PESTICIDE REGISTRATION AND EVALUATION COMMITTEE (PREC)
Meeting Minutes – March 21, 2014

Committee Members/Alternates in Attendance:
Ann Prichard, Department of Pesticide Registration (DPR)
Charles Salocks, Office of Environmental Health Hazard Assessment (OEHHA)
Eric Lauritzen, CA Agricultural Commissioners and Sealers Association (CACASA)
Jeff Fowles, Department of Public Health (CDPH) – via webcast
Lynn Baker, Air Resources Board (ARB)
Patti TenBrook, U.S. Environmental Protection Agency (U.S. EPA), Region 9 – via webcast
Matt Hengel, University of California (UC), IR-4 Program
Valerie Mitchell, Department of Toxic Substances Control (DTSC) – via webcast

Visitors in Attendance:
Aimee Brooks, CA Cotton Ginners and Growers Assoc./Western Agricultural Processers Assoc.
Andi Cameron, DPR –Pesticide Registration Branch
Anne Katten, California Rural Legal Assistance Foundation
Artie Lawyer, Technology Sciences Group
Bernice Yeung, Center for Investigation Reporting
Brian Bret, Dow AgroSciences
Charlotte Fadipe, DPR –Director's Office
Dave Kim, DPR –Environmental Monitoring Branch
Dave Lawson, Lawson and Associates
David Duncan, DPR –Environmental Monitoring Branch
Denise Alder, DPR –Pesticide Registration Branch
Doug Downie, DPR –Pest Management and Licensing Branch
Eileen Mahoney, DPR –Pesticide Registration Branch
Jay Schreider, DPR –Medical Toxicology Branch
Jeanne Martin, DPR –Enforcement Headquarters
Jennifer Henke, Coachella Valley Mosquito and Vector Control District
Jill Townzen, DPR –Pesticide Registration Branch
Jim Wells, Environmental Solutions Group
John Inouye, DPR –Pesticide Registration Branch
Kendell Taggart, Center for Investigation Reporting
Leslie Crowl, DPR –Worker Health and Safety
Marta Barlow, DPR –Office of Legal Affairs
Mike Zeiss, DPR –Enforcement
Pam Wofford, DPR –Environmental Monitoring Branch
Rachel Kubiak, Western Plant Health Association
Randy Segawa, DPR –Environmental Monitoring Branch
Regina Sarracino, DPR –Enforcement Branch

Rima Woods, OEHHA
Victoria Hornbaker, California Department of Food and Agriculture (CDFA)

1. **Introductions and Committee Business –Ann Prichard, Chair, DPR**
   a. About thirty-six (36) people attended the meeting.
   b. No corrections to the previous meeting minutes held on January 17, 2014 identified.

2. **Asian Citrus Psyllid (ACP) Eradication Program Update –Victoria Hornbaker, CDFA**
   The ACP is an extremely dangerous insect that feeds on leaves and stems of citrus trees. ACP can transmit a deadly bacterial disease fatal for citrus called Huanglongbing (HLB), also known as citrus greening disease. Prevention and management of HLB is a matter of public interest as there is no cure. The best prevention, aside from killing citrus trees, is to control the psyllid.

   The CDFA first detected ACP in 2008. The psyllids were discovered in San Diego and Imperial counties. By 2013, they had moved up the state as far Kern and Fresno counties. California created a 17-member Citrus Pest and Disease Prevention Committee to develop a statewide citrus specific pest and disease work plan and advise the Secretary of the California Department of Food Agriculture on implementation of the work plan. The program activities include, but are not limited to, detection trapping, visual surveys, delimitation trapping, treatment, quarantine, and outreach.

   In urban areas, the program treats ACP detection sites and adjacent properties with homeowner consent. The treatments may include foliar treatment with cyfluthrin (Tempo SC Ultra) and/or a soil drench with imidacloprid (Merit 2F). To ensure protection of human health and the environment, the CDFA has contracted with DPR to oversee environmental monitoring of treatment projects. Sampling media include air, leaf, soil, tank, and water. Trapping with a servicing interval of two to four weeks continues in Fresno, Imperial, Kern, Kings, Madera, Monterey, Riverside (eastern), San Benito, San Diego, San Luis Obispo, Santa Barbara, Tulare, and Ventura counties.

   In groves where ACP is detected, an area-wide treatment program is used. Response is based on the level of infestation and the feasibility of treatments. Area-wide, coordinated pesticide applications in commercial citrus help obtain control of ACP while minimizing resistance. The area-wide control concept was successfully implemented for glassy-winged sharpshooter (GWSS).

   In southern California, infested areas have implemented area wide treatments where feasible and grower participation levels are high. In areas where an area wide protocol is not feasible, the program is focusing on HLB survey and bio control. Areas of low pest prevalence are continuing to maintain 1.5 mile trapping buffers while treating urban properties within four hundred meters of the detection site. The program also maintains a two-mile trapping buffer along the U.S./Mexico border.

   In central California, the current protocol is to review each find to determine if eradication is feasible. If eradication is feasible, the program conducts mandatory treatments of all host plants

within eight hundred meters of the ACP detection. If eradication is not feasible, the program conducts voluntary four hundred meter control or suppressive treatments for all host plants.

Some areas of California are under an expanded quarantine, affecting the movement of citrus nursery stock. Regulated establishments include nurseries (production and retail), bulk citrus (growers, harvesters, and haulers), cut flowers, cut greens producers, green waste receivers, yard maintenance operations, swap meets, and farmers markets. Movement of citrus nursery stock is prohibited with the ACP quarantine area unless: (1) approved systemic and foliar treatments have been applied every ninety days, (2) the stock has a CDFA-issued tag, (3) stock was grown in a federally approved screen house, or (4) a pre-shipment treatment option is available for shippers located outside ACP quarantine areas to facilitate movement of stock into the ACP quarantine areas. The U.S. Department of Agriculture has stated untreated bud wood may move interstate as long as movers meet requirements for interstate movement, safeguards are in place when handling the bud wood, and a permit for movement is granted.

To date, the program has identified one positive HLB tree in the Hacienda Heights area of Los Angeles. The homeowner voluntarily allowed for the removal of the diseased tree. California's surveillance program requires an intensive survey for HLB disease symptoms, laboratory analysis of symptomatic plants parts, and laboratory analysis of ACP for HLB presence. As a proactive measure, CDFA has started mass-producing *Tamarixia radiate*, a tiny parasitic wasp that lays eggs under ACP nymphs, eventually killing them. CDFA reared 238,000 wasps in 2013.

In conclusion, the program's goal is to prevent the establishment of ACP outside the quarantine area, to expand bio control efforts, and to survey and remove HLB infected trees. The program continues to work on developing early HLB detection technologies and continues to seek alternative treatments to maintain vigilance for other citrus diseases.

You can find more information regarding the Citrus Pest and Disease Prevention Program online at <http://www.californiacitrusthreat.org/>. If you have questions or require additional information, please contact Victoria Hornbaker at <victoria.hornbaker@cdfa.ca.gov>.

3. **<u>Pesticide Air Monitoring Network Update</u> –Randy Segawa, DPR**

The Pesticide Air Monitoring Network will remain unchanged for 2014, including monitoring for thirty-two pesticides in Ripon, Salinas, and Shafter. The program currently collects one set of 24-hour samples each week at each site.

The program selected communities based on a quartile-averaged ranking for use of each pesticide within five miles of the community. The top communities based on 2011 use data were in the central coast and San Joaquin Valley.

The locations of a monitoring site need to have minimum qualifications, including but not limited to, site permission. Additionally, previous monitoring shows similar concentrations for sites with one-mile separation and moving sites makes year-to-year comparisons difficult. Alternatives to Salinas include Prunedale, King City, Greenfield, Soledad, Gilroy, Hollister, and San Martin. Prunedale is a problematic site selection due to its hilly area. King City, Greenfield, and Soledad have higher wind speeds, possibly leading to lower air concentrations. Salinas has

lower wind speeds and comparable or higher diazinon concentration than these cities. Gilroy, Hollister and San Martin are not highly rated for fumigants and ARB is already monitoring for fumigants at a site south of Watsonville where fumigant use is higher. Gilroy is also upwind from the higher non-fumigant use areas.

Alternatives for Ripon were Modesto, Stockton, and Salida. Modesto and Stockton are too large to monitor with a single site and Salida is adjacent to Ripon. Alternatives for Shafter were Bakersfield and Fresno, which are too large to monitor with a single site. ARB is also currently monitoring for fumigants in two other high rated areas: Nipomo/Santa Maria and Camarillo/Oxnard.

Additional monitoring by ARB complements the program. At DPR's request, ARB is conducting year-round monitoring for 1,3-D and methyl bromide, and likely seasonal monitoring for chloropicrin. DPR also requested ARB conduct application-site monitoring for chlorpyrifos, mancozeb, and methyl isothiocyanate (MITC).

The program supplements monitoring for individual pesticides and focuses on long-term monitoring for multiple pesticides, including frequency. Ripon, Salinas, and Shafter remain high use areas for many pesticides, whereas other communities do not have significantly higher use ratings with other disadvantages.

The preliminary results for 2013 concentrations were higher than previous years for many pesticides, including but not limited to, carbon disulfide, chloropicrin, chlorothalonil, chlorpyrifos, 1,3-dichloropropene, s-ethyl dipropylthiocarbamate (EPTC), and oxyfluorfen. Chloropicrin and 1,3-D may have exceeded screening levels or regulatory goals so DPR will conduct additional evaluations for those pesticides. The chloropicrin evaluation will include reasons for higher concentrations (e.g., chloropicrin use and weather at time of detections) and evaluating impact of proposed mitigation measures for acute exposures on seasonal (sub chronic) exposures.

For more information regarding the program, please visit <http://cdpr.ca.gov/docs/emon/airinit/air_network.htm> or contact Randy Segawa by email at <Randy.Segawa@cdpr.ca.gov> or 916-324-4137.

4. <u>1,3-Dichloropropene Update</u> –Randy Segawa, DPR

1,3-dichloropropene (1,3-d) is a pre-plant soil fumigant effective against many pests and is applied by tractor shank injection or through drip irrigation systems. 1,3-D is a restricted material, meaning a permit and a certified applicator are required. Growers use this chemical prior to planting several crops and the peak use occurs in the fall. Dow AgroSciences (DAS) is the main registrant for this chemical and some of the products contain chloropicrin.

In 1990, DPR and the Agricultural Commissioners stopped use after monitoring by ARB showed possibly high cancer risk. In 1995, 1,3-D was reintroduced with additional restrictions. DPR set a goal for a cancer risk of no more than five percent probability of one cancer per one hundred thousand people.

DPR's current restrictions for 1,3-D include requirements for occupied structures and a township cap. Permit conditions currently prohibit 1,3-D fumigations within one hundred feet of structures occupied at any time for seven days following fumigation. The California Management Plan for 1,3-D requires DAS to administer a township cap program, limits within each township (a 6x6 mile area). The state issues an allocation of 90,250 pounds per year since 1995 with unused amount "banked" and a maximum amount of 180,500 pounds per year (if available in the bank) can be used. Cap amounts, "adjusted total pounds" (ATP), equate to pounds applied multiplied by an application factor. The application factor varies from 0.3x to 2.3x depending on the fumigation method, location, and month. County Agricultural Commissioners verify compliance with the cap by checking Notices of Intent. Previously, DPR had issued exceptions to the cap. DPR and ARB have been conducting air monitoring for 1,3-D at six locations statewide. In 2011, at DPR's request, Dow AgroSciences conducted air monitoring for 1,3-D in Merced County. Due to air monitoring results, exceptions to the township cap have been suspended since February 2014. The monitoring data shows exposures may exceed DPR's cancer risk goal in several locations, particularly areas where there are exceptions to the cap.

An update to the risk assessment and evaluation of the computer model (SOFEA) to estimate long-term air concentrations is currently in progress. Once this work is complete, DPR may revise its requirements. Recent agricultural practices should lead to lower air concentrations. For example, use of low permeability tarps is increasing for 1,3-D and chloropicrin combination products due to 2013 federal field fumigant labeling changes. These tarps reduce emissions and air concentrations. Research and demonstration of alternatives such as anaerobic soil disinfestation continues, including DPR grants. DPR and ARB monitoring of 1,3-D continues at six sites.

For more information regarding the program, please visit <http://cdpr.ca.gov/docs/emon/pubs/tac/13-dichlor.htm> or contact Randy Segawa by email at <Randy.Segawa@cdpr.ca.gov> or 916-324-4137.

5. **Public Comment and Questions**

Asian Citrus Psyllid (ACP) Eradication Program Update

Patti TenBrook inquired via email whether the ACP Eradication Program delayed imidacloprid soil drenches so it would not get into pollen and nectar during bloom. She also asked whether this affects bees and if the program analyzes the pollen and nectar. Ms. Hornbaker stated UC Riverside is currently analyzing the citrus pollen and nectar for imidacloprid. Current product labels do not allow for the delay of soil drenches and the program does not use imidacloprid as a foliar application. The program is very careful to follow the registered label and ensures applications are absorbed into the soil. Additionally, if there are bees and bloom present on a tree, foliar applications of cyfluthrin are not used.

Dave Lawson inquired whether the program uses an additional fungicide or a fertilizer scheme on HLB infected trees to help recovery. Since there has only been one documented case of a HLB infected tree in California, the protocol is to eradicate the infection.
Matt Hengel inquired about the process of moving citrus samples in the IR-4 program out of state. Ms. Hornbaker stated CDFA regulates intrastate movement whereas USDA regulates interstate movement. Moving any citrus tree would require a permit.

Arthur Lawyer inquired about the Section 18's recently issued in Florida. Ms. Hornbaker commented that the situation in California and Florida are very different. Florida was busy with citrus canker and was going to start an ACP program when hurricanes hit. The hurricane spread the psyllids and the disease throughout Florida. California has had a huge lead in and preparation time for a possible infestation. Ms. Hornbaker belongs to a multiagency cooperative, which works with states such as Texas and Arizona. The goal is to find a cure. Without a cure on the horizon, the cooperative is looking at thermal therapy, GMO rootstocks, and antimicrobials as possible way to aid the trees in withstanding infection.

Jennifer Henke inquired via email where she might direct residents for more information regarding ACP. Ms. Hornbaker identified additional information regarding ACPs may be found at the Citrus Pest and Disease Prevention Program online at <http://www.californiacitrusthreat.org/> or telephone the CDFA hotline at 1-800-491-1899.

Mike Zeiss inquired about the percentage of psyllids testing positive for HLB and inquired about the status is of HLB in Pakistan (where the wasps are native). Ms. Hornbaker stated California only has three documented psyllids positive for HLB. Pakistan currently has citrus trees that are resistant to HLB. Florida has brought these trees into their state but has had no success with them.

Pesticide Air Monitoring Network Update
Lynn Baker suggested the Air Monitoring Program consider the recently posted 2012 data in continuing the program, along with the budget and resources available to DPR. Randy Segawa stated DPR determined the air monitoring network and special air monitoring studies regarding evaluation of efficacy of new mitigation measures is a priority and DPR will continue these studies.

Leslie Crowl inquired about application-site monitoring of chlorpyrifos, mancozeb, and MITC. DPR has requested ARB monitor these chemicals in agricultural fields. This monitoring is coordinated with County Agricultural Commissioners. Ms. Crowl also inquired whether the chloropicrin data exceeded screening levels triggers regulatory action.
Mr. Segawa stated the screening levels is only a trigger for re-assessing the data and does not constitute regulatory action.

Anne Katten inquired if any use analysis had been performed within one square mile of the community sites and compared to the average or maximum residues found in the Air Monitoring Program. Mr. Segawa stated the program compiles the data separately and has separate rating for use within communities, one mile for use within communities, and five miles for use within communities.

1,3-Dichloropropene Update
Lynn Baker inquired whether soil type is a factor when computing the application factor to calculate cap amounts. Mr. Segawa stated additional research is currently in progress, which may bring light to the application factor. Mr. Baker also suggested the monitoring program consider Merced county as a future monitoring site, as use of 1,3-D is highest in California.

Matt Hengel inquired whether DPR and ARB use different laboratories for testing. DPR and ARB use different laboratories; however, they both use the same methodology using stainless steel canisters. Mr. Hengel further inquired if there will be a phasing out of 1,3-D. DPR will need to finalize its current 1,3-D risk assessment, before any official decisions will be made.

Anne Katten inquired whether DPR is looking into the use of Totally Impermeable Film (TIF) tarps and the time requirement for leaving them in place. Mr. Segawa stated DPR assisted with a university study in 2011 to determine the minimum time requirement in relation to air concentration when using TIF tarps. This study determined a minimum of nine days is required. Ms. Katten further inquired if DPR issued any public notices regarding township cap exceedances for 1,3-D. The DPR California Management Plans states there may be exceptions to the township caps.

Lynn Baker inquired if DPR is looking into computer modeling. Mr. Segawa stated DPR is currently working on its risk assessment, which goes hand in hand with computer modeling. Through its assessment, DPR may revise the regulatory goal and township caps. Mr. Baker inquired if tarps are required for 1,3-D applications. Mr. Segawa noted if the method of application is shanked in by tractor, the application does not require tarps; however, if the application is applied by drip irrigation, tarps are mandatory. DPR has been working on computer modeling for several years to estimate flux based on soil type, chemical characteristics, and several environmental other factors.

Jeff Fowles asked for clarification on the time period for DAS monitoring of 1,3-D in Merced via email. It was determined the monitoring occurred between October 2010 and December 2011.

6. <u>Agenda Items for Next Meeting</u>

Rich Breuer, Committee Member and Assistant Director of the Office of Information Management and Analysis, State Water Resources Control Board (SWRCB) will present the latest results of the Pesticide Model Project. The Pesticide Model Project integrates the model results with the Irrigations Lands Data from Region 5.

The next meeting will be on May 16, 2014, in the Sierra Hearing Room on the second floor of the Cal/EPA building, located at 1001 I Street, Sacramento, California.

7. <u>Adjourn</u>