

California Environmental Protection Agency  
Department of Pesticide Regulation

Concepts to Address Pesticide Use Near Schools

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The Department of Pesticide Regulation is accepting written comments on the concepts for potential regulations for pesticide use near schools presented in this document until July 31, 2015. Submit comments to:

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## Purpose

The regulation of pesticides in California to protect the environment and public health is the joint responsibility of the Department of Pesticide Regulation (DPR), and the County Agricultural Commissioners (CACs). These regulatory entities have given, and will continue to give, special attention to the protection of children and schools in their regulatory decision making. However, in recent years, the attention of the public has focused both on the use of pesticides in schools and in the fields around schools. DPR intends to address the concerns about the agricultural use of pesticides in fields surrounding schools on a statewide basis by adopting regulations that would require a notification provision and additional protective measures. As with all pesticide use regulations, they will be enforced by the local CAC. DPR is gathering input from all stakeholders including parents, teachers, school officials, county health officers, and the agricultural community as it determines what measures are appropriate to enhance protection for California's schoolchildren.

## Background

DPR is vested with primary authority through the U.S. Environmental Protection Agency (U.S. EPA) to enforce federal and state laws pertaining to the proper and safe use of pesticides. As part of the California Environmental Protection Agency, DPR protects human health and the environment by regulating pesticides sales and use, and by fostering reduced-risk pest management. DPR's enforcement of pesticide use in the field is largely carried out in California's 58 counties by CACs and their staff. DPR's headquarters personnel, as well as field staff located in Anaheim, Fresno, and West Sacramento, provide training, coordination, and technical support to the counties. Working with CACs, DPR has comprehensive programs to evaluate pesticides for potential health and environmental effects both before and after approval for sale in California. DPR also has programs to develop, implement, and enforce requirements for using pesticides.

Pesticide use in and around schools has recently been highlighted by public agencies, both academic and regulatory, the legislature and public media. In 2014, DPR and the University of California held a series of workshop, "Neighbors at the Edge," to address conflicts between agricultural and urban land use that included concern over pesticide use. The workshops were intended to encourage collaboration between local agencies, including CACs, county supervisors and planning commissioners, school boards, developers, and the community to help resolve these conflicts. Through its unique pesticide use reporting system, DPR tracks pesticide use and utilizes this information to help guide its regulatory actions. Using 2010 pesticide use information provided by DPR and CACs, the California Department of Public Health (CDPH) sought to identify significant use of certain pesticides near a number of schools ([CDPH 2014](#)). However, the report cautioned that it did "not attempt to measure school children's exposures to pesticides and, therefore, study results cannot be used to predict possible health impact." Additionally in 2014, Senate Bill 1411 was introduced (but not passed) attempting to strengthen previous legislation addressing pesticide drift onto schools sites; Senate Bill 1405 became law strengthening certain provisions of the Healthy Schools Act that addresses pesticide use at schools.

## **DPR's scientific evaluation of available data indicates low risk in most cases.**

Comprehensive evaluations by DPR through its risk assessment process and air monitoring to evaluate toxicity and exposure indicates that the risk to children from agricultural pesticides applied near schools is low for most pesticides ([Vidrio, et al. 2014a](#); [Vidrio, et al. 2014b](#)). For pesticides and situations that have been identified through the evaluation process with the potential for posing unacceptable risks, DPR is working to implement additional restrictions. In general, the risk assessments and monitoring data indicate that field fumigants (such as chloropicrin) have potentially higher risk to bystanders than other pesticides. However, in 2012, U.S. EPA added restrictions for several of the fumigants that prohibit applications within a minimum of one-eighth mile from schools.

DPR's Pesticide Illness Surveillance Program is another tool used by DPR to evaluate acute health effects from pesticides and guide regulatory action. California law requires physicians to report any known or suspected illness caused by a pesticide exposure. CACs must investigate exposure circumstances surrounding these reports as well as any direct pesticide incidents reported to them and provide that information to DPR. DPR supplements this information with other doctor reports made in connection with worker's compensation claims and reports made to the California Poison Control System that indicate possible illness from pesticide exposure. DPR scientists review and evaluate the information for all the reported illnesses to determine in each case whether the illness was definitely, probably, or possibly caused by pesticide exposure. This information can be accessed through the California Pesticide Illness Query (CalPIQ) portal on DPR's Web site: <http://apps.cdpr.ca.gov/calpiq/>. In addition, the California Pesticide Illness Surveillance Program's annual summary reports of this data can be found on DPR's Web site: <http://www.cdpr.ca.gov/docs/whs/pisp.html>

Specifically in connection with schools, DPR recently surveyed the CACs for pesticide inquiries received about schools between September 2011 and September 2014. Based upon the results of the investigation that CACs are required to perform of such inquiries, 46 of the 58 California counties returned the surveys to DPR. During the three-year survey period, the 46 counties recorded a total 1,779 pesticide related inquiries. Investigation revealed that 26 (1.5 percent) of the inquiries were due to pesticides applied on campus and 58 (3 percent) were due to pesticides applied outside of campus. None of the investigations discovered an exposure incident or illness. While the frequency of inquiries was low, many people expressed a desire for more information about pesticide applications near schools (Appendix 1).

Since 2011, DPR and the California Air Resources Board have conducted year-round ambient air monitoring for several pesticides in six communities throughout the state ([Vidrio, et al. 2014a](#); [Vidrio, et al. 2014b](#)). Three of the six monitoring sites are located at schools. This monitoring will continue through at least 2015 and will provide data to refine its estimates of exposure and risk. This information will continue to be used to guide further regulatory action if needed.

## Existing Regulation of Pesticides Used at or Near Schools

### **California has comprehensive programs to regulate the sales and use of pesticides.**

DPR regulates pesticide sales through its registration process. Similar to the U.S. EPA's process, pesticide manufacturers and formulators (registrants) must submit and DPR must evaluate studies on toxicity, environmental effects, chemistry, and other pesticide characteristics. DPR registers a pesticide product (i.e., approves it for sale) if the studies submitted are acceptable and use as allowed by the label is not anticipated to result in unacceptable risk to human health or the environment. Once registered, DPR can request, through its reevaluation process specified in state law, that the registrant provide additional studies to determine if further regulatory action is necessary to protect people or the environment.

Application or use of pesticides is regulated at several levels. All pesticide products must have a U.S. EPA-approved label that describes the maximum application rate, methods of application, crops that can be treated, safety precautions, and other requirements. By law, any pesticide application made contrary to label directions is a violation of both state and federal law. DPR also develops and implements state regulations that can be more restrictive than the requirements on the label. The state has listed certain pesticides in regulation as restricted materials due to the potential hazards they pose to public health, farmworkers, domestic animals, honeybees, the environment, wildlife, or crops other than those being treated. There are approximately 37 restricted materials currently registered in California ([list](#)). By law, agricultural applications of restricted materials can only be made by or under the supervision of a certified applicator and only after obtaining a site and time specific permit issued by the CAC. As part of the functional equivalent of an environmental impact report for the California Environmental Quality Act, before issuing a permit, a CAC considers the need for a particular pesticide and whether a safer pesticide or better method of application could be used and still prove effective. If the evaluation shows that the application is likely to pose a significant risk of causing an adverse effect, the CAC may further restrict use (based on specific local conditions) beyond the requirements of the label or regulation, or deny the permit. Applicators must provide a notice of intent (NOI), to the CAC at least 24 hours before any application that includes key information such as the pesticide product name, the permit number, the name and address of the applicator and permit holder; the name of the farm operator, the method of application, the acres being treated, and the date the application will begin.

With DPR oversight, CACs provide training and outreach to growers, pesticide applicators, and fieldworkers; conduct inspections of applications; and investigate all complaints and reported illnesses. If an investigation results in non-compliances or violations, the CACs will follow through with enforcement based upon regulatory fine guidelines. When an enforcement action is needed, the CAC has various options. This includes revoking or suspending the right of a pest control company to do business in the county and issuing civil and criminal penalties. DPR reviews each CAC pesticide program biannually and develops work plans with established goals for CACs to meet.

### **The Healthy Schools Act specifies requirements for pesticides applied at schools.**

The Healthy Schools Act of 2000 (Assembly Bill 2260) established requirements for pesticides applied at public K-12 schools and licensed child day care facilities. The law has been amended

several times and includes right-to-know requirements such as notification, posting, recordkeeping and reporting for pesticides used at schools and child day care facilities. The law prohibits the use of certain pesticides at public schools and day care facilities that have conditional, experimental use, or interim registrations or have been canceled, suspended, or phased out. The most recent amendments to the law (Senate Bill 1405 passed in 2014) require schools to develop an integrated pest management<sup>1</sup> (IPM) plan and requires those who use pesticide to receive IPM training by July 1, 2016. DPR's [School IPM web page](#) has additional information and resources.

**In December 2012, labels for most field fumigant products were revised to include requirements for fumigations near difficult to evacuate sites.<sup>2</sup>**

As discussed above, field fumigant pesticides generally have higher potential risk compared to other pesticides. Fumigants are applied in higher amounts and are more volatile than most other pesticides. Therefore, the risk is from inhalation exposure, not direct contact or from residue on surfaces. Fumigants are injected into the soil of agricultural fields prior to planting certain crops for the control of weeds, insects, and plant diseases. Field fumigants include 1,3-dichloropropene (1,3-D), chloropicrin, methyl bromide, and pesticides that generate methyl isothiocyanate (MITC; dazomet, metam-potassium, and metam-sodium). All field fumigants are California restricted materials.

Legal requirements on fumigant product labels are designed to keep the chemical in the soil, but some emits into the air. U.S. EPA requires labels for field fumigant products containing chloropicrin, methyl bromide, and MITC-generating pesticides (not required for 1,3-D products) to include the following requirements for schools and other difficult to evacuate sites.

- No fumigant application with a buffer zone greater than 300 feet is permitted within 1/4 mile (1,320 feet) of difficult to evacuate sites unless the site is not occupied by children from state-licensed day care centers, students (pre-K to grade 12), patients, or prisoners during the application and the 36-hour period following the start of the application.
- No fumigant application with a buffer zone of 300 feet or less is permitted within 1/8 mile (660 feet) of difficult to evacuate sites unless the site is not occupied by children from state-licensed day care centers, students (pre-K to grade 12), patients, or prisoners during the application and the 36-hour period following the end of the application.

**Many CACs have additional requirements based on local conditions for pesticides applied near schools, beyond those specified by U.S. EPA and DPR.**

Many CACs have more stringent requirements for certain pesticides applied near schools (Appendix 2). CACs may include more stringent requirements through permits for restricted materials, based on local conditions. For example, at least a dozen counties prohibit applications of

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<sup>1</sup> The Healthy Schools Act defines IPM as a pest management strategy that focuses on long-term prevention or suppression of pest problems through a combination of techniques such as: monitoring for pest presence and establishing treatment threshold levels, using non-chemical practices to make the habitat less conducive to pest development, improving sanitation, and using mechanical and physical controls.

<sup>2</sup> Fumigant labels define difficult to evacuate sites as pre-K to grade 12 schools, state licensed daycare centers, nursing homes, assisted living facilities, hospitals, in-patient clinics, and prisons.

restricted materials within a specified distance of a school, while a school is in session. The specified distance varies from 120 to 5,280 feet (1 mile), depending on the county and application method. Some counties also prohibit applications during additional times when schools are in use.

Some counties also have formal or informal requirements for non-restricted materials (general use pesticides). State law gives CACs authority to adopt county regulations that are more stringent than state regulations, with the approval of DPR's Director. Following the process and Director approval required by Food and Agricultural Code sections 11503 and 11503.5, the San Bernardino CAC adopted regulations that supplement the existing state and federal measures to protect schools. San Bernardino's regulations are likely the most comprehensive county school requirements and they apply to all pesticide applications to a "commercial agriculture" site within 1,320 feet (1/4 mile) of a public K-12 school or licensed day care center ([San Bernardino County 2009](#)). They are summarized as follows:

Applicator must notify the CAC at least 24 hours prior to application, with some exceptions.

With some exceptions, pesticide applications are prohibited applications within 1,320 feet if:

- The product applied bears the signal word "DANGER-POISON;" and
- Application occurs within one hour of formal classroom instruction or within two hours of the end of formal classroom instruction.

If the pesticide is applied as an orchard airblast sprayer or similar ground applications not directed downward, pesticide applications are prohibited within 1,320 feet if:

- The product applied bears any signal word, including "DANGER-POISON," "WARNING," or "CAUTION;" and
- Application occurs within one hour of formal classroom instruction or within two hours of the end of formal classroom instruction.

All pesticide applications made by aircraft are prohibited within 1,320 feet.

**Some other states also have requirements for pesticides applied at or near schools.**

Many states have requirements for pesticides applied at schools, similar to California's requirements under the Healthy Schools Act. Several states also prohibit aerial applications within a specified distance of a school, usually 300-1,000 feet (Appendix 3).

## **Concepts for Additional Requirements for Pesticide Applications Near Schools**

Based upon feedback from many stakeholder groups, DPR is gathering input on new requirements for pesticide use near schools. DPR recognizes and intends to address the need for consistent, statewide requirements that pertain to agricultural pesticide applications near schools. The following topics represent the starting point for a discussion to address concerns and enhance protection of schoolchildren.

Increased communication through **notification** to schools

- of intended applications of certain pesticides
- made when the school is in session
- within a certain proximity to the school.

Reduced risk of exposure by **additional restrictions** on applications

- of certain pesticides
- made using specific application methods
- within a certain proximity to the school.

## **Process and Timeline** – all dates approximate

DPR will follow a two-phase process to develop restrictions for schools. The first phase will be the development and public discussion of regulatory concepts. The second phase will be formal rulemaking for statewide regulations based on the final concepts.

May – June 2015: DPR holds regional workshops and provides an informal comment period on regulatory concepts.

July 31, 2015: Deadline to submit comments on the regulation concepts.

August 2015: DPR completes posting of comments on the regulation concepts.

August-December 2015: DPR evaluates comments and develops a draft regulation.

December 2015: DPR releases a proposed regulation for formal public comment.

February 2016: DPR holds public hearings on proposed regulation.

December 2016: DPR submits final regulations to Office of Administrative Law for review.

April 2017: Regulations become effective.

## **References**

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