Statewide Pesticide Application Notification System
November 2022 Workshop Summary Report

The Center for Regional Change (CRC) at the University of California at Davis (UC Davis) facilitated two in-person workshops and one virtual workshop in November 2022 on behalf of the California Department of Pesticide Regulation (DPR). These workshops provided stakeholders an opportunity to share feedback on the notification pilot projects and statewide pesticide notification system that DPR is developing.

Background

DPR is in the development phase of the statewide system. The department has partnered with a number of County Agricultural Commissioners (CACs) who have conducted notification pilot projects to inform development of the statewide system.

The purpose of the state's pesticide notification system is to provide advance, transparent and equitable access to information about pesticide applications. The statewide notification system will complement, and enhance public education and outreach regarding, existing pesticide laws and regulations that protect public health, worker health and safety, and the environment.

Workshop Structure

Two workshops were held in-person: on November 7 in Oxnard (Ventura County) and on November 9 in Orosi (Tulare County). One workshop was held virtually using the Zoom platform on November 10. The three sessions were held in the evening from 5 – 7 p.m. to accommodate participation from a broad range of stakeholders with varying availability. Each session featured the same agenda as detailed in the following section. At the in-person meetings, translation was available in Spanish and Mixteco. The virtual meeting was conducted in English and interpreted simultaneously into Spanish by a professional interpretation team and accessible to participants via a dedicated Zoom audio channel. To protect privacy and encourage candid feedback, facilitators did not take attendance and took notes without attributing comments to any individual or group. In total, there were roughly 75 attendees at the Oxnard workshop, more than 150 attendees at the Orosi workshop, and approximately 350 attendees at the virtual workshop. Across the three workshops, it is anticipated that more than 500 individuals participated. A precise number is not available as some individuals attended more than one workshop, and participant names were not documented.

Workshop Agenda

- *Welcome and arrival*
  Instructions were provided verbally to attendees before entering the venue. Instructions included which areas would be available to provide feedback on the notification system, where children's coloring books and refreshments would be provided by community partners, and how to receive an interpretation device.

- *Overview of workshop goals*
  At each workshop, Julie Henderson, DPR Director, shared the goal of the workshop series to gather public feedback on the notification pilot projects in Riverside, Santa Cruz, Stanislaus and Ventura counties and the statewide notification system.

- *Overview of pilot projects and updates for the statewide notification system*
  At the virtual workshop, Karen Morrison, DPR Chief Deputy Director, presented on the four notification pilot projects and the current design vision for the statewide notification system. At the in-person meetings, information was displayed on a series of poster boards for attendees in English and in Spanish. At both in-person venues there was a designated section where attendees could provide feedback written on note cards or Post-It notes (with an option to submit feedback anonymously), or to provide verbal feedback directly to DPR Director Julie Henderson and DPR staff. During the virtual workshop, the brief presentation by DPR and UC Davis was followed with time for public feedback with simultaneous translation in English and Spanish using the Zoom channel feature. For both the in-person and for the virtual events, there were 3-4 UC Davis facilitators and 6-7 DPR representatives.

- *Initial in-person set-up*
  Both of the in-person meetings featured poster boards with descriptions of the notification pilot projects and the statewide proposed system. The UC Davis team set up several large easels with poster paper along with note cards and Post-It notepads and pens on every table. These Post-It notes were intended to be used to collect feedback directly from attendees who could add their comment on the poster. Attendees also had the option to submit feedback on notecards to submit their feedback discreetly in one of two marked ANONYMOUS boxes.

- *Virtual set-up*
  For the final, virtual workshop, public feedback was collected via Zoom. The interpretation team set up a monolingual Spanish and a monolingual English channel on Zoom. Throughout the call, the interpreting team would send a message in the chat reminding monolingual participants to tune into their respective channels. Three UC Davis facilitators were prepared to write down specific feedback and take notes throughout the event. Attendees were granted the temporary ability to unmute themselves during the public feedback session by a member of the facilitation team. Consistent with the second in-person meeting, each speaker had two minutes to speak. UC Davis and DPR ensured that attendees who joined via watch parties would each have a chance to offer feedback with each attendee given two minutes to speak. When it was time for a participant to present, a UC Davis facilitator would 'Ask Participant to

Unmute' and 'Ask Participant to Turn On Camera' to enable the participant to present. At the end of two minutes, an online timer would make a repetitive sound that indicated when time was up. The timer was restarted for each speaker, including those logged on with a single Zoom account.

Modifications Made to Workshop Agendas

- *Environmental Justice Advocates and Community Groups Provided Alternate Forms of Public Comment at DPR Workshops*
  The UC Davis and DPR teams accommodated community-based groups' and Environmental Justice advocacy groups' interest in an alternate form of public comment at the in-person workshops, while striving to ensure that all stakeholders had the ability to provide feedback to the department.

- *Oxnard venue set-up modifications*
  Members of the community-based groups and Environmental Justice advocacy groups who attended the Oxnard event brought their own portable speaker system, a microphone, and several posters in English and Spanish to share specific requests for the DPR team and to provide a format for public comment different from DPR's planned workshop structure. The community members and advocates gathered on one side of the Oxnard venue and used their speaker system to share feedback, personal experiences and perspectives on the notification system pilot projects as well as the statewide system proposal. Although this was not the planned format for the DPR workshops, DPR Director Julie Henderson stood to listen and acknowledge all comments received. This also meant that there were additional barriers for other stakeholders to include their comments during the allotted time of the workshop.

- *Oxnard interpretation modifications*
  To adapt from a one-on-one conversation to a large-scale listening audience, the interpreters switched to a live-interpretation model. Mixteco and Spanish translators provided consecutive translation for English presentations, while Mixteco and Spanish speakers were live interpreted into English via the listening devices. At the Oxnard meeting, the number of attendees exceeded the number of available listening devices for people who were monolingual English. As a result, the majority of monolingual English-speaking attendees were unable to understand the Spanish and Mixteco portions of the evening. Director Henderson was able to receive a listening device and hear attendee comments.

- *Oxnard feedback modifications*
  UC Davis facilitators adapted the feedback plan since poster boards were not readily viewable by attendees at the Oxnard meeting due to the adjustments made to accommodate Environmental Justice and community groups' interest in an alternate form of public comment. Instead, UC Davis facilitators wrote themes and specific feedback concepts described by community members and advocates on Post-It notes. Those Post-It notes were then put directly on the poster papers. Additionally, about halfway through the proceedings at the Oxnard meeting, UC Davis facilitators went

outside to gather feedback directly from attendees not presenting inside with the microphone. This was done to make sure that everyone who arrived at the Oxnard meeting had the opportunity to give feedback. Comments collected this way were placed in the Anonymous boxes. CRC facilitators assumed public comments via microphone were made by participants who were willing to be identified as a member of Environmental Justice or community-based groups.

- *Orosi venue set-up modifications*
  UC Davis facilitators adapted the feedback plan at the Orosi meeting, following the changes in Oxnard and the expectation of similar requests for public comment over a sound system by community members and advocates. At this venue, the microphone and speaker were both provided by DPR. Approximately 25 minutes into the public feedback presentations, UC Davis facilitators worked with community members and Environmental Justice advocates to form a standing line for those who wished to speak. This allowed UC Davis to approximate how many people were interested in speaking over the course of the remaining time, estimated at two hours. After assessing the number of people who desired to speak, UC Davis announced to every participant that an individual would be given a 2-minute opportunity to speak, including time for their comment to be interpreted into either English or Spanish. Community organizers also worked with the UC Davis team to hand out DPR short and long surveys for anyone to share written feedback. The Orosi venue was much larger than Oxnard, and the DPR posters with information about the pilot projects were more accessible. There was the opportunity for anyone who would like to know specific details about the pilot projects or the statewide system to speak directly with DPR representatives and provide detailed feedback via Post-It notes.

- *Orosi interpretation modifications*
  At the Orosi meeting, the interpretation team procured dozens of headsets that exceeded the number of attendees at the Oxnard meeting, but the number of attendees again exceeded the number of headsets. It was decided by the DPR and UC Davis teams early in the workshop that rather than using the listening devices, interpreters would provide consecutive interpretation in Spanish-to-English and English-to-Spanish conversations. This format would take more time for any one person to provide a comment, but this also meant that everyone at the venue would be able to hear and understand everyone else who was speaking.

Summary of Stakeholder Feedback

The UC Davis and DPR teams took notes during all three workshops to capture feedback, though not verbatim. Below is a summary of findings and key presentation themes from verbal feedback.

- *Themes mentioned dozens of times*

  - **Health and safety.** The health and safety of farmworkers, their families, and particularly children, was one of the most frequently voiced themes spanning all

three workshops. Comments by attendees who identified as farmworkers and agricultural laborers expressed concern that pesticides are toxic and that they and other chemical farming agents are dangerous and bad for the health of all living things. Dozens of comments were shared of workers experiencing health issues after being exposed to pesticides, including mentions of sulfur, insecticides, neurotoxins, and other chemicals, while at work. Attendees asked for more research to understand specific health effects of pesticides, including those not on DPR's restricted materials list. Attendees asked DPR to consider pursuing research on specific health outcomes after long-term and acute exposure to pesticides including cancer, developmental and behavioral disorders, nervous system damage, asthma, and damage to vision and the eyes and for research to be shared with farmworkers and physicians who treat farmworkers.

- o **Sense of urgency.** Numerous signs and posters brought by workshop attendees mentioned the proposed 2024 system roll-out timeline. Several dozen attendees at all three workshops stated that 2024 is too long of a wait for a statewide system rollout. There is a sense of urgency voiced by many participants that notifications are long overdue, and are needed now, even if the actual program launch is later and design improvements are made over time. *See Community Engagement.*

- o **Timing of advance notice.** Several attendees commented through posters and others provided verbal feedback that 24 hours is not enough time for advance notice of pesticide applications. Over 50 representatives requested a minimum of 72-hour advance notice for all pesticide use. A number of commenters noted that information about pesticide applications is provided 72-hours in advance for farmers and growers who, in some counties, share the information through a "Grower to Grower" system for communication. Commenters requested the exact time and date of the proposed application for transparency.

- o **Language accessibility.** It was shared that farmworkers speak a much larger diversity of languages than English, Spanish, and Mixteco. Examples of languages that attendees told the department they needed for better accessibility include Indigenous languages of South and Central America, such as: Triqui, Nahuatl, Purepecha, Zapotec, Otomi, Mixe, Yaqui, Garifuna, and Maya. Nearby agricultural communities also need access for Asian and Southeast Asian languages such as Korean, Punjabi, Hmong, and Tagalog. Attendees shared that the notification system pilot projects that are English/Spanish do not serve thousands of Indigenous language users.

- o **Access to technology.** One of the most frequent comments was that e-mail notifications are not user-friendly for many stakeholder populations. Many farmworkers do not have email addresses or are unable to access their emails while working out in the fields. It was suggested that during the opt-in portion of the system, one should be able to choose how to receive information: via email, text, or phone call. Phone calls were recommended for stakeholders with barriers

that include vision impairments, hearing impairments, and literacy barriers or for those who speak Indigenous languages without a written form.

o **Exact location information.** The 2022 pilot projects provided users with a notification for applications within a 1- to 5-mile distance of the user-provided address (either via the search tool or subscription). Many attendees found the distance reporting lacking in transparency. They commented that it is insufficiently precise, called for exact pinned locations, and noted that the 1- to 5-mile distance does not indicate the north, south, east or west direction of the application from the user's location. In addition, many commenters requested that system provide the ability to tag multiple addresses and locations.

Requirements for opt-in subscription models. Some attendees voiced concern about and opposition to a requirement that users provide personal information when opting in to receive information through the pesticide notification system. They expressed wariness about how their personal information would be used, and by whom. Some attendees noted that the sign-up process was too lengthy and difficult to complete. Other commenters requested that users provide personal information to opt-in to the notification system to better identify who is or is not using the program.

o **Transparency.** Some attendees indicated frustration that the pilot projects were not transparent enough in terms of pesticide applications. There was a concern expressed by several attendees affiliated with community-based groups that DPR, growers, and/or County Agricultural Commissioners were withholding, delaying, or not publicly releasing public data on pesticide applications in more accessible formats. *See Exact location information & Timing of advance notice & Mistrust.*

- *Themes mentioned several times*

  o **Number of Notifications: Fear vs. Fatigue.** Some attendees who were enrolled in the pilot programs were receiving notifications of pesticide application near them on almost a daily basis. Some workshop attendees expressed concern that the number of notifications would create fear among its users or would create user fatigue from receiving too many notifications. While no clear solutions were identified to reduce the likelihood of user fatigue, several people said that knowing what pesticides are being used, when, and where would not incite fear. Rather, fear of not knowing what pesticides are being used, and when and where was a much more common concern among workshop attendees.

  o **User Experience.** Several attendees who used the pilot project systems expressed that the pilots were not user-friendly, were difficult to navigate, and were not easy to access. Attendees shared that a notification system that is easy to understand is crucial and that the content and information shared should not exceed a 6th grade reading level. Attendees also urged the department to consider users who are low-tech and ensure they are able to navigate through

the website to use the actual notification system with ease. One specific suggestion for format was to include the pesticide name, chemical/class name, location, and date and time in the message text, while having a link at the bottom of the text where one can click to find out more, view a live map, and other applications scheduled nearby.

- o **Total project cost.** Several participants commented that the funding allocated to the department for the development of this notification system is an indicator that the statewide system needs to be effective and accurate, with data uploaded in a timely manner. Attendees also commented that the project cost is dwarfed by the billions of dollars brought in every year by the agricultural industry of California, which is only made possible by farmworkers and their labor. Several commenters requested that the project funding support continued collection of community feedback and suggestions, including additional languages, and applications of an expanded number of pesticides.

- o **Information on pesticide class, chemical, known health risks.** In responding to DPR's system design proposal regarding the type of information included in the notification, some attendees would like more information on the pesticide's chemical structure, pesticide class, and known human and animal health risks associated with said pesticide or pesticide class. *See Health and Safety.*

- *Themes mentioned a handful of times*

  - o **Mistrust.** Some attendees expressed concern about a power imbalance between growers and farmers, agricultural commissioners, and farmworkers. Some also voiced their hesitation to report illegal pesticide applications to authorities for fear of retaliation. Some farmworkers expressed concern that their local agricultural commissioners may not comply with a statewide notification system. Other commenters voiced concerns about groups promoting misinformation about the pesticide notification system to the public.

  - o **Attendance turnout vs. representation.** A handful of attendees shared that their presence represented 10-100 more people who were unable to attend for various reasons. Pesticide notification is a topic of interest to farmworkers, growers and CACs, according to those able to attend the workshops.

  - o **Pesticide drift.** The topic of pesticide drift was discussed during the virtual meeting. Several participants that used a pilot system noted that they live in areas that are particularly windy and where pesticide application drift is a concern. Commenters who participated in a pilot that provided information about pesticide applications within 1 mile of a user address expressed concern that that distance was an ineffective representation of how much pesticides may drift in the air. Suggestions for improvements included using wind and weather data to augment the map as well as including modeling patterns of pesticide drift with an option to select a distance larger than 1 mile for notifications.

- o **Community engagement.** Multiple commenters voiced an interest in having an Environmental Justice Advisory Committee formally weigh in on specific improvements needed to the notification system over time. Attendees suggested that this could be done via community engagement or through a community advisory board made up of agricultural industry representatives, growers, farmworkers and farmworker representatives from Environmental Justice advocacy groups before, during, and after the statewide notification system is implemented. Participants suggested that such a group could troubleshoot issues with the system interface and resolve issues and bugs found in the program.

- o **Education on reducing jobsite exposure.** A number of commenters reported allegations of illegal pesticide applications. DPR staff urged attendees to timely report any potentially illegal applications of pesticides to local County Agricultural Commissioners, who are responsible for local enforcement of pesticide use violations, or to DPR. DPR provided pamphlets regarding worker safety (English/Español) and how to report illegal applications (English/Español) at the in-person workshops. Several attendees recommended better training for farmers and growers on worker rights, as well as more education for farmworkers themselves on how to protect their face, skin, and bodies while working in the fields when pesticides were being applied overhead. Attendees also shared that the specific instances where pesticides were being applied at the worksite (including during lunch and breaks), and more information is needed about what protective equipment can be used by farmworkers to protect their health and safety while working.

- o **More than just pesticides.** A number of attendees vocalized concern about other growing agents beyond pesticides and their safety for use on plants, animals, and humans who are exposed, including fertilizers.

- o **Pesticides Included in Notification System.** In responding to DPR's system design proposal to provide information about restricted material pesticide applications, some commenters stated that this list is incomplete and does not represent all dangerous chemicals used in the fields.

The final category of stakeholder comments reflects those raised a few times by participants.

- *Other considerations*

  - o **Postings directly in the field.** For people who do not have access to their phone or computer regularly, or who do not have reliable access to the internet, some attendees shared that posting signs directly in the field about which pesticides will be used in that field and what time and date the pesticide will be used would be helpful. Those attendees recommended that the signs include an easy-to-understand graphic with precise location(s) and that information be provided in as many written languages as possible. *See language accessibility.*

- o **Oral, non-written languages considerations.** There are several Indigenous languages spoken by farmworkers that either do not have a formal written language or do not have a high reading and literacy rate among their speakers. Some commenters recommended that users have the option to receive information by text message as well as voice mail, where a pre-recorded message could be left speaking the preferred oral language of the user.

- o **Sensitivity regarding pesticide-related experiences.** A number of commenters emphasized the importance of government representatives demonstrating humility and sensitivity when receiving comments from farmworkers describing traumatic experiences related to pesticide exposure.

- o **Health impacts of the use of multiple pesticides**. A number of attendees asked DPR to expand research on how the combination of chemicals (multiple pesticide classes, not just one isolated pesticide) impact human and animal health. They expressed concern that farmworkers work around many different types of crops and pesticides in a single day, as well as over time.

- o **Expanding air monitoring programs.** One attendee expressed concern that their hometown of Salinas has some of the highest rates of pesticide applications in the country, but in 2018 had one of the best air quality ratings. In their opinion, the high air quality rating does not represent the reality of their local air. They believe the high amounts of asthma, chronic cough, and respiratory problems in their community requires more air monitoring and air monitoring research to track pesticides and pesticide drift.