PESTICIDE REGISTRATION
AND EVALUATION COMMITTEE (PREC)
Meeting Minutes –March 18, 2016

Committee Members/Alternates in Attendance:

Ann Prichard, Department of Pesticide Regulation (DPR)
Charles Salocks, Office of Environmental Health Hazard Assessment (OEHHA)
Crystal Reul-Chen, Department of Resources Recycling and Recovery (CalRecycle) –via webcast
Eric Lauritzen, California Agricultural Commissioners and Sealers Association (CACASA)
Jeff Fowles, Department of Public Health (CDPH)
James Seiber, University of California, Department of Toxicology
Lynn Baker, Air Resources Board (ARB)
Perry Poe, California Department of Food and Agriculture (CDFA)
Rebecca Sisco, University of California, IR-4 Program
Rich Breuer, State Water Resources Control Board (SWRCB)
Valerie Hanley, Department of Toxic Substances Control (DTSC) –via webcast

Visitors in Attendance:

Anne Katten, California Rural Legal Assistance (CRLA) Foundation
Bob Blakely, California Citrus Mutual
Brian Brett, Dow AgroSciences LLC
Catherine Caraway, OEHHA
Chris Valadez, California Fresh Fruit Association
David Luscher, CDFA
George Soares, Kahn, Soares & Conway, LLP
James Nakashima, OEHHA
Jean-Mari Peltier, Environmental Solutions Group representing California Strawberry Commission
Jodi Raley, California Cotton Ginners and Growers Associations
Lori Lim, OEHHA
Mark Weller, Californians for Pesticide Reform –via webcast
Paul Towers, Pesticide Action Network North America
Rachel Kubiak, Western Plant Health Association (WPHA)
Renee Pinel, WPHA
Ruben Arroyo, CACASA

DPR Staff in Attendance:

Andi Cameron, Pesticide Registration Branch –via webcast
Ann Schaffner, Worker Health and Safety Branch
Atac Tuli, Environmental Monitoring Branch
Chris Collins, Environmental Monitoring Branch
Colin Brown, Environmental Monitoring Branch
Craig Cassidy, Outreach and Public Engagement
David Duncan, Environmental Monitoring Branch
Denise Alder, Pesticide Registration Branch
Edgar Vidrio, Environmental Monitoring Branch
Eileen Mahoney, Pesticide Registration Branch
Jeanne Martin, Enforcement Branch
Jesse Cuevas, Office of Legislation and Policy
Jill Townzen, Office of Legislation and Policy
Joe Marade, Pesticide Programs Division
Kelsey Craig, Environmental Monitoring Branch
Leslie Crowl, Worker Health and Safety Branch
Leslie Ford, Fiscal Services and Business Operations Branch
Lisa Ross, Worker Health and Safety Branch
Lu Saephanh, Fiscal Services and Business Operations Branch
Madeline Brattesani, Environmental Monitoring Branch
Marylou Verder-Carlos, Pesticide Programs Division
Miglena Wilbur, Human Health Assessment
Mike Zeiss, Worker Health and Safety Branch
Pam Wofford, Environmental Monitoring Branch
Randy Segawa, Pesticide Programs Division
Russell Darling, Pesticide Registration Branch

1. Introductions and Committee Business –Ann Prichard, Chair, DPR

a. About forty-nine (49) people attended the meeting and seventy (70) webcast viewers.
b. No corrections to the minutes held on November 20, 2015 identified.

2. Air Monitoring Network Changes

a. Background –Randy Segawa, DPR

DPR and ARB routinely conduct pesticide air monitoring. The Air Monitoring Network started in 2011. DPR has evaluated results, received comments from stakeholders, and have discussed possible changes to monitoring objectives, pesticides monitored, sampling frequency, communities monitored, and selection criteria within communities. There are currently three types on monitoring being conducted: (1) application-site monitoring in the immediate vicinity of an application for several days to estimate acute exposures; (2) ambient air monitoring several communities in a high-use region during a high-use season for a single pesticide to estimate subchronic exposures; and, (3) air monitoring network year-round monitoring of several

communities with high use of multiple pesticides to estimate cumulative, subchronic, and chronic exposures.

Currently, DPR is collecting one set of 24-hr samples each week for thirty-two pesticides in Ripon, Salinas, and Shafter. DPR calculates 24-hour, 4-week, 1-year, and overall average concentrations then compares detected concentrations to health screening levels or regulatory target concentrations. The highest concentrations for the four fumigants were 23 to 175 percent of screening levels or regulatory targets. The highest chlorpyrifos and diazinon concentrations were 47 percent and 74 percent of screening levels, respectively. The highest concentration for other non-fumigant pesticides was less than two percent of screening levels.

At DPR's request, ARB is collecting one 24-hr sample every six days for 1,3-dichloropropene and methyl bromide, as well as seasonal monitoring for chloropicrin in Oxnard, Santa Maria, and south of Watsonville. DPR calculates 24-hour, 4-week, 1-year, and overall average concentrations then compares detected concentrations to health screening levels or regulatory target concentrations. The highest concentrations were 59 to 140 percent of health screening levels or regulatory targets (including chloropicrin 4-week concentration that was 117 percent of screening level in 2015).

Stakeholders have suggested changing objectives to "design program to monitor most hazardous pesticides most likely to move offsite in the air." The statement may be considered vague and is addressed with current objectives. DPR proposes no changes to DPR's or ARB's objectives. Currently, DPR's objectives are to identify common pesticides in air and determine seasonal, annual, and multiple-year concentrations and estimate cumulative exposure to multiple pesticides with common modes of action. DPR's and ARB's objectives are to compare concentrations to subchronic and chronic health screening levels, track trends in air concentrations over time, and attempt to correlate concentrations with use and weather patterns.

DPR has evaluated top 100 pesticides used with California (except inorganics, oils, and antimicrobials) and prioritized pesticides based on use, volatility, and DPR's risk assessment priority. DPR also considered the feasibility of including several pesticides in single method. There are currently four pesticide monitoring methods: (1) multi-residue, which includes 27 pesticides; (2) Volatile Organic Compounds, which includes 1,3-dichloropropene, methyl bromide, and carbon disulfide; (3) chloropicrin; and, (4) methyl isothiocyanate (MITC).

Table 1. Pesticides in Multi-Residue Method.

Acephate (Orthene)*	Methidathion (Supracide)*
Bensulide (Prefar)*	Naled as dichlorvos (DDVP)*
Chlorothalonil (Bravo)	Norflurazon (Solicam)
Chlorpyrifos (Lorsban)†*	Oryzalin (Surflan)
Chlorthal-dimethyl (Dacthal)	Oxydemeton-methyl (Metasystox)*
Cypermethrin	Oxyfluorfen (Goal)
Diazinon†*	Permethrin
Dicofol (Kelthane)	Phosmet (Imidan)*
Dimethoate (Cygon) †*	Propargite (Omite)
Diuron (Karmex)	S,S,S-tributyl phosphorotrithioate (DEF)*
Endosulfan (Thiodan) + sulfate	Simazine (Princep)
EPTC (Eptam)	S-metolachlor (Dual)
Iprodione (Rovral)	Trifluralin (Treflan)
Malathion†*	

†includes oxygen analog breakdown product
*organophosphate

The University of California, Davis was requested to add 2,4-dichlorophenoxy acetic acid, captan, fenpyroximate (Fujimite), imazalil (Magnate), methomyl (Lannate), and pendimethalin (Prowl) to the multi-residue analytical method used in the Air Monitoring Network. These pesticides have been identified by CDPH as "pesticides of public health concern" and are not currently included in the Air Monitoring Network. At this time, other pesticides of interest such as mancozeb cannot be added to multi-residue method due to cost.

Currently, DPR collects one set of 24-hr samples one random day each week and ARB collects one 24-hr sample every six days for 1,3-dichloropropene and methyl bromide while chloropicrin is collected every three days during peak season. Suggestions to the sampling frequency include more frequent sampling during peak use season, no sampling during low use season, and change ARB sampling to random days. There is minimal value with calculating subchronic exposure using average of 8-12 samples rather than current four samples. Average concentrations for 1-year cannot be calculated if no samples are collected for several weeks. Pesticides are detected during periods of low or no use and ambient air monitoring for individual pesticides provides additional subchronic data. DPR and ARB propose to change ARB sampling to a random day. DPR proposes no other changes to sampling frequency.

Currently, communities are selected for monitoring based on pesticide use of 32 monitored pesticides. In these communities, only fumigants and organophosphates approach or exceed screening levels or regulatory targets. DPR proposes to monitor for 32 pesticides, but select communities based on use of fumigants and organophosphates. Additionally, DPR proposes to adjust use based on wind speed.

DPR proposes to revise the current method to rate communities for pesticide use by selecting two sets of communities. One community will be identified based on 2012-2014 use of four fumigants and another community will be identified based on 2012-2014 use of eleven organophosphates. DPR would compile use in three zones (greater weight to community use): (1) use within the community (community zone); (2) use within the community and one mile of the community (local zone); and, (3) use within the community and five miles of the community (regional zone). This would determine the use density (pounds per square mile) by pesticide, year, and zone for each community, rank from highest to lowest community (1 to 1267) for each use value (no quartile rating), and each community would be assigned an average ranking of 3 years, 3 zones, and 4 or 11 pesticides

Furthermore, DPR proposes a revised method to rate communities for pesticide use. This revised method would group top ranked communities by regions, evaluate the top fumigant regional groups and top organophosphate regional groups, while determining an average wind speed for each group. DPR could then adjust pesticide use by dividing by average wind speed and revise rankings for top regional groups based on adjusted pesticide use. The wind speed adjustment is consistent with the methods for air dispersion modeling.

Under consideration are two alternatives for community selection. Both alternatives include selecting communities for DPR monitoring while continuing to monitor one community each year (Shafter).

Alternative 1 is to select one community from the top fumigant regions and select one community from the top organophosphate regions. Monitoring would be conducted for all 32 pesticides at all three sites. DPR proposes to continue monitoring in Shafter as predictions indicate 1,3-dichloropropene will exceed the regulatory target if concentrations do not decline. Additionally, Shafter contains the highest organophosphate concentrations relative to screening levels.

Alternative 2 is to select two communities from the top fumigant regions and select two communities from the top organophosphate regions. Monitoring in Shafter would include one fumigant community and one organophosphate community in odd-numbered years while monitoring in Shafter and other two communities in even-numbered years. Monitoring would be conducted of all 32 pesticides at all five sites.

Proposed selection of communities for ARB monitoring includes monitoring one current community (Santa Maria) each year. Santa Maria has exceeded the chloropicrin screening level. Presently, 1,3-dichloropropene will exceed the regulatory target if concentrations do not decline. Additionally, the proposed selection would include one or two communities from the top 1,3-dichloropropene and methyl bromide regions. Monitoring would be conducted at two or three communities.

Table 2. Communities with the Highest Unadjusted Use Rankings for Organophosphates (2012-2014).

Communities	County	Ranking
Delft Colony, Tooleville, East Orosi	Tulare	1, 8, 9
Monterey Park Tract, Cowan	Stanislaus	2, 23
Mexican Colony, Cherokee Strip	Kern	3, 12
Chualar, Gonzalez	Monterey	4, 26
San Joaquin, Tranquility	Fresno	5, 6
Saticoy, El Rio	Ventura	7, 58
Westmorland, Palo Verde	Imperial	10, 41

Wind speed has not been considered in this table.

Table 3. Communities with the Highest Unadjusted Use Rankings for Fumigants (2012-2014).

Communities	County	Ranking
Edmundson Acres, Mettler	Kern	1, 2
Macdoel, Mount Hebron	Siskiyou	3, 9
Saticoy, El Rio	Ventura	4, 10
La Vina, Bowles	Madera, Fresno	5, 22
Cuyama, New Cuyama	Santa Barbara	6, 12
Pajaro, Boronda, Castroville	Monterey	7, 11, 13
Delft Colony, Linnell Camp	Tulare	8, 40

Wind speed has not been considered in this table.

Table 4. Communities with the Highest Unadjusted Use Rankings for 1,3-Dichloropropene and Methyl Bromide (2012-2014).

Communities	County	Ranking
Macdoel, Mount Hebron, Dorris	Siskiyou	1, 6, 15
Edmundson Acres, Mettler	Kern	2, 5
Delft Colony, Rodriguez Camp	Tulare	3, 14
La Vina, Bowles, Biola	Madera, Fresno	4, 10, 19
Saticoy, El Rio	Ventura	7, 16
Pajaro, Boronda, Las Lomas, Castroville, Pajaro Dunes, Freedom	Monterey, Santa Cruz	8, 9, 11, 12, 13, 17
Bret Harte, Stevinson, Livingston	Stanislaus, Merced	18, 26, 32
Woodlands, Guadalupe	San Luis Obispo, Santa Barbara	20, 21
Parlier, Raisin City, Delhi	Fresno	30, 31, 33

Wind speed has not been considered in this table.

The minimum site selection criteria within a community includes meeting the U.S. Environmental Protection Agency (U.S. EPA) ambient air siting criteria, accessibility to sampling personnel during time of sampling, accessibility to electrical outlets, accessibility to the public, the monitored community is secure from equipment loss or tampering, and permission of site operator/owner. U.S. EPA ambient air siting criteria includes that the site is 2 – 15 meters above ground, at least 1 meter horizontal and vertical distance from supporting structure, at least 20 meters from trees, the distance from obstacles is at least twice the obstacle height, and the site has unobstructed air flow for 270 degrees. The preferred monitoring sites include schools, day care centers, other "sensitive" sites, and edges of community and/or adjacent to agricultural fields. DPR is proposing to add predominantly downwind from fields to the list of preferred monitoring sites.

For more information regarding changes to the Air Monitoring Network, please visit DPR's Web site at <http://cdpr.ca.gov/docs/emon/airinit/air_network.htm>. More information can also be obtained by contacting Environmental Program Manager I, Mr. Randy Segawa at 916-324-4137 or by e-mail at <Randy.Segawa@cdpr.ca.gov> or Environmental Program Manager I, Ms. Pam Wofford at 916-324-4297 or by e-mail at <Pam.Wofford@cdpr.ca.gov>.

b. Californians for Pesticide Reform –Anne Katten, CRLA Foundation

Some of the organizations meeting with the California Environmental Protection Agency and DPR include Californians for Pesticide Reform, California Rural Legal Assistance Foundation, Center for Environmental Health, Natural Resources Defense Council, and Pesticide Action Network. Californians for Pesticide Reform Steering Committee believes monitoring objectives should include evaluating highest potential exposure of rural populations to pesticides in air. This will mitigate exposure to protect those with highest potential exposures and is the most efficient use of limited resources. This would also provide data to improve modeling capacity as data with high percentage of "non-detects" is hard to use in modeling.

The Californians for Pesticide Reform Steering Committee supports adding pesticides to multi-residue screen and adding additional proposed pesticides of public health concern. Sampling should occur more frequently and include a more thorough seasonal monitoring of fumigants in coastal areas. Coastal areas have a predictable pesticide use season. Additionally, DPR should consider obtaining multiple samples per week to better characterize peak exposures, will reduce the impact should samples be lost or fail analysis, and will provide more data during high use periods. By collecting multiple samples per week, this will increase DPR's ability to correlate air concentrations with pesticide use and weather data through modeling. Additionally, the Californians for Pesticide Reform Steering Committee supports selecting monitoring sites based on use of fumigants and organophosphates. However, a monitoring site must be found near to and predominantly downwind of fields before a community is selected. The Californians for Pesticide Reform Steering Committee generally supports adjusting for wind speed but exceptions may also need to be considered.

Research by Harnly et al. (2005) supports more frequent monitoring and obtaining monitoring sites close to fields. The study noted that use of chlorpyrifos and diazinon within a three-mile radius of the monitoring site on the monitoring day performed two to four days prior was

significantly associated with higher air concentrations. The research found the strongest correlation of pesticide use was within 1.5 miles of the monitoring site.

The Californians for Pesticide Reform Steering Committee supports relocation of DPR monitoring sites. Three years of data have been collected at these sites. The data has limited usefulness with low sampling frequency and more than trace detections. Additionally, the current monitoring sites are much further from fields than many residences and schools in these communities. If DPR chooses to continue monitoring in Shafter, the Californians for Pesticide Reform Steering Committee proposes to relocate the monitoring sites closer to fields and consider monitoring in nearby communities with higher use.

The Californians for Pesticide Reform Steering Committee proposes to relocate a DPR or ARB fumigant-monitoring site within Salinas. Many residences and schools are down wind of higher density fumigant use. Additionally, a seasonal chloropicrin monitoring at an alternate site is needed to accurately evaluate subchronic exposure. Furthermore, the Salinas community is interested and concerned about exposure. Previous ARB monitoring at a north Salinas school site found high fumigant levels. ARB monitoring should continue at this site to detect seasonal chloropicrin use. The Californians for Pesticide Reform Steering Committee asks DPR to consider adding methyl isothiocyanate (MITC) at sites near high use and in Santa Maria. Non-fumigant monitoring in Santa Maria should also occur because high organophosphates and fungicides are used. Additionally, the Californians for Pesticide Reform Steering Committee requests the monitoring to continue at the current Oxnard site or relocate to Ventura County.

Table 5. Chloropicrin Use (Millions of Pounds) Rising in Coastal Counties.

County	2013 Use	2014 Use	Percent Change
Santa Cruz	0.66	0.78	+18.3%
Monterey	2.01	2.26	+12.3%
Santa Barbara	1.27	1.42	+11.8%
Ventura	2.18	2.29	+5%

The Californians for Pesticide Reform Steering Committee requests sites to be located adjacent or close to fields and predominantly downwind from field. DPR should evaluate levels of pesticide use and weather conditions close to candidate monitoring sites. Schools are preferred but other sites close to and mainly downwind of fields will also be acceptable. The Californians for Pesticide Reform Steering Committee supports monitoring in alternating years to allow monitoring in a wider range of locations. This will allow for data collection in a large number of communities in close proximity to high levels of pesticide use. Additionally, this will allow a high level of variability in a condition that affect air concentration between sites (meteorological conditions, topography, application methods, pesticide chemistry) and is the best use of limited resources.

Reference Cited

Harnly, M., R. McLaughlin, A. Bradman, M. Anderson, and R. Gunier, 2005, "Correlating Agricultural Use of Organophosphates with Outdoor Air Concentrations: A Particular Concern for Children," *Environmental Health Perspectives,* Vol. 113, No. 9, Pp. 1184-1189. <https://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/display.files/fileID/13720>

c. Industry Representative –Rachel Kubiak, WPHA

WPHA has historically observed the development of these programs. The comprehensive 2000 monitoring program that was in place demonstrated screening levels was not exceeded. The Parlier project showed that no levels of health risk concerns from pesticides and showed non-pesticide pollutants were the greatest concern. Finally, the current monitoring program has demonstrated that California is not exceeding health-screening levels. In general, industry requests more information to be able to provide feedback on DPR's proposal to modify the Air Monitoring Network.

Industry requests DPR provide a comprehensive review of the past five years of data collected to finalize the program. This is to ensure the validity of the five-year monitoring data. Furthermore, Industry requests additional time to assess the impact of the proposed changes. The grower community needs to be engaged and the community would like an opportunity to discuss the proposal. Additionally, industry requests a comment period and potential secondary discussion with the PREC.

The lack of detection of pesticides has value and shows the grower community is doing what they are supposed to be doing. Other things to be clarified include adjustment of the wind speed versus the site selection based on wind direction. What additional benefits will result in changing the criteria? Industry would like more time to assess the proposal and in essence, DPR is creating a new program. A comprehensive summary or report of the previous monitoring needs to be completed.

d. Discussion

Eric Lauritzen commented that he is uncomfortable with DPR asking the PREC for a recommendation as opposed to being a source of information.

James Seiber encouraged DPR to add data collection to validate modeling as an objective. Lynn Baker stated that models might not be efficient in predicting long-term concentrations for subchronic and chronic exposure.

Lynn Baker inquired if there is interest in annual average concentrations for organophosphates. Randy Segawa stated the data indicates the organophosphates are approaching the screening levels for acute toxicity as opposed to subchronic or chronic toxicity. However, DPR is calculating and estimating the subchronic and chronic exposure and comparing the organophosphates to screening levels.

Jeff Fowles inquired if some organophosphates that consistently showed no exposure were not removed from the list for consistency. Randy Segawa stated yes.

Mike Zeiss asked for clarification from Anne Katten regarding how the current objectives do not adequately ensure the pesticides of highest risk to communities are being sampled. Anne Katten stated the places where sampling is conducted did not necessarily capture the highest levels of exposure.

Bob Blakely stated DPR is completely revising the objectives. The Air Monitoring Network was meant to be a long-term study and changing the program after five years may invalidate a portion of the objectives. Furthermore, Bob Blakely requested an extension on the comment period. Lynn Baker stated he does not believe the objectives are changing. However, one of the criteria for site selection is being removed –if there was a site that was an air-monitoring site for another entity or program, DPR would additionally monitor the site.

Lynn Baker clarified pesticides are applied to fields and if the wind is blowing across an urban area, the concentrations of the pesticides are being diluted. An air district locates an air-monitoring site downwind of a community because the wind blows the emissions downwind and the highest air pollution downwind of the town. That is why an air district rationale for locating a monitoring site is not necessarily consistent with locating a pesticide-monitoring site.

Chris Valadez stated the program should focus on subchronic and chronic long-term benefits.

Paul Towers commented the proposed changes have been proposed over the course of years and the potential changes do not significantly affect the objectives.

Jeff Fowles commented altering the program does not invalidate the data collected.

Charles Salocks commented the program might want to look into sites with stable conditions (e.g., wind speed). Randy Segawa stated the program is factoring both pesticide use and weather. The program is taking the pounds of pesticides used divided by the average wind speed so the communities with higher wind speed and lower air concentrations will be ranked lower. Charles Salocks further commented that DPR consider looking at data on a seasonal basis rather a yearly average.

Kelsey Craig inquired how wind speed would be factored into the calculations. Wind speed, wind direction, and percent of calms would be important factors to consider. Randy Segawa stated wind direction could not be factored into the 1200 communities. DPR will consider any suggestions to the calculations.

Charles Salocks inquired about the specific changes to add pesticides to the multi-residue method including 2,4-D, captan, fenpyroximate (Fujimite), imazalil (Magnate), methomyl (Lannate), and pendimethalin (Prowl). Randy Segawa stated the pesticides would be added as long as the University of California, Davis, validates the analytical methods for the chemicals. Charles Salocks further inquired on the chemical structure of imazalil.

Jeff Fowles asked if there is an option to separate site selection by fumigants and organophosphates. Randy Segawa stated this would increase the field sampling costs, but DPR is willing to consider this option.

Catherine Caraway inquired how the data collection would be captured if sampling does not occur during periods of low or no use. Randy Segawa stated the data would no longer be captured and DPR is uncertain as to the cause of the current detections during periods of no use. Charles Salocks stated there are toxic air contaminants that are not volatile and exposure detections could be possible due reentrainment.

Rebecca Sisco commented that DPR's proposal speaks to annual monitoring instead of seasonal monitoring.

Jeff Fowles asked if Shafter changed in the prioritization. Randy Segawa stated the unadjusted pesticide use has decreased in Shafter. The official city boundaries of Shafter are misconstruing the data. One of DPR's objectives is to detect trends.

Rebecca Sisco commented Shafter could bridge old locations to the new locations. Alternative 1 is a reasonable approach and alternative 2 may lose the robustness of the data.

Lynn Baker commented chloropicrin should be included considering methyl bromide may not be used in soil fumigation next year so the data would only rely on 1,3-dichlororpropene. Charles Salocks agreed.

Anne Katten inquired if current procedure is that DPR looks at the pesticide use per square mile and is that for all pesticides or all pesticides being monitored. Randy Segawa stated this is current procedure and this is only for the 32 pesticides being monitored.

Randy Segawa inquired if DPR should weigh pesticide use by distance. DPR currently looks at three zones: (1) community; (2) one mile; and, (3) five miles. This is a cumulative total within each of the three zones. The use within the community zone is overweighed compared to the one and five mile zones (i.e., the one-mile zone includes the use within the community and the one-mile zone; the five-mile zone includes the one-mile zone and community).

Rebecca Sisco asked for clarification on the weight use by distance. Randy Segawa stated DPR would collect the data by zones (community, one-mile, five-mile) i.e., rings instead of cumulative. Rebecca Sisco commented there is value to collecting data in rings rather than cumulative.

Rich Breuer commented the more DPR could determine how well DPR can model; data collection will refine the answers to the key issues.

e. Next Steps –Randy Segawa, DPR

3. Committee Comment

James Seiber inquired which of the pesticides monitored have a buffer zone requirement. Randy Segawa stated currently, there are buffer zones for methyl bromide, chloropicrin, and methyl isothiocyanate (MITC). James Seiber further inquired if the buffer zones have been changed due to the results of the Air Monitoring Network. Randy Segawa stated the buffer zones are based on acute exposures while the Air Monitoring Network gathers subchronic and chronic exposure data. Application site monitoring data is the basis for determining buffer zones.

James Seiber questioned to what extent is the Air Monitoring Network bridging over to modeling. Randy Segawa stated DPR is conducting extensive modeling with fumigants to estimate the emissions of flux applications using HYDRUS (originally developed by the University of California, Riverside). Modeling will be considered for other pesticides in the Air Monitoring Network.

Rebecca Sisco inquired if there was a more precise way to calculate wind speed as the "average" wind speed does not appear to be accurate. Randy Segawa stated the Air Monitoring Network's objective is to measure subchronic and chronic exposure so an average wind speed calculation to adjust the data over a year should be sufficient. DPR has considered using percent of hours with calm wind instead of an average wind speed. However, the difference in the methods should be negligible as average over a year.

James Seiber asked if the neonicotinoids are considered in the Air Monitoring Network. Randy Segawa stated neonicotinoids are not currently included in the Air Monitoring Network. Presently, bees are not considered in the Air Monitoring Network as the network measures inhalation toxicity. Denise Alder stated the toxicity route of exposure to bees is primarily contact and oral.

Jeff Fowles inquired if the University of California, Davis researchers validate additional compounds analysis methods, would the information influence any of the pesticides being monitored (e.g., methomyl). Randy Segawa stated once DPR confirms the ability to add active ingredients such as methomyl, DPR will consider them.

James Seiber commented that Shafter is an excellent selection. James Seiber asked if there is any consideration of monitoring urban populations such as Fresno and Bakersfield. Randy Segawa stated DPR has considered Fresno and Bakersfield as well as a number of other communities. However, the rural communities selected have shown to have the highest air concentrations. Furthermore, there is difficulty selecting a single monitoring site in areas such as Fresno.

Lynn Baker asked for clarification on the minimum site selection criteria, "accessible to the public." Pam Wofford stated the site should have general access i.e., public property is preferred.

James Seiber asked if DPR is considering drones in environmental monitoring. Pam Wofford stated that presently, DPR is not considering drones in environmental monitoring.

James Seiber commented that the Air Monitoring Network should complete a comprehensive summary of the data collected to date and the summary should possibly go out for peer review.

Rich Breuer commented the State needs to have a continuous monitoring program to address issues of public health. DPR should continue to move forward without delay for the summary or report to be completed.

Crystal Reul-Chen inquired if the maps used in the presentation were publically available. This could help doctors to determine adverse health effects for patients and could help people choose locations to live to reduce exposure. Randy Segawa stated that the maps are currently not publically available, the maps shown were interactive, and the maps may not be viable to place on DPR's Web site. Additionally, the maps shown were of pesticide use, not air concentration. Additionally, there is about a year and a half lag in pesticide use data.

Eric Lauritzen suggested DPR provide an informational forum regarding DPR's change proposals to the Air Monitoring Network so subject matter experts can comment and the PREC may not be the appropriate format. Randy Segawa stated there will be a formal public comment period until April 15, 2016 and the comments will be compiled and discussed during the May PREC meeting. Eric Lauritzen inquired if there will be more subject matter experts invited and commented the meeting was not publically noticed. Randy Segawa stated DPR would consider inviting additional subject matter experts.

4. Public Comment

Catherine Caraway asked if there is a weighting for the relative toxicity when calculating the use density (pounds per square mile). Randy Segawa stated that presently there is not a weighting as there may be disagreements with how the weighting scheme is implemented.

Catherine Caraway further asked if the samples collected over 32 weeks are averaged over 52 weeks. Randy Segawa stated it is 32 pesticides averaged over 52 weeks.

James Nakashima inquired about CalEnviroScreen. Randy Segawa stated OEHHA does have a program that maps pesticide use as well; however, it is a different group of pesticides.

5. Agenda Items for Next Meeting

The next meeting will discuss the comments received regarding the proposed changes to the Air Monitoring Network. Future topics may include modeling, drones in monitoring, and the recently passed SWRCB Stormwater strategy.

The next meeting is scheduled for Friday, May 20, 2016 at 10:00 a.m. in the Sierra Hearing Room on the second floor of the CalEPA building, located at 1001 I Street, Sacramento, California.

6. Adjourn