

## ASSEMBLY THIRD READING

AB 1603 (Schultz)

As Amended May 18, 2026

Majority vote

**SUMMARY**

Prohibits, commencing January 1, 2035, the marketing, use, manufacture, or sale of pesticides that contain perfluoroalkyl and polyfluoroalkyl (PFAS) pesticide ingredients for agricultural use; prohibits the Department of Pesticide Regulation (DPR) from registering for agricultural use any new pesticides that contain PFAS pesticide ingredients; and places other prohibitions and restrictions on the marketing, use, manufacture, and sale of pesticides that contain PFAS pesticide ingredients.

**Major Provisions**

- 1) Prohibits, commencing January 1, 2035, the marketing, use, manufacture, sale, delivery, holding, or offer for sale in commerce of any pesticide that contains PFAS pesticide ingredients for agricultural use; and, prohibits DPR from registering new pesticides that contain PFAS pesticide ingredients for agricultural use.
- 2) Prohibits, commencing January 1, 2030, the marketing, use, manufacture, sale, delivery, holding, or offer for sale in commerce of any pesticide that contains one of 23 specified PFAS pesticide ingredients for agricultural use; and, prohibits DPR from registering pesticides that contain the 23 specified PFAS pesticide ingredients for agricultural use.
- 3) Deems, commencing July 1, 2028, a registered pesticide containing PFAS pesticide ingredients to be a restricted material.
- 4) Requires, commencing July 1, 2028, the use permit for a PFAS-restricted material to state: "This product contains perfluoroalkyl and polyfluoroalkyl substances, or PFAS, and can contaminate produce, groundwater, drinking water, soil, and the environment."
- 5) Requires, commencing July 1, 2028, any public disclosure by DPR of the use of a PFAS-restricted material, including through DPR's SprayDays California program, to state: "This product contains perfluoroalkyl and polyfluoroalkyl substances, or PFAS, and can contaminate produce, groundwater, drinking water, soil, and the environment."
- 6) Prohibits DPR from registering a pesticide that contains PFAS pesticide ingredients that has not been previously registered by DPR.

**COMMENTS**

*Perfluoroalkyl and polyfluoroalkyl substances (PFAS):* PFAS are synthetic, highly fluorinated substances that have been widely used in industrial and consumer applications for their heat, water, and lipid resistance properties for more than seven decades. During production, use, and disposal, PFAS can migrate into the soil, water, and air. Some PFAS are volatile, and can be carried long distances through the air, leading to contamination of soils and groundwater far from the emission source. Researchers have found PFAS in indoor and outdoor environments, plants, soil, food, drinking water, wildlife, companion animals, production animals, and humans

at locations across the nation and around the globe. PFAS are extremely persistent and degrade very slowly over time, which has resulted in their accumulation in the environment since the onset of their production in the late 1940s. Currently, nearly 15,000 PFAS chemicals are included in the chemicals database CompTox, which is maintained by the United States Environmental Protection Agency (US EPA).

*Exposure to PFAS:* The main route of exposure to PFAS is through ingestion of contaminated food or liquid (accounting for up to half of total exposure), through contact with consumer products, and through inhalation and ingestion of contaminated indoor air and dust. Food can become contaminated with PFAS through soil and water used to grow the food, food packaging containing PFAS, and equipment that uses PFAS during processing. Some foods, such as fish, meat, eggs, and leafy vegetables, may contain PFAS due to bioaccumulation and crop uptake. Studies have shown that PFAS can transfer from pregnant mothers to their fetuses via the placenta during gestation, as well as transfer from nursing mothers to their infants via breastfeeding. Dermal exposure is also possible when people touch products treated with PFAS, such as carpets or clothing. Young children may be exposed to higher levels of PFAS than adults because they ingest more dust containing PFAS and mouth PFAS-treated consumer products. Workers, such as carpet installers, carpet cleaners, firefighters, and workers in furniture, furnishings, outdoor clothing, and carpet stores, may also experience above average PFAS exposure levels. Exposure to PFAS in drinking water is an escalating concern due to the persistence of PFAS chemicals in the environment and their tendency to accumulate in groundwater. In 2022, PFAS were detected in 79% of the 150 public water systems tested throughout California.

*Hazard traits of PFAS:* According to the Department of Toxic Substances Control (DTSC), all PFAS display at least one of the hazard traits identified in California's Safer Consumer Products Hazard Traits Regulations. An intrinsic property of PFAS is the extreme environmental persistence of the individual compounds, their degradation products, or both, resulting in their classification as "forever chemicals." Most PFAS are mobile in environmental media such as air and water, and thus are widespread in living organisms and the environment.

Scientific studies have shown that exposure to some PFAS can lead to adverse health outcomes in humans and animals. DTSC states that if humans are exposed to PFAS through diet, drinking water, or inhalation, some of these chemicals remain in the body for a long time. As people continue to be exposed to PFAS, the PFAS levels in their bodies may increase to the point that they suffer adverse health effects. According to the US EPA, current peer-reviewed scientific studies have shown that exposure to certain levels of PFAS may lead to: reproductive effects such as decreased fertility or increased high blood pressure in pregnant women; developmental effects or delays in children, including low birth weight, accelerated puberty, bone variations, or behavioral changes; increased risk of some cancers, including prostate, kidney, and testicular cancers; reduced ability of the body's immune system to fight infections, including reduced vaccine response; interference with the body's natural hormones; and, increased cholesterol levels and/or risk of obesity. In addition to direct human health impacts, some PFAS may have high global warming potential. Also, several PFAS bioaccumulate significantly in animals or plants and emerging evidence points to their phytotoxicity, aquatic toxicity, and terrestrial ecotoxicity.

The persistence and proliferation of PFAS chemicals makes it challenging to study and assess the cumulative potential human health and environmental risks of PFAS exposure.

*PFAS in pesticides:* The scientists that drafted the 2021 *Environmental Health Perspective* article, "Forever Pesticides: A Growing Source of PFAS Contamination in the Environment," found that of the 471 unique, conventional pesticide active ingredients (AIs) that are currently registered in the U.S., 107 (23%) contained at least one carbon-fluorine bond and 66 (14%) are PFAS. The study also found that fluorination is a recent trend among new registrations of pesticide AIs. Of the 54 conventional AIs that had been approved from 2012 to 2021, the proportion of fluorination increased dramatically with 33 (61%) classified as organofluorines and 16 (30%) as PFAS. In addition to the AIs identified by the study as "intentional" PFAS pesticides; eight inert ingredients are PFAS registered for use in pesticides. Additionally, the authors of the study found that pesticides likely further accumulate PFAS contamination from leaching from fluorinated containers and other as-yet-undetermined sources.

DPR indicates there are 53 pesticides with at least one fully fluorinated carbon registered in California, and 1,153 products currently registered for use in California that contain at least one of the 53 pesticides. US EPA appears to have registered nearly 20 additional PFAS pesticides that have not yet been approved for use in California.

*PFAS pesticide use in California:* A 2025 analysis by the Environmental Working Group (EWG) found that California agricultural fields are treated with an average of 2.5 million pounds of PFAS pesticides every year, and that between 2018 and 2023, nearly 15 million pounds of PFAS pesticides were applied to California farmland, according to data from DPR. Through their analysis, EWG found that PFAS pesticides are being used most heavily on some of California's most iconic and lucrative crops, such as almonds, pistachios, wine grapes, alfalfa and tomatoes. The analysis further revealed that 85% of PFAS pesticides used in the state were used for crop production. The remaining 15% were used for various structural practices, such as insecticide for termite control, herbicide for landscape maintenance, and rodenticide. EWG reports that among the most frequently applied pesticides are bifenthrin and trifluralin, which it states have been banned in the European Union due to health and environmental concerns.

*Potential impacts of PFAS in pesticides:* The authors of the 2021 *Environmental Health Perspective* article state, "It is our view that PFAS in pesticides, particularly PFAS active ingredients, may be having unintended impacts on environmental and public health that must be mitigated or eliminated to prevent irreversible impacts... The long-term impacts of using mixtures of extremely persistent chemicals on potentially hundreds of millions of acres of US land every year is, to us, a cause for concern. Most, if not all, PFAS in pesticide products or their degradates are going to be chronic persistent pollutants for the foreseeable future of humanity, and their ultimate impact on human and environmental health are largely unknown." The authors identified examples of potential consequences of PFAS in pesticides such as immunotoxicity (studies of impacts on the immune system indicate that it is one of the most sensitive targets of PFAS exposure, and both the US EPA and the European Food Safety Authority have identified immunotoxicity as the most potent adverse effect to humans from exposure to certain PFAS); environmental fate (all PFAS contain perfluoroalkyl moieties that are highly stable in the environment); water contamination (PFAS have been found in US streams, lakes, and rivers, often at levels that exceed aquatic safety thresholds); and, total organic fluorine in the environment (new or unidentified PFAS are increasingly contributing to the overall organofluorine exposure to people and the environment).

*This bill:* This bill prohibits, commencing January 1, 2035, the marketing, use, manufacture, or sale of pesticides that contain PFAS pesticide ingredients; prohibits, commencing January 1,

2030, the marketing, use, manufacture, or sale of 23 pesticides that contain PFAS pesticide ingredients that the author contends are prohibited or restricted in the European Union; prohibits DPR from registering new pesticides that contain PFAS pesticide ingredients; and, places other prohibitions and restrictions on the use, manufacture, and sale of pesticides that contain PFAS pesticide ingredients. This bill also deems, commencing July 1, 2028, a pesticide that contains PFAS pesticide ingredients as a restricted material that can only be used in accordance with current restricted material law. Additionally, the bill requires the use permit for a PFAS-restricted material to state: "This product contains perfluoroalkyl and polyfluoroalkyl substances, or PFAS, and can contaminate produce, groundwater, drinking water, soil, and the environment."

*Alternatives to PFAS in pesticides.* Should this bill be signed into law as drafted today, 53 PFAS pesticide AIs, which are currently registered for use in scores products in California, will be prohibited for agricultural use or for marketing, sale, or manufacture for agricultural use in California by 2035. Additionally, no other PFAS pesticides will be registered for sale or for agricultural use in the state in the future.

Supporters of the bill point to integrated pest management (IPM) for potential solutions for many of the current pest problems addressed by PFAS pesticides. According to the University of California Statewide IPM Program, IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Pesticides are used only after monitoring indicates they are needed according to established guidelines, and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied in a manner that minimizes risks to human health, beneficial and nontarget organisms, and the environment. Supporters also point to other chemistries that may have less potential for harm as alternatives to pesticides that contain PFAS, such as some organic-approved pesticide alternatives or other conventional chemistries.

Opponents of the bill argue that PFAS in pesticides serve important, targeted functions, and that, due to their unique properties, less overall PFAS pesticide is often needed than pesticides without PFAS. They also argue that prohibiting PFAS pesticides could prompt a shift toward, "Older chemistries that may require higher application rates and carry different environmental or public health risks that must be mitigated; broader-spectrum pesticides that are less targeted and may have greater impacts on non-target organisms; and, less effective tools that increase the risk of pest resistance, damage or loss."

Should the prohibition on PFAS pesticides in this bill be enacted without corresponding requirements for, or support of, an integrated pest management approach to pests managed by the prohibited PFAS chemicals, it is possible that the use of higher risk alternatives could increase. Instituting stronger state support of, or requirements for, integrated pesticide management approaches to pest control would likely reduce the use of pesticides overall.

As this bill moves through the legislative process, special effort should be made to understand and address the potential for regrettable substitutions to PFAS in pesticides.

#### **According to the Author**

"PFAS pesticides are being spread in large quantities across our most valuable agricultural land and on our most popular crops. These chemicals are highly persistent, take a very long time to break down, and can contaminate soil and ground water for years to come. In addition, PFAS are associated with a range of serious health harms. Very low doses of PFAS in drinking water

have been linked to the suppression of the immune system and are associated with an elevated risk of cancer, increased cholesterol, and reproductive and developmental harms, among other serious health concerns. For most people, food and drinking water are the primary routes of exposure to PFAS. That makes the use of these chemicals in agriculture especially concerning; PFAS do not belong on our food or dinner tables. We should not eat them. We need to end the use of these very problematic pesticides now."

### **Arguments in Support**

A coalition of environmental, environmental justice, public health, consumer protection, and labor organizations write in support,

"... Since California grows over half of the nation's produce, ...findings suggest that Californians and families across the United States are regularly exposed to PFAS pesticides in their food. These findings also raise serious concerns around environmental and health-related harms associated with such broad PFAS pesticide applications.

...Despite these risks, California's regulatory infrastructure does not accurately characterize or regulate PFAS pesticides and is not equipped to address the magnitude of potential widespread PFAS contamination of water and soil. Already, state monitoring indicates that PFAS pesticides are frequently detected in surface waters, sediment and wastewater influent and effluent.

... PFAS are highly persistent, move easily in the environment, and do not break down in the environment... Their environmental and human impacts can span decades to centuries, as they contaminate ground and surface water, soil, and air.

...PFAS can also harm wildlife, with research showing PFAS chemicals are linked to tumors in animals and lower reproductive rates in birds. Honeybee populations exposed to very low concentrations of Perfluorooctanesulfonic acid (PFOS), one type of PFAS, halted all brood-rearing in the colony, reduced or stopped resource gathering, impaired activity, and significantly decreased hive population size.

...PFAS chemicals are linked to a litany of adverse health effects, including elevated risks of cancer, high cholesterol, immune dysfunction, developmental delays, and reproductive harm. According to the US EPA, food ingestion is a major human exposure route. Given that 37% of California-grown non-organic produce is tainted with PFAS pesticides, PFAS pesticides are a significant source of our food-derived exposure. Agricultural runoff also serves as a major source of PFAS contamination in waterways, where these 'forever chemicals' bioaccumulate through the food chain, creating significant health risks for fish consumers. Further, the release of PFAS pesticides into the environment may contribute to the PFAS detected in drinking water systems serving 25.4 million Californians. Millions of Californians are cumulatively exposed to PFAS chemicals, warranting expedited measures to decrease PFAS-related exposures.

...Counties with the highest PFAS application rates also have high percentages of Latino farmworker populations, who are on the frontlines of PFAS pollution and live or work near fields that regularly apply PFAS pesticides. This is truly concerning, as these populations are already disproportionately exposed to toxic pesticides as well as other PFAS exposure routes, such as in-field crop residues and pesticide handling.

...The widespread presence of PFAS pesticides on California-grown produce underscores a concerning and largely unaddressed gap in pesticide oversight and PFAS use reductions..."

### **Arguments in Opposition**

A coalition of farm, commercial, residential and industrial users, pest management professionals, and manufacturers writes in opposition,

"California's agricultural industry produces nearly \$50 billion in revenue annually, and grows half of the country's fruits and vegetables, including 400 commodity crops. However, growers in the state face significant and increasing challenges including competition from growers out of state and out of the country, where pesticides containing PFAS would still be legal if AB 1603 passed, creating another significant obstacle to growing crops economically and with a high enough yield to remain profitable. If AB 1603 were to become law, produce with detectable levels of PFAS, below federally established tolerances, would still be legally sold to residents.

...Fluorinated chemistries in pesticides are designed to provide critical performance characteristics, including improved chemical stability, efficacy at low use rates, and highly targeted pest control... As a result, these products often enable more precise applications with lower overall use rates, helping to minimize environmental loading. Importantly, the fluorinated chemistries used in pesticide active ingredients, inert or adjuvants are structurally and functionally distinct from legacy PFAS compounds associated with widespread environmental persistence and bioaccumulation concerns. A blanket restriction fails to account for these important scientific distinctions and the role these chemistries play in enabling effective and efficient pest management.

... Pesticides are among the most rigorously reviewed products in commerce, including for the presence of PFAS. Before any active ingredient can be registered, [US EPA] conducts extensive evaluations of human health, environmental fate, and ecological risk. In California, [DPR] applies an additional layer of review that is widely recognized as the most stringent in the nation.

...Recent claims regarding PFAS pesticide residues, such as those advanced by the bill sponsor, lack important scientific context. These claims rely on DPR monitoring data but misinterpret what detection means in a regulatory framework. Detection of residues does not equate to risk... Failing to distinguish between presence and risk and ignoring context results in misleading conclusions and poor policymaking.

...The bill also asserts that the listed "twenty-three of the California-approved PFAS pesticides are not allowed to be used in the European Union." This assertion is inaccurate. In many cases, active ingredients are not approved in the European Union due to data gaps, lack of registrant support, or differing regulatory frameworks, not because of PFAS content...

...AB 1603 would effectively eliminate a broad range of pesticide products used across agriculture, structural pest control, and public health tools. The scale of impact would be substantial. California agriculture is under threat of climatic changes that foster pest cycles that are new and more difficult to manage as well as rapidly changing interstate and international commerce patterns that bring multiple opportunities for highly problematic agricultural pests and invasive species to enter food production regions."

**FISCAL COMMENTS**

According to the Assembly Appropriations Committee, enactment of the previous version of this bill would result in the following fiscal impacts, among others (please see the Assembly Appropriations Committee analysis for more detailed information):

- 1) Ongoing annual workload costs to DPR of approximately \$778,000 for four staff, operating expenses, and equipment to implement the requirements of the bill.
- 2) Decreased revenue, likely in the tens of millions of dollars annually, to the DPR Fund, resulting from a decrease in pesticide product registrations and renewals and a decrease in collection of the mill assessment.
- 3) An annual revenue loss of between \$500,000 and \$800,000, to the California Department of Food and Agriculture (CDFA).
- 4) Costs of between \$2 million and \$3 million annually due to the loss of use of bifenthrin for spotted lanternfly management; and, costs of \$2.4 million annually due to loss of the primary tool for CDFA's Hydrilla Eradication Program, per CDFA.
- 5) Loss of about \$1.5 million annually from a reduction in state-mandated assessment revenue, per CDFA.
- 6) Increased workload and costs of an unknown but potentially significant amount to County Agricultural Commissioners to identify and take enforcement action on potential violations and to refer cases to DPR for investigation and enforcement.
- 7) Costs of an unknown but potentially significant amount to Department of Justice (DOJ) to respond to increased referrals from DPR (its client agency) relating to client representation and litigation arising from this bill.

**VOTES****ASM ENVIRONMENTAL SAFETY AND TOXIC MATERIALS: 5-2-0**

**YES:** Connolly, Bauer-Kahan, Lee, McKinnor, Papan

**NO:** Ellis, Castillo

**ASM APPROPRIATIONS: 10-4-1**

**YES:** Wicks, Aguiar-Curry, Calderon, Caloza, Fong, Mark González, Krell, Pellerin, Sharp-Collins, Solache

**NO:** Hoover, Dixon, Ta, Tangipa

**ABS, ABST OR NV:** Pacheco

**UPDATED**

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