MEETING SUMMARY | Workshops on Concepts to Address Pesticide Use Near Schools

Department of Pesticide Regulation

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I. Background

The Department of Pesticide Regulation 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 the County Agricultural Commissioners (CACs). 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 concerns about agricultural pesticide use in fields surrounding schools on a statewide basis by adopting regulations that would require a notification provision and additional protective measures. The DPR conducted workshops in five locations around the state in May to June 2015 to gather input from stakeholders as it determines what measures are appropriate to enhance protection for California's schoolchildren. These informal public meetings preceded the formal rule-making process that will include an official comment period (expected to occur around December 2015).

II. Workshop Design

Workshops were held in five locations (Sacramento, Salinas, Ventura/Oxnard, Lamont, and Coachella) and occurred between May 28 and June 9, 2015. The workshops were separated into three meetings at each location. The early afternoon meeting was for school administration issues and was not open to the public. The afternoon meeting focused on grower and pesticide applicator issues and was open to the public. The evening public meeting focused on community, parent, and teacher issues. The evening public workshop included simultaneous Spanish translation (and additional languages provided upon request prior to a meeting). The community meeting held in Sacramento were also linked to a webinar. The webinar recording is available on the DPR website.

III. Welcome and Introductions

Chris Reardon, DPR Chief Deputy Director, welcomed workshop attendees and introduced DPR staff, CAC, as well as local and statewide elected officials.

IV. Workshop Purpose and Opening Remarks

Chris Reardon stated that the purpose of the workshops was to receive input on the development of new regulations for potential restrictions on pesticide use near schools to improve the safety of school children across the state. He acknowledged that the community has many concerns, and DPR staff have come to listen and learn from the community to develop meaningful regulations that respond to the range of interests.

Mr. Reardon then provided an overview of the process and timeline for developing regulations for pesticide use near schools. DPR will gather input from stakeholders as an initial phase. DPR invites the public to submit comments to DPR until **July 31, 2015** (See Section VIII below for comment submission information). DPR will then develop draft regulations and release the draft regulations for formal public comment around December 2015. DPR expects it will hold a public hearing around February 2016 and intends to have the regulations finalized by January 2017.

V. Current Requirements

George Farnsworth, DPR Enforcement Branch Chief, and Randy Segawa, DPR Special Advisor to the Director, provided an overview of regulations for pesticide use. Examples of current school requirements include the Healthy Schools Act (HSA), fumigant label requirements, and the San Bernardino County regulations. Mr. Farnsworth referred attendees to a document summarizing the concepts to address pesticide use near schools and supplemental appendices (See Appendices A and B).

VI. Regulation Concepts

Mr. Farnsworth then introduced two major regulation concepts to help encourage discussion–improved communication through notification to schools and additional regulations for pesticide applications to reduce exposure risks. Mr. Farnsworth explained that these regulation concepts are based upon feedback from many stakeholder groups and a survey conducted among CACs. DPR had requested all CACs to characterize any concerns related to pesticide use associated with schools that were submitted to CACs between 2011 and 2014. Mr. Farnsworth referred attendees to the document summarizing the complaints received by CAC that involved pesticides and schools (Appendix B).

VII. Key Interests and Ideas

The facilitator posed several questions related to improved communication and additional restrictions to help encourage discussion. DPR staff and CACs were available to answer clarifying questions. The information below highlights questions, concerns, and suggestions provided by workshop participants at all five workshop locations, and responses provided by DPR staff.

Major themes across all five workshops are presented first, followed by specific comments and responses grouped by category. Locations are included when the speaker provided location-specific questions or suggestions. The focus groups are indicated if the question or comment arose within only one or two of the focus groups. In addition to the discussion period, attendees had the opportunity to submit written comments to DPR. Recurring issues raised in the comment cards are also embedded in the major themes section. Transcribed written comments and other materials submitted to the DPR can be found in Appendix C.

Major Themes

Concerns and Suggestions

Across multiple focus groups and multiple workshop locales

- **Sustainability**. While attendees differed in whether they prioritized economic, public health, food security, and/or environmental sustainability, generally all attendees' questions and comments reflected long-term thinking and visions.
- **Effective and equitable**. Whatever regulations DPR develops for communication and/or pesticide applications, the regulatory system needs to be effective, implementable, and fair for everyone.
- **Considerations for the notification process**. Attendees posed several questions and issues they said DPR should consider when it develops notification requirements, including:
  - Who will be responsible for notifying and confirming notification? Who will be responsible for receiving the notifications and transferring the information to which parties?
  - What should be the notification methods?
  - What information needs to be in the notifications?

  - How far in advance should the notifications occur? If the notification process includes more parties, the notifications will need to be further in advance to account for the extended timeline (depending on the notification method).
  - Should notifications vary for different applications (e.g., aerial versus ground treatments, high versus low toxicity formulations, weekday versus weekend treatments, etc.)?
  - What is the cost for implementing the notification process, and what will be the funding sources?
- **Partnerships and collaboration**. Overall, attendees emphasized the importance of strong relationships among growers, schools, and the community to be better informed and aware of pesticide applications and associated risks; attendees said DPR should continue to support and strengthen these partnerships, when appropriate. Many attendees cited specific informal partnerships between growers and the community (e.g., growers would work with school staff to identify a mutually agreeable day and time period to apply pesticides). Some attendees said these voluntary partnerships were sufficient, while others said DPR should formalize the partnerships and develop required standards statewide.
- **Access to information**. Attendees highlighted the need for DPR to support clear, concise, and critical information that is easily accessible by any interested parties. Attendees provided several suggestions, including a central web-based searchable database and/or mobile app for proposed pesticide applications near schools. Several attendees also suggested the schools provide school calendars to neighboring growers.
- **Information and evidence-based regulations**. Attendees from all three focus groups said DPR should base the proposed regulations on sound evidence and the best available science. Attendees varied in what information sources they suggested (e.g., DPR monitoring stations, Department of Public Health, University of California Davis, etc.). Several attendees suggested DPR incorporate the communities' stories as anecdotal evidence. Attendees also said the regulations should include an adaptive management component such that the regulations continuously represent the best available information and practices.
- **Clear definitions**. Across all three focus groups, attendees said DPR will need to explain the scope of proposed regulations with clearly defined terms. Attendees specifically identified the following terms:
  - "Near/adjacent" - What will be the exact buffer distance between a pesticide application and school grounds?
  - "School hours" - Does that include school-sponsored activities that occur before and after typical school hours or the off-season (e.g., summer)?
  - "off-season" - Would pesticide applications occur during school offseason when there are fewer school activities?
  - "Schools" - Does that include any kind of school (e.g., nursery, private, public, child care centers, etc.)?
  - "Occupied" - How many individuals or what types of individuals (e.g., school-affiliated personnel, students, parents, and/or any individual) need to be on school grounds for the school to be considered as "occupied?"
  - "Safe" - How will DPR define what is considered "unsafe," since safety is relative to individual perception?
  - "Reasonable possibility" - 'Reasonable possibility of contamination in the body' is too ambiguous. What are the exact thresholds for determining pesticide contamination in the body?
- **Land-use planning.** Many attendees said greater collaboration with decision-makers is necessary in land use planning decisions. Land use conflicts are inevitable if decision makers continue to allow for schools and farms to exist in such close proximity without buffers.

- **Balance between statewide standards and local flexibility.** Many attendees stated the regulations should be simple and straight forward such that interested parties from varied backgrounds can understand the regulations. However, attendees also said that regulations need to support local flexibility, because California agriculture and community needs vary widely across the state.
- **Cost of implementation and funding sources.** Attendees from all three focus groups expressed concerns over the cost and funding sources to implement the future regulations over the long term.
- **Appreciation for the public meetings.** Attendees thanked DPR for providing a forum for anyone to learn and provide their input on pesticide applications near schools. Many attendees expressed their appreciation for the translators (Spanish, Triqui, etc.) during the general community focus group meetings.

Focus group-specific

- **Notifications**.
  - *School Administrators* - Many school administrators expressed concern that notification responsibility would overly-burden school staff and potentially create liability risks. They said school administration departments are very understaffed. School administrators envisioned various scenarios that could compromise their ability to provide timely notification. For example, if the notices occurred over a short period of time, there could be a situation where the assigned staff member is absent and notification does not reach the school community before the application actually occurs.
  - *Growers and Pesticide Applicators* - Generally growers and pesticide applicators said the costs of notification would increase operational costs beyond what many farmers can afford. Many individuals said more notification requirements may lead to too many notifications and negative indirect consequences (e.g., a notification for a high-risk application becoming lost amidst a multitude of low risk applications).
  - *Community Members, Parents, and Teachers* - Parents, teachers, and community members shared varied opinions on who should implement notifications. Many said the grower should be responsible for notifying schools of any pesticide applications (conducted in conjunction with and separate from notifications to CACs). Several attendees suggested DPR develop an automatic notification system to which concerned parties can subscribe.
- **Pesticide Application Regulations**.
  - *School Administrators* - Several school administrators said they saw benefits in additional regulations, while others questioned that sufficient evidence exists to justify new regulations. Generally, school administrators deferred to subject matter experts to determine the appropriate level of regulation for different types of pesticide regulations. A few school administrators said additional regulations should address pesticide drift; standardize distance buffers; and incorporate best management practices.
  - *Growers and Pesticide Applicators* - Generally, growers and applicators said additional regulations for pesticide application near schools are not necessary, because the current formal and informal practices work well. Because the DPR concept paper (Appendix A) said the risk to children from agricultural pesticides applied near schools is low for most pesticides, and the CAC survey to characterize pesticide inquiries related to schools said no investigations between 2011 and 2014 discovered an exposure incident or illness, several attendees did not believe additional regulations are necessary. They suggested DPR focus its efforts on improving communication to increase public awareness rather than develop additional pesticide application regulations.

- *Community Members, Parents, and Teachers* - Community members generally said the current system is inadequate and additional regulations are necessary. Several attendees disagreed with the DPR concept paper's conclusion that children at schools are at low risk of pesticide exposure and cited other studies and reports indicating the health risks and impacts of pesticides. Many said the issue of pesticide applications near schools is an environmental justice issue, because the schools near fields tend to serve primarily low income communities and communities of color. DPR should also consider the impact of pesticides on the farmworkers, general community, and overall ecosystem. Attendees said DPR should provide more outreach and help educate the community on pesticides.

Information Requested

The following lists attendees' requests for specific information:

- How many notifications would be disseminated (i.e., schools and CACs need to know the number of potential notifications to estimate their staff's level of effort)?
- How many interested parties want to be notified (e.g., teachers, parents, and other community members)? DPR will need this information to determine how comprehensive the notification process should be.
  - Department of Education Comment: Under the Healthy Schools Act, parents can request to be on a notification list for proposed pesticide applications on school grounds. Initially 20% of the list consisted of parents, but that number has decreased over the years.
- How many and which schools will the regulations affect?
- What are the criteria for a "difficult to evacuate facility?" What is the time needed to evacuate these designated locations?
- Does the State Department of Education have recommendations for how schools should process pesticide application notifications?
- How will DPR assess whether the notification process and/or the regulations are effective?
  - DPR Comment: Monitoring successful communication efforts could include measurable goals such as meeting with schools by a certain year.
- How many enforcement actions occurred last year for product label violations?
- How exactly will DPR analyze and use all the data as a decision-making tool? There is a vast amount of datasets and anecdotes with varied methods, time frames, reliability, etc.?
- Several individuals in Ventura and Oxnard raised concerns over how DPR safeguards schoolchildren from pesticides, specifically citing a situation in which the presence of the pesticide 1,3-dichloropropene (1,3-D) had exceeded the air quality targets from 2011 through 2013 in fields near Rio Mesa High School.
  - DPR Response: We have set another meeting for the DPR Director Brian Leahy to meet with the Ventura County Board of Supervisors on June 16 at 2:30 PM to discuss the details of this situation. We encourage any interested parties to attend the June 16 meeting to specifically discuss that issue.

Discussion

The following paraphrases additional individual comments and questions from attendees and includes DPR staff responses.

Health and Safety Concerns

- Several community members listed immediate health reactions to pesticides, including headaches, asthma attacks, nausea, diarrhea, eye pain, skin rash, etc. However, they said long term effects might include kidney failure, hormone disruptions, chronic respiratory issues, thyroid issues, neurological damage, cancer, etc., all of which may lead to a shorter life expectancy.
- Many growers, PCAs, and a few community members said growers and PCAs are highly concerned about public health and safety, especially near schools. They said growers, their families, and the field workers live in the same community as the fields, and their children often attend the nearby schools; therefore growers have the incentive to use pesticides safely.

Environmental justice issue

- Many attendees said that schools close to fields with high pesticide use tend to consist primarily of students from low-income and non-English speaking families. The California Department of Public Health (DPH) report states that Latino children in California are 91% more likely than white students to be exposed to the highest levels of hazardous pesticides. Attendees called upon DPR to address this environmental injustice immediately.
- Many attendees said that the health issues, that are likely caused or aggravated by pesticide exposure, are extremely costly to treat (e.g., medicine, doctor visits, hospitalization, etc.), and many of the families lack health insurance.

Schoolchildren and teachers

- Several teachers, parents, and other community members said they knew of children who attended schools next to farms who had major respiratory issues or developed cancer; some children died from these health problems.
- Comment: Children exposed to pesticides are more vulnerable than adults because they are still in their early developmental stages.
- Comment: Teachers also suffer from chronic exposure to pesticides and often miss school due to illness. Not only do the teachers suffer, but the students receive a lower quality of education.
- Comment: DPR should consider how to protect schoolchildren from pesticide exposure when they are not on school grounds (e.g., when children are on the bus or in route to school).
- Comment: Consider the psychological impact on children due to their physiological problems (e.g., more likely to have anxiety attacks).

Farmworkers and parents

- Many farmworkers said they suffered from major chronic ailments, which may be due to high pesticide exposure. They said they want DPR to help protect their families from experiencing similar hardships, including the psychological stress from observing their families in pain.
- Many farmworkers shared stories of instances when they felt their health or safety was a lower priority to those in charge. They mentioned incidents such as the farmer/grower provided little training to use chemicals carefully, dismissed health complaints, and/or sprayed while workers were in the field. A few attendees said more farmworkers wanted to attend the public meetings, but they feared farmers would avoid employing them in the future.
- Several health professionals said they were concerned about increasing birth defects among mothers who worked on farms and children with neurodevelopmental disorders. A few practitioners suggested DPR should consider how environmental agents affect the genetic makeup of children, especially children in utero.

Interconnections and general community

- Several community members said DPR should consider the interconnections between the farms, schools, community, and the overall ecosystem (e.g., parents who work on the fields can bring home traces of pesticides on their clothes or pesticides can seep into the ground and affect the groundwater).

- Comment (*Lamont*): Regardless of whether restrictions on pesticides around schools increase, children and families have homes in the fields and are still exposed to chemicals outside of school.

Cause or coincidence

- A few individuals offered the possibility that some of the health issues expressed at the workshops may be attributed to other variables such as smog. Several attendees said they worked on farms and did not have the same ailments that several other attendees identified.

Information, analyses, and evidence-based conclusion

Current monitoring and data evaluation

- Question: How did DPR arrive at the conclusion that the risk to children from agricultural pesticides applied near schools is low?
  - DPR Response: That conclusion is based upon DPR's continuous monitoring data for detecting pesticides in air, surface water, groundwater, and food. DPR analyzed the data to evaluate the potential risk, and most of the monitoring data thus far indicates the risk to children is quite low. There are exceptions, such as fumigants, and DPR established additional requirements such as buffer zones to address the higher risk.
  - Community Member Comment: DPR's conclusion regarding low risk exposure near schools is flawed. DPR has a large backlog of unfinished risk assessments, there are too few monitoring stations on or near school sites, and one of the monitoring stations is too far from schools to accurately represent pesticide levels near schools. Additionally, the CAC survey likely underestimates pesticide-related incidents due to low reporting rates; impacts may not be acute, people may not draw a connection between their health issues and pesticide exposure, and/or those most affected are non-English speakers.
- Question: Can you explain the wind monitoring methods more (e.g., can they detect off-gassing)?
  - DPR Response: The air monitoring network accounts for weather patterns such as wind speed and direction. We sample year-round and therefore could capture off-gassing indicators.
- Question: How does DPR select where to place air monitoring devices?
  - DPR Response: We consider several factors such as we need permission from the property owners (several schools have denied permission), the sampler needs to be in an area with free airflow and secure from vandalism, DPR needs to easily access it, and the device should be in an area with higher potential for pesticide exposure.
- Question: Are any studies conducted for agriculture pesticide residue on school sites? Can pesticides drift if they adhere to dust particles and strong winds carry those particles?
  - DPR Response: DPR is currently analyzing recently collected data from air monitoring studies that address those questions. The preliminary findings suggest some amounts of pesticides may be present, but below levels of concern. The findings also suggest pesticides may travel from farms that are far away from the monitoring site.
  - DPR Comment: Drift is illegal, and CACs conduct the investigations when drift is discovered. CACs can issue fines and work to establish corrective measures to prevent future drift.
- Comment (*Coachella*): The Salton Sea has a noticeable amount of residual pesticides and toxins.
  - DPR Response: At this time, DPR does not conduct monitoring near the Salton Sea, but that could be considered in the future.

Analyzing submitted pesticide complaints

- Question: What is DPR's process for evaluating complaints? Does it give greater weight to concerns based on actual evidence rather than speculation or misinformation?

  - DPR Response: Our goal is certainly to characterize the real issues.

Need evidence-based regulations

- Comment: DPR needs to develop additional restrictions objectively that are evidence-based and separate from outside interests who may use strategic tactics to influence DPR decisions.

Need long-term, independent studies

- Comment: More studies need to analyze the long term effects of chronic, low-dose exposure to pesticides, especially for young children. Studies should also explore the effects of a combination/interaction of different pesticides.
- Many community members said DPR should have an independent research body evaluate an active ingredient's impacts on human and environmental health. Several individuals voiced their distrust in any study results from the pesticide manufacturer or distributor.
- Several community members said chronic exposure studies need to be longer than four years. At elementary schools, children attend that school for more than four years, and the young children are physiologically vulnerable in their early developmental phases. Teachers and staff may also be exposed to nearby pesticide applications for over a decade.

Monitoring

- Several attendees suggested DPR provide a method for citizen science, such as self-monitoring test kits. Another individual said he received air sampling devices and sampling method guidance from a Pesticide Action Network staff scientist.
- A few community members said the grower should pay to monitor their pesticide applications, place monitoring stations on school sites, and conduct ongoing third party testing. The burden of proof that there are no toxic levels of pesticides should fall on the grower.
- Comment: DPR needs to establish more monitors statewide.

Education and Outreach

Existing outreach efforts

- Comment: Organizations and programs exist, such as SpraySafe, which help educate those in the agriculture industry to use pesticides correctly and responsibly. SpraySafe has several chapters throughout California (not in Coachella).
- A few school administrators said that in general, the HSA is increasing awareness about pesticide use on and around school grounds. However, it applies only to kindergarten through 12th grades. Preschools and colleges are not required to follow these protocols.

Need for improved communication and outreach

- Several school administrators and growers shared examples of incidences when public concerns drastically escalated when there was no imminent danger. School administrators said they did not have information readily available to assuage community concerns early.
- Comment: The perception issue is a major challenge for farmers and applicators. Homeowners can apply any pesticide amount, without protective clothing, and close to schools. Growers and applicators using the same pesticide wear protective clothing and follow the pesticide regulations, but the public perceives the grower or applicator's actions as dangerous.
- Question: How can DPR support accurate information sharing and avoid situations such as misinformed concerns spreading rapidly through communities?
- Question: Is there a greater need to manage risk (i.e., regulations) or manage public perception (i.e., outreach and education)?

  - DPR Response: We want to find a balance between managing risk and perception. We also want to ensure we fund efforts wisely. For example, diverting funds away from field worker safety to address misperception issues is a poor use of funds.
- Comment: Increased awareness and strong relationships among the different parties will help offset general concerns.
- Question: Is there a process for informing school staff managers of these issues, such as when managers receive IPM training?
  - DPR Response: No pesticide application training requirements currently exist for school staff. However, informal arrangements may exist at specific sites.
- Comment: DPR needs to provide a safe and confidential method for anyone to submit complaints, otherwise farmworkers may not raise concerns about pesticide misapplications. CACs should have a toll-free number for anyone to call if they have concerns regarding pesticide applications near schools and a Spanish-speaking staff person to collect and process complaints in Spanish. CACs should also protect the concerned party's confidentiality because several students' parents may work for the grower.
- Comment: DPR should help educate those who use pesticides, but are not licensed professional applicators. Many of these non-professionals make mistakes, creating health hazards for themselves and those around them.
- Several attendees said the public generally acknowledges the importance of agriculture in California, but the public also views pesticides negatively. A few individuals discussed the possibility of relabeling pesticides (e.g., plant protection products) and conduct more outreach to shift public perception.
- A few school administrators said school staff need more outreach to encourage staff to do their part and avoid bringing toxic materials into the classrooms.
  - DPR Response: DPR does provide HSA/IPM guidance and training (contact lisa.estridge@cdpr.ca.gov for more information on outreach). New IPM teacher training requirements go into effect Jul 1, 2016 that allows for fines up to $5,000.
- Comment: Children also need to be educated on the issues and learn how to be safe around chemicals. Perhaps develop visuals and learning materials that children can easily understand.

Issues to include in outreach

- Many attendees from all three focus groups said DPR, CACs, and schools should celebrate the successes of the current practices and methods (e.g., the most acute toxic pesticides are banned in California). DPR should help educate the public about the advancements in farming methods and policy since the 1960s. DPR has a good safety track record due to this framework, and California has the most stringent restrictions in the country through its state and county restrictions, the PCA licensing process, and the pesticide application permitting process. California also conducts comprehensive monitoring through random field sampling, inspections, and monitoring stations.
- Several school administrators suggested utilizing the IPM program to disseminate information to teachers and parents. Some school districts send students home on the first day of school with Integrated Pest Management (IPM) information in English and Spanish. Schools could include similar information about neighboring growers to support building relationships between growers and the community.
- Comment: Individuals will often cite the pounds of pesticide material applied around schools; however, they do not differentiate between low risk and higher risk materials. If a grower uses a less toxic pesticide (e.g., certified organic pesticides), then the grower will often need to conduct more applications. The amount of pesticide material applied is not an accurate indicator for estimating health risk.

- Comment: Provide factsheets with the chemical information, application methods, and treatment/decontamination instructions, etc. to schools.
- Comment: Doctors need to be trained to diagnose pesticide-related symptoms.
- Comment: Anyone who uses pesticides, including school staff and homeowners, needs training to safely handle pesticides.
- Comment: Education regarding the need for pesticide applications near schools for public health purposes is also important (e.g., need pesticides to address fire ants in southern California).

Access to information

- Attendees' specific suggestions included: provide risk assessment information guidance, consolidate and summarize the existing evidence on the DPR website, provide web-based maps or a mobile app to locate all schools near farms, provide a glossary of terms and issues summaries, make CAC workplans available to the public, etc.
- Many attendees suggested that DPR provide information in region-appropriate languages (e.g., Spanish and indigenous dialects).
- A few community members said DPR should make sure the State Department of Health can access DPR's monitoring data.

Remote or absent property owners

- Question: How can DPR support communication and partnerships between schools and absentee farm owners? Timely notifications may be difficult to coordinate if the farm owner is consistently absent.

Unbiased outreach and education

- Several attendees expressed concerns regarding who would conduct the outreach and using what information. They said outreach efforts should include a fair and accurate representation of the available information.

Notification - Current Methods

- Question: Are farmers currently required to notify schools of pesticide applications near schools?
  - DPR Response: It depends on the type of pesticide and application method. If the pesticide active ingredient is categorized as "restricted," then the grower must submit a Notice of Intent (NOI) to the local CAC at least a certain number of hours/days prior to application (the minimum time requirement varies depending on the active ingredient). Additional requirements such as notifications to neighbors or schools depend on the local county restrictions. Non-restricted pesticides do not have notification requirements.
- Question: State regulations exist that require proposed pesticide notifications be sent to parents and schools, correct?
  - DPR Response: Notification requirements through the HSA apply only if the pesticide is utilized on school grounds. No state regulations exist regarding notifications for pesticide applications near school grounds. These public workshops are part of DPR's outreach efforts as it considers regulations for pesticide applications near school grounds.

Notification Requirements - Suggestions/Considerations

- A few school administrators recommended the notification process directly include parents, while others expressed concerns regarding the level of effort and potential liability.
- A school administrator said growers or CACs should inform the school district-level risk management and facilities maintenance departments.

- Several community members suggested schools directly notify parents of proposed pesticide applications. The grower should notify schools and CACs independently such that one does not rely on the other to transfer the information.
- Comment: Notifications need to go to a specific person, not the general office of the school district or individual school site. That person then requires adequate supervision to ensure proper notification dissemination.
- Growers and applicators said notifying schools is easier than notifying neighbors. Schools have a system to provide widespread messaging quickly, growers and applicators lack these tools. Mailing takes several days, and the property owner may not check his/her mail every day.
- Many individuals said coordination between schools and growers can be challenging, because school activities occur on the weekends and outside of "regular" school hours.
- Comment: The best day/time for a pesticide application, according to the school's schedule, may not align well with on the ground agricultural conditions.
- Several attendees suggested that schools should provide their school schedules, including extracurricular activities, to the local CAC and nearby farms.

Variations for notifications

- DPR should develop less restrictive notification requirements for chemicals/application methods that are less toxic.
- Question: Should growers/CACs notify schools during "off-hours" (e.g., holidays, weekends, etc.) if school staff are absent? If yes, who would growers/CACs notify?
- A few school administrators said DPR should allow schools to opt-out of receiving pesticide application notifications if schools may be held liable for communicating notifications to on-site staff and parents.

Notification methods

- Comment: Phone call notifications are easier than print notices. Printing and translating notifications are very costly. However, phone calls do not necessarily guarantee parents receive the notification. E-mail may be a more preferable method.
- Question: How will DPR provide notification information to parents or students that are without web access, phone numbers, etc.?
- Comment: Perhaps the schools and parents could organize a phone tree to disseminate information as a low-cost method of notification.
- Comment: Notification should include auto-dialing and automatic e-mails to teachers and parents.
- Comment: For schools, parents, and the general public, notices should be publicized on television, radio, and in the newspaper. Notifications should be in large font and in the local languages appropriate to the region.
- Comment (*Lamont*): The majority of parents in this area do not have internet or computers. Many growers also do not currently use e-mail.
- Comment: Growers or applicators could personally deliver notifications to schools (and follow-up with an e-mail for record-keeping purposes).
- Comment: Analyze other organizations/programs' notification system (e.g., PG&E scheduled power outage notifications).
- Comment: DPR sponsored a pilot project in Kern County that utilized Geographic Information Systems (GIS) capability to map the extent of scheduled pesticide application for the 38 restricted materials. Every site/establishment within a certain proximity to the application receives a notification. The program can incorporate other pesticide active ingredients.

Notification timing

- Community members and school administrators provided a wide range for the suggested notification time - 48 hours to 2 weeks. Many individuals said 24 hours advanced notice is too short; many preferred one week advanced notice for proposed pesticide applications near schools.
- Several individuals from all three focus groups said one week advanced notice may not serve as a practical standard. Growers and applicators would send a huge amount of notifications to CACs, then cancel due to weather conditions. They suggested DPR allow for varied notification timing requirement to address unforeseeable changing conditions such as weather or sudden pest infestation.

Notification content

- Attendees suggested several pieces of information to include in pesticide application notices, such as the timing, amount, and duration of the pesticide; method of application; the pesticide ingredients; the chemicals' material safety data sheets (includes health risks, treatment, handling and storage, etc.); and farmer and CAC contact information.

Funding and resources for notification

- Comment: If the notification process becomes too complicated, either the grower, CAC, or schools will need to hire additional staff to take on these specific responsibilities.

Pesticide Application Regulations - Current Voluntary and Required Processes

Current methods and requirements for pesticide applications

- Many growers and certified pest control advisors (PCAs), and several school administrators and community members, said California already has the most stringent pesticide application regulations in the nation, as proven by the lack of pesticide-related incidents compared to other areas.
- School administrators said school districts have to follow the Healthy Schools Act when pesticides are applied at schools. Requirements include notification to parents if on-campus spraying is scheduled to occur.
- Growers and PCAs shared several experiences about their current practices and efforts to not only comply with federal, state, and county restrictions, but also support safe pesticide applications near schools. For example, PCAs work with growers to develop the least toxic effective pest management strategy and growers apply pesticides at night or on the weekend. Several PCAs said they undergo thorough and ongoing training to maintain their licenses to help ensure safe pesticide applications.
- Several growers and PCAs said pesticide applications are expensive; applicators and growers apply only what they need and have the incentive to prevent pesticide over-use.
- Question: Are there any pesticide regulations instituted by the Air Quality Control District?
  - DPR Response: No, it does not regulate pesticides.
- Question: Are there counties that have prohibited any pesticide applications near schools?
  - DPR Response: No.
- Question: Are there requirements such as buffer zones and notification processes for *all* pesticides?
  - DPR Response: No. There are approximately 200 pesticide active ingredients identified in California, about 38 of which are categorized as "restricted." Those 38 restricted materials have additional regulations, such as buffer zones. Fumigants are examples of restricted materials. No requirements (such as buffer zones or advanced notice) exist for non-restricted materials beyond what is on the product label.
- Question: Are there regulations that prohibit pesticide applications under windy conditions?
  - DPR Response: Not for all pesticides. Several pesticides have wind restrictions. Those restrictions are listed on the label.

- Question: Is drift a major concern for schools?
  - DPR Response: Drift is illegal under any circumstance, regardless of whether the pesticide is one of the restricted 38 materials or not. Pesticides must be contained, and DPR employs severe consequences for pesticide drift.
- Question: Are farmers obligated to notify schools of crop dusting?
  - DPR Response: No.
- Question: Where can we find information on our county's pesticide restrictions and which growers are using "restricted" materials?
  - DPR Response: Contact and work with your local CAC to access that information.
- Question: How are the buffer zones between school grounds and pesticide applications determined?
  - DPR Response: Either the DPR requirements or the product label (i.e., Federal EPA requirements) of a particular pesticide defines the appropriate buffer distance (whichever is the greater distance). In general, the grower must adhere to the more stringent regulation. The buffer zone for restricted pesticide applications around schools is either one-quarter or one-eighth of a mile.
- Question: Can CACs place limits on non-restricted pesticides such as glyphosate?
  - DPR Response: Not under the current regulations. CACs can only place additional limitations on the "restricted" materials list. To restrict glyphosate applications, DPR first needs sufficient scientific evidence that finds a significant hazard requiring mitigation then undergo the rule-making process before categorizing the chemical as "restricted."
  - DPR Comment: Many growers and pesticide applicators have informal agreements for using non-restricted materials near schools. DPR is considering whether there should be more over-arching regulations statewide (e.g., regulations for the non-restricted active ingredients).
- Question: Does DPR have to approve a CAC's proposed regulations?
  - DPR Response: Yes. The DPR Director must first approve a CAC's proposed regulations.
- Comment: It is difficult to satisfy all community members and still accomplish any work. If a farmer applies pesticides at night, neighboring residents complain about the noise and odor.
- Comment: When pesticides are applied properly and judiciously by professionals, such as a PCA-licensed applicator, pesticides are valuable agricultural tools.
- Comment: Organic fields are also sprayed with pesticides. However, these pesticides are usually less effective and require more frequent applications.

Current enforcement

- Question: How does DPR detect and address growers or pesticide applicators who violate the current pesticide regulations?
  - DPR Response: DPR has an ongoing evaluation program that continuously monitors air quality, groundwater, surface water, and food to detect possible conditions for high pesticide exposure. CACs also conduct approximately 1,900 inspections statewide each year. DPR will conduct a follow-up inspection if someone submits a concern. If a professionally-licensed applicator violates application restrictions, DPR can revoke the license.
- Question: Why does it take so much time to evaluate whether an area has high risk of pesticide exposure?
  - DPR Response: We want to gather all the relevant data to make an informed decision. If people have data that DPR has not considered, we welcome that information.

Parties/conditions subject to proposed regulations

- Question: Is DPR proposing regulations for smaller applications?

  - DPR Response: Small-scale applications such as home-use will not be included since the proposed regulations are specific to production agriculture.
- Question: Will the regulations apply to all commercial agriculture (i.e., businesses and private owners)?
  - DPR Response: Yes.

Enforcement/implementation

- Question: Who would enforce the regulations?
  - DPR Response: We work closely with CACs and provide them with resources to enforce the current regulations at the local level.
- Question: Will the State regulations supersede county regulations?
  - DPR Response: Yes, if we adopt a regulation. Counties can develop more stringent regulations, but not less stringent. Our goal is to build some consistency statewide for safe pesticide applications near schools.

Pesticide Application Regulations - Considerations

Need for regulations

- Question: Rather than new rules, how can DPR better enforce the existing restrictions?
- Question: If the lines of communication between growers, pesticide applicators, schools, and the community improve and perform well, will the additional regulations be necessary?
- Comment: Certain growers and pesticide applicators may follow best management practices to avoid accidental pesticide exposure to schools, but DPR needs regulations to address the growers who do not follow these practices and ensure statewide safety precautions.
- Several attendees shared stories of how they were discouraged by others (e.g., school administrators, CACs, or the growers) when they raised concerns about pesticide applications. They said DPR needs to develop and enforce regulations and notifications, because the current system does not adequately address their concerns.
- Question: What if parents keep their children at home whenever there is a proposed pesticide application? Schools lose Average Daily Attendance (ADA) funding.

Increased operation costs

- Several individuals said farming organically may not be economically feasible for many growers. Many farmers who have converted to organic methods lose money, especially strawberry farmers.

Food prices and imports

- Many individuals said that if DPR adds more pesticide regulations, growers' operational costs will increase. Growers will need to raise food prices, and that cost burden will fall onto customers. This will only exacerbate the hardships for those who already face food insecurity.
- Comment: California may need to import food from areas that lack the food safety restriction framework that California possesses.

Information overload with diminishing effectiveness

- Many individuals said that if DPR requires more notifications for all pesticides, the warnings can lose their value because people might view all the notifications as general "background noise."
- Comment: DPR needs to consider that CACs may become inundated by unjustified complaints - people will file a complaint even if a pesticide application is cancelled. We want CACs to focus their efforts on bigger issues.

Quality of education

- Comment: If students and teachers miss school due to pesticide-related health issues, students receive a lower quality of education. This can seriously inhibit their future progress, especially in disadvantaged communities.

Economic viability for small growers

- A grower said those with small farms may not have the capital to afford professional PCAs and must rely on their own staff to have the appropriate skills and training.

Pesticide companies and distributors profit

- Several individuals said the pesticide companies and distributors ultimately benefit from pesticide use, not the farmers.

Slow response for regulating toxic materials

- Comment: The process for evaluating and labelling a chemical as "Restricted" takes too much time and effort. DPR should not adopt this pesticide-by-pesticide approach.

Pesticide Application Regulations - Suggestions

- Comment: DPR should adopt a precautionary principle as it develops the regulations.
- Comment: Growers, DPR, and/or pesticide manufacturers should provide funds for ongoing health screenings for farmworkers and schools by an independent party.
- Comment: DPR should not allow any pesticide application restriction waivers.
- Comment: Any new regulations that DPR develops should start out as voluntary, then consider whether certain regulations should become mandatory.
- Comment: The regulations should apply to residential areas (e.g., any pesticide application near a school requires notification).

Differentiation among pesticide materials/applications

- Growers, applicators, and a few school administrators and community members said that regulations should address low-risk or low-toxicity pesticide applications differently than the higher-risk materials/methods.
- Comment: The average resident does not know the difference between restricted and non-restricted materials. Develop simple strategies that apply to all pesticides.

Organic methods

- Many attendees, primarily during the community focus group meetings, said farms should grow organically. Some individuals said the fields near schools should be organic, while others said all farms should convert towards organic methods.
- Comment: DPR should embrace innovative agriculture methods in areas around schools. DPR should be at the forefront to help farmers phase out dangerous materials and move towards truly organic and sustainable agriculture.
- Comment: Farms should convert to organic methods and biological pest control methods rather than rely on chemicals.

Buffers - physical barriers, distance, and time

- Comment: DPR should allow for location-specific, buffer time periods. The specific geography and weather conditions of a certain area may prevent a pesticide from off-gassing as quickly as other places. Consider that certain areas and weather conditions may increase how long pesticide residues remain in the area (e.g., foggy weather may cause the pesticide to "stick").
- Several individuals said that buffer zones should be larger in some areas due to region-specific weather conditions. For example, the Santa Ana winds in the Ventura region are very strong and can carry pesticides much further than a quarter mile.

- Comment: The buffer zone should include a hedge row as a physical barrier to prevent pesticide drift.
- Comment: The buffer zone should be proportional to the risk potential of the pesticides/application methods. If the total amount of applied pesticides increase, the buffer zone should increase.
- Many community members said DPR should require a one-mile buffer zone around schools. A few individuals said the buffer zone should apply to school routes and other inhabited structures, such as residential properties.

Total mass limits

- Comment: DPR should set a cap on the total amount of pesticides allowable around schools to address the cumulative exposure to pesticide applications.

Pesticide prohibition

- Community members, and a few school administrators and PCAs, suggested different degrees of pesticide prohibition - prohibit any pesticide applications near schools, prohibit the most dangerous pesticide applications near schools, prohibit applications under certain conditions, prohibit applications near communities and hard-to-evacuate sites, or prohibit all pesticides in California.
- Many community members said the current regulations do not sufficiently protect the public's health from certain prevalent pesticides (e.g., neonicotinoids and glyphosate) and require additional regulation/monitoring.
- Comment: Pesticides prohibited in urban areas should also be prohibited in rural areas.

Penalties

- Several community members emphasized that the penalties for violations need to be adequately severe to deter pesticide misuse. Otherwise, growers will include the violation as an operational cost and continue conducting business as usual.

Compensation

- The people who get sick from pesticide exposure often lack health insurance and cannot afford the costly medical visits and treatments. A few attendees suggested that pesticide manufacturers or those using more dangerous pesticides should have to provide funds to help pay for medical costs.

Economic incentives

- Comment: DPR's efforts should support a future in which it is an economic benefit for everyone not to use pesticides.

Partnerships and Collaboration

- Comment: The best path forward is through peace, unity, and good communication. The whole community, growers included, are at risk and need to work together. The surrounding community also relies on the farms prospering (e.g., many parents work on the farms and/or the farms supply food to the local schools).
- Several growers and applicators mentioned they had strong relationships with school site administrators and/or operated under both widespread and local organizations/associations such as GlobalGAP, Lodi Rules, and California Association of Pest Control Advisors (CAPCA), who support good stewardship and best practices.
- Question: Could a school set aside a day where the school would be completely empty, and the neighboring growers could apply pesticides to their farms?
  - DPR Response: There are many factors the grower needs to consider to safely apply pesticides such as weather; therefore pre-selecting a day may prove difficult. However, we want to hear that type of creative thinking to develop solutions for safe pesticide applications.

- Comment: Schools need to show their commitment to the notification process for partnerships to work with growers and the CACs. Perhaps growers, schools, and the community could meet annually to determine what communication methods work best.
- Comment: DPR needs to ensure these regulations only enhance partnerships and not undermine all the efforts that have gone into building the existing collaborative partnerships.
- A grower said his company strives to form partnerships with schools and uses the fields adjacent to school grounds to help fund agricultural education.
- Comment: DPR needs to better collaborate with other agencies such as CDFA to ensure each agency's efforts is aligned with the other agencies' long term goals.
- Comment: Farmworkers should unionize to help ensure farmworkers are educated on safe practices to preserve the workers and the community's health.
- Comment: The local community needs to continue these discussions on pesticides and health issues (e.g., round table discussions).
- Comment: Land-use planners should include the growers and schools when they make development decisions for agricultural areas.

Leadership Responsibility

- Comment: DPR should not support companies and/or growers' actions that prioritize profits over public health and safety.
- A few attendees said they had doubts that DPR would develop regulations that would wholly reflect the public's interests, because past DPR leadership had ties to chemical companies and/or loosened pesticide regulations in California. Attendees asked DPR to be transparent in their decision-making processes to avoid potential conflicts of interests.
- Comment (*Ventura*): To DPR Director Leahy, please listen to the people who have spoken at the public meeting. DPR's mission is to protect human health, not protect pesticide companies or profits. DPR has the opportunity to address the racial discrimination and infringement on civil rights that so many Latino school children face in California. The community will continue to organize and strive for their civil rights, and DPR can be part of that progress.
- Attendees from all three focus groups said elected officials and government agencies have a duty to serve the public and protect the health and safety of all those who live and work in California.

Statements from Elected Officials

- Several representatives for State senators and assembly members provided statements on the elected officials' behalf - Assembly Member Kevin McCarty in Sacramento, Senator Hannah-Beth Jackson in Ventura, and Assembly Member Das Williams in Ventura. Ventura County Board of Supervisor John Zaragoza also attended the Ventura public meetings. The elected officials thanked DPR for holding the workshops and for providing an opportunity for all stakeholders to offer their input. They share the communities' concerns and hope the future regulations will provide the balance between protecting children and families' health safety with protecting the agricultural communities' viability.
- Mr. Zaragoza posed two questions for DPR - 1) would DPR consider authorizing waivers and exceptions for pesticide applications near schools and under what conditions, and 2) what would the regulation process be to ensure that pesticides do not exceed safety limits in the future?

Public Meeting-Specific Comments

- Question: Who specifically initiated these regulation discussions?

  - DPR Response: We cannot name specific groups. However, we held several discussions with educators, pesticide applicants, and general community members over the last year and received substantial public input. It is DPR's responsibility to listen to concerns, which is why DPR decided to conduct these initial informal public meetings prior to potential regulation development. DPR is interested in suggestions on how to develop regulations that are standard but also allow for local flexibility.
- Question: Why did DPR have focus groups meet in three separate meetings rather than together?
  - DPR Response: Often when all constituents are in one room, many people become too reserved or intimidated to express their opinions or input candidly. For this meeting series, DPR wanted to hear from all constituents equally.
- Question: Why are other constituent groups, who also apply pesticides near public areas, exempt from this discussion (e.g., CalTrans, golf courses, etc.)?
  - DPR Response: In a series of surveys conducted, surrounding agricultural land generated most of the public's concern regarding pesticide use near schools. However, DPR has not decided on the scope or details for the regulations yet and welcomes suggestions.
- Comment: At a future date, DPR should host meetings to educate the farmers about residents' concerns and vice versa.
- Question: Will the public have access to the questions and responses from these public workshops?
  - DPR Response: DPR will post a meeting summary on its website that will consolidate the questions and comments provided at these public workshops, and the transcribed written comments and handouts submitted to DPR at these workshops will also be part of the meeting summary.
- Question: What types of outreach did DPR conduct for these public workshops?
  - DPR Response: We used several public outreach methods to notify interested parties of these statewide workshops, including sending notices through our list-serves, which are fairly extensive. However, we did not send conventional mail notifications to all residents statewide.
- A few individuals provided petitions in support of additional pesticide application restrictions (Appendix C).

Other Comments

- An individual expressed concern that the DPR concept paper does not sufficiently differentiate between the actions of professional applicators and school district employees. He said growers and PCAs should not be associated with school employees, over whom the growers and PCAs have no control.
- Comment: Growers have a responsibility to serve healthy food, not supply food to the whole world. This comment was made in response to a grower expressing that it would be impossible to feed the world through organic agricultural production.
- Question: How will DPR protect students in the near term if the regulations will not take effect until 2017? DPR needs to better safeguard schools immediately and not use studies to stall pesticide regulations.
- Question: What would the process be for DPR to declare a State of Emergency for toxic pesticide impacts on schools?
  - DPR Response: The brief answer is we would need sufficient evidence to justify an emergency declaration, which is hard to accomplish. We have a large amount of data, but not sufficient evidence to declare a state of emergency. However, we are conducting these public workshops, because we recognize there is a serious issue we need to address.

- Comment: DPR should consider these pesticide-related events as an emergency. Too many children are ill with severe asthma, miss school, and often hospitalized, to be considered a coincidence.

VIII. Closing Remarks

Mr. Reardon thanked attendees for sharing their experiences and providing their input. He recommended attendees refer to the DPR website for the public meeting materials and other related information: http://www.cdpr.ca.gov/docs/legbills/regsdeve.htm

Mr. Reardon also reiterated that the public can submit written comments by **July 31, 2015** to:

Mr. George Farnsworth, Department of Pesticide Regulation
PO Box 4015, Sacramento CA 95812-4015, or
George.farnsworth@cdpr.ca.gov

IX. List of Appendices

Appendix A - Concepts to Address Pesticide Use Near Schools

Appendix B - Appendices to the Concept Paper:

1. Summary of Complaints Received by County Agricultural Commissioners that Involved Pesticides and Schools
2. California County Restrictions for Pesticide Applications Near Schools
3. State Laws and Regulations Restricting Pesticide Applications in and Around School Premises

Appendix C - Transcribed Written Comments & Materials Submitted During the Public Workshop