

Healthy Children and Green Jobs: A Platform for Pesticide Reform



**A Pesticide Policy Brief for the Brown Administration
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Californians for Pesticide Reform

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The Problems with Pesticide Use in California

California's pesticide use is immense; the health and environmental consequences are devastating for both urban and rural communities, especially the state's one million farmworkers and their families. Over 160 million pounds of pesticides are used each year in agriculture alone, with much more used in homes, schools, parks and for other non-farming uses. In 2008, California pesticide use included over 16 million pounds of pesticides that cause reproductive harm (like birth defects or miscarriages), 23 million pounds that cause cancer, 5 million pounds that damage the nervous system, 37 million pounds of toxic air contaminants, and a million pounds of groundwater contaminants.

Children are among the most vulnerable. Pound for pound, they drink 2.5 times more water, eat three

to four times more food, and breathe twice as much air. They therefore absorb a higher concentration of pesticides than adults do during a time when their brains and bodies are still developing.

Pesticides are a key part of the conventional agricultural machine, a system that contributes significantly to climate change and could be devastated by the effects. Water shortages and shifting temperatures make California agriculture—and the state's economy—extremely vulnerable to climate change. Organic and sustainable agriculture offer solutions by building the soil, sequestering carbon and reducing nitrous oxide emissions; the latter are two potent contributors to climate change. Shifting to organic and sustainable would help California agriculture simultaneously mitigate and adapt to climate change.



Solutions

Reducing pesticide use, with a particular focus on phasing out pesticides that can cause the most dangerous health and environmental problems, will provide California with multiple benefits. Reducing and eliminating reliance on pesticides will not only create green jobs for Californians, but create *more* jobs, both in agriculture and in urban green pest management companies. Reducing and eliminating pesticide use improves the health of California's families—especially children and farmworkers—and reduces health costs by providing residents with clean air, clean water, and healthy food. Finally, implementing alternatives to pesticides, particularly organic and sustainable agriculture, slows climate change by reducing the greenhouse gas carbon dioxide through sequestration of carbon.

Californians for Pesticide Reform, a statewide coalition of over 185 organizations, urges the Brown administration to seize this opportunity to create green jobs, protect families, and mitigate climate change by taking the following steps:

- 1. Deny pending California approval of new cancer-causing pesticide, methyl iodide: "one of the most toxic chemicals on earth." Support a transition to healthier, safer and economically viable strawberry farming methods, including organic production.**
- 2. Prioritize organic and sustainable agricultural practices to ensure that California agriculture mitigates climate change, protects the environment, maintains vibrant rural economies, and provides healthy food to all Californians.**
- 3. Protect children and rural communities from the most toxic airborne pesticides.**
- 4. Reduce the use of smog-forming pesticides.**
- 5. Reduce pesticide pollution in California's surface and ground waters.**
- 6. Reduce pesticide exposure for agricultural workers and their children.**
- 7. Reform the pesticide regulatory process to ensure an effective, time-sensitive, health-protective decision-making process.**
- 8. Reduce children's exposure to pesticides at home, at school and in daycare facilities.**
- 9. Ensure transparency about pesticide ingredients.**
- 10. Improve enforcement of pesticide laws.**

More information on each of these recommendations follows.

1. Deny pending California approval of new cancer-causing pesticide, methyl iodide: “one of the most toxic chemicals on earth.” Support a transition to healthier, safer and economically viable strawberry farming methods, including organic production.

Problem:

Arysta LifeScience, the largest private pesticide corporation in the world, seeks access to the lucrative California strawberry production market for its pesticide product, MIDAS. MIDAS contains the chemical methyl iodide, a Proposition 65 carcinogen that has not yet been approved for use in California agriculture. Scientists who assessed the proposal as members of the Department of Pesticide Regulation’s Scientific Review Committee called the chemical “difficult, if not impossible to control,” once released into the environment, and raised serious concerns about links to cancer, reproductive harm (including late-term miscarriages), lack of information about neurodevelopmental problems, and the potential for groundwater contamination. DPR proposed approving methyl iodide for use in California agriculture as a soil fumigant on April 28, 2010, and solicited public comment on their proposal. After receiving 53,000 comments, the largest number of comments on a pesticide in the history of the agency, DPR has not yet made a final decision, citing the need for time to review and respond to the comments.

We urge the Brown Administration to do the following:

- a. Deny registration of methyl iodide as a fumigant pesticide, given the findings of DPR’s external Scientific Review Committee (report available on DPR’s website¹).
- b. Support alternatives to the use of fumigants (gaseous pesticides used to sterilize the soil before planting). Establish a multi-stakeholder, interagency panel charged with creating a plan to end reliance on fumigants in strawberry production by 2018. The California Strawberry Commission has launched research on farming without fumigants, an effort worth bolstering. Organic farmers—from Jim Cochran of Swanton Berry Farm to one of the largest strawberry producers and marketers, Driscoll’s—are successfully growing and distributing organic strawberries to scale. Researchers at UC Davis and UC Santa Cruz have developed a range of alternatives to fumigants for strawberry production. As the provider of over 85% of the nation’s strawberries, California must lead with a framework for safe and effective production.



2. Prioritize organic and sustainable agriculture to ensure that California agriculture helps to mitigate the effects of climate change, protects the environment, maintains vibrant rural economies, and provides healthy food for Californians.

Problem:

From climate change to pressure on small growers, the need to create a sustainable agricultural system has never been more critical. Obesity and diabetes epidemics, massive pesticide and fertilizer use, and greenhouse gas emissions endemic to conventional agriculture and long-distance food transportation all demonstrate the acute need to restructure our food system. Agriculture is a unique economic sector because it has the potential to go from being a major contributor to climate change—the effects of which could be devastating for growers—to becoming an essential part of the solution. California’s Economic and Technical Advancement Advisory Council estimates that by 2020, agriculture could achieve an estimated reduction of 17 million metric tons of carbon equivalents per year, or about 10% of California’s goal. This requires, however, a decisive shift to organic and other sustainable farming practices.



We urge the Brown Administration to do the following:

- a. Develop a concrete action plan to shift 20% of California’s agricultural land to organic production by the year 2020.
- b. Coordinate all relevant departments—including all those with mandates regarding agriculture, pesticides, energy, air and water quality and public health—toward a shared goal of expanding organic agriculture in the state.
- c. Mandate use of federal agricultural support funds, including Specialty Crop Block Grants, to support the transition to organic agriculture.
- d. Utilize UC research and extension to propagate “best practices” of pest, nutrient and soil management that have the greatest capacity to effectively mitigate and adapt to climate change. Formally recognize certified organic farming practices as “best practices.”
- e. Provide financial incentives for transition to organic, prioritizing small and medium size farms.
- f. Develop processing, marketing and distribution infrastructure that supports regional organic and sustainable food and farm systems, including tax credits and loan guarantees for growers and private investors.
- g. Create guaranteed markets for local organic and sustainably grown produce by developing procurement policies for public institutions, especially schools.
- h. Ensure living wages and healthcare for farmers, agricultural workers and their families. Provide incentives for growers that offer extended employment (leading to year-round employment) and professional development opportunities for their employees.

3. Protect children and rural communities from the most toxic airborne pesticides.

Problem:

Over 90% of the agricultural pesticides used in California are prone to drifting through the air away from where they're applied and on to workers and fenceline communities. In 1984, the California legislature passed the Toxic Air Contaminant (TAC) Act to protect public health from toxic airborne pollutants, including pesticides. Of the 900-plus pesticides currently registered in California, DPR has completed the TAC review process for only eight in the past 25 years, one of which is no longer registered for use in California. An additional 35 pesticides were automatically listed as Toxic Air Contaminants because of their status as U.S. EPA-listed Hazardous Air Pollutants (HAPs). To date, DPR has taken almost no action under the TAC law to regulate any of the listed pesticides to reduce air pollution, except when forced to act by other regulations or pending lawsuits. Although DPR identified the need to reduce exposure to workers and the general public to the fumigant metam sodium in their own TAC review in 2002, they took eight years to issue draft—and insufficient—use restrictions.

We urge the Brown Administration to do the following:

- a. Immediately establish mandatory protection zones of at least one mile around schools, day care facilities, homes, occupied labor camps, hospitals, nursing homes and environmentally-sensitive areas for all pesticides federally listed as HAPs or slated for review under TAC. Even if no further mitigation measures are recommended, these buffer zones should stay in place.
- b. Strengthen the TAC law to prioritize prompt review of the most hazardous airborne pesticides, as determined by both toxicity levels and likelihood of exposure for farm-workers and fenceline communities.
- c. Establish enforceable timelines under the TAC law for DPR to conduct risk assessments, air monitoring and implementation of mitigation measures for all TACs (and federally listed HAPs). Ensure public process for each of the steps.
- d. Ensure that the most hazardous pesticides are removed from the market.
- e. Give County Agricultural Commissioners greater authority to respond when community members and workers are exposed to airborne pesticides by rescinding DPR's overly narrow definition of pesticide drift.

4. Reduce the use of smog-forming pesticides.

Problem:

Pesticides are a significant source of smog in the San Joaquin Valley. Volatile organic compounds (VOCs)—such as those emitted from some pesticides—react with chemicals called nitrogen oxides to form Ozone air pollution, or “smog.” Smog damages lung tissue, exacerbates asthma, reduces lung capacity, increases respiratory and cardiovascular hospital admissions, and increases school and work absenteeism. Failure to meet federal air quality standards in the Valley has an economic toll of almost \$6 billion per year in health care costs.² In keeping with Federal Clean Air Act mandates, California regulators promised in 1994 and 1996 to adopt regulations to reduce VOC emissions from pesticides to 20% below 1990 levels in five air basins, including the San Joaquin Valley, Ventura, and Southeast Desert basins. But the California Department of Pesticide Regulation and California Air Resources Board abandoned this commitment. Instead, in 2009, they adopted regulations that only require 12% pesticide VOC emissions reductions in the San Joaquin Valley.

We urge the Brown Administration to do the following:

- a. Bring DPR into compliance with the Federal Clean Air Act and require 20% pesticide VOC emissions reductions in the San Joaquin Valley Air basin.
- b. Direct the California Air Resources Board and the Office of Environmental Health Hazard Assessment to conduct a thorough review of the scientific methodology DPR uses to calculate pesticide VOC emissions.
- c. Conduct an investigation by June 2011, to identify the gaps in regulation of fumigants and pesticide ozone pollution under the federal Clean Air Act and the Toxic Air Contaminant Act (see #3, above).

5. Reduce pesticide pollution in California's water.

Problem:

Consumers served by public drinking water systems in California generally do not know whether their tap water contains unsafe levels of the many pesticides classified as potential groundwater contaminants; groundwater supplies are typically not tested for these chemicals. Drinking water sources in agricultural areas are not adequately protected because pesticides are regulated only after they have been found to cause widespread contamination, costing consumers and taxpayers millions for mitigation and alternative water supplies.



We urge the Brown Administration to do the following:

- a. Require that companies submit to DPR analytical methods sufficient to measure the levels of a pesticide in drinking water prior to registration. For all currently registered pesticides with the potential to contaminate groundwater (DPR's §6800(b) list), require companies to submit analytical methods to DPR by the end of 2011. Require companies that have registered pesticides to pay for early and more intensive water monitoring.
- b. Mandate the Department of Public Health to ensure that all public water systems are testing drinking water for appropriate unregulated contaminants, including all groundwater-contaminating pesticides applied in the area.
- c. Adopt health-protective Maximum Contaminant Levels (MCLs) for all pesticides that are known or potential groundwater contaminants, including legacy pesticide breakdown products 1,2,3 trichloropropane and hexavalent chromium.
- d. Provide strong guidance for regional water quality control boards on implementation of the Anti-degradation Policy that requires protection of surface and groundwater quality.³
- e. Create strong Irrigated Lands Regulatory Programs that include source-water protection programs and requirements for best management practices.
- f. Use pesticide mill fee funds for mitigating pesticide contamination of rural community drinking water sources.
- g. Require water quality control boards and the Department of Pesticide Regulation to fund contamination mitigation of drinking water supplies, and wellhead protection programs in vulnerable areas.

6. Create green jobs by reducing pesticide exposure for agricultural workers and their children.

Problem:

Agricultural workers and their children face the highest risk of both immediate and long-term illnesses because of their routine exposure to pesticides in the fields, drifting pesticides, and take-home exposure. The CHAMACOS study of Salinas farmworker women and their children found that higher pesticides exposure in the womb is associated with attention deficit disorder and other possible learning problems.⁴ In California, 909 cases of pesticide illness were reported in farmworkers between 2001 and 2007, two thirds caused by exposure to drifting airborne pesticides and one third by exposure to pesticide residues. Reported illnesses represent the tip of the iceberg, because many workers legitimately fear that reporting pesticide poisoning could jeopardize their employment or call attention to immigration status.



We urge the Brown Administration to do the following:

- a. Reduce and phase out use of pesticides with high immediate or acute toxicity, and those known or suspected to cause cancer, birth defects, reproductive toxicity, nervous system effects or other chronic health hazards. Replace these pesticides with safer, greener and more sustainable pest control methods.
- b. Lengthen pesticide reentry intervals so farmworkers do not work in fields where pesticide residues might have an adverse health impact. Require posting around field perimeters using durable signs, listing the name of pesticide(s) applied and date and time reentry is allowed.
- c. Reduce fieldworker pesticide drift exposure by establishing protection zones for workers in adjacent fields, requiring notification of fieldwork crews on neighboring farms prior to pesticide applications, and phasing out aerial applications and soil fumigations.
- d. Require annual fieldworker training about pesticides and ongoing disclosure of pesticides used in fields.
- e. Improve agricultural worker access to effective and appropriate health care for both occupational and non-occupational pesticide illness; improve pesticide illness reporting.
- f. Ensure anti-retaliation laws are upheld for farmworkers who report pesticide illness or misuse, or seek health care.
- g. Protect undocumented farmworkers by preventing incarceration (even if temporary) or deportation when they report pesticide illness, seek healthcare for pesticide-related illnesses or identify pesticide misuse.
- h. Establish a temporary California driver's license and/or identification card for undocumented farmworkers working in California.

7. Reform the pesticide regulatory process to ensure an effective, time-sensitive, health-protective decision-making process.

Problem:

Despite a clear legislative mandate (the Birth Defects Prevention Act), DPR has failed to take action to reduce or eliminate worker and public exposure to pesticides that have demonstrated potential to cause serious health effects. Currently, a backlog of 75 pesticides are prioritized for risk assessment because of their toxicity and high risk, but only one or two assessments are completed each year. Pesticide risk assessments must be reviewed by the Office of Environmental Health Hazard Assessment (OEHHA) before they are finalized, but DPR often does not incorporate OEHHA's recommendations. There are also significant delays in taking action to reduce exposure once risk assessments are completed.



We urge the Brown Administration to do the following:

- a. Reduce and phase out use of pesticides with high immediate or acute toxicity, and those known or suspected to cause cancer, birth defects, reproductive toxicity, nervous system effects or other chronic health hazards.
- b. Instruct regulators to refuse new pesticide registrations or renewals when there is clear scientific evidence of potential harm to health and the environment.
- c. Require DPR to implement OEHHA's findings about pesticide risks and their proposed mitigations.
- d. Establish enforceable timelines for completing risk assessments and implementing mitigation measures; include a mandatory requirement for DPR to institute emergency measures to reduce exposures, even before the risk assessment is complete, if the toxicology and exposure data indicate that exposures exceed levels of concern.
- e. Improve the scientific integrity of pesticide hazard review by requiring mitigation measures that are adequate to protect children and pregnant women, not just adult males.
- f. Expand pesticide toxicology testing requirements to include endocrine disruption and other health effects not currently required.
- g. To improve transparency and accountability, incorporate a public comment period into the risk assessment process.
- h. Reduce pesticide company influence on government decisions. Pesticide manufacturers, scientists, lobbyists, communications firms and distributors that stand to benefit economically from the registration or use of a specific chemical should be required to disclose their affiliations during all meetings, testimony and written comments that occur as part of a pesticide evaluation.
- i. Establish a clearinghouse of information about low-toxicity pest control methods, including cultural methods that do not involve the use of pesticides.

8. Reduce children's exposure to pesticides at home, at school and in daycare facilities.

Problem:

Seventy-five to ninety percent of all households use at least one pesticide product every year. Residues from pesticides often linger indoors for years or even decades. Home pesticide use accounts for approximately 80% of the typical person's exposure to pesticides.⁵

In addition, toxic pesticides are regularly used in California schools. A California Department of Pesticide Regulation report released in June documents the risk of exposure to these pesticides, noting that: "47% [of schools] report the use of non-exempt pesticide application methods, including spraying or the use of foggers that can leave residues on surfaces and in the air and potentially expose children and staff."⁶ The Healthy Schools Acts of 2000 and 2006 laid the foundation for healthier schools and day care centers in California, providing parents with notification about pesticide use and encouraging schools to move away from use of chemicals—but progress has stalled since then.

Children are particularly at risk from pesticide exposure because their bodies and brains are still developing. Each year, tens of thousands of children are involved in common household pesticide-related poisonings or exposures, according to data collected from the American Association of Poison Control Centers.⁷

We urge the Brown Administration to do the following:

- a. Ban the most dangerous pesticide delivery systems— aerosol, bombs, and foggers—in home- and school-use products.
- b. Guarantee the right of tenants to protect their health by opting for green pest control methods and refusing dangerous methods of pest control, such as sprays or fumigant treatments, in their units.
- c. Provide financial incentives for visionary professional pest control operators to become certified in ecological pest management.
- d. Ban the use of the most toxic pesticides at California's schools and day care facilities and make green pest control mandatory at all schools and day care facilities.
- e. Use fees from the sale of pesticide products to fund green pest control programs for schools.

9. Ensure transparency about pesticide ingredients.

Problem:

Currently pesticide manufacturers are not required to publicly identify all of the ingredients in pesticide products. The unidentified ingredients include many with significant health and environmental concerns. Without identification of pesticide ingredients, pesticide consumers cannot make informed purchasing decisions, and health care professionals lack important information when treating patients with pesticide illnesses.

We urge the Brown Administration to do the following:

- a. Support U.S. Environmental Protection Agency proposals to require public disclosure of all pesticide ingredients.
- b. Require state agencies to identify ingredients in pesticides used in state-run pest management programs.

10. Improve enforcement of pesticide laws.

Problem:

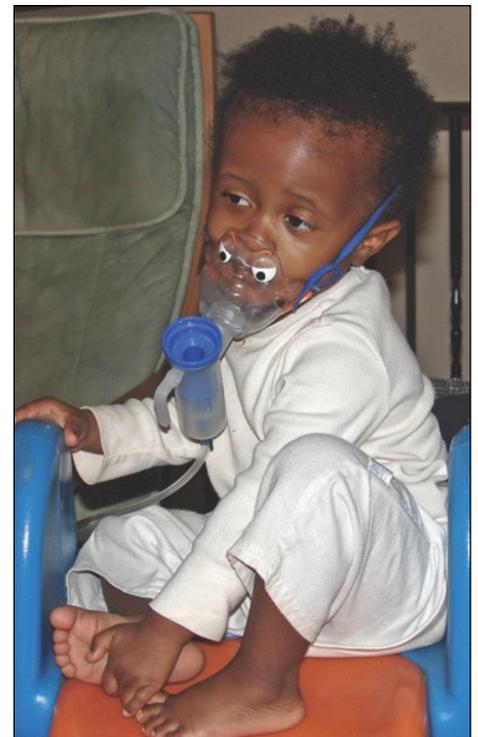
California has the most extensive pesticide enforcement program in the United States, but this program has major weaknesses. The high volume of pesticides applied and diminishing county and state enforcement resources severely limit the reach of enforcement officials. For example, Fresno county had the highest pesticide use in the state in 2008 with 25 million pounds of pesticides reported used and over 212,000 agricultural pesticide applications. Resources allowed completion of only 2,759 inspections and records show that only seven civil penalties (fines) were issued for agricultural pesticide violations.

We urge the Brown Administration to do the following:

- Require mandatory fines for all violations.
- Provide legal support for County Agricultural Commissioners to defend appeals of fines for pesticide violations.
- Allow parties—especially the victims—who file complaints about pesticide use violations to appeal an enforcement decision.
- Require adequate pesticide use enforcement resources be readily available in the languages needed in each county.
- Utilize phaseouts and targeted use-reduction to decrease pesticide exposure—instead of complex restrictions and mitigations—because lack of resources severely limit the counties' and state's ability to enforce complicated restrictions.

Conclusion

Californians for Pesticide Reform calls on Governor Brown to take decisive action to implement the recommendations in this pesticide policy platform: they are necessary steps for the Brown's administration to create green jobs, protect children's health and mitigate the effects of climate change. Some of these can be implemented immediately while others may take more time, but all will ultimately help to improve the health of California's residents, protect the environment and strengthen the economy. In the interests of all Californians, we look forward to discussing these recommendations with the Governor and the new administration's appointees.



Endnotes

1. <http://www.cdpr.ca.gov/docs/risk/methyliodide.htm>
2. <http://business.fullerton.edu/centers/iees/>
3. <http://www.swrcb.ca.gov/academy/courses/wqstandards/materials/mod14/14caantidegpolicy.pdf>
4. <http://ehs.sph.berkeley.edu/chamacos/>
5. <http://www.epa.gov/iaq/pubs/insidest.html>
6. http://apps.cdpr.ca.gov/schoolipm/childcare/pest_mgt_childcare.pdf
7. <http://www.health.state.mn.us/divs/eh/homes/pesticides.html>

Californians for Pesticide Reform

CPR is a statewide coalition of over 185 public interest groups dedicated to protecting human health and the environment from pesticide use.

Our member organizations include public health, children's health, educational and environmental advocates, clean air and water organizations, health practitioners, environmental justice groups, labor, farmers and sustainable agriculture advocates.

Our Platform is to:

- **Eliminate use of the worst pesticides — including those that cause cancer, reproductive harm or acute poisoning.**
- **Reduce overall use of the remaining pesticides.**
- **Promote the use of sustainable pest control solutions in our farms, communities, forests, homes and yards.**
- **Protect people's right-to-know about pesticide use in our neighborhoods, counties and state.**

For more information about our current programs and campaigns, visit www.PesticideReform.org or call 415-881-3939 or 1-888-CPR-4880 (toll free in California only).

CPR's Steering Committee:

California Rural Legal Assistance Foundation
Center for Environmental Health
Center on Race, Poverty & the Environment
Environment California
Fresno Metro Ministry
Organización en California de Líderes Campesinas
Pesticide Action Network
Pesticide Watch
Physicians for Social Responsibility – Los Angeles