

University of California  
San Francisco



Obstetrics, Gynecology  
& Reproductive Sciences



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Linda Irokawa-Otani, Regulations Coordinator  
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RE: DPR 16-004 Pesticide Use Near School sites  
<http://www.cdpr.ca.gov/docs/legbills/rulepkgs/16-004/16-004.htm>

Dear Director Leahy and Coordinator Irokawa-Otani:

Thank you for the opportunity to provide comments to the California Department of Pesticide Regulation (DPR) on its draft regulation, DPR 16-004. We commend DPR for its efforts to decrease exposure to toxic pesticides among California's children and women and men working at schools and child day care facilities. However DPR's proposed regulation falls short of its intention in several critical ways. To meet its important public health goal of reducing health risks of drift prone pesticide applications DPR should:

**require buffer zones be at least one-mile wide, be in place 24 hours per day every day, and allow counties to retain full authority to adopt stricter requirements based on local conditions.**

I am writing on behalf of the University of California, San Francisco Program on Reproductive Health and the Environment (PRHE). Our mission is to create a healthier environment for human reproduction and development through advancing scientific inquiry, clinical care and health policies that prevent exposures to harmful chemicals in our environment. Our research and research by many, many other scientists supports DPR's stated rationale for its proposed regulation, i.e., because of children's "increased sensitivity and exposure" to pesticides, that "the [pesticide] dose that may cause adverse effects in children may be lower than adults," that "pesticides may cause effects to a child's developing nervous system", that "children may have higher [pesticide] exposure than adults", and that "schools and child day care facilities are considered

sensitive sites because large numbers of children can be located there for extended periods."

Our research specifically focuses on preventing pre-conception, prenatal, and childhood exposures to environmental chemicals, which would be directly impacted by DPR's regulation. During these periods, exposure to environmental chemicals such as pesticides can have a profound and lasting impact on health across the individual's life course and may even be passed to subsequent generations, continuing to impact multiple individuals within a family. In recognition of health hazards of exposure to toxic environmental chemicals such as pesticides, reproductive and other health professional societies in the U.S. and around the world have issued statements calling for timely action to prevent harm including strengthening public policy (See: <http://prhe.ucsf.edu/international-federation-gynecology-and-obstetrics-figo-opinion-reproductive-health-impacts-exposure>).

Thus, while the science fully supports DPR's intention to strengthen its regulations to further reduce risk of exposure to pesticide drift, DPR's draft regulations for pesticide use near schools and child day care facilities do not adequately protect school children or staff from the health threats of highly hazardous drift prone pesticide applications. Specifically, DPR proposes an inadequate physical (1/4 mile) and temporal (Monday to Friday 6AM – 6 PM) buffer zone. Therefore, we strongly recommend that the DPR:

**Require a 1 mile buffer zone:** DPR should require one-mile buffer zones for pesticides of public health concern between fields where these pesticides are used and schools, childcare centers, school bus stops, and known school routes. Pesticides of public health concern include pesticides that show evidence of causing cancer, reproductive damage, harm to the brain and nervous system, and asthma and other respiratory problems. DPR states that over a million pesticide applications are made to agricultural crops in California every year, and that a study by the California Department of Public Health identified pesticide uses ranging from 0.01 to 28,979 pounds within a one-quarter mile of schools in 15 agricultural counties. The need to mitigate risk from these many applications is substantial.

Buffer zones of ¼ mile are not adequate for health protection. As a former scientist at the California Department of Public Health I personally investigated an incident of occupational pesticide poisoning and the evacuation of a school in Santa Barbara County due to pesticide drift. In this case, we found that the use of metam-sodium in an overhead sprinkler system released MITC into the air which drifted off-site and resulted in at least three cases of pesticide poisoning among workers **up to one mile from the application site**. CDPH recommended, that "During sprinkler applications of metam-sodium, a residential buffer zone of less than one mile, maintained for 48 hours, does not provide workers with adequate protection from exposure to MITC." (See <http://www.cdph.ca.gov/programs/ohsep/Documents/metamsod.pdf> ). Moreover, DPR's own air-monitoring network has shown ¼-mile buffer zones to be inadequate. For example, the air monitor at Shafter High School in Kern County has registered over the last four years average concentrations of the toxic fumigant Telone at 175% of DPR's previous lifetime cancer risk level of concern. This despite ¼-mile buffer zones for schools in Kern County and zero Telone applications within ¼-mile of the school.

**2. Require the buffer zone be in place for 24 hours a day 7 days a week:** No-spray protection zones around schools and child day care facilities should be enforced 24 hours a day 7 days a week for fumigations, ground air blast, as well as for aircraft applications, because students, teachers and community members are often on school grounds for scheduled events and unscheduled activities when school is not formally in session. Furthermore, pesticides can evaporate off the crop plants for days and even weeks after they are applied, and pesticide contaminated dust can be blown onto school grounds and tracked into classrooms. Eight of the ten pesticides most heavily used within a ¼-mile of schools persist in the environment for more than a week.

**3. Allow local jurisdictions to retain full authority to adopt stricter requirements based on local conditions.** Counties need to retain full authority to keep and adopt stricter requirements based on local conditions. The draft policy requirement that schools, grower, and County Ag Commissioner all need to agree on stricter requirements around specific schools hampers county officials ability to protect children. Some counties currently enforce school buffer zones during evening and weekend hours and have adopted buffer zones well beyond ¼ mile for certain pesticide applications. The regulated industry should not be given veto power over such critical health protections.

Finally, we note that DPR's statutory purpose is to protect human health and the environment by regulating pesticide sales and use, and by fostering reduced-risk pest management. While mitigating risk from pesticide drift applications at schools and child day care centers is an important goal and one that we fully support, at the same time, the evidence shows it will reduce but not eliminate exposures. Moreover, as DPR notes, full compliance with regulations and the reliable presence of "normal conditions" cannot be assumed. Thus, we urge DPR to also devote its efforts to reducing the use of, and phasing out, the use of soil fumigants and other high toxicity, drift-prone pesticides.

In conclusion, we appreciate DPR's efforts to prevent exposure to pesticide drift for children and workers at school sites. We believe the science fully supports the need to mitigate risk. We strongly recommend that DPR strengthen its regulation by requiring 1 mile buffer zones enforced 24/7, and allowing local jurisdictions to further reduce the risks for California's children and school workers. Thank you in advance for your consideration of our comments.

Sincerely,



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