

INITIAL STATEMENT OF REASONS AND PUBLIC REPORT  
DEPARTMENT OF PESTICIDE REGULATION

Title 3. California Code of Regulations  
Adopt Sections 6690, 6691, 6692, and 6693  
Pertaining to Pesticide Applications Near Schoolsites

This is the Initial Statement of Reasons (ISR) required by Government Code section 11346.2, and the public report specified in section 6110 of Title 3, California Code of Regulations (3 CCR). Section 6110 meets the requirements of Title 14, CCR section 15252, and Public Resources Code section 21080.5 pertaining to certified state regulatory programs under the California Environmental Quality Act.

SUMMARY OF PROPOSED ACTION/PESTICIDE REGULATORY PROGRAM ACTIVITIES AFFECTED

The Department of Pesticide Regulation (DPR) proposes to adopt 3 CCR sections 6690, 6691, 6692, and 6693. The pesticide regulatory program activities affected by the proposal are those pertaining to pesticide enforcement. In summary, the proposed action would require growers<sup>1</sup> to notify public K-12 schools, child day care facilities (except family day care homes), and county agricultural commissioners when certain pesticide applications made for the production of an agricultural commodity near a schoolsite are planned in the coming year and also a few days prior to the applications. In addition, certain pesticide applications near these schoolsites will be prohibited at certain times.

SPECIFIC PURPOSE AND FACTUAL BASIS

**Background and Evaluation of Pesticide Health Risks at Schools**

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. DPR's oversight includes: product evaluation and registration; statewide licensing of commercial and private applicators, pest control businesses, dealers, and advisers; environmental monitoring; and residue testing of fresh produce. This statutory scheme is set forth primarily in Food and Agricultural Code (FAC) Divisions 6 and 7. Specifically, DPR is charged by FAC section 11501 to protect public health and safety while providing for the proper, safe, and efficient use of pesticides for the production of food and fiber and to protect the environment from harmful pesticides by regulating and ensuring proper stewardship of those pesticides. To effectuate this purpose, FAC gives the Director broad authority to adopt regulations that are reasonably necessary to carry out the provisions of the Code (FAC section 11456) including the authority to promulgate regulations governing the use of pesticides (FAC section 12976).

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<sup>1</sup> The term "grower" as used in this Initial Statement of Reasons refers to an operator of property to be treated with a pesticide product.

DPR continuously evaluates pesticides as mandated by FAC section 12824. DPR's evaluation of toxicity and exposure indicate 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 are identified through the evaluation process as having the potential for posing unacceptable risks, DPR imposes mitigation measures to address the risks.

Nevertheless, concerns about the risks associated with pesticide use at or near schools and child day care facilities have persisted through the years due to children's potentially increased sensitivity and exposure. The dose that may cause adverse effects in children may also be lower than adults. For example, based on current scientific findings some pesticides may cause effects to a child's developing nervous system. Also, children may have higher exposure than adults due to their higher breathing rate relative to their body weight. While DPR accounts for these factors in its evaluation of potential toxic effects and exposure, there may be disproportionate impacts to children when unintended drift occurs. Moreover, schools and child day care facilities are considered sensitive sites because large numbers of children can be located there for extended periods of time.

Acute illnesses due to drift from agricultural applications have been documented in California and elsewhere (Lee, et al. 2011). In some events, drift illnesses occurred more than one mile from the application. The majority of illnesses in these cases resulted from aerial applications and fumigations that were not conducted in compliance with regulatory requirements. For California during 1998 – 2006, Lee et al. (2011) estimated 1.6 drift events causing 11.8 cases of illness per 100,000 agricultural pesticide applications. [NOTE: DPR estimates that more than one million agricultural pesticide applications occur each year in California.] Fumigations accounted for a disproportionate number of illnesses, causing 8 percent of the events but 45 percent of the cases of illness. However, as discussed below, these illnesses occurred prior to the U.S. Environmental Protection Agency's (EPA's) new restrictions for fumigants in 2012, DPR's requirements for methyl isothiocyanate implemented in 2010 and requirements for chloropicrin implemented in 2015, to mitigate drift exposure.

DPR's pesticide illness database for California shows that 5 episodes involving 34 cases of illness occurred at schools due to drift from agricultural pesticide applications during 2005 – 2014. Different pesticides were involved in each of the episodes, some with higher toxicity such as chloropicrin, and some with lower toxicity such as *Bacillus thuringiensis*. It is likely that these episodes would not have occurred if the proposed regulation had been in effect. For a variety of reasons, the number of illnesses may be underreported or drift to schools may not result in acute illnesses. As described below, DPR estimates that approximately 1.5 percent of non-fumigant agricultural pesticide applications each year may potentially result in drift.

The California Department of Public Health (CDPH) completed a study of the use of certain pesticides near a number of schools in California. Relying on information provided by DPR and the county agricultural commissioners from 2010, the study identified pesticide uses ranging from 0.01 to 28,979 pounds within one-quarter mile of schools in 15 agricultural counties. Although the report provided valuable data on pesticide use practices, it further cautioned on page viii of the report, 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."

## **Overview of Pesticide Regulation**

There are both state and federal regulations that apply to the use of agricultural production pesticides in California. Pesticides must be registered (licensed for sale and use) with U.S. EPA before they can be registered in the state. DPR's preregistration evaluation is in addition to, and complements, U.S. EPA's evaluation. Before a pesticide can be sold or used, both agencies require data on a product's toxicology and chemistry--how it behaves in the environment; its effectiveness against targeted pests and the hazards it poses to nontarget organisms; its effect on fish and wildlife; and the degree of worker exposure posed by its use.

Application or use of pesticides is regulated at several levels. All pesticide products must have a label approved by U.S. EPA that describes the maximum application rate, methods of application, crops that can be treated, safety precautions, and other requirements. 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. 3 CCR section 6614 provides a fundamental level of protection by requiring an applicator to evaluate the weather and surrounding properties before an application to determine if there is a reasonable possibility of contamination of bystanders, public or private property, or if the application would prevent the normal use of property or create a health hazard. The applicator cannot make or continue the application if any of those conclusions could reasonably be made.

Existing law (FAC sections 14004.5 and 14005) authorizes the Director to adopt, by regulation, a list of restricted materials based upon criteria including danger of impairment of public health; hazards to pesticide applicators, farmworkers, and domestic animals; hazards to the environment from pesticide drift onto streams, lakes, and wildlife sanctuaries; and hazards to wildlife and other crops through persistent residues in the soil. There are approximately 37 restricted materials currently registered in California. In accordance with FAC section 14015, 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 county agricultural commissioner. Before issuing a permit, a county agricultural commissioner must evaluate local conditions, including whether the use is in the vicinity of schools (FAC section 14006.5). If the evaluation shows that the application is likely to pose a significant risk of causing an adverse effect, the county agricultural commissioner may further restrict use beyond the requirements of the label or regulation, or deny the permit. As part of the permit, applicators must provide a notice of intent to the county agricultural commissioner at least 24 hours before any application. The notice of intent includes application-specific information, such as the number of acres being treated and date the application is intended to commence.

## **Evolving Regulation of Pesticides Used At and Near Schools**

Continuing concerns about pesticides applied at and near schools have prompted several legislative and regulatory changes in recent years.

Fumigant pesticides generally have higher potential risk compared to other pesticides and their use has stringent requirements. In 2000, DPR made major revisions to the regulations for methyl bromide. The revisions included limits on amounts applied and buffer zones. They also included an expanded buffer zone for methyl bromide fumigations near schools. DPR implemented buffer zones and other requirements for methyl isothiocyanate fumigations in 2010, and for chloropicrin in 2015. In 2012, U.S. EPA added label requirements for several of the fumigants that prohibit applications within one-eighth or one-quarter mile of “difficult to evacuate sites” such as schools and child day care facilities.<sup>2</sup> Pursuant to these label restrictions, fumigations are prohibited within one-eighth mile of difficult to evacuate sites when the buffer zone for the particular fumigant is 300 feet or less, and they are prohibited within one-quarter mile of these sites if the buffer zone for the fumigant is greater than 300 feet.

In 2000 the Legislature adopted the Healthy Schools Act. (AB 2260, Chapter 718, Statutes of 2000.) This Act provides that it is the policy of the state “that effective least toxic pest management practices should be the preferred method of managing pests at schoolsites.” (Ed. Code, § 17610.) This law was amended in 2006 to extend the protections to child day care facilities. [Ed. Code, § 17609(f).] The Healthy Schools Act established a system to notify parents and teachers when pesticides are applied on schoolsites as well as requirements for training and pesticide use. The law did not apply to agricultural pesticide applications in close proximity to schoolsites.

Consistency with the Healthy Schools Act is an important element of the proposed regulations. For example, as discussed below, the proposed regulations require growers to provide information to schools and child day care centers in a way that is consistent with the procedures for on-site applications under the Healthy School Act. Because of this procedural alignment, it may be easier for schools and child day care centers to implement an optional parental notification process for off-site applications that is similar to the Healthy Schools Act’s mandatory notification process for on-site applications.

In 2002, the Legislature gave county agricultural commissioners authority to adopt county regulations that are more stringent than state regulations, with the approval of DPR's Director. AB 947 (Chapter 457, Statutes of 2002) added section 11503.5 to the FAC. This statute gives county agricultural commissioners authority to adopt a regulation for their county regarding the timing, application method, and notification of pesticide applications within one-quarter mile of a school through a rulemaking process and contingent on DPR's approval.

Many county agricultural commissioners have more stringent requirements for certain pesticides applied near schools. County agricultural commissioners may include more stringent requirements through permits for restricted materials when their evaluation of local conditions required pursuant to 3 CCR section 6432 indicates it is needed. A common permit condition for restricted materials requires a one-quarter mile distance from aerial applications to a school.

During the development of the proposed regulation, DPR investigated whether there was a need to provide greater protection for school children from risks associated with agricultural pesticide use near schools. DPR's evaluation of available data and current requirements indicates that the health

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<sup>2</sup> All field fumigant product labels include difficult to evacuate site requirements, except products containing 1,3-dichloropropene (1,3-D; Telone) as the sole active ingredient.

risk to children and others is low when pesticides are used in compliance with the relevant regulations and label requirements. However, this low risk reflects compliance with current requirements in normal situations and does not account for exceptional circumstances or violations. More than a million pesticide applications are made to agricultural crops each year in California. Given the large number of applications that occur around schools, the risk of potential exposure, while small, is still present. In 2014, county agricultural commissioners conducted a total of 3,369 inspections associated with non-fumigant applications to agricultural commodities. Non-compliance with rules intended to prevent pesticide drift were observed in 51, or 1.5 percent of these inspections. As described below, DPR estimates that 3,499 schools and day care facilities are near agricultural pesticide applications and potentially affected by drift. Additionally, schools and child day care facilities usually lack information to respond to pesticide drift events or other pesticide emergencies.

The current regulatory requirements for pesticide applications near schools vary from county to county, and are primarily designed to prevent unacceptable exposures from normal pesticide use. The purpose of this proposed regulation is to (1) provide minimum statewide standards for all agricultural pesticide applications near public K-12 schools and child day care facilities; (2) provide an extra margin of safety in case of unintended drift or when other problems with applications occur (e.g., equipment failure causes an unintended release of pesticide, or an abrupt change in weather conditions); (3) increase communication between growers and schools/child day care facilities; and (4) provide information to assist schools and child day care facilities in preparing for and responding to pesticide emergencies. The proposed regulation will address potential short-term acute exposures from pesticide applications.

In developing the proposed regulations, DPR held public workshops at five locations throughout the state on the concepts for the proposed rules. Three separate sessions were held at each location with focused discussions for school administrators; growers and applicators; and parents, teachers and the community.

### Section 6690. Pesticide Use Near Schools

Proposed section 6690 generally provides that the proposed regulations pertain to pesticide applications made for the production of an agricultural commodity within one-quarter mile of a schoolsite. The proposed provisions in this regulation would serve the purpose of ensuring the added health protections are appropriate, while providing for ease of compliance and administration through the incorporation of practices already in place in existing law.

Section 6690 specifies that the proposed requirements apply to pesticide applications within one-quarter mile of a “schoolsite.” To define “schoolsite,” the regulation uses the definition in the Healthy Schools Act, section 17609(f) of the Education Code, except it specifically excludes “family day care homes” as defined in Health and Safety Code section 1596.78.

Education Code section 17609(f) provides: “‘Schoolsite’ means any facility used as a child day care facility, as defined in Section 1596.750 of the Health and Safety Code, or for kindergarten, elementary, or secondary school purposes. The term includes the buildings or structures, playgrounds, athletic fields, vehicles, or any other area of property visited or used by pupils.

‘Schoolsite’ does not include any postsecondary educational facility attended by secondary pupils or private kindergarten, elementary, or secondary school facilities.”

Section 6690 excludes family day care homes because, unlike other schoolsites, the locations of these facilities are not publically available. This exclusion also is consistent with the provisions of the Healthy Schools Act that exempt family day care homes from notification and similar requirements (see Ed. Code §§ 17612(g), 17610-17614) and FAC section 13186, which exempts family day care homes from pesticide use records and certain other requirements.

Section 6690 applies to pesticide applications made for the production of an “agricultural commodity.” As defined in 3 CCR section 6000, agricultural commodity means an unprocessed product of farms, ranches, nurseries, and forests (except livestock, poultry, and fish). Agricultural commodities include fruits and vegetables; grains, such as wheat, barley, oats, rye, triticale, rice, corn, and sorghum; legumes, such as field beans and peas; animal feed and forage crops; rangeland and pasture; seed crops; fiber crops such as cotton; oil crops, such as safflower, sunflower, corn, and cottonseed; trees grown for lumber and wood products; nursery stock grown commercially; Christmas trees; ornamentals and cut flowers; and turf grown commercially for sod. Often, applications for the production of an agricultural commodity will be made to large areas; involve pesticides that have been designated as a restricted material; and are made with equipment (such as airblast sprayers or aircraft) that have a higher potential for drift.

Section 6690 also defines the radius for the application of the proposed requirements as one-quarter mile from a schoolsite. DPR proposes the one-quarter mile distance for the following reasons:

- One-quarter mile distance restriction is consistent with many county restricted materials permit conditions issued by county agricultural commissioners. County agricultural commissioners have placed additional restrictions keyed to this distance on applications around schools that appear to be effective and feasible. Many have been in effect for several years, with few complaints or illnesses at schools and acceptance and compliance by the growers.
- One-quarter mile distance restriction is similar to the restrictions on fumigant labels that prohibit closer applications around schools and other difficult to evacuate sites.
- Using the one-quarter mile distance restriction is consistent with FAC section 11503.5. This statute gives county agricultural commissioners the authority to adopt a county regulation regarding the timing, application method, and notification of pesticide applications within one-quarter mile of a school through a rulemaking process and contingent on DPR's approval. This proposed regulation essentially implements the intent of that legislation without requiring each county to go through an extended process and provides the same level of protection to school children regardless of where they live.
- The selection of the one-quarter mile distance is supported by an analysis of pesticide illnesses due to drift from agricultural applications. Lee, et al. (2011) evaluated pesticide illnesses in 11 states during 1998-2006. This analysis documented illnesses more than one mile from applications. However, most if not all of the illnesses in California more than one-quarter mile from the application were from fumigations that occurred prior to the adoption of buffer zones

and other restrictions enacted in 2010 and later that may have prevented those illnesses. Additionally, DPR's analysis of pesticide illnesses in California shows that five episodes occurred at schools due to drift from agricultural pesticide applications during 2005 – 2014. It is likely that these episodes would not have occurred if the one-quarter mile distance restriction that DPR proposes had been in effect.

- DPR considered other distances, particularly a one mile distance suggested in letters submitted by the public after the workshops held during the development of these regulations. The workshop commenters cited two studies in support of that distance: a CDPH study on pesticide use near schools and a University of California, Davis (UCD) study on pesticide use and autism. These two studies do not provide scientific justification for a one mile distance.

CDPH relied solely on pesticide use data for its assessment. More importantly, they only looked at pesticide use within one-quarter mile of schools and provided no support for a more extensive buffer. In addition, the study did “not attempt to measure school children's exposures to pesticides and, therefore, study results cannot be used to predict possible health impact.”

The UCD study does not provide information on pesticide exposure to children in schools surrounded by agricultural fields, but on the prenatal pesticide exposure to pregnant women, using pesticide use data as a surrogate, and possible correlations to neurological effects.

The way UCD calculated the pesticide use data in relation to the location of the residence in each case does not allow for any conclusions on the relative impact of use at different distances from the residence. Closer evaluation of data analysis shows that the actual sample sizes used were very small, and even with a finding of a significant correlation, the small sample size is a flag that such results may indicate the cases are atypical.

#### Section 6691. Application Restrictions.

Proposed section 6691 provides for time and distance restrictions on pesticide applications near a schoolsite.

As discussed above, DPR's evaluation of available data and current requirements indicates that when pesticides are used in compliance with label instructions and applicable regulatory restrictions the health risk to children and others is low. However, given the large number of applications around schools, the potential for exposure, while small, is still present from applications that may present unusual problems or violations. Proposed section 6691 will provide an extra margin of safety in event of unintended drift or other problem applications.

DPR proposes to implement restrictions based on pesticide type and application equipment for pesticide applications made near schoolsites beginning October 1, 2017, Monday through Friday during the hours between 6:00 a.m. and 6:00 p.m. DPR proposes that the operator of the property to be treated, as well as the pesticide applicator, are responsible for ensuring the required minimum distance is maintained between the treated area and a schoolsite based on the type of pesticide and type of application equipment used. The minimum distance is one-quarter mile for applications that

have a relatively higher potential to move off the application site, and 25 feet for most other applications.

For this regulation, DPR classifies pesticides in four categories (The type of pesticide is based on the final form applied, not product formulation. For example, if a powder is mixed with water and then applied, this is considered a liquid application.):

- dust and powder
- fumigant
- granule, flake, and pellet
- all other pesticides (mainly liquids)

DPR classifies application equipment into nine categories:

- airblast sprayer
- aircraft
- backpack sprayer
- bait station
- field soil injection equipment
- ground-rig sprayer
- hand pump sprayer
- sprinkler chemigation
- all other equipment (mainly chemigation equipment other than sprinkler)

Where applicable, the application equipment categories are consistent with the ones listed in the existing regulatory definition (section 6000) for “ground-based application equipment,” including backpack sprayer, field soil injection equipment, hand sprayer, granular applicators, and ground-rig sprayer.

Proposed subsection (a) specifies that there must be at least one-quarter mile distance between the treated area and a schoolsite for pesticide applications using an aircraft, airblast sprayer, sprinkler chemigation equipment, dust or powder (with the exception of applying a dust or powder using field soil injection equipment -- then no distance is required), and fumigant. These types of applications have higher potential for drift and higher exposure to bystanders.

With some exceptions and excluding those applications listed in (a) that require a one-quarter mile distance, proposed subsection (b) specifies the pesticide applications that require at least a 25-foot distance between the treated area and a schoolsite. These types of applications have lower potential for drift and lower exposure to bystanders. These applications include using a ground-rig sprayer; field soil injection equipment (except when applying a fumigant); and all other application equipment that are not one of the other seven application equipment types identified in this section (except when using dust, powder, or fumigant). The exceptions to applications that require the minimum 25-foot distance restrictions specified in (b) are identified in either proposed subsections (c) or (d) where no minimum distance is required. Twenty-five feet is consistent with the minimum distance for pesticides with buffer zones to mitigate acute bystander exposure as specified by labels, and/or DPR requirements, including U.S. EPA's recent revisions to its Worker Protection Standard regulation. The 25-foot distance in the proposed regulation will provide a consistent minimum level of protection for all pesticide applications near schools/child day care facilities.

Consistency with current buffer distances will also make compliance and enforcement oversight easier.

Proposed subsection (c) identifies the types of application where there is no distance restriction. This includes applications made within an enclosed space, such as a greenhouse (except when applying fumigants), using bait stations, backpack sprayer (except when used to apply a dust or powder), hand pump sprayer (except when used to apply a dust/powder or fumigant), and granule/flake/pellet (except when applied by aircraft or as a fumigant). These types of applications have little or no potential for drift, and little exposure to bystanders. Additionally, proposed subsection (d) specifies that there is no distance restriction between the treated area and a schoolsite when school classes are not scheduled the day of application or the child day care facility is closed during the entire day of the application. No distance restriction is needed because no emergency preparedness or response by a school or day care facility is needed on weekends, holidays, or other days when the schoolsite is not in session. This also provides flexibility and incentive for growers to apply when children are not likely present.

Proposed subsection (e) specifies an additional restriction for fumigants. Due to their potential to volatilize after application, DPR proposes to require an additional 36 hours between the end of the application and when children can be in classes or occupy a child day care facility. This requirement is consistent with label requirements for three of the four field fumigants registered in California. U.S. EPA did not evaluate and make label changes for 1,3-dichloropropene at the same time as the other fumigants. As with the other fumigants, this requirement will help address emergency preparedness in case of unintended emissions after fumigation, such as loss of the tarp covering the field. Additionally, a consistent requirement for all fumigants will make compliance and enforcement easier. Therefore, this is an additional requirement only for products that contain 1,3-dichloropropene as the sole active ingredient.

Subsection (f) provides an opportunity for schools, growers, and the county agricultural commissioner to negotiate written agreements on site-specific practices that all parties agree will provide the same or greater protection as the proposed restrictions in subsections (a)-(c). Proposed subsection (f) promotes communication between growers, schools/child day care facilities, and the county agricultural commissioner to address unique situations not considered by the proposed regulations and provides the flexibility to tailor enforceable restrictions based upon local conditions. For example, this provision can be used to provide additional requirements for athletic events or other extracurricular school activities. Extracurricular activities vary from school to school and from day to day, making standard application requirements infeasible. Further, some of the application restrictions in subsections (a)-(b) may be infeasible due to the wide variety of crops, locations, and pest management practices in California. Practices that would provide greater protection include, but are not limited to: using organic production methods, using application methods with lower drift potential (e.g., precision spray technology that varies the amount of pesticide applied), or limiting the size or number of applications. Any agreement reached under this subsection is specifically designated by the proposed regulation to be enforceable as if it were a regulation, making the commissioner an essential party to the agreement.

## Section 6692. Annual Notification.

Proposed section 6692 provides for an annual notification to schoolsites of expected pesticide application and the contents of that notice.

DPR proposes a two-part notification to schoolsites--annual notification (discussed in this section) and an application-specific notification (discussed next under proposed section 6693). The annual notification is consistent with notification required under the Healthy Schools Act that requires schoolsite administrators to notify parents of pesticides anticipated to be used on school property.

Beginning in 2018, DPR proposes to require annual notification by operators of the property (as defined in section 6000) used for the production of an agricultural commodity. The annual notification must include expected pesticide applications to any area within one-quarter mile of schoolsites in the upcoming period of July 1 through June 30. Notification is needed to assist schools and child day care facilities in responding to potential inquiries from parents, and to react appropriately to any problems associated with nearby pesticide applications. The notification proposed by DPR will enable schools and child day care facilities to incorporate this information with their emergency preparedness and response documents and procedures.

Proposed subsection (a) specifies that annual notification must be provided to the affected schoolsite by April 30 of each year. This date coincides with the latest date for schools to have sufficient time to incorporate the annual notification information with the other pesticide information provided to students and parents under the Healthy Schools Act. Although DPR lacks legal authority to require schools or child day care facilities to notify parents, this time frame will facilitate the ability of schools and child day care facilities to provide notification to parents, students, and staff of agricultural pesticide applications near schoolsites if they choose to do so because it will correspond with the notices they must provide parents under the Healthy Schools Act. DPR anticipates the regulations will become effective September 2017. For that first annual cycle, DPR intends to reduce the delay in schoolsites receiving the first annual notification. Therefore, DPR proposes to require the operator of the property to provide notification for applications expected to be made from January 1, 2018 through June 30, 2018 by October 1, 2017.

Proposed subsection (a) also specifies that the operator of the property to be treated must provide the annual notification to the school principal and the child day care facility administrator when application of pesticides is expected within one-quarter mile of the schoolsite. The principal and administration may also designate up to two employees to receive the annual notification. The designation of employees is discussed in proposed subsection (c). In addition, the county agricultural commissioner must be notified pursuant to subsection (a)(3).

DPR's economic analysis of the proposed regulation estimated that growers would have provided 4,821 annual notifications to 3,499 schoolsites statewide during July 2013 – June 2014. The average schoolsite would have received 1.4 annual notifications. Since the area affected increases or decreases exponentially with distance, the number of notifications would be expected to change exponentially.

For compliance and enforcement purposes, proposed subsection (b) requires the annual notification to be in writing. The annual notification must provide sufficient information to the affected schoolsites by identifying which pesticides will be applied and where, and who will make the applications. DPR proposes the annual notification to include the following information:

- subsection (b)(1): a summary explaining the operator of the property's requirement to provide annual notification. This will provide schoolsites with the basis for why they are receiving such notification.
- subsection (b)(2): a summary explaining when the school or child day care facility will receive application-specific notifications, and that there is an opportunity for the principal or administrator to waive their right to receive such notification. This is further discussed in proposed section 6693(e).
- subsection (b)(3): a summary of the applicable pesticide application distance and time restrictions specified in section 6691 so the schoolsites will be aware of the restrictions relevant to particular applications. For example, if a grower makes aerial applications, but does not apply fumigants, the grower's annual notification would include a summary of the aerial application restrictions in section 6691(a)(1) and would not include the fumigant restrictions. Including only the applicable restrictions rather than all restrictions will provide more concise information, making it easier for growers to describe and for schoolsite staffs to understand.
- subsection (b)(4): the operator of the property's name and contact information.
- subsection (b)(5): a map showing location of the field(s) to be treated and the school or child day care facility. This will provide visual reference of anticipated applications.
- subsections (b)(6),(7) and (10): county agricultural commissioners contact information, the Web site address for the National Pesticide Information Center, and informational statement on contacting the county agricultural commissioners. This provides sources of information or additional facts on pesticides, as well as contact information for non-emergency situations. Schools and child day care facilities can incorporate this information with their emergency preparedness and response documents and procedures.
- subsection (b)(8): example pesticide product name(s) expected to be used; name of the active ingredient or principal functioning agent for a spray adjuvant; and the U.S. EPA or California registration number. Since the available products could change over the course of the year, the annual notification would only include examples of pesticide products. The actual pesticide to be used will be provided in the application-specific notification.
- subsection (b)(9): the option for the principal or administrator to designate up to two employees to receive annual and application-specific notification. This is further discussed in proposed subsection (c).
- subsection (b)(11): a description of the option to negotiate an alternate application-specific notification. This is further discussed in proposed section 6693(f), and agreements for alternate application restrictions were previously discussed in proposed section 6691(f).

Proposed subsection (c) allows the school principal and child day care administrator the option to designate up to two employees to receive the notifications. This will ensure that the schools and child day care facilities receive the notifications in case of absence or personnel changes. If the principal or administrator chooses to designate additional employees, the county agricultural commissioners must receive the contact information in writing for compliance and enforcement purposes.

Proposed subsection (d) describes the operator of the property's recordkeeping requirement. The annual notification must be retained for two years. This is consistent with other record retention times currently required by the property operator. Additionally, the notification must be made available upon request by the Director or county agricultural commissioner. Existing 3 CCR section 6140 provides inspection authority for the Director or county agricultural commissioner necessary to ensure compliance.

#### Section 6693. Application-Specific Notification.

Proposed section 6693 provides for notification to schoolsites prior to specified pesticide applications and the contents of that notice.

Application-specific notification is the second part of the two-part notification system. This notification will provide more detailed information about specific applications allowed to take place within one-quarter mile of the schoolsite pursuant to section 6691(b). As described above, this is consistent with notification required under the Healthy Schools Act and will allow schools and child day care facilities to coordinate the information they are already sending under the Healthy Schools Act with the new agricultural application information when forwarding notifications to parents, students, and staff without becoming so regular and routine to parents that the notices lose significance. DPR's economic analysis of the proposed regulation estimated that growers would have provided 24,527 application-specific notifications to 3,499 schoolsites statewide during July 2013 – June 2014. The average schoolsite would have received 7.0 application-specific notifications. Since the area affected increases or decreases exponentially with distance, the number of notifications would be expected to change exponentially. Again, DPR lacks legal authority to require schools or child day care facilities to notify parents.

DPR proposes to make the application-specific notification requirements effective on January 1, 2018 to provide sufficient preparation time for schoolsites and growers. Schoolsites need time to designate the appropriate staff to receive the notifications, develop templates and processes for notifying parents and staff, and develop information and processes to handle inquiries from parents and staff. Growers need time to prepare a template for notifying schoolsites and county agricultural commissioners, and identify staff and develop processes to notify schoolsites and county agricultural commissioners.

In subsection (a), DPR proposes that the operator of the property to be treated, as well as the pesticide applicator, provide application-specific notification of applications listed in section 6691(b). Application-specific notification is not required for other applications because they are either prohibited within one-quarter mile of a schoolsite, Monday through Friday, 6:00 a.m. to 6:00 p.m. [section 6691(a)], or they are exempted [section 6691(c)].

DPR proposes that the property operator and the pesticide applicator arrange to provide a single application-specific notification to the schoolsite. While this may seem more complicated than having one person responsible, compliance and enforcement should be easier because it is consistent with the notice of intent requirements for restricted materials.

DPR proposes a time period of Monday through Friday, 6:00 a.m. to 6:00 p.m. because the application-specific notification will provide information when children are most likely to be present on the school grounds. Additionally, no emergency preparedness or response by a school or child day care facility is needed on weekends, holidays, or other days when the schoolsite is not in session, and the ability to avoid the application-specific notification requirement may provide incentive to apply when children are not likely to be present. For activities that may occur at schools outside the specified time period, the existing regulatory requirement for the applicator to evaluate if there is a reasonable potential for contamination to people or property from the application, and the prohibition on making or continuing the application if there is such a reasonable possibility, still applies (3 CCR section 6614).

These application-specific notification exemptions are consistent with the application restriction exemptions proposed section 6691(c-d).

In subsection (b), DPR proposes to require the operator of the property to be treated and pesticide applicator to assure that application-specific notification is provided in writing to schools and child day care facilities at least 48 hours prior to application. DPR proposes to require the application to take place within 4 days of the earliest date specified in the notice, or the operator of the property to be treated or applicator will have to provide a new notification. Whether or not the new notification must be provided at least 48 hours prior to the application depends on when the new notification is submitted. The new notification does not need to be provided 48 hours prior to the application if it is submitted within four days of the date specified in the original notification. The new notification must be provided at least 48 hours prior to the application if it is not submitted within four days of the date specified in the original notification. For example, if the notification indicates that the application is intended to occur on March 1, the application may occur any time between March 1 and March 4. If the application does not occur during that time period, the applicator may submit a new notification on March 4, with an intended application date of March 5. The application may then occur March 5 through March 8.

DPR proposes at least a 48-hour initial notification because (1) this is consistent with other notification requirements, such as a notice of intent submitted to the county agricultural commissioner for restricted materials such as fumigants; and (2) it provides sufficient time for schools and child day care facilities to forward the notification to staff, students, and parents; a shorter notification time period would give schools and child day care facilities insufficient time to forward the notification. Requiring application-specific notification earlier than 48 hours would be detrimental to good pest management, with more applications made on a regular schedule rather than monitoring for pest levels and applying when needed, potentially leading to more applications.

The “four-day window” for an application to take place is consistent with the window for a notice of intent required to be submitted to the county agricultural commissioners for the application of a restricted material. Consistency with notice of intent requirements will lessen the burden on the operator of the property to be treated because the notice of intent can also serve as the application-specific notification to the commissioner required in proposed subsection (d).

DPR proposes the following information to be required in the application-specific notification:

- Subsection (c)(1): a summary of the legal requirements to provide application-specific notification.
- Subsection (c)(2): information previously provided in the annual notification - the operator of the property information, map showing location, county agricultural commissioner information, National Pesticide Information Center Web site.
- Subsections (c)(3-10): information about the pesticide(s) to be applied, including the name of each pesticide active ingredient or principal functioning agent for a spray adjuvant, product name(s), registration number; an indication if the active ingredient was not listed in the annual notification; specific location of the application; number of acres to be treated; method of application; and earliest date and time of the application.
- Subsection (c)(11): a statement that provides sources of information for emergency and non-emergency situations.

The application-specific notification provides information to identify when, where, and how a specific pesticide will be applied. This will assist schools and child day care facilities in responding to pesticide inquiries and emergencies. DPR proposes subsection (c)(6) to alert a school to the fact that use of an active ingredient was not anticipated and therefore not included in the annual notification.

Proposed subsection (d) requires the operator of the property to be treated to submit application-specific notifications to the commissioner for compliance and enforcement purposes, as well as to assist the commissioner in responding to any questions from schools or child day care facilities. To lessen the burden on the operator of the property, a notice of intent for a restricted material can be submitted in lieu of an application-specific notification, provided the notice of intent indicates that the application is within one-quarter mile of a schoolsite.

Proposed subsection (e) provides flexibility for a principal or administrator by providing them with the option to waive their right for application-specific notification. Based on the stakeholder discussions, some schools and child day care facilities may opt out for several reasons, such as (1) being unable to immediately forward the application-specific notifications to parents; (2) concerns with the time, workload, and cost of forwarding the notifications; (3) concerns about decrease in student attendance and associated decrease in school funding if they choose to provide the notification to parents; or (4) concerns about any liability associated with the notifications.

Proposed subsection (f) allows the operator of the property to be treated, the principal of the school or the administrator of the child day care facility, and county agricultural commissioner to develop a written agreement with alternative application-specific notification. This subsection provides a means for additional communication between growers, schools/child day care facilities, and county agricultural commissioner as well as provides flexibility for several situations. For example, this subsection can be used to provide additional requirements for athletic events or other extracurricular school activities. The extracurricular activities vary from school to school and from day to day, making standard notification infeasible.

Proposed subsection (g) describes the requirement to keep records of application-specific notifications for two years, for compliance and enforcement purposes.

## CONSULTATION WITH OTHER AGENCIES

DPR consulted with the California Department of Food and Agriculture during the development of the text of the proposed regulations, as specified in FAC section 11454 and the February 6, 1992, Memorandum of Agreement developed per FAC section 11454.2.

DPR has also consulted with the California Agricultural Commissioners and Sealers Association at a Pesticide Regulatory Affairs Committee meeting.

## ALTERNATIVES TO THE PROPOSED REGULATORY ACTION

DPR has not identified any feasible alternatives to the proposed regulatory action that would lessen any adverse impacts, including any impacts on small businesses, and invites the submission of suggested alternatives.

DPR considered several alternatives to the proposed regulatory action. One alternative is to select a distance other than one-quarter mile as the trigger for most of the requirements. As described above, DPR selected one-quarter mile because it is consistent with requirements for fumigants and application of restricted materials in several counties, and the legislative intent of FAC section 11503.5. It also likely addresses pesticides illnesses that have been documented previously. DPR considered distances from one-eighth to one mile. A shorter distance would lessen the impact to businesses, but provide a lower margin of safety for children. Conversely, a longer distance may increase the margin of safety for children, but would increase the cost to businesses. The change in the margin of safety by increasing the distance would be speculative because objective analysis indicates that only unintended drift or problem applications near schools pose a potential risk. The impact to businesses largely depends on the number of acres affected by the proposed regulation, which increases exponentially as the distance that triggers the requirements increases.

A second alternative is to select a subset of pesticides for the proposed regulatory action. For example, only include restricted materials or products designated as Toxicity Category One with a “DANGER” signal word shown on the label. However, this would complicate compliance and enforcement. If school/day care staff or other people see an application within the minimum distance they would either need to assume that it uses an allowed pesticide, or report numerous possible violations to the county agricultural commissioner. In addition, while pesticides bearing the “DANGER” signal word may present the potential for more serious health risks, there can be adverse health impacts to exposure to pesticides in other categories as well.

A third alternative is to include more or fewer schoolsites. DPR considered including private K-12 schools, and considered excluding both family day care homes (excluded in the proposed regulations) and other child day care facilities. However, private K-12 schools are not included in the Healthy Schools Act and consistency with current law is an important factor when drafting regulation. In addition, the inclusion of these schools would increase the cost to regulated entities. When considering whether to exclude all child day care facilities, we noted that their inclusion essentially doubled the number of schoolsites and the cost to businesses. However, we also noted that these children may be the most vulnerable to pesticide exposure and child day care facilities that are not family day care homes are included in the Healthy Schools Act.

## EVIDENCE SUPPORTING NO SIGNIFICANT ADVERSE ECONOMIC IMPACT ON BUSINESS PURSUANT TO GOVERNMENT CODE SECTION 11346.2(b)(5)(A)

While the proposed regulations will have a statewide economic impact directly affecting businesses, the impact will not be significant, including the ability of California businesses to compete with businesses in other states. As described in DPR's memorandum entitled "Estimated Economic and Fiscal Impact of the Proposed Regulation to Address Pesticide Applications Near Schoolsites," DPR relied on a report prepared for the California Department of Food and Agriculture by the Department of Agricultural & Resource Economics at UCD. UCD evaluated 13 major agricultural counties, and three key provisions of the proposed regulation.

Using similar methodology, DPR extrapolated the impacts determined by UCD for the 13 target counties to all counties statewide. Using pesticide use report data for July 2013 through June 2014, DPR estimated the following would have been affected by the proposed regulation:

- 3,499 schoolsites one-quarter mile or less from an agricultural field (13 percent of all schoolsites).
- 4,821 agricultural fields one-quarter mile or less from a schoolsite (10 percent of all fields).
- 2,519 growers operating these fields (3 percent of all growers).
- 2,312 small businesses (91.8 percent of the affected growers).
- 137,483 pesticide applications to these fields (11 percent of all applications).
- 9,933 acres of almonds (0.9 – 1.2 percent of almond acreage).
- 10,158 acres of grapes (0.9 – 1.3 percent of all grape acreage).

DPR estimated the cost to make the notifications required by the proposed regulation during this one-year period would have been \$3.3 million, and the loss due to the proposed prohibitions would have been \$1.2 million. Total grower cost would have been \$3.3-\$4.5 million for an average cost of \$1,328-\$1,795 for each affected grower, with the same cost per grower whether or not the grower was a small business. DPR assumed that the indirect costs were the same as the direct costs, for a total economic impact ranging from \$7.8-\$9.0 million.

## ECONOMIC IMPACT ASSESSMENT PURSUANT TO SECTION 11346.3(b)

**Creation or Elimination of Jobs within the State of California:** The proposed action will not likely create or eliminate jobs within California. DPR proposes to add new requirements for pesticide applications near schools and child day care facilities, likely only causing changes to current pesticide application practices. Changes may include shifting the day or time of pesticide applications, using different application methods, or using different pesticides. Those changes will not have a significant impact on California businesses, and therefore will not lead to the creation or elimination of jobs within California.

**Creation of New Business or the Elimination of Existing Businesses within the State of California:** The proposed action would not create or eliminate existing businesses currently doing business within the State of California. The intent of the proposed regulation is to only change practices when applying pesticides near schools and child day care facilities, and therefore will not lead to the creation or elimination of existing businesses within California.

The Expansion of Businesses Currently Doing Business within the State of California: The proposed action will not likely result in an expansion of businesses currently doing business within the State of California. The intent of the proposed regulation is to only change practices when applying pesticides near schools and child day care facilities, and therefore will not lead to the expansion of businesses currently doing business within California.

The Benefits of the Regulation to the Health and Welfare of California Residents, Worker Safety, and the State's Environment: The proposed action may reduce pesticide exposure to children and other bystanders, but the primary objective of the regulation is to provide an extra margin of safety for unintended drift and other problem applications. The proposed notification requirements will also enable schools and others to take additional voluntary actions to reduce pesticide exposures.

#### IDENTIFICATION OF ANY SIGNIFICANT ADVERSE ENVIRONMENTAL EFFECT THAT CAN REASONABLY BE EXPECTED TO OCCUR FROM IMPLEMENTING THE PROPOSAL

DPR's review of the proposed action showed that no significant adverse effect to California's environment can reasonably be expected to occur from implementing the proposal. Therefore, no alternatives or mitigation measures are proposed to lessen any significant adverse effects on the environment.

#### EFFORTS TO AVOID UNNECESSARY DUPLICATION WITH FEDERAL REGULATIONS

The proposed regulatory action does not duplicate or conflict with any regulations contained within the Code of Federal Regulations. There are no regulations within the Code of Federal Regulations that address this issue.

#### DOCUMENTS RELIED UPON

1. DPR. 2015. Meeting Summary | Workshops on Concepts to Address Pesticide Use Near Schools. Prepared by the Center for Collaborative Policy, CSU Sacramento.
2. Vidrio, E., P. Wofford, R. Segawa, and J. Schreider. 2014a. *Air Monitoring Network Results for 2013*. December 2014. Department of Pesticide Regulation.
3. Vidrio, E., P. Wofford, and R. Segawa. 2014b. *Methyl Bromide and 1,3-Dichloropropene Air Monitoring Results*. Memorandum to Marylou Verder-Carlos, dated September 24, 2014. Department of Pesticide Regulation.
4. Goodhue, R., K. Klonsky, C. DeMars, R.V. Steenwyck. 2016. Draft Regulation Regarding Pesticide Applications near Schoolsites: Potential Economic Effects for Agriculture. University of California, Davis. Prepared for California Dept. of Food and Agriculture, Office of Pesticide Consultation and Analysis.
5. Neal, R. and R. Segawa. 2016. Estimated Economic and Fiscal Impact of the Proposed Regulation to Address Pesticide Applications Near Schoolsites. Department of Pesticide Regulation. Memorandum dated July 25, 2016.

6. Lee, S-J., L. Mehler, J. Beckman, B. Diebolt-Brown, J. Prado, M. Lackovic, J. Waltz, P. Mulay, A. Schwartz, Y. Mitchell, S. Moraga-McHaley, R. Gergely, and G.M. Calvert. 2011. Acute Pesticide Illnesses Associated with Off-Target Pesticide Drift from Agricultural Applications: 11 States, 1998–2006. *Environmental Health Perspectives*. Volume 119, Number 8, pages 1162-1169. August 2011.