
SENATE COMMITTEE ON ENVIRONMENTAL QUALITY

Senator Allen, Chair

2019 - 2020 Regular

Bill No: SB 86
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Urgency: No
Consultant: Maria Montchal

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Fiscal: Yes

SUBJECT: Department of Pesticide Regulation: chlorpyrifos: quarterly reports

DIGEST: Requires the Department of Pesticide Regulation (DPR) to submit quarterly reports on chlorpyrifos use, monitoring, and exposure to specified committees in the legislature and the Office of the Surgeon General.

ANALYSIS:

Existing law:

- 1) Regulates the use of pesticides and authorizes the director of DPR to adopt regulations to govern the possession, sale, or use of specified pesticides, as prescribed (Food and Agriculture Code. (FAC) §11501, et seq.)
- 2) Requires the director to endeavor to eliminate from use in the state any pesticide that endangers the agricultural or nonagricultural environment, is not beneficial for the purposes for which it is sold, or is misrepresented. (FAC § 12824)
- 3) Requires DPR to designate, control and regulate restricted materials found to meet specified criteria, including, but not limited to, danger of impairment to public health, as specified. Authorizes DPR to adopt regulations that prohibit the use or possession of a restricted material in certain areas or under certain conditions. (FAC § 14001 et seq.)
- 4) Requires that, except as may be provided in regulations adopted by the director, a pesticide use report (PUR) be submitted to the county agricultural commissioner within seven days after each use of a restricted material. (FAC § 14011.5)
- 5) Defines a Toxic Air Contaminant (TAC) as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health. (FAC § 14021)

- 6) Requires the director, in consultation with the Office of Health Hazard Assessment (OEHHA) and the State Air Resources Control Board (ARB), to evaluate, as specified, the health effects of pesticides that may be or are emitted into the ambient air of California and that may be determined to be a TAC that poses a present or potential threat to human health. (FAC § 14022(a))
- 7) Requires the operator of the property which is producing an agricultural commodity to report the use of pesticides applied to the crop, commodity, or site to the agricultural commissioner of the county in which the pest control was performed by the 10th day of the month following the month in which the work was performed. Requires an agricultural pest control business to report the use of pesticides applied by it for the production of an agricultural commodity to the agricultural commissioner within seven days of completion of the pesticide application (3 California Code of Regulations. (CCR) 6626)

This bill:

- 1) Requires DPR to prepare and submit quarterly reports due 60 days after the end of each quarter to the Senate Committee on Health, the Senate Committee on Labor, Public Employment and Retirement, the Senate Committee on Environmental Quality, the Assembly Committee on Health, the Assembly Committee on Labor and Employment, the Assembly Committee on Environmental Safety and Toxic Materials, and the Office of the Surgeon General that provide all of the following information:
 - a) The location and amount of granular chlorpyrifos in pounds used during the quarter;
 - b) Potential reasons for an increase or decrease in granular chlorpyrifos use compared to the same quarter of the previous year;
 - c) A description of how the DPR monitors exposure to granular chlorpyrifos, with an emphasis on inhalation or exposure through the skin and any information relating to that exposure during the quarter.
- 2) Makes findings about the health impacts of chlorpyrifos and the steps California has taken to regulate and monitor it.

Background

- 1) *Pesticidal uses of chlorpyrifos.* Chlorpyrifos has been used as a pesticide since 1965 in both agricultural and non-agricultural areas. It is used on corn, soybeans, fruit and nut trees, brussels sprouts, cranberries, broccoli, and cauliflower, as well as other row crops. Non-agricultural uses include golf courses, turf, green houses, and on non-structural wood treatments such as utility poles and fence posts. It is also registered for use as a mosquito adulticide, and for use in roach and ant bait stations in child resistant packaging. Products are sold as liquids, granules, water dispersible granules, wettable powders, and water soluble packets, and may be applied by either ground or aerial equipment.
- 2) *Impacts on human health.* According to the Agency for Toxic Substances and Disease Registry, breathing the air where chlorpyrifos has recently been sprayed may result in headaches, blurred vision, watering of the eyes, excessive salivation, runny nose, dizziness, confusion, muscle weakness or tremors, nausea, diarrhea, and sudden changes in heart rate. The effect depends on the amount in the air and exposure time. Ingesting chlorpyrifos may cause similar symptoms. DPR has cited recent research showing that chlorpyrifos is a developmental neurotoxin in children and sensitive populations.
- 3) *Environmental impacts.* According to the National Pesticide Information Center, studies have found chlorpyrifos in soils for over one year following application. Soil persistence may depend on the formulation, rate of application, soil type, climate and other conditions.

According to a 2016 US EPA Chlorpyrifos Refined Drinking Water Risk Assessment, chlorpyrifos has not been detected in drinking water supplies, but potential for exposure exists. There are several reasons why chlorpyrifos may not have been detected in drinking water, including sample site location, sampling frequency, as well as drinking water treatment. It's unclear if water samples taken to date are located in watersheds vulnerable to chlorpyrifos contamination.

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

In 2017, OEHHA listed chlorpyrifos as a chemical known to cause

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

In September 2018, following extensive scientific review and public comment, DPR proposed designating chlorpyrifos as a “toxic air contaminant” (TAC), which California law defines as an air pollutant that may cause or contribute to increases in serious illness or death, or that may pose a present or potential hazard to human health.

DPR recommended that county agricultural commissioners begin implementing the interim measures on January 1, 2019 while it completed a formal regulatory process. The interim recommendations include: banning all aerial applications of chlorpyrifos; discontinuing its use on most crops; requiring a quarter-mile buffer zone during all allowed applications of the pesticide and for 24 hours afterwards; and, requiring a 150-foot setback from houses, businesses, schools and other sensitive sites at all times, regardless of whether the site is occupied at the time of application.

- 5) *Listing chlorpyrifos as a Toxic Air Contaminant (TAC)*. Following the interim action, DPR adopted an emergency regulation listing chlorpyrifos as a TAC effective on April 1, 2019. The listing of a TAC requires DPR to determine, in consultation with the OEHHA, ARB, and the air pollution control districts or air quality management districts in the affected counties, the need for and appropriate degree of control measures for chlorpyrifos. Within two years of the determination of the need for control measures, DPR was required to develop control measures in consultation with the county agricultural commissioners, air pollution control districts, and air quality management districts in the affected counties. The permanent control measures adopted will replace the current recommended interim permit conditions.
- 6) *Cancellation of registration of products containing chlorpyrifos*. On May 8, 2019, the California Environmental Protection Agency (CalEPA) announced that DPR, "Is acting to prohibit the use of the pesticide and TAC chlorpyrifos in California by initiating cancellation of the pesticide." This decision is due to mounting evidence that chlorpyrifos causes serious health effects in children and other sensitive populations at lower levels than was previously understood. DPR and the California Department of Food and Agriculture (CDFA) established a cross-sector working group to identify, evaluate, and recommend safer, more sustainable pest management alternatives to chlorpyrifos.

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

On October 9, 2019, CalEPA announced that virtually all use of the pesticide chlorpyrifos in California will end in 2020 following an agreement between DPR and pesticide manufacturers to withdraw their products. The CalEPA announcement notes that under the settlement, the companies agreed that sales of chlorpyrifos to growers in California will end on February 6, 2020, that growers will not be allowed to possess or use chlorpyrifos products in California after December 31, 2020, and until then all uses must comply with existing restrictions. These restrictions include a ban on aerial spraying, quarter-mile buffer zones, and limiting use to crop-pest combinations that lack alternatives. DPR will support aggressive enforcement of these restrictions. The development of safe, more sustainable alternatives to chlorpyrifos is being supported through the current state budget, which appropriates more than \$5 million in grant funding for the purpose.

- 7) *Federal Regulation of chlorpyrifos.* While the US EPA made label changes and took other actions on chlorpyrifos over the years, most recently, in October 2015, under the Obama administration, the US EPA proposed to revoke all food residue tolerances for chlorpyrifos. Because tolerances are the maximum residue of a pesticide that can be in or on food, the proposed rule revoking all chlorpyrifos tolerances means that if this approach had been finalized, all agricultural uses of chlorpyrifos in the United States would have ceased.

In March 2017, under the Trump administration, the US EPA denied a petition that asked it to revoke all pesticide tolerances (maximum residue levels in food) for chlorpyrifos and cancel all chlorpyrifos registrations. The US EPA concluded that the science addressing neurodevelopmental effects remained unresolved and further research was needed. In rejecting the petition, the US EPA Administrator took what is known as a "final agency action" on the question of the safety and use of chlorpyrifos, suggesting that the matter would not likely be revisited until October 2022 when US EPA is formally required to re-evaluate the safety of the pesticide.

Currently, chlorpyrifos remains registered as it undergoes registration review, a program that re-evaluates all pesticides on a 15-year cycle. Registration review ensures pesticides will not cause unreasonable adverse effects when used

according to label directions and precautions and that there is a reasonable certainty of no harm from dietary and residential exposure.

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

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

- 9) *Pesticide Use Reports.* California's pesticide use reporting program is recognized as the most comprehensive in the world. In 1990, California became the first state to require full reporting of agricultural pesticide use in response to demands for more realistic and comprehensive pesticide use data. Under the program, all agricultural pesticide use must be reported monthly to county agricultural commissioners, who in turn, report the data to DPR.

Under the program, all agricultural pesticide use must be reported within seven days to county agricultural commissioners, who in turn report the data to DPR within one calendar month. Statute requires the director to summarize the contents of these PURs quarterly as to the type of material and amounts, and requires the summaries to be made a public record.

Comments

- 1) *Purpose of Bill.* According to the author, "Scientists from the U.S. EPA have determined that the handling of chlorpyrifos in granular form results in unsafe levels of exposure to farmworkers, even when farmworkers follow all of the directions on chlorpyrifos labels, wear personal protective equipment, and use engineering controls. California continues to allow use of granular pesticides

containing chlorpyrifos, despite the substantial risk these products present to farmworkers, children, and mothers.

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

- 2) *Referral to the Committee pursuant to Senate Rule 29.10.* SB 86 was originally introduced by Senator Durazo on January 10, 2019, as a measure addressing school safety.

On July 27, 2020, Assembly amendments changed the subject of the bill to require DPR to submit quarterly reports on granular chlorpyrifos use to specified committees in the Legislature and to the Office of the Surgeon General. The measure passed the Assembly Floor on August 25, 2020 by a vote of 58-13.

Consistent with Senate Rule 29.10 the Senate Rules Committee has referred the amended bill to the Senate Environmental Quality Committee for a hearing of the Assembly amendments.

Related/Prior Legislation

SB 458 (Durazo, 2019) would have outlawed the use of pesticides containing chlorpyrifos until DPR issued control measures that are protective of children’s neurological development. This bill died in the Senate Appropriations Committee.

SOURCE: American Academy of Pediatrics, California; Earthjustice; United Farm Workers (co-sponsors)

SUPPORT:

Anahuak Youth Sports Association
Association of Regional Center Agencies
California Coastkeeper Alliance
California League of Conservation Voters
Californians for Pesticide Reform
Community Nature Connection
East Yard Communities for Environmental Justice

Environmental Working Group
Friends of The L.A. River
From Lot to Spot
Heal the Bay
Leadership Council for Justice and Accountability
Los Angeles Waterkeeper
Mujeres De La Tierra
Natural Resources Defense Council (NRDC)
Pacoima Beautiful
Pesticide Action Network North America
Physicians for Social Responsibility - Los Angeles
Prevention Institute
Sierra Club California
Urban Semillas

OPPOSITION:

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

ARGUMENTS IN SUPPORT: According to Earthjustice, a co-sponsor, “Granular uses of chlorpyrifos are unsafe for workers. In the 2016 Risk Assessment, USEPA assessed work scenarios involving granular formulations of chlorpyrifos. The Risk Assessment found that combined dermal and inhalation exposures exceeded the level USEPA determined was safe for workers even when

maximal personal protective equipment or engineering controls were assumed. Moreover, the granular half-life of this chemical, depending on the type of soil and conditions can last on aerobic soil between 11 to 180 days. The hazards of granular dust particles also pose a problem as they can adhere to work clothes. While washing may remove some of the residue, when clothes are incompletely cleaned and clothing comes in contact with skin the pesticide residue can be absorbed into the body. It is important to monitor the use of granular products of chlorpyrifos as the chemical remains dangerous as long as it is allowed to be in use.”

ARGUMENTS IN OPPOSITION: According to the California Chamber of Commerce, “The findings in SB 86 are misleading as they do not acknowledge the work DPR has done to mitigate the risk of granular chlorpyrifos use or the differences between granular chlorpyrifos and chlorpyrifos applied through ground spray and aerial application. The findings of SB 86 claim that the use of granular chlorpyrifos results in unsafe levels of exposure to farm workers; can be found on food as a residue; and is tracked home by parents and siblings, which in turn impact young children. These insinuations of danger are untrue and do not consider the facts and scientific studies conducted by DPR... Further, granular chlorpyrifos is different than other forms of chlorpyrifos in several ways. Granules are not saturated with chlorpyrifos, but coated in a mixture that helps fix the product to the granule. The active ingredient in granular chlorpyrifos is from 15% down to 2.5%, the balance being made up of inert ingredients resulting in a much lower active ingredient concentration.”

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