure in California. DFW reported that dozens of species are impacted by anticoagulant pesticides, including the golden eagle, great-horned owl, Cooper's hawk, American kestrel, black bear, fisher, red fox, gray fox, San Joaquin kit fox (federally endangered), coyote, mountain lion, bobcat, and badger.

Restricted materials are pesticides deemed to have a higher potential to cause harm to public health, farm workers, domestic animals, honeybees, the environment, wildlife, or crops compared to other pesticides. With certain exceptions, restricted materials may be purchased and used only by, or under the supervision of, a certified commercial or private applicator under a permit issued by the County Agricultural Commissioner (CAC).

California requires permits for restricted materials so that the local CAC can assess, in advance, the potential effects of the proposed application on public health and the environment. Permits are time and site specific, and include use practices to reduce adverse effects. The CAC may deny permits or require feasible alternatives to be used.

Analysis of anticoagulant rodenticides on wildlife in California: In response to DFW's 2011 request, DPR took steps to obtain wildlife incident and mortality data between 1995 and 2011, which it analyzed together with land use data and rodenticide use and sales data between 2006 and 2010. DPR considered data from multiple sources, including DFW, private agencies, individuals, available journal articles, and other resources. Of the 492 non-target mammals and bird necropsies included in DPR's analysis, 368 (74.8 percent) had residues of one or more anticoagulant rodenticide (FGARs and SGARs). Of the 368 animals that tested positive for at least one anticoagulant rodenticide, 359 (97.6 percent) had residues of at least one SGAR while 65 (17.7 percent) had residues of at least one FGAR.

After reviewing all the data obtained from both urban and rural areas, DPR found that SGAR exposure and toxicity to non-target wildlife is a statewide problem, regardless of the setting. DPR found that the use of SGARs presents a hazard related to persistent residues in target animals resulting in impacts to non-target wildlife.

State regulatory action on SGARs: While certain mitigation efforts had previously been in effect for some SGARS, following its findings on the impacts of SGARs on wildlife throughout the state, on March 18, 2014, DPR designated the active ingredients brodifacoum, bromadiolone, difenacoum, and difethialone as California-restricted materials, making all SGAR products restricted materials.

In the March 2014 action, DPR further restricted the use of SGARs by prohibiting the placement of aboveground baits containing SGARs more than 50 feet from a human-made structure, unless there is a feature associated with the site that is harboring or attracting pests. SGARs target commensal rodents, such as the house mouse, Norway rat, and roof rat, which generally live in close association with humans and are dependent upon human habits for food, water, and shelter. DPR contends that restricting the use of all SGARs to only certified applicators and limiting its use to near structures will significantly reduce unintended exposures to non-target wildlife. These use restrictions for SGARs went into effect on July 1, 2014.

State legislative action on SGARs: In 2014, the Legislature passed, and Governor Edmund G. Brown Jr signed, AB 2657 (Bloom, Chapter 475, Statutes of 2014), which prohibits the use of SGARs in wildlife habitat areas, defined as any state park, state wildlife refuge, or state conservancy. The provisions of this bill went into effect on January 1, 2015.

Have the regulations and legislation been effective? According to DPR, after implementing regulatory action on SGARs in 2014, and after AB 2657 went into effect, DPR continued to receive reports claiming that SGARs may have caused, or are likely to have caused, significant adverse impacts to non-target wildlife. Under 3 CCR section 6220, the Director is required to investigate such reports. The Director then has the authority to begin a reevaluation if the investigation finds that the pesticide caused or is likely to cause significant adverse impacts.

In response to the reports on continued impacts of SGARs, DPR prepared an investigatory report on potential significant adverse impacts reportedly caused by anticoagulant rodenticides. The investigation reviews and analyzes information and data from a variety of sources, including peer-reviewed scientific publications, statewide sales and use reporting data, and unpublished wildlife incident and mortality data. As part of this investigation, DPR scientists analyzed 11 different studies examining the possible impacts of anticoagulant rodenticides on non-target wildlife, and 152 DFW loss reports submitted to DPR since 2014.

The investigation found that while the 2014 regulations changed SGAR use patterns by restricting their purchase, sale, and use, reported rates of non-target wildlife exposure to SGARs have not decreased. Additionally, the investigation found evidence of possible population-level impacts among non-target wildlife in California due to statistically significant associations with SGAR exposure and sublethal impacts. The investigation indicates that non-target wildlife exposure may be significant due to the chemical characteristics of SGARs, which are known to have properties of high toxicity, persistence, and bioaccumulation. The investigation also notes that brodifacoum has relatively higher rates of exposure among non-target wildlife as compared to other SGARs. Based on the investigation, the Director found that a significant adverse impact has occurred or is likely to occur from the use of SGARs and proposed to begin reevaluation of SGARs.

DPR's current reevaluation of SGARs: On November 16, 2018, DPR issued a notice of its proposed decision to begin the reevaluation of pesticide products containing the SGAR active

ingredients brodifacoum, bromadiolone, difenacoum, and difethialone. DPR accepted comments on the proposed decision to begin reevaluation of SGARs up to and including January 16, 2019. DPR notes that they are currently reviewing and responding to the public comments they received on the proposed reevaluation. DPR says that once the reevaluation process begins, there is no set time frame for completion because DPR has not yet made a final decision as to the data it will require pursuant to this reevaluation. However, in general, DPR intends to obtain data related to SGAR exposure rates as well as any resulting risk of adverse impacts to non-target wildlife. DPR notes that how quickly that data can be generated will be one of the primary drivers of how long it takes to complete the reevaluation process.

Next steps: While the author of AB 1788 believes that the regulations put forth by DPR and enacted legislation on SGARs in wildlife areas are important steps toward protecting the public and wildlife from unintended exposure to anticoagulant rodenticides, he does not believe that they sufficiently protect vulnerable wildlife, pets, or children from unintentional rodenticide exposure. The goal of AB 1788 is to augment existing regulatory and legislative action by prohibiting the use of SGARs throughout the state, and by additionally prohibiting the use of FGARs on state-owned property.

Alternatives to rodenticides: According to DFW and DPR, the most effective and safest ways to address rodent issues are through exclusion and sanitation—by eliminating factors that allow rodents to reproduce and thrive. DPR notes that rodenticides do not eradicate rodents and may not reduce their numbers for long. If there is an area-wide population of rodents, rodents from the edges move into the available space vacated by the poisoned rodents. Rodent numbers surge when people leave unpicked fruit on trees and pet food outside. Rodents find shelter when people ignore clutter and overgrown vines and allow access inside houses and garages.

To address these issues, DPR and DFW suggest that people who have identified a rodent population should eliminate rodent entrances to the structure (seal holes, fill cracks, and install door sweeps); remove brush piles and debris near the structure; and, remove other food sources, such as pet food, wild bird seed, and fruit from trees. In addition to exclusion and sanitation, traps and electrocution devices can also be employed to address rodent pests.

Unintended consequences? While sanitation and exclusion are the most effective methods for long-term rodent control, should the prohibition on SGARS be enacted though this bill, FGARs and acute toxicant rodenticides would still be allowed (except on state-owned property, on which the use of FGARs would be prohibited). Consumers could still purchase and use the FGARs warfarin, chlorophacinone, and diphacinone and the acute toxicants bromethalin, zinc phosphide, and strychnine. Professional applicators could additionally use cholecalciferol.

While FGARs, which require several doses to cause intoxication, appear to be less toxic to nontarget wildlife that SGARs, residues of FGARs continue to be found in nontarget wildlife. Under the provisions of this bill, consumers would still be able to use, on non-state owned property, warfarin (moles); chlorophacinone (house mice, Norway rats, roof rats, gophers); and, diphacinone (house mice, Norway rats, roof rats, ground squirrels, gophers). Certified pesticide applicators could additionally use, on non-state owner property, warfarin (house mice, rats voles, deer mice); chlorophacinone (voles, deer mice, ground squirrels); and, diphacinone (deer mice).

According to DPR, bromethalin, which is designed to kill in a single feeding, affects the nervous system and causes symptoms such as lack of coordination, tremors, seizures, paralysis, and often

death within 2 to 4 days after ingestion. Antidotes to bromethalin do not exist. Treatment includes intravenous fluids and drugs to decrease brain swelling.

Most brands of pesticides that contain zinc phosphide are registered for consumer use for pocket gopher control only. Professional applicators can additionally use a few brands for mouse and rat control. When rodents feed on bait containing zinc phosphide, they die quickly because their stomach acid reacts with phosphide to produce toxic phosphine gas. Predators and scavengers can be poisoned if they eat enough of the gut content of animals recently killed with zinc phosphide. Zinc phosphide is toxic to birds, fish, and other wildlife.

Some strychnine-containing bait products are labeled for consumer use in California and others are restricted materials. Strychnine causes nerve cells to fire rapidly, which causes severe muscle spasms and leads to death. Several recent deaths of non-target wildlife have been caused by improper use of strychnine.

Baits containing the acute toxicant cholecalciferol (Vitamin D) can be used by professional applicators, but not consumers. High doses of cholecalciferol raise blood calcium levels and cause heart and kidney failure in rodents. Secondary poisoning cases related to cholecalciferol are less frequent than those for other rodenticides, but it is not a very effective tool for rodent control.

Should the prohibition on SGARs in this bill be enacted, without corresponding requirements or support of an integrated pest management approach to rodent management, it is likely that the use of FGARs and acute toxicants to control rodents would increase. Additionally, cholecalciferol is not very effective, raising the concern that should it be used widely, resistance could occur. Instituting stronger state support of, or requirements for, integrated pesticide management approaches to rodent control would likely reduce the use of rodenticides overall.

Should the use of FGARs and SGARs be restricted through the existing regulatory framework? In California, pesticides are generally regulated though labeling requirements and the designation of the pesticide as a restricted material. DPR is currently proposing reevaluating SGARS for use in California. However, there are examples in statute of specific pesticide use restrictions and requirements, such as Education Code § 17610.1, which prohibits the use of specified pesticides on a school site, as defined, and FAC § 12978.7, which prohibits the use of SGARs in wildlife habitat areas. Instead of adding restrictions for the use of FGARs and SGARs through legislation, should the proposed restrictions in this bill be examined through the regulatory process?

Clarification needed: Should this bill pass this Committee, the author may wish to continue to consult with local entities to determine how best to structure an exemption for the use of SGARs in the case of a public health threat, if such an exemption is necessary.

Arguments in support: The Center for Biological Diversity argues,

> "AB 1788 is narrowly targeted to the most dangerous rodenticide uses and specifically exempts agricultural activities and emergency pest infestations… Regulations enacted by [DPR] to minimize harm from one subset of rodenticides—[SGARs]—have proven ineffective. Recent data analyzed by DPR reveal anticoagulant rodenticide poisoning is an ongoing problem in over 85% of tested mountain lions, bobcats, and the state threatened

Pacific fishers. The use of rodenticides by licensed pest control applicators still allows rodents to consume rodenticides and then poison upper-level predators who consume the rodents themselves, which will result in continued deaths of wildlife and pets. Stronger safeguards are needed…

Anticoagulant rodenticides pose an unreasonable risk to children. According to the Environmental Protection Agency (EPA), just one 5-gram bite of rodenticide bait greatly exceeds safety thresholds. The most recent summary from the National Poison Data System documented almost 5,000 cases of anticoagulant rodenticide poisoning of children under the age of 6 years old in 2017 alone. More protections for children are needed…

There is a wide array of cost-effective alternatives available on the market today to better address rodent infestations. Sealing buildings and eliminating food and water sources are a necessary first step. Lethal rodent control strategies that involve snap traps, electric traps, and other non-toxic methods can then be implemented to address any infestations. Several types of less toxic rodenticides are available as well."

Arguments in opposition: A coalition of opponents, including the American Chemistry Council, the Animal Pest Management Services, Inc., the California Chamber of Commerce, the California League of Food Producers, and the California Manufacturers and Technology Association argues,

"The Department of Pesticide Regulation (DPR) announced in March 2019, they will enter a formal reevaluation of SGARs. This scientific evaluation should be allowed to take place before the legislature bans a product without all the necessary data, leaving California with fewer and, in some cases, less effective methods for controlling rodent populations…

The US Environmental Protection Agency (EPA) and DPR regulate these products for efficacy, human health impacts and impacts to the environment. In 2014, DPR classified all SGARs as restricted use; meaning only certified applicators can legally use these rodenticides. In 2019, DPR made the decision to formally reevaluate all SGARs. Through this process, DPR reviews existing data and may require registrants to provide more data. DPR also has the regulatory authority to implement additional mitigation or product restrictions, at the end of the thorough review.

Rodenticides have been a critical tool for controlling rodent populations to protect Californians from the spread of disease and illness. Rodents can transmit more than 35 diseases to humans, including Hantavirus, which killed three people and infected seven others in Yosemite National Park in 2012. Last year, a man in Placer County died from the virus….

We believe all rodenticides, when used according to the labeled instructions, serve an important function protecting Californians from disease and property damage. These products are widely used in a variety of settings to protect public health including food service establishments, hospitals, by retailers and in homes. While we appreciate the exemption from this ban for certain facility types, a threat to public health exists beyond these locations."

Double referral: Should the Assembly Committee on Environmental Safety and Toxic Materials approve this bill, it will be referred to the Assembly Water, Parks, and Wildlife Committee.

Recent related legislation:

1) AB 2422 (Bloom, 2018). Would have prohibited the use, except as specified, of any pesticide that contains an anticoagulant. The Assembly Water, Parks, and Wildlife Committee hearing on this bill was cancelled at the request of the author and the bill subsequently died on file.

2) AB 1687 (Bloom, 2017). Would have prohibited the use of any pesticide that contains one or more of nine specified active ingredients (including all first and second generation anticoagulant rodenticides and some acute toxicants). The Assembly Committee on Environmental Safety and Toxic Materials hearing on this bill was cancelled at the request of the author and the bill subsequently died on file.

3) AB 2596 (Bloom, 2016). Would have prohibited the use of second generation anticoagulant rodenticides. The Assembly Committee on Environmental Safety and Toxic Materials hearing on this bill was cancelled at the request of the author and the bill subsequently died on file.

4) AB 2657 (Bloom, Chapter 475, Statutes of 2014). Prohibits the use of second generation anticoagulant rodenticides in wildlife habitat areas, as defined.

REGISTERED SUPPORT / OPPOSITION:

Support

Animal Legal Defense Fund
California Council for Wildlife Rehabilitators
California Environmental Health Initiative
California Wildlife Center
Center for Biological Diversity
Citizens for Los Angeles Wildlife (CLAW)
City of Los Angeles, Council District 5
Clean Water Action
Conejo Valley Audubon Society
Environmental Protection Information Center
Environmental Working Group (EWG)
Friends of Griffith Park
Friends of The Inyo
Friends of The Santa Clara River
Humane Society of The United States; The
In Defense of Animals
Los Padres Forestwatch
Malibu Monarch Project
Midpeninsula Regional Open Space District
Mt. Diablo Audubon Society
National Association for Wildlife Emergency Services
National Parks Conservation Association
Poison Free Agoura
Poison Free Malibu

Project Coyote
Raptors Are The Solution
San Fernando Valley Audubon Society
Santa Susana Mountain Park Association
Save Chatsworth, Inc.
Social Compassion in Legislation
Sonoma County Wildlife Rescue
The Paw Project
The River Otter Ecology Project
Ventura Audubon Society
WildEarth Guardians
Wildlife Research Institute, Inc.
71 Individuals

Opposition

American Chemistry Council
Animal Pest Management Services, Inc.
California Chamber of Commerce
California Food Producers
California Manufacturers & Technology Association
California Retailers Association
Household and Commercial Products Association
Pest Control Operators of California
Responsible Industry for a Sound Environment (RISE)
Syngenta
Western Plant Health Association

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