



California Stormwater Quality Association™

Dedicated to the Advancement of Stormwater Quality Management, Science and Regulation

May 13, 2008

Office of Pesticide Programs (OPP)
Regulatory Public Docket (7502P)
Environmental Protection Agency (USEPA)
1200 Pennsylvania Ave., NW.
Washington, DC 20460-0001

Jennifer Howenstine
Special Review and Reregistration Division (7508P)
Office of Pesticide Programs
Environmental Protection Agency
1200 Pennsylvania Ave., NW.
Washington, DC 20460-0001

Subject: d-Phenothrin (Sumithrin) Risk Reduction Options (Docket No. OPP—2008-0140)

Dear Ms. Howenstine:

Thank you for this opportunity to comment on risk reduction options for the pyrethroid insecticide d-phenothrin. We are concerned about pyrethroids because their use in urban areas has been linked to toxicity to sediment-dwelling organisms in urban creeks. Pesticide-related toxicity in surface waters receiving urban runoff creates regulatory burdens for many of our municipality members, including National Pollutant Discharge Elimination System (NPDES) stormwater permit requirements, and the threat of litigation under the citizen suit provisions of the Clean Water Act.

In this letter, we request that USEPA implement sufficient risk management measures to ensure that future use of d-phenothrin, according to label requirements, does not interfere with Clean Water Act compliance. We recommend label language that we believe would help to achieve this goal.

Background about CASQA

CASQA is composed of stormwater quality management organizations and individuals, including cities, counties, special districts, industries, and consulting firms throughout the state. CASQA was formed in 1989 to recommend approaches to the State Water Resources Control Board (State Water Board) for stormwater quality management in California. In this capacity, we have assisted and continue to assist the State Water Board with development and implementation of stormwater permitting processes.

Since 1999, CASQA has provided comments on selected USEPA pesticide registration and reregistration actions, including proposed changes in policies and regulations, and actions involving specific active ingredients that appear in urban runoff (e.g., diazinon, chlorpyrifos, carbaryl, atrazine, permethrin, cypermethrin). Our focus on pesticide registration issues is the result of numerous scientific studies conducted in California by stormwater programs, wastewater treatment plants, the University of California, California Regional Water Quality Control Boards, United States Geological Survey, and USEPA showing widespread toxicity in local creeks and rivers, urban runoff, and wastewater treatment plant effluent from pesticide residues. These studies have demonstrated that the use of some pesticides registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) can and does adversely affect water bodies in California. Ironically, as a result of discharges of pesticides registered for use by USEPA under FIFRA, the State Water Board and USEPA have found many waters in urban areas of California to be impaired in accordance with Clean Water Act §303(d).

Consequently, expensive programs have been required of many cities and counties, through municipal stormwater NPDES permits, to restore the designated beneficial uses of pesticide-impaired waters. Through this process, CASQA has recognized the need for USEPA to be more proactive in its implementation of its FIFRA authority to reduce the potential for registered pesticides to impair surface water quality.

Concern with the Pyrethroids

CASQA's overriding concern with pyrethroids is that they pose a significant risk to water quality in urban and suburban areas. Recent evidence indicates that pyrethroids are found in urban and suburban creeks at levels of concern:

- Recent investigations of sediments in more than 15 Northern California urban creeks found pyrethroids in almost every sample.¹
- The same studies have shown widespread toxicity to sediment-dwelling organisms in California urban surface water sediments.
- The State of California is proposing listing several creeks as impaired by pyrethroids as part of the USEPA mandated Clean Water Act §303(d) listing process.

d-Phenothrin, which is used primarily in urban areas, has not been documented as contributing significantly to this problem. Lack of commercially viable monitoring methods and the incomplete aquatic toxicity data set for d-phenothrin make evaluation of its potential contributions to this toxicity problematic. As the USEPA risk assessment shows, mosquito abatement applications of d-phenothrin could contribute to this problem. Other d-phenothrin uses also have the potential to contribute to this problem in the future, depending on where and in what quantities d-phenothrin is used.

¹ Amweg, E. L., D. P. Weston, et al. (2006). "Pyrethroid Insecticides and Sediment Toxicity in Urban Creeks from California and Tennessee." *Environ. Sci. Technol.* **40**(5) 1700-1706; Weston, D. P., R. W. Holmes, et al. (2005). "Aquatic Toxicity Due to Residential Use of Pyrethroid Insecticides," *Environ. Sci. Technol.* **39**(24): 9778-9784.

Risk Management Measures for d-Phenothrin

A. Limit d-Phenothrin Outdoor Applications to Localized, Spot, and Crack-and-Crevice Treatments

Limiting outdoor applications of d-phenothrin would significantly reduce the potential for future insecticide market changes to increase sales of d-phenothrin. We suggest that this limitation be worded as follows:

“Outdoor applications are limited to spot or crack-and-crevice treatments only.”

If USEPA does not believe that this general limitation is feasible, an alternative approach would be to specify limitations on applications to impervious surfaces (which are most important because pesticides wash off of impervious surfaces relatively efficiently). This approach was selected by USEPA for cypermethrin. If USEPA selects this approach, we suggest that the same label language required for non-agricultural outdoor use cypermethrin products be adopted for d-phenothrin:

“All outdoor applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses:

- Treatments to soil or vegetation around structures;
- Applications to lawns, turf, and other vegetation;
- Applications to building foundations up to a maximum height of 3 feet
- Broadcast application to building foundations

All outdoor applications to impervious surfaces such as sidewalks, driveways, patios, porches and structural surfaces (such as windows, doors, and eaves) are limited to spot treatments or crack-and-crevice applications, only.”

B. Add Stewardship Language Intended to Reduce Urban Runoff of d-Phenothrin

Labels for all pesticide products intended for outdoor use in urban areas should provide instructions on ways to prevent releases of pesticides into urban runoff. We recommend that the product stewardship language required for all urban, outdoor use cypermethrin products also be required for d-phenothrin products:

“Do not apply directly to or near water, storm drains, gutters, sewers, or drainage ditches. Do not apply when windy. Do not water the treated area(s) to the point of run-off or apply when raining or when rain is expected that day. Rinse application equipment over treated area only.”

C. Use Icons to Communicate Water Quality Stewardship Concepts

Our membership includes professionals that manage public information and public participation programs, which are a required element of municipal stormwater NPDES permits. These professionals have found that communicating critical information graphically—as well as with words—is important to successful adoption of procedures to protect water quality. Based on this experience, we recommend that USEPA require d-phenothrin product labels to include compelling icons to quickly convey potential water quality and environmental risks to residential users. The icon types proposed for metaldehyde labels are a good example of the types of icons that have successfully communicated risk messages to users.

D. Establish a System to Minimize Water Quality Problems from Mosquito Abatement Applications

Wide-area applications for mosquito abatement over urban areas of some pesticides, such as pyrethroids, have particular potential to cause and/or contribute to water quality problems. This may have adverse consequences for municipalities subject to municipal stormwater NPDES permits. The d-phenothrin environmental risk assessment provides an example of the potential adverse consequences of such applications.²

To address such concerns, we request that USEPA develop a system for management of wide-area mosquito abatement insecticide applications that minimizes risks to water quality. To ensure that the water quality protection system does not interfere with necessary public health protections, we recommend that it be developed in consultation with mosquito abatement agencies, state pesticide regulatory agencies (including local enforcement officials like California's County Agricultural Commissioners), USEPA Office of Water, state water quality agencies, municipal stormwater quality management agencies, and experts in the use of integrated pest management (IPM) for mosquito control.

We believe it is possible to design a tiered system that would promote use of mosquito abatement approaches that reduce the risk of water quality impacts, but that would not pose an unreasonable barrier to wide-area applications of insecticides when necessary to protect public health. A system to minimize water quality impacts of pesticides applied for wide-area mosquito abatement should include the following elements:

- An alternatives analysis that considers the availability and efficacy of non-pesticide management options and of pesticides that pose less of a threat to urban water bodies.
- Promotion of wider adoption of IPM-based mosquito management systems. We understand that many mosquito abatement agencies already utilize IPM-based management systems that employ a tiered approach to both chemical selection and treatment area size. Various agencies have demonstrated that this management approach results in effective mosquito control. While it does not exclude the use of pesticides, it reduces the chance that pesticide-use thresholds will be reached.
- For pesticides USEPA has identified as having a high potential to cause aquatic toxicity when used for mosquito abatement, USEPA should consider use of a restricted materials classification and establish a set of permit conditions (for example, to require specific findings of need by designated officials consistent with state law) prior to wide-area applications.

Cooperation between Offices

USEPA has taken important steps toward protecting water quality throughout its various reregistration processes. However, continued significant efforts are needed from USEPA to

² The d-phenothrin environmental risk assessment likely underestimates risks from mosquito abatement applications in urban areas because it did not address runoff from impervious surfaces, which typically have much higher washoff fractions than pervious surfaces.

better integrate surface water quality protection into its pesticide registration and regulatory review programs. Coordination between USEPA offices in reviewing pesticide ingredients is essential to Clean Water Act implementation; it also provides an appropriate method of meeting the Federal Insecticide, Fungicide, and Rodenticide Act's goal of preventing unreasonable adverse impacts from pesticide use.

Thank you for your consideration of our comments about the risk reduction options for the pyrethroid insecticide d-phenothrin. If you have any questions, please contact CASQA Executive Director Geoff Brosseau at (650) 365-8620.

Very truly yours,



Chris Crompton, Chair
California Stormwater Quality Association

cc: James B. Gulliford, Assistant Administrator, Office of Prevention, Pesticides and Toxic Substances
Debbie Edwards, Director, U.S. EPA Office of Pesticide Programs
William Diamond, Director, Field and External Affairs Div.
Donald Brady, Director, Environmental Fate and Effects Division
Rick Keigwin, Director, Biological and Economic Analysis Division
Steven Bradbury, Director, Special Review and Reregistration Division
Claire Gesalman, Branch Chief, Communication Services Branch, Field and External Affairs Div.
Jennifer McLain, Branch Chief, Policy and Regulatory Services Br., Field and External Affairs Div.
Benjamin H. Grumbles, Assistant Administrator, Office of Water
James Hanlon, Director, Office of Wastewater Management
Ephraim King, Director, Office of Science and Technology
Craig Hooks, Director, Office of Wetlands, Oceans, and Watersheds
Wayne Nastri, Administrator, USEPA Region IX
Kathleen Goforth, USEPA Region IX
Patti Tenbrook, USEPA Region IX
Debra Denton, USEPA Region IX
Mark Rentz, California Department of Pesticide Regulation
Nan Singhasemanon, California Department of Pesticide Regulation
Syed Ali, Division of Water Quality, State Water Resources Control Board
Tom Mumley, Regional Water Quality Control Board, San Francisco Bay
Diane Beaulaurier, Regional Water Quality Control Board, Central Valley
Julie Chan, Regional Water Quality Control Board, San Diego
Preeti Ghuman, Tri-TAC