



# California Regional Water Quality Control Board

## San Francisco Bay Region



Linda S. Adams  
Secretary for  
Environmental Protection

1515 Clay Street, Suite 1400, Oakland, California 94612  
(510) 622-2300 • Fax (510) 622-2460  
<http://www.waterboards.ca.gov/sanfranciscobay>

Arnold Schwarzenegger  
Governor

March 7, 2007

Mr. Craig Downs  
District Manager and the  
Members of the Board of Managers  
Contra Costa Mosquito & Vector Control District  
155 Mason Circle  
Concord, CA 94520

### **Subject: March 12, Board Meeting Regarding Adulthood and Impact on Water Quality**

Dear Members of the Board and Mr. Downs:

I am writing to offer support and encouragement for your efforts to implement the least toxic means of controlling mosquitoes and to call attention to the water quality attainment strategy recently adopted by the Regional Water Quality Control Board (Water Board). The Water Board encourages the Contra Costa Mosquito and Vector Control District (District) to continue and enhance its efforts to:

- Prevent adult mosquito populations by controlling breeding areas (through physical and larval control means) and increasing outreach to residents to encourage the elimination of standing water in private properties
- Use less toxic controls, including oils and baits
- Use less toxic products should adulthood become necessary. In particular, the Water Board recommends that the District continue its practice of not using organophosphorus pesticides and reduce or eliminate its use of synthetic pyrethroid insecticides in order to prevent water quality impacts.

Researchers have found evidence of pyrethroids at levels that are toxic to aquatic life in California urban creeks (such as Kirker Creek in Contra Costa County).<sup>1</sup> There has also been some evidence that piperonyl butoxide (PBO), a synergist that is used to increase the potency of both synthetic pyrethroid products and pyrethrins, can increase the toxicity of pyrethroids already present in the environment.<sup>2</sup> These results affected the recent decision by the California Department of Pesticide Regulation (DPR) to reevaluate the use of approximately 600 pyrethroid products. As part of this effort, DPR is requiring manufacturers to begin more studies to address water quality toxicity concerns.

<sup>1</sup> 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.

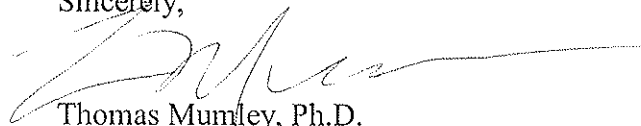
<sup>2</sup> Weston, D. P., E. Amweg, et al. (2006). "Aquatic Effects of Aerial Spraying for Mosquito Control over an Urban Area." *Environmental Science & Technology* **40**(18): 5817-5822.

The Water Board has also taken action to prevent and control pesticide-caused toxicity by establishing its "Water Quality Attainment Strategy and Total Maximum Daily Load TMDL for Pesticide-Related Toxicity in Bay Area Urban Creeks" (Strategy). The Strategy was adopted by the San Francisco Bay Water Board in November 2005 and approved by the State Water Board in November 2006 as an amendment to the Water Quality Control Plan for the San Francisco Bay Basin. The Strategy calls on municipalities and its agencies to effectively management use of pesticides to avoid causing water quality toxicity and establishes requirements for municipalities that will be included in NPDES permits for urban runoff discharges. These include:

1. Reduce reliance on pesticides that threaten water quality by adopting and implementing policies, procedures, or ordinances that minimize the use of pesticides that threaten water quality in the municipality's operations and on its property;
2. Track progress by periodically reviewing the municipality's pesticide use and pesticide use by its hired contractors;
3. Train the municipality's employees to use integrated pest management techniques and require that they rigorously adhere to integrated pest management practices;
4. Require the municipality's contractors to practice integrated pest management; and
5. Study the effectiveness of the control measures implemented, evaluate attainment of the targets, identify effective actions to be taken in the future, and report conclusions to the Water Board.

We appreciate your efforts to review existing aduenticiding threshold practices and encourage you to reduce or eliminate the need to aduenticide by implementing larviciding and outreach to the community to the fullest capacity. If you have any questions, please contact me at 510 622-2395 or [tmumley@waterboards.ca.gov](mailto:tmumley@waterboards.ca.gov).

Sincerely,



Thomas Mumley, Ph.D.  
Planning and TMDLs Division Chief