



Terrie L. Mitchell  
*Tri-TAC Chair*  
Sacramento Regional County Sanitation District  
10060 Goethe Road  
Sacramento, CA 95827  
(916) 876-6092  
[mitchellt@sacsewer.com](mailto:mitchellt@sacsewer.com)

May 29, 2012

Ms. Dana Friedman  
Office of Pesticide Programs (OPP)  
Regulatory Public Docket (7502P)  
U.S. Environmental Protection Agency (U.S. EPA)  
1200 Pennsylvania Ave., NW.  
Washington, DC 20460-0001

**RE: Docket No. EPA-HQ-OPP-2012-0167 – Cypermethrin Registration Review**

Dear Ms. Friedman:

The purpose of this letter is to provide input on the Cypermethrin Registration Review Docket that was made available for public comment on March 28, 2012 (77 FR 18810). We are pleased to have the opportunity to provide EPA with information that may help the Agency ensure the environmental risk assessment for cypermethrin is complete and accurate so that EPA can make a well-informed registration review decision. Our comments focus specifically on the environmental risks of cypermethrin in relationship to publicly owned wastewater treatment plants, also known as publicly owned treatment works (POTWs).

As background, Tri-TAC is a technical advisory group for POTWs in California. It is jointly sponsored by the California Association of Sanitation Agencies, the California Water Environment Association, and the League of California Cities. The constituency base for Tri-TAC collects, treats, and discharges or reclaims wastewater and manages biosolids from more than 90% of the sewered population of California. These agencies collectively treat and reclaim more than two billion gallons of wastewater each day and beneficially recycle or otherwise manage more than 600,000 dry tons of biosolids annually.

Tri-TAC members are very concerned about the potential water quality impacts from the discharge of pesticides into our municipal wastewater systems. These concerns have been expressed in our previous letters to U.S. EPA and in past letters from our colleagues at the Bay Area Clean Water Agencies (BACWA) and the National Association of Clean Water Agencies (NACWA). We would like to thank EPA for incorporating many of our past comments into the cypermethrin workplan. The revised and improved approach to assessment of POTW discharges is greatly appreciated, and will result in a more thorough analysis of environmental risk associated with pyrethroids. We support EPA's decision to conduct a down-the-drain assessment for cypermethrin and their decision to request additional aquatic toxicity data to fill in data gaps.

***Vice Chair***

**Jacqueline Kepke**  
East Bay Municipal Utility  
District  
375 – 11<sup>th</sup> Street, MS702  
Oakland, CA 94607  
(510) 287-1608  
[jkepke@ebmud.com](mailto:jkepke@ebmud.com)

***Water Committee  
Co-Chairs***

**Lorien Fono**  
Patricia McGovern Engineers  
2242 Leavenworth Street  
San Francisco, CA 94133  
(510) 684-2993  
[lfono@pmengineers.com](mailto:lfono@pmengineers.com)

**Shannon Bishop**  
Los Angeles County  
Sanitation Districts  
1955 Workman Mill Road  
Whittier, CA 90601  
(562) 908-4288 x2843  
[sbishop@lacsds.org](mailto:sbishop@lacsds.org)

***Land Committee  
Co-Chairs***

**Vincent De Lange**  
East Bay Municipal Utility  
District  
375 – 11<sup>th</sup> Street, MS702  
Oakland, CA 94607  
(510) 287-1141  
[vdelange@ebmud.com](mailto:vdelange@ebmud.com)

**Tom Meregillano**  
Orange County Sanitation  
District  
10844 Ellis Avenue  
Fountain Valley, CA 92708  
(714) 593-7457  
[tmeregillano@ocsd.com](mailto:tmeregillano@ocsd.com)

### **Tri-TAC's Interest in Cypermethrin**

Cypermethrin is of special interest to POTWs due to its many indoor uses and the pathways that it can enter a POTW. As a result, during the registration review we encourage EPA to: consider appropriate data for the down the drain assessment, evaluate cross media transfers particularly related to biosolids, evaluate aquatic toxicity data including synergists, and consider the potential compliance costs for POTWs with the Clean Water Act. Our comments regarding these interests are outlined in more detail below.

### **Pathways for Cypermethrin to Enter POTWs**

Cypermethrin is a broad-spectrum pyrethroid. Cypermethrin has the potential to be discharged into sewers from indoor uses and other uses where drains are tributary to sewer systems. Cypermethrin may also enter sewers from outdoor uses through storm water inflow.

Because POTWs were not specifically designed to treat pesticides, constituents such as cypermethrin that enter POTWs in the influent may ultimately be emitted to the environment. For instance, discharges into sewers can occur when a cypermethrin treated surface, created by using the pesticide directly on the surface or by deposition and dispersion of aerosols, foggers, and sprays onto the surface, is cleaned. Wastewater containing the pesticide can be produced by cleaning these surfaces with sponges, cloths, and mops that are later washed with water into a drain or washed in a washing machine, and by cleaning carpets and discharging the cleaning water into a drain. The pesticide may also be discharged when cypermethrin treated fabrics are washed. Similarly, cypermethrin may be discharged into sewers when it is used in commercial transportation vehicles, automobiles, taxis, limousines, and recreational vehicles and the interior of the vehicle is later cleaned.

In addition, discharges into sewers can also occur from use of cypermethrin in animal kennels/sleeping quarters, pet living/sleeping quarters, and pet products. Animal and pet kennels/sleeping quarters are typically washed down and the wash water is discharged into either a sewer or storm drain. Cypermethrin in pet products can also be transferred to the pet's fur and discharged down the drain when the pet is washed.

### **Down-the-Drain Assessment**

As outlined above, pesticides that are used indoors are contained in the influent to POTWs as a natural consequence of their use, cleanup, and ultimate disposal. Tri-TAC supports the use of a down-the-drain assessment to evaluate the impacts of cypermethrin from indoor uses; use in animal kennel/sleeping quarters, pet living/sleeping quarters, fabric treatments, pet products, vehicles; and storm water inflow. Tri-TAC has previously submitted general comments to EPA regarding our

concerns with the Exposure and Fate Assessment Screening Tool (E-FAST) Version 2.0. Tri-TAC has requested EPA provide the technical basis for assuming the surface water concentrations obtained from the 10<sup>th</sup> and 50<sup>th</sup> percentile stream dilution factors as acute and chronic concentrations in national down-the-drain assessments. Some POTWs discharge to effluent dominated receiving waters, providing essentially the only source of water to a surface water body during dry periods. As a result, the National Pollution Discharge Elimination System (NPDES) permits for these facilities do not include a stream dilution factor. In addition, other facilities in the country do not have dilution credits in their NPDES permits for other environmental reasons. Therefore, EPA should not include stream dilution factors in national down-the-drain assessments for pesticides.

For down-the-drain assessments, we recommend EPA use E-FAST to calculate a median surface water concentration without a stream dilution factor for use as the chronic estimated environmental concentration in the risk analysis. For the acute estimated environmental concentration, we also recommend that EPA calculate a surface water concentration assuming a local high-end scenario appropriate for cypermethrin. These simple modifications to the procedures for down-the-drain assessments would result in better evaluation of the potential impacts to aquatic organisms.

When available, existing POTW monitoring data should be utilized as input into E-FAST for the down-the-drain assessment. If influent, effluent and biosolids POTW monitoring data is not available or is insufficient to account for the variety of POTW treatment processes and operational parameters utilized nationwide, we recommend EPA use a conservative assumption of no removal of cypermethrin during wastewater treatment in the down-the-drain assessment.

Tri-TAC supports the Offices of Pesticide Programs and Water collaborating to develop an improved wastewater discharge methodology to evaluate the potential impacts to aquatic organisms from pesticides discharged to sewers using E-FAST. This methodology would include an analysis of the input parameters and scenarios needed to generate representative surface water concentrations from the use of pesticides discharged to sewers. We would be glad to assist EPA in this effort, as the development of an improved methodology would be beneficial to both EPA and POTWs to evaluate the impacts of pesticides during registration review.

### **Pesticide Removal Versus Cross-Media Transfer**

To assist in preparing the ecological risk assessment, Tri-TAC would like to clarify the difference between pesticide removal during wastewater treatment and cross-media transfer of a pesticide. Adsorption to biosolids and volatilization/stripping are cross-media transfers of pesticides from wastewater to solids or air, respectively, and are not pesticide removal mechanisms. Potential removal mechanisms during wastewater treatment are biodegradation and chemical oxidation, but the extent

cypermethrin is removed by these mechanisms at POTWs is unknown. We recommend that the potential environmental impacts of the cross-media transfers of pesticides be addressed in EPA ecological risk assessments.

### **Biosolids Land Application Assessment**

Roughly fifty percent of the total cost of wastewater treatment is expended on solids handling and land application is a frequently used method for recycling biosolids. Tri-TAC suggests that EPA's Offices of Pesticide Programs, Water (Offices of Wastewater Management and Science and Technology), and Research and Development work together to develop a methodology to evaluate potential impacts from the use of pesticides to biosolids land application in cases where down-the-drain assessments indicate that pesticides would partition into biosolids. The existing Office of Pesticide Programs' guidelines for the study of chemicals in the terrestrial environment could be modified to address biosolids amended soil systems. In addition, the evaluation should include an analysis of bioaccumulation, toxicity to microbes, and toxicity to worms, all of which have Office of Pesticide Programs' guidelines. Such evaluations should focus on fate, transport, and toxicity factors specifically applicable to the biosolids matrix.

### **Aquatic Toxicity Data**

Acute and chronic toxicity data is essential to completing a scientifically sound review of cypermethrin. These data are also necessary to perform the down-the-drain assessment. Tri-TAC supports EPA's requests for additional aquatic toxicity testing data to fulfill data gaps identified by EPA.

Tri-TAC requests that EPA impose more stringent conditions on issuing waivers for aquatic toxicity data during registration review. Tri-TAC reviewed many Re-registration Eligibility Decisions in which EPA reregistered pesticides without receiving aquatic toxicity data required under CFR 40 Part 158. Tri-TAC recommends that EPA withhold registration decisions until required data are submitted and evaluated. By registering pesticides without required aquatic toxicity data, EPA cannot ensure that the pesticide does not pose an unreasonable adverse risk to the environment.

### **Cumulative Risks with Synergists and Other Pyrethroids**

EPA states on page 29 of the Problem Formulation for the Environmental Fate and Ecological Risk, Endangered Species, and Drinking Water Assessments in Support of the Registration Review of Racemic Cypermethrin and Zeta-Cypermethrin dated March 1, 2012, that piperonyl butoxide (PBO) and MGK-264 are commonly used in formulations with pyrethroids (including the cypermethrins). As a result, we encourage EPA to evaluate the potential impacts from synergists and multiple active ingredient formulations in the down-the-drain assessment to the extent that these products have indoor uses and use in animal kennel/sleeping quarters, pet living/sleeping quarters, fabric treatments, pet products, and vehicles.

## **POTWs Testing and Compliance Costs**

As mentioned previously, because POTWs were not specifically designed to treat pesticides, constituents such as cypermethrin that enter POTWs in the influent may ultimately be emitted to the environment. POTWs are subject to National Pollutant Discharge Elimination System (NPDES) permits under the Federal Clean Water Act, and non-compliance with Federal Clean Water Act requirements can be extremely costly for POTWs. Costs are incurred for identifying the source of the pollutants that have caused non-compliance, source control to reduce the impacts of the pollutants, and construction, operation, and maintenance costs to upgrade POTWs with advanced treatment to remove pollutants that cannot be adequately reduced with source control.

Also, when surface water bodies become impaired by pesticides, POTWs discharging to the water bodies can be affected through additional requirements established as part of Total Maximum Daily Loads (TMDLs) set for the water bodies by U.S. EPA and state water quality regulatory agencies. The cost to POTWs to comply with TMDLs can be up to millions of dollars per water body per pollutant. As a result, Tri-TAC members are very concerned about the potential water quality impacts and associated capital and compliance costs our agencies may incur from the discharge of pesticides into our municipal wastewater systems.

For instance, NPDES dischargers are required to conduct regularly scheduled acute and chronic toxicity bioassays. The frequency of routine bioassay testing varies from permit to permit, but they are generally conducted at approximately monthly intervals with an average cost of \$500 and \$1,000 for each acute and chronic test respectively. These toxicity tests are conducted in addition to chemical-specific monitoring to assess potential aquatic life impacts associated with unregulated chemicals, chemical combinations, and substances that do not have established water quality criteria thresholds. If toxicity is observed during routine testing, dischargers are typically required to conduct accelerated tests weekly for a minimum of six weeks at an additional cost of approximately \$3,000 to \$6,000 depending on the test. If toxicity is observed in two or more of the weekly accelerated tests, the discharger would be required to implement a toxicity identification evaluation (TIE). TIEs consist of multiple toxicity tests conducted with multiple sample manipulations in order to characterize and eventually identify the toxicity causing constituent(s). The cost of a TIE can vary widely from \$10,000 to well over \$100,000 depending on complexity and persistence of the toxicant. Once identified the cost to treat or remove the toxicity causing compound(s) can vary dramatically.

## **Conclusion**

In conclusion, POTWs need EPA's assistance to protect surface water from contamination from pesticides and Tri-TAC looks forward to continuing to work with EPA in this effort. POTWs are required by NPDES permits to meet effluent toxicity standards; however our agencies do not have the authority to directly regulate

Ms. Dana Friedman  
Office of Pesticide Programs (OPP)  
RE: Docket No. EPA-HQ-OPP-2012-0167 – Cypermethrin Registration Review  
May 29, 2012  
Page 6

pesticides. As detailed above, when toxicity problems occur, they can be very costly for POTWs. Tri-TAC supports a requirement for aquatic toxicity, environmental fate data, down-the-drain assessment, and a biosolids assessment as part of U.S. EPA's registration review for cypermethrin.

Tri-TAC appreciates the opportunity to comment on this cypermethrin registration application and look forward to our continued collaboration with EPA. We want to thank you for acting upon our previous comments regarding bifenthrin, permethrin, and fipronil and are pleased with the improvements that EPA has made to the environmental risk assessment process and including POTW discharges in the conceptual model and future modeling efforts. If you have any questions or require additional information, please contact Ms. Preeti Ghuman by phone at (562) 699-7411, extension 2904, or by email at [pghuman@lacsdc.org](mailto:pghuman@lacsdc.org).

Sincerely,



Terrie L. Mitchell  
Chair, Tri-TAC

cc: Rick P. Keigwin, Jr., U.S. EPA Office of Pesticide Programs, Pesticide Re-Evaluation Division  
Monica Wait, U.S. EPA Office of Pesticide Programs, Pesticide Re-Evaluation Division  
Kevin Costello, U.S. EPA Office of Pesticide Programs, Pesticide Re-Evaluation Division  
Mah Shamim, U.S. EPA Office of Pesticide Programs, Environmental Fate & Effects  
Mark Corbin, U.S. EPA Office of Pesticide Programs, Environmental Fate & Effects Division  
Charles Peck, U.S. EPA Office of Pesticide Programs, Environmental Fate & Effects Division  
Keith Sappington, U.S. EPA Office of Pesticide Programs, Environmental Fate & Effects  
Donald Brady, U.S. EPA Office of Pesticide Programs, Environmental Fate & Effects  
William Eckel, U.S. EPA Office of Pesticide Programs, Environmental Fate & Effects Division  
Tom Myers, U.S. EPA Office of Pesticide Programs, Pesticide Re-Evaluation Division  
Laurence Libelo, U.S. EPA Office of Pollution Prevention and Toxics  
Ephraim King, U.S. EPA Office of Water, Office of Science and Technology  
James A. Hanlon, U.S. EPA Office of Water, Office of Wastewater Management  
Alexis Strauss, Water Division, U.S. EPA Region 9  
Nancy Woo, Water Division, U.S. EPA Region 9  
Debra Denton, U.S. EPA Region 9  
Patti TenBrook, U.S. EPA Region 9  
Syed Ali, California State Water Resources Control Board  
Tom Mumley, California Regional Water Quality Control Board, San Francisco Bay Region  
Janet O'Hara, California Regional Water Quality Control Board, San Francisco Bay Region  
Tessa Fojut, California Regional Water Quality Control Board, Central Valley Region  
Daniel McClure, California Regional Water Quality Control Board, Central Valley Region  
Nan Singhasemanon, California Department of Pesticide Regulation  
Kelly D. Moran, Urban Pesticides Pollution Prevention Project  
Greg Kester, California Association of Sanitation Agencies  
Chris Hornback, Regulatory Affairs, National Association of Clean Water Agencies