DEPARTMENT OF PESTICIDE REGULATION
PESTICIDE REGISTRATION AND EVALUATION COMMITTEE
Meeting Minutes – November 21, 2008

Committee Members/Alternates in Attendance:

Syed Ali, State Water Resources Control Board (SWRCB)
Angela Csondes, Air Resources Board (ARB)
Anna Fan, Office of Environmental Health Hazard Assessment (OEHHA)
Patricia Gouveia, State Water Resources Control Board (SWRCB)
Martha Harnly, Department of Public Health (DPH)
Stella McMillin, Department of Fish and Game (DFG)
Ann Prichard, Department of Pesticide Regulation (DPR)
Rebecca Sisco, University of California, IR-4 Program
Patti L. TenBrook, U.S. Environmental Protection Agency, Reg. 9 (U.S. EPA)

Visitors in Attendance:

Chris Beegan, SWRCB
Brian Bret, Dow Agro Sciences
Nasser Dean, Western Plant Health Association
George Farnsworth, DPR
Billy Gaither, Jr., Pest Control Operators of California
Johnny Gonzales, SWRCB
Chon Goodman, California Department of Food and Agriculture (CDFA)
Kathleen Groody, California Integrated Waste Management Board (CIWMB)
Kathleen Haley, Inside Cal/EPA Newsletter/ Inside Washington Publishers
Kim Hensley. Environmental Solutions Group, LLC
Amy Her, DPR
Victoria Hornbaker, CDFA
Tom Jacob, E.I. Dupont de Nemours and Company
Aron Lingren, DPR
Eileen Mahoney, DPR
Jeanne Martin, DPR
Eric Paulsen, Clark Pest Control
Mark Robertson, DPR
Sewell Simmons, DPR
Denise Webster, DPR

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

a. About 20 people attended the meeting.
b. No corrections to the minutes of the previous meeting held on September 19, 2008, were identified.

2. Revised Healthy Schools Act and New Child Integrated Pest Management (IPM) Program – Sewell Simmons, DPR

Private child day care facilities (except for family child care homes) have to comply with certain recordkeeping and notification requirements when they use pesticides. These requirements parallel those in public schools and public child care facilities, and went into effect in January 2007 (AB 2865).

The law was prompted by concern about the risk to children from potential exposure to pesticides. The Healthy Schools Act (HSA) of 2000 addressed this concern for children in public schools and child care facilities. The law now expands that protection to children in private day care facilities.

Highlights of What the New Law Requires

Right-to-know (Education Code)

- Notification. Each child care facility must provide annual written notification to staff and parents with specified information on the pesticides it expects to apply in the coming year (except certain exempted products). The notice must also include DPR's school IPM Web site.
- Registry. Each child care facility must provide the opportunity for interested staff and parents to register with the facility if they want to be notified about individual pesticide applications before they occur.
- Warning signs. The child care facility must post warning signs at each area where pesticides will be applied. These signs must be posted 24 hours before and 72 hours after applications and should be sufficient, in the facility's opinion, to restrict uninformed access to treated areas.
- Recordkeeping. Each child care facility must keep records of pesticide use at the facility for four years and make the records available to anyone who asks.
- Pesticide prohibition. The use of certain pesticides is prohibited at school sites, including child care facilities. For a list of those pesticides, go to <www.cdpr.ca.gov/schoolipm>. Click on "AB 405 List of Prohibited Pesticides."

Property owners (Education Code)
The law also imposes requirements on owners of property where a child care facility is located, who personally apply pesticides to specified areas. These owners must provide 120 hours written notice to the child care facility before a pesticide application.

Pesticide use reporting (Food and Agricultural Code)
Licensed pest control businesses:

- Must report yearly to DPR on pesticide applications they make to private child care facilities.

- If hired to apply pesticides at a child care facility, must notify the facility with specific information at least 120 hours before the application.

Department of Social Services (DSS) (Health and Safety Code)
The law requires DSS to:

- Serve as liaison to child care facilities as needed.
- Offer orientations for applicants for new licenses or special permits that include information about the Healthy Schools Act and IPM practices.

Department of Pesticide Regulation (Food and Agricultural Code)
The law requires DPR to:

- Support school IPM efforts
- Provide IPM training
- Create model IPM guidebook
- Create IPM Web site
- Collect pesticide use information from pest control businesses on designated form

DPR's Child Care IPM Program

Training
DPR provides IPM training presentations at existing training venues, primarily at DSS License Program Analyst training, California Research and Referral Network Conferences, and at other child care provider conferences.

Model IPM Program Guidebook
The child care edition of the guidebook is in progress and will be available in 2009. The School IPM Guidebook is now available online at <www.cdpr.ca.gov/schoolipm>.

Web site
The Child Care IPM Web site is a subset of the School IPM Web site at <www.cdpr.ca.gov/schoolipm>. The Web site provides information on management methods for major school pests, including preventive and treatment methods, links to UC (University of California, based at Davis) IPM Pest Notes for detailed management methods for each pest, and links to toxicity data.

Technical Outreach
DPR is collaborating with the UCSF Childcare Health program to develop 12 newsletter articles on: (1) the Healthy Schools Act and AB 2865, (2) What is IPM, (3) Yellowjacket IPM, (4) Ant IPM, (5) Sanitizers, and (6) Green Cleaning. The UCSF (University of California, bas4d at San Francisco) newsletters are "Childcare Health Connections" and "Health & Safety Notes". Three school IPM fact sheets for individual

pests are being revised for child care IPM. Current handouts at training presentations include fact sheets, DPR pesticide safety brochures, and the HSA requirements brochure.

Survey / Evaluation
DPR is collaborating with the UC Berkeley Center for Children's Environmental Health to conduct a survey of 2000 child care facilities. The questions focus on pest management practices and pesticide use. Results will be used to establish a baseline for assessing training needs.

Collect pesticide use information
DPR is collecting pesticide use information from pest control businesses (PCBs). PCBs are required to report to DPR, at least once annually, all pesticide applications on child care facilities.

Communications
- Child care providers
- County agricultural commissioners
- Pest control businesses
- Other stakeholders

3. State Water Board's Sediment Quality Objective Methodology – Chris Beegan, SWRCB

Sediment quality objectives represent a means to differentiate those sediments impacted by toxic pollutants from those that are not. Many factors affect the bioavailability of pollutants in sediment, and as a result, no single tool or indicator has been developed that can reliably assess the risk posed by the broad mixtures of pollutants occurring in sediment. The lack of a single reliable tool is the primary reason why few regulatory agencies have promulgated standards for pollutants in sediment. To solve this problem, most sediment quality assessments rely on multiple lines of evidence (MLOE). As a result, the State Water Board (SWB) chose to develop receptor specific narrative objectives, that would be interpreted with MLOE developed and validated by the technical team using data obtained from existing studies from within bays and estuaries of California. The receptor specific narrative objectives are: (1) pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities in bays and estuaries of California, and (2) pollutants shall not be present in sediments at levels that will bioaccumulate in aquatic life and to levels that are harmful to human health.

To interpret the narrative objective protecting benthic communities, the SWB's technical team evaluated a variety of existing and new chemical indicators, acute and

sublethal sediment toxicity tests, and benthic community indicators and developed response categories for each. To accomplish this effort a large database was assembled from existing sediment quality studies within bays and estuaries in California and divided into a development dataset and validation dataset. In addition, a means to integrate the responses from the three lines of evidence into an overall site classification was developed. These final categories are used to assess sediment quality relative to the narrative.

The SWB did not have enough time to develop an approach to assess sediment quality relative to the human health narrative. Rather, this narrative is interpreted using existing approaches; however, the development of such an approach is a major priority in the Phase II effort that will be completed by late 2010.

During development of the technical tools, SWB staff also developed a unique means to apply the narrative sediment quality objectives to existing programs including NPDES permitting, 303(d) listings. Because none of the MLOE approaches can reliably identify the cause of sediment quality impairments, stressor identification is a critical component of the overall strategy.

Although mentioned briefly above, SWB embarked upon Phase II of the program that consists of two main tasks. The first task is the development of a framework to assess the potential for contaminants in sediment to bioaccumulate in sportfish and shellfish at levels that could pose harm to human health through consumption of fish tissue. Due to the fact that fish can be exposed throughout their home range by eating prey containing contaminant residue, the link between the contaminants in sediment and those in fish tissue is much more complex than the link to the relatively sessile benthic community. The second task is developing benthic indicators for estuarine habitats. The estuarine habitat is highly variable, exhibiting large fluctuations in salinity, flows, suspended sediment and temperature and as a result far fewer species are capable of adapting to those conditions. When only hardy tolerant organisms are present, establishing a reference community within a physically stressed habitat is difficult and a major challenge for the technical team in Phase II. Toward this end, the SWB collected a large number of sediment samples within the Delta in the fall of 2007 and spring of 2008. Selected samples were analyzed for priority pollutants and other pollutants as well as acute and sub-lethal toxicity tests and identification and enumeration of benthic invertebrates from each site. Although the complete data package is still forthcoming, preliminary data from the two studies suggests a relatively low frequency of toxicity in delta sediments during the sampling periods.

Outreach was a major component in Phase I and will continue in Phase II. The SWB relied upon a number of committees and groups to achieve success. An independent panel of scientists was assembled to provide an unbiased review of the technical team's proposed work elements, results and conclusions. A stakeholder committee was also assembled to advise staff and provide input during the development of implementation policy. Finally, a

committee composed of state and federal agencies was also created to receive input on existing sediment quality programs, agency responsibilities and mandates, as well as the needs of staff. In addition, a sediment quality objectives webpage was created and an electronic subscription was established through lyris for announcing sediment quality related documents, meetings and notices. The sediment quality webpage is located at <http://www.waterboards.ca.gov/water_issues/programs/bptcp/sediments.html>. Lyris subscriptions can be accessed from the same page within the left column under "Resources."

4. <u>Asian Citrus Psyllid</u> (ACP) – Duane Schnabel, CDFA

Duane Schnabel is the Primary State Agricultural Biologist in CDFA's Pest Detection/Emergency Projects. The outline of his discussion begins with (1) the history of the Asian citrus psyllid (ACP), (2) its host range, (3) life cycle, (4) identification of damage, (5) symptoms of citrus greening, (6) susceptibility of citrus, and (7) identification of possible routes of entry into California. Mr. Schnabel's talk concluded with CDFA's exclusion and detection efforts along with their response to the introduction of ACP including quarantine, pesticide treatments, and what the public can do to help.

<u>History of ACP</u>
ACP was first found in June 1998 located in orange jasmine in Palm Beach County, Florida. By 2001, it had spread to 31 counties in Florida. In the spring of 2001, it was accidentally introduced into the Rio Grande Valley of Texas. In 2006, ACP was reported in Sonora, Mexico. In 2008, ACP was detected in San Diego and Imperial Counties of California.

<u>ACP's Host Range</u>
Its host range includes 25 genera in the family Rutaceae, however not all of the genera are good hosts. Most preferred hosts are in the genera *Citrus*, *Citropsis*, and *Murraya*.

<u>Life Cycle of ACP</u>
Adults gather on new growth of stems and leaves and feed on the underside of leaves. Adults can feed on both new and mature leaf flushes. Adult longevity ranges from about 88 days at 15ºC to about 29 days at 32ºC. ACP overwinters as adults. Females oviposit only on young leaf flush. The number of eggs each female can lay varies with host plant and temperature. The almond shaped eggs are about 0.3mm long, pale when deposited, and then turn yellow to orange as they mature. The nymphs feed only on developing flush, flower stems and shoots. They complete five nymphal instars in about 11 days at 28ºC. Development time from egg to adult varies from about 49 days at 15ºC to about 14 days at 28ºC.

Identification of Damage
Psyllids produce copious amounts of white waxy honeydew. Damage causes leaf distortion, shoots that snap off easily, and sooty mold. ACP transmission is the primary means of spread of the citrus greening disease or Huanglongbing. This disease is thought to be caused by a phloem inhabiting bacterium *Candidatus Liberibacter asiaticus*. In the Philippines, citrus greening was largely responsible for reducing citrus production by sixty percent between 1961 and 1970.

Symptoms of Citrus Greening
The symptoms of citrus greening are chlorosis of leaves, small – hard fruit that do not color properly, and stunted – sparsely foliated trees.

Susceptibility of Citrus
All citrus cultivars, species, hybrids, and some citrus relatives are susceptible. Severity of symptoms on different hosts varies from geographic region. The fourth and fifth instar nymphs and adults can transmit the ACP and greening disease. Acquisition time is between fifteen and thirty minutes with incubation period between eight and twelve days before transmission. Fourth and fifth instar nymphs can retain the bacteria into their adult stage.

Possible Routes of Entry into California
ACP may come as a hitchhiker on nursery stock from Florida, Texas, Hawaii, Mexico, or Asia. They may also travel in bulk citrus moved from Mexico to California for packing. ACP will spread naturally northward from Mexico. Citrus greening may arrive in illegally transported infected plant material (budwood or trees) and may arrive in psyllids that have acquired the bacteria.

CDFA's Exclusion and Detection Efforts
Federal quarantine prohibits the movement of nursery stock from greening-infested areas of Florida to states with citrus industries. Border Stations inspect commercial shipments of nursery and agricultural products. Some private vehicles are also inspected. Annual state surveys are conducted in nurseries, commercial and backyard citrus for ACP and greening. State and county inspection efforts are performed on nursery and other plant materials coming into California.

CDFA's Response to the Introduction Including Quarantine and Pesticide Treatments
For both the ACP and the citrus greening disease, the area is immediately quarantined and no plant material, plant products, or equipment used in the area can be moved out of the area, unless treated. For the insect, insecticide treatments to eradicate the population have begun. The disease has not yet been detected in California. For both the insect and the disease, surveys of the surrounding areas have been initiated to determine the infested area that needs treatment. The success of the treatments will be assessed to determine the need

for more treatment and/or regulatory action. The pesticides, along with the active ingredient (in parenthesis), identified for this treatment program include: Merit 2F (imidacloprid), Core Tect (imidacloprid), Tempo SC Ultra (cyfluthrin), Scimitar CS (lambda cyhalothrin), Sevin SL (carbaryl), PyGanic Crop Protection EC 5.0 (pyrethrin), Garden Tech Sevin Concentrated Bug Killer (carbaryl), and Master Nurserymen Nature's Pest Fighter for Fruits and Vegetables (pyrethrin).

What the public can do to help
If you see either the psyllid or symptoms of greening, contact the CDFA Exotic Pest Hotline at 1-800-491-1899. Contact your local county Agricultural Commissioner's office or UC County Extension Farm Advisor's office. Their phone numbers are listed on the county government page in any phone book. The sooner the infestation is found and a response initiated, the more likely the eradication effort will succeed.

5. Goose Deaths – Anticoagulant Chlorophacinone - Stella McMillin, DFG

In July 2008, the California Department of Fish and Game Pesticide Investigations Unit and the Monterey County Agricultural Commissioner's Office responded to a report of several dead geese near Moro Cojo Slough (Elkhorn Slough Foundation property) in Monterey County. The geese showed symptoms of anticoagulant poisoning (abnormal bleeding in the body cavities). The geese's livers were removed and analyzed for anticoagulants. Chlorophacinone was detected in all six livers. However, the source of the chlorophacinone was difficult to determine because death occurs several days after exposure, giving the geese a chance to travel from the source of the exposure. Also, chlorophacinone is used in a number of products found in agriculture, businesses, and residences. For the next several weeks, more geese died in the same location. The total number was approximately 70 geese. A couple of turkey vultures and a barn owl were also found dead, probably as a result of secondary exposure. All but one goose contained chlorophacinone residues.

Stomach contents were collected from several of the geese and some of these contained paraffin, a material found in only one of the chlorophacinone products used in the area. This product, a pellet, is applied under artichoke plants to control field rodents. Because of a lack of suitable alternatives, the use of this product had been extended later in the year. The later usage meant that the product was present on the ground when the artichoke plants were cut back, allowing the geese to access the pellets. It is thought that this change in use was the cause of the goose mortality.

The registrant submitted an amended 24(C) which eliminated the use of the pellets from one month before cut back until one month after cutback to eliminate the opportunity for geese to access the pellets. The Department of Pesticide Regulation approved the amended label.

6. Agenda items for next meeting - Ann Prichard, DPR

Syed Ali requested an update on the chloropyrifos and diazinon reevaluations.

The next meeting will be held on Friday, January 16, 2009, in the Sierra Room on the second floor of the Cal/EPA building, located at 1001 I Street, Sacramento, California.

7. **Adjourn**