PESTICIDE REGISTRATION
AND EVALUATION COMMITTEE (PREC)
Meeting Minutes –August 15, 2014

Committee Members/Alternates in Attendance:
Charles Salocks, Office of Environmental Health Hazard Assessment (OEHHA)
Eric Lauritzen, CA Agricultural Commissioners and Sealers Association (CACASA) –via webcast
James Seiber, University of California (UC), Department of Environmental Toxicology
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
Rich Breuer, State Water Resources Control Board (SWRCB)
Shelley Lopez, Department of Pesticide Regulation (DPR)
Valerie Mitchell, Department of Toxic Substances Control

Visitors in Attendance:
Andi Cameron, DPR –Pesticide Registration
Andy Rubin, DPR –Human Health Assessment
Anne Katten, California Rural Legal Assistance Foundation
Brian Bret, Dow AgroSciences
David Duncan, DPR –Environmental Monitoring
Denise Alder, DPR –Pesticide Registration
Doug Downie, DPR –Pest Management and Licensing
Eileen Mahoney, DPR –Pesticide Registration
Eric Kwok, DPR –Human Health Assessment
George Farnsworth, DPR –Enforcement
Jeanne Martin, DPR –Enforcement
Jill Townzen, DPR –Pesticide Registration
Joe Marade, DPR –Pesticide Programs Division
John Inouye, DPR –Pesticide Registration
Kean Goh, DPR –Environmental Monitoring
Ken Everett, DPR –Environmental Monitoring
Leslie Crowl, DPR –Worker Health and Safety
Liz Pelham, DPR –Pesticide Registration
Louie Mendoza, Yuba County Agricultural Commissioner
Mark Robertson, DPR –Pest Management and Licensing
Nan Singhasemanon, DPR –Environmental Monitoring
Patricia Matteson, DPR –Pest Management and Licensing
Randy Segawa, DPR –Pesticide Programs Division
Paul Towers, Pesticide Action Network
Richard Marovich, DPR –Pest Management and Licensing
Sheryl Beauvais, DPR –Human Health Assessment
Svetlana Koshlukova, DPR –Human Health Assessment

Tom Babb, DPR –Pest Management and Licensing
Yuzhou Luo, DPR –Environmental Monitoring

1. **<u>Introductions and Committee Business</u> –Shelley Lopez, Acting Chair, DPR**
   a. About 40 people attended the meeting.
   b. No corrections to the minutes of the previous meeting held on July 18, 2014 identified.

2. **<u>Chlorpyrifos Update</u> –Randy Segawa, DPR**

   Chlorpyrifos is a widely used insecticide. While use of chlorpyrifos has been decreasing, more than a million pounds are applied each year with most use occurring during mid-June to September. Most of its use occurs in the Central Valley, Central Coast, and Imperial County regions in California. The top five counties for chlorpyrifos use between 2010 and 2012 were Fresno County, Kern County, Tulare County, Kings County, and Imperial County. More than ninety-nine percent of chlorpyrifos use is for agricultural commodities. It is applied to more than sixty crops and the top five crops account for more than seventy percent of the use. Almonds, alfalfa, walnuts, oranges, and cotton accounted for the top five crops between 2010 and 2012. Two thirds of the applications are by ground and one third is by air. Chlorpyrifos has about a dozen different formulation types, but liquid concentrates and emulsifiable concentrates account for more than ninety percent of use.

   Currently, certain chlorpyrifos products are federally restricted use pesticides that require use by a certified applicator. Current restrictions include 25-150 foot setbacks from aquatic areas and 10-100 foot setbacks from sensitive areas. Additional restrictions include application methods and spray drift management methods. The aquatic areas setback distance depends on application method and the sensitive area setback distance depends on application method, application rate, and nozzle size. DPR regulation (California Code of Regulations, Title 3 §6960) ensure no dormant application if soil moisture is at field capacity or storm runoff is forecasted within forty-eight hours. Growers have three options: 1) apply chlorpyrifos to a hydrologically isolated site, 2) hold runoff for seventy-two hours, or 3) obtain a pest control advisor recommendation, do not apply within 100 feet of sensitive aquatic sites, wind speed must be 3-10 mph, and most aerial applications are prohibited. A "hydrologically isolated site" is any treated area that does not produce runoff capable of entering any irrigation or drainage ditch, canal, or other body of water. A "sensitive aquatic site" is any irrigation or drainage ditch, canal, or other body of water in which the presence of dormant insecticides could adversely influence any of the beneficial uses of the waters of the state specified in California Water Code §13050(f).

   A recently updated surface water analysis conducted between 2006 and 2012 focused on seven major agricultural production areas: Sacramento, San Joaquin, Tulare, Pajaro, Salinas, Santa Maria in the Central Coast, and Imperial Valley in the south. Overall, 4,094 samples were collected with 683 detections and 372 exceedances. This equates to about seventeen percent detections and about nine percent with concentrations above the minimum U.S. EPA benchmark for aquatic organisms. The current U.S. EPA benchmark for determining exceedance is 0.04 µg/L. Among the regions, Santa Maria and Imperial Valley had highest

detection and exceedance frequencies. Regions in the Central Valley had relatively lower detection and exceedance frequencies. Based on detections and the U.S. EPA benchmark exceedances, the Technical Advisory Committee started holding meetings in 2013 and identified significant use of chlorpyrifos on broccoli seed/transplant to control cabbage maggot and subsequent runoff from sprinkler irrigation as an area of initial focus. The initial focus became the Central Coast with the Central Valley and Imperial Valley next in line.

Chlorpyrifos is an organophosphate insecticide that causes neurotoxic effects. Acute, high-dose exposure symptoms include tremors, vomiting, convulsions, and possibly death. Some studies suggest lower-dose exposures can cause neurodevelopmental affects in infants and children. Infants and children are more susceptible due to their developing nervous systems. Exposures to residents in rural areas are potentially of concern as well. Exposure data is lacking for downwind of applications and calculating exposure estimated requires many assumptions. Currently, DPR uses computer modeling with agricultural drift (AgDrift) and agricultural dispersal (AgDisp) developed by U.S. EPA and registrants to estimate offsite deposition and dermal exposure. Air monitoring to estimate inhalation exposure showed a maximum concentration from ambient monitoring being approximately 1 $\mu g/m^3$ and the maximum concentration from application site monitoring being approximately 50 $\mu g/m^3$. Additionally, DPR's Pesticide Illness Surveillance Program identified thirty-five applications that may have caused illnesses to 136 people due to drift during 2001 to 2011. Other possible exposures include ingestion by infants due to hand-to-mouth activities.

Due to health and environmental concerns, particularly from drift, DPR is working on proposed regulations to make chlorpyrifos a state restricted material when used for production of an agricultural commodity. If chlorpyrifos becomes a restricted material, applications must be made, or supervised by, a certified applicator. Furthermore, purchase, possession, or use requires the property operator to obtain a permit from the County Agricultural Commissioner (CAC), and applications for hire will require a pest control advisor recommendation. There are three types of certified applicator requirements: 1) DPR-issued qualified applicator license (valid for two years), 2) DPR-issued qualified applicator certificate (valid for two years), and 3) CAC-issued private applicator certificate (valid for three years). Certified applicator requirements include passing examinations and continuing education required to renew the applicator license/certificate. For restricted materials, pest control advisors and growers must consider and adopt feasible mitigation measures and alternatives, which substantially lessen environmental impact. CACs must evaluate permit applications and notices of intent, including if substantial environmental impact will occur, local conditions, and information from DPR and other specified sources. CACs may approve, condition, or deny a permit.

To date, there are thirty-eight end use products with active registrations and the restriction would affect the thirty products used for the production of agricultural commodities. Twenty-four of the thirty-eight products are federally restricted use pesticides that require a certified applicator, but not a permit. The restriction would not affect eight products used solely for non-production agriculture or non-agriculture uses will not be affected (e.g., golf courses,

rights of way, landscape maintenance, seed treatments, non-residential structures, livestock housing, and cattle tags). Ten of the products are Federal Insecticide, Fungicide, Rodenticide Act §24(c) or better known as Special Local Need (SLN) registrations. The restriction would affect eight of the SLNs used for the production of agricultural commodities while the restriction would not affect the other two SLNs used for seed treatment.

In addition to the proposed regulations, DPR's Air Monitoring Network is currently monitoring ambient air in Ripon, Salinas, and Shafter. DPR also requested additional monitoring from ARB during and after a chlorpyrifos pesticide application. The California Department of Food and Agriculture, Coalition for Urban Rural Environmental Stewardship project is currently improving efficiency of pesticide applications by minimizing offsite movement from orchards and providing outreach on "good spraying" practices for orchards. Furthermore, DPR placed chlorpyrifos in reevaluation to identify processes that contribute to chlorpyrifos detection in surface water and mitigation strategies. DPR requested registrants contribute information on processes and mitigation strategies.

DPR issued a number of grants and contracts directly or indirectly related to chlorpyrifos, which include: a reduced risk approaches to manage maggot pests in cole crops in the Central Coast (Joseph); an integrated pesticide reduction strategies for insect and disease management in cole crops (Shennan); to identify and manage critical uses of chlorpyrifos in alfalfa, almond, citrus, and cotton (Goodell); ecoinformatics approaches to reduce use of high-risk insecticide on San Joaquin Valley citrus (Rosenheim); and, California pesticide efficacy and selectivity trials archive (Grieneisen).

DPR hopes to finish chlorpyrifos stakeholder meetings by this month and begin a 45-day public comment period in September, with an estimation of chlorpyrifos becoming a restricted material by summer 2015 at the earliest. Furthermore, DPR hopes to resolve toxicity uncertainties and set risk management goals to identify exposure scenarios and estimate exposures by characterizing crops and application settings (e.g., foliage density), application methods (e.g., air, ground boom, orchard sprayer), and application amounts (application rates, field acreage). This would occur while considering permit conditions including estimating drift and air concentrations with monitoring data and computer modeling, taking into account application method restrictions, and considering revised setbacks for sensitive sites. DPR will also consider all other information from research in progress from grant programs and work conducted by Pete Goodell when developing permit condition options. Pete Goodell is identifying critical uses of chlorpyrifos in alfalfa, almonds, citrus, and cotton.

For more information regarding the program or chlorpyrifos, please contact Randy Segawa by email at <Randy.Segawa@cdpr.ca.gov> or by telephone at (916) 324-4137.

3. <u>Update on Closed Mixing Systems Proposal</u> –Ken Everett, DPR

Title 3 of the California Code of Regulations (3 CCR) §6746 currently requires employers to provide closed systems for employees who mix or load liquid pesticides with the signal word "Danger". Data in the 1970's showed a need to protect handlers from dermally absorbed systemically toxic pesticides, primarily from the use of organophosphate and n-methyl carbamate pesticides. However, the use of organophosphate and carbamate pesticides is far less today. Many pesticides receive the signal word "Danger" based on hazards that are not mitigated by the use of a closed system e.g., oral, inhalation, and to some extent eye hazards. The closed system is designed for mitigating dermal exposures.

Additionally, in 2009, 2010, and 2011, no closed systems (or replacement parts) were commercially available. This made complying with 3 CCR §6746 very difficult. In 2013, DPR began conducting surveys on closed systems in various counties and the results showed that almost half of them fail to adequately prevent exposure; over half fail the container seal requirement; and, three-quarters did not have operating requirements.

DPR proposes to revise the requirements for closed systems. Instead of using pesticide label signal words to determine the requirement for a closed system, DPR intends to use the pesticide label's Human Hazard and Precautionary Statements. DPR also proposes a tiered approach with closed systems. Tier 1 Closed Mixing systems must remove the pesticide from the container and move it to the mixing tank as well as have an integrated pesticide container rinsing system. Tier 2 Closed Mixing systems has the same requirements as a Tier 1 Closed Mixing System, however it is not required to have an integrated pesticide container rinsing system.

Closed Mixing System Regulation Concepts include:

- Incorporating specific items from existing "Closed system" definition in 3 CCR §6000 and the existing Director's Criteria for Closed Systems into 3 CCR §6746;
- Delete subsection 3 CCR §6793(d) which is the requirement to provide a closed system for minimal exposure pesticides;
- Specify the requirements that apply only to the mixing of liquid concentrates (and rinsing when required)-not loading diluted mixtures; and,
- Delete the existing exemption for hand pouring from a one-gallon container for a Tier 1 pesticide product.

DPR proposes to implement the following exemptions: (1) mixing pesticides using a method or mixing device required by the registered label; (2) opening of a container by removal of the manufacturer's original sealing device without removing any of the contents before re-closing with a liquid-tight sealing device; (3) regulatory personnel collecting samples of pesticides; (4) rinsing refillable containers; and, (5) employee's required to use a Tier 2 closed mixing system if handling a daily maximum of one gallon or less while wearing label required personal protective equipment.

The regulation will require eye protection while using the closed mixing system. Current regulations require eye protection when the closed system is under pressure. The regulation will also require all closed mixing systems to have operating instructions whereas the current regulations require that only commercially produced closed systems have operating instructions. DPR in partnership with UC Davis have developed closed system designs and operating instructions. Once DPR adopts the regulations, DPR will post the closed system designs and operating instructions on its Web site.

Additionally, DPR is proposing to make the follow changes to 3 CCR §6188:

CCR §6188 Closed System Compatibility
(a) Each applicant to register a liquid pesticide product ~~carrying the signal word "DANGER" on the label for~~ bearing the label statement "Fatal if absorbed through skin," "May be fatal if absorbed through skin," "Corrosive, causes skin damage," or other comparable language labeled for any use in the production of an agricultural ~~use~~ commodity shall submit to the director data on the product's viscosity and such other data the director may require to comply with sections 6188(b) and ~~6744~~ 6746; and
(b) No liquid pesticide ~~carrying the signal word "DANGER" on the label shall be registered for~~ labeled for any use in the production of an agricultural ~~use~~ commodity and bearing the label statement "Fatal if absorbed through skin," "May be fatal if absorbed through skin," "Corrosive, causes skin damage," or other comparable language shall be registered unless the product is compatible for use with closed mixing systems ~~as defined in section 6000~~ required in section 6746.

For more information regarding the Closed Mixing Systems Proposal, please contact Ken Everett by email at <Ken.Everett@cdpr.ca.gov> or by telephone at (530) 902-1794.

4. <u>Partnering to Better Solutions in Protecting Endangered Species</u> –Rich Marovich, DPR
U.S. EPA has been trying to satisfy the requirements of the endangered species act for thirty years with little progress. The relative lack of progress has resulted in an escalating series of lawsuits that began with procedural complaints, failure to consult with the U.S. Fish and Wildlife Service that progressed into injunctions. The injunctions operate outside of the Federal Insecticide, Fungicide, and Rodenticide Act and are relatively unknown to the user community. However, this opens the door to third party lawsuits against users. Lawsuits have little effect when they reach few or any users; listed species, nor advocates benefit and it adds to the sense of conflict in a perpetual cycle of force and resistance. Registrants and users increasingly operate in an environment of uncertainty.

Currently, the pesticide registration process is overwhelmed at the federal level and is unsuitable to address this issue. Likewise, the Federal Endangered Species Act does not address such large and complex issues. The Act addresses site-specific actions conducted or licensed by the federal government such as building a dam or highway. The licensing of pesticides refers to site categories such as crops but is not otherwise site-specific. Experts cannot solve the problem, as it is too complex. Moreover, the experts who work with

pesticides and those who work with species tend to seek and obtain confirmation of their beliefs within their own communities so nothing new emerges.

To make progress, we must look to the future rather than the past, to the world of ideas that is beyond the world of facts. Those that seek greater protections for species cannot find the assurances they seek in their own groups. Working together, stakeholders can achieve mutual ongoing assurances. It is not enough to say that a pesticide is registered and therefore it is safe. Rather, the ongoing diligence of responsible users will provide security for pesticide registrations and protection for listed species. DPR has had some success bringing users and other stakeholders together for emerging solutions. We present the risks as we understand them and the need to address regulatory concerns but we withhold judgment and refrain from offering solutions allowing instead, solutions to emerge from collective wisdom. Often, these emergent solutions are beyond anything we had previously considered and occasionally they are beyond anything we can regulate e.g., the location of pesticide storage facilities. We reached a consensus not only with users and species advocates, but also with U.S. EPA and the U.S. Fish and Wildlife Service on the use of rodenticides, arguably the worst-case scenario for listed species. Most pesticides are not applied directly to habitat and exposures are indirect e.g., by drift or runoff. The extreme risk posed by rodenticides made it essential to gather users and stakeholders to find new solutions.

In *Solving Tough Problems* by Adam Kahane, he describes three levels of complexity and all three apply to endangered species issues. Social complexity combines differing views and interests such as farmers and environmental advocates while dynamic complexity occurs when the cause and effect are distant in time and space. Generative complexity occurs when past is not prologue. The typical approach to simple problems is to rely on experts and authorities, piece-by-piece solutions, and applying existing solutions. For complex problems, not all relevant facts are known or knowable. There is no true or false; no right or wrong solution, just better or worse. Stakeholders can only find assurances from each other and therefore must enable and empower each other. Solutions need to address the whole system rather than applying existing solutions we need to seek emerging solutions that come from group perspectives.

The type of decision-making style depends on degree of agreement and degree of certainty. When close to agreement and close to certainty, rational decision-making works. When close to certainty but far from agreement, this is the realm of political decision-making. When close to agreement but neither near nor far from certainty, then judgmental decision-making works. When far from agreement and neither near nor far from certainty then brainstorming and dialectical inquiry works. When far from agreement and far from certainty, then there are no acceptable decisions and avoidance is common.

The four ways of talking and listening are the attributes of Social Space and Social Time. The first type of listening consists of downloading, the application of existing frameworks, and hearing stories of the past that are internally consistent and completely and nothing new emerges. The second type is listening for facts and any new facts with a focus on the

unknown. The third type consists of focusing on the future, what is possible, honoring the truth of others, objective sharing focused on the future, shifting from the world of things to the world of human interactions and then we will begin to see from the viewpoints of others. The fourth and final type consists of generative dialogue, the collapse of boundaries, focusing on future possibilities, and subjective sharing of the whole system. When this all comes together, a consensus on future action, the highest future collective becomes a possibility.

For more information regarding this partnering to better solutions in protecting endangered species, please contact Rich Marovich by email at <Rich.Marovich@cdpr.ca.gov> or by telephone at (530) 902-1794.

5. **Revision to Pesticide Product Evaluation for Impacts to Surface Waters, Improved Urban Evaluation –Yuzhou Luo, Ph.D., DPR**

DPR's Surface Water Protection Program (SWPP) developed a more consistent, transparent, and faster method for evaluating new active ingredient registration submissions. SWPP mainly designed this method for agricultural uses by generally following U.S. EPA approaches for registration evaluation. Improvements to SWPP are currently under development, including urban pesticide uses.

Ten hectares is the U.S. EPA recommended size of drainage area for registration evaluation of agricultural uses. U.S. EPA also applies this recommended size to the risk assessment of urban uses. A specialized model for urban pesticides uses is required due to the impervious surfaces in urban areas. Originally, no data (e.g., half-life, adsorption coefficients) on impervious surface was available. Furthermore, there were no models available. U.S. EPA does not have models for registration evaluation in urban uses. For post-use assessment, U.S. EPA developed a modeling scenario for impervious surfaces, mainly for incidental application (overspray) of lawn treatment to adjacent concrete surfaces. DPR's previous SWPP model incorporated parts of the U.S. EPA modeling scenario.

The Pesticide Root Zone Model and the Exposure Analysis Modeling System (PRZM/EXAMS) are the models used by U.S. EPA where the modeling scenario, "San Francisco impervious surface" is "the most suitable available modeling approach for impervious runoff" (U.S. EPA 2013[1]). However, there are known limitation in the landscape description and simulation design (e.g., Nationwide suburban data is a quarter acre house lot, buildings all surrounded by lawns, optimized lawn irrigation by soil moisture, no dry-weather runoff (urban drool) from paved areas, and assumed equal contributions of runoff from pervious and impervious surfaces).

SWPP plans to improve urban landscape description represented in the modeling approach based on California conditions and to improve the simulation design for better prediction of estimated environmental concentration from an urban catchment. To implement these improvements, SWPP plans to use U.S. Geological Survey land use images, and Caltrans urban boundaries (for San Francisco-Oakland) to better the impervious surface coverage and

use the OEHHA urban survey (Sacramento, Irvine, and Santa Cruz) to refiner the residential density. Additionally, SWPP plans to use the American Housing Survey 2011 (for San Francisco) to refine the house footprint and use the UC Agriculture and National Resources lawn watering guide to refine the prescheduled lawn irrigation.

The SWPP developed a modeling approach based on four conceptual urban surfaces depending on the permeability and water sources (e.g., impervious versus pervious, with or without irrigation). For more information regarding the SWPP, please visit <http://cdpr.ca.gov/docs/emon/surfwtr/index.htm>. For more information regarding the Revision to Pesticide Product Evaluation for Impacts to Surface Waters, please visit <http://cdpr.ca.gov/docs/emon/surfwtr/review.htm> or contact Yuzhou Luo by email at <Yuzhou.Luo@cdpr.ca.gov> or by telephone at (916) 445-2090.

6. <u>Public Comment</u>

Lynn Baker inquired if collection of the surface water detections of chlorpyrifos samples occurs during the dormant season or throughout the year. Randy Segawa stated collection occurs throughout the year. Chlorpyrifos dormant sprays may be one of the major uses in the San Joaquin Valley or Central Valley. However, there are not many dormant sprays in the coastal areas.

James Seiber asked if DPR monitors the oxon form of chlorpyrifos. Randy Segawa stated DPR monitors the oxon form of chlorpyrifos, and in general, the compound has higher toxicity.

James Seiber inquired when U.S. EPA will complete the risk assessment for the active ingredient chlorpyrifos and how will DPR use the information. Randy Segawa stated U.S. EPA has released a preliminary draft of the document and DPR is anticipating a final draft by the end of the year.

Charles Salocks asked if DPR received any studies or is aware of studies on chlorpyrifos in regards to background exposure (e.g., dust and residue in the home). Randy Segawa stated DPR, as well as U.S. EPA, is looking at background exposure.

Lynn Baker asked for further information regarding Special Local Needs (SLN) registrations. SLN registrations are a new end-use product or an additional use of a federally registered pesticide product to address an existing or imminent pest situation. The pest situation must be a special local need within the state that a currently registered product cannot mitigate. For more information regarding SLN registrations, please visit <http://cdpr.ca.gov/docs/registration/sec24/sect24intro.htm>.
James Seiber inquired if chlorpyrifos is on the California Toxic Air Contaminant (TAC) and the California Proposition 65 list. Randy Segawa stated chlorpyrifos is not designated as a TAC at this time and DPR does not plan to designate it as such, as it would slow down the proposed regulation process. Furthermore, DPR is looking at dermal exposure to chlorpyrifos, which would not fall under TAC authority.

Rich Breuer asked what the status of DPR's chlorpyrifos reevaluation is and when the estimated completion date will be. Randy Segawa stated this particular reevaluation is twofold. DPR is investigating the causes of chlorpyrifos to get to surface water as well as developing mitigation measures to prevent offsite movement. There is no estimated completion date at this time.

Lynn Baker inquired if there are any indications, based on the data received, to develop mitigation measures for bystander exposure to chlorpyrifos for sub chronic or chronic exposure. Sheryl Beauvais stated DPR is currently looking at bystander exposure; however, there are no certainties at this time.

Rich Breuer suggested walnuts be included in the study conducted by Pete Goodell. Doug Downie stated DPR has discussed this and the issue has come down to economics.

James Seiber asked what the alternatives for chlorpyrifos are. Randy Segawa stated the alternative for chlorpyrifos are included in the studies Pete Goodell is conducting.

Brian Bret expressed concern that DPR is implementing regulations before completion of U.S. EPA's risk assessment. Randy Segawa stated there are notable health issues as well as environmental issues relating to chlorpyrifos. Brian Bret inquired whether the environmental issues specifically relating to surface water are getting better or worse. David Duncan stated the frequency of detection and exceedances is improving in the Central Valley and that could be due to the coalition of growers involved in the Irrigated Lands program. However, there are areas of concern, especially on the Central Coast.

Paul Towers asked when DPR started the chlorpyrifos risk assessment. Randy Segawa stated the risk assessment started long ago and he did not know the actual date. Paul Towers commented the risk assessment has been a very slow process that has evolved over a decade.

Brian Bret commented the Air Monitoring Network's 2011-2012 chlorpyrifos detections above the limit of quantifications data demonstrates that one in three percent of the samples are above any levels of quantification and is well below DPR's screening level. Randy Segawa stated chlorpyrifos is one of the more frequently detected pesticides in the Air Monitoring Network and around thirty percent of samples contain detectable residues. Brian Bret stated the residues are detectable but below the limit of quantifications. Paul Towers stated the information is irrelevant since the samples collected are not in close proximity to residents. Brian Bret expressed concern of the characterization of chlorpyrifos.

James Seiber inquired if DPR is looking into biopesticides and alternatives. Randy Segawa stated Pete Goodell's study is looking into biopesticides and other pest management practices.

James Seiber inquired about the difference between the Tiers in the closed mixing systems proposal. Ken Everett stated Tier 1 requires rinsing and Tier 2 does not require rinsing. The Tier 1 system is required to have an integrated rinsing capability. Tier 2 can be detached from the system and rinsed with an alternative method.

James Seiber asked what the difference in toxicity is between Tier 1 and Tier 2. Ken Everett stated toxicity is not an issue in regards to dermal exposure. No person should come into physical contact with any product considered Tier 1.

James Seiber inquired if there is a drawback to the ecological risk assessment methodology currently in place or if there a proposal for improvements in the methodology. Rich Marovich stated DPR is not proposing any abandonment of traditional risk assessment. However, the process can be more open and explicit.

Patricia Matteson asked for specific examples of how collaborating to better solutions is protecting listed endangered species. Rich Marovich stated lawsuits, an example of anti-dialog, have arisen from groups thinking in the past. Litigation becomes about winning and losing and not about success and making progress on the issues. U.S. EPA deals with the situation directly with plaintiffs and other entities do not participate in the solutions and in turn, are not largely sympathetic to the situation.

Rich Breuer inquired as to the next steps for the SWPP model and if DPR will apply this model to its registration decision process. Yuzhou Luo stated the SWPP plans to develop a California-specific receiving water factor. Nan Singhasemanon stated the SWPP model is already being used to make registration recommendations.

7. Agenda Items for Next Meeting

The next meeting will be on September 19, 2014 in the Sierra Hearing Room on the second floor of the Cal/EPA building, located at 1001 I Street, Sacramento, California.

8. Adjourn

[1]U.S. EPA (2013). Effects Determination for Deltamethrin and the Bay Checkerspot Butterfly, Valley Elderberry Longhorn Beetle, California Tiger Salamander, Delta Smelt, California Clapper Rail, California Freshwater Shrimp, San Francisco Garter Snake, and Tidewater Goby (http://www.epa.gov/oppfead1/endanger/litstatus/effects/redleg-frog/2013/deltamethrin/appendix-d.pdf). U.S.