



California Regional Water Quality Control Board

San Francisco Bay Region



Linda S. Adams
Acting Secretary for
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Edmund G. Brown, Jr.
Governor

April 25, 2011

U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street, WTR-3
San Francisco, California 94105

Sent via <http://www.regulations.gov> to Docket ID Number EPA-R09-OW-2010-0976
Sent via email to Erin Foresman: foresman.erin@epa.gov

RE: ADVANCE NOTICE OF PROPOSED RULEMAKING FOR WATER QUALITY CHALLENGES IN THE SAN FRANCISCO BAY/SACRAMENTO-SAN JOAQUIN DELTA ESTUARY, Docket Number EPA-R09-OW-2010-0976

Dear Ms. Foresman:

Please accept these comments into the docket for the Advanced Notice of Public Rulemaking (ANPR), as referenced above. The San Francisco Bay Regional Water Quality Control Board (Water Board) is the State of California's regional office with responsibility for enhancing and maintaining the water quality of the San Francisco Estuary. We appreciate the effort the U.S. Environmental Protection Agency (EPA) is putting towards evaluating water quality problems in the Bay Delta Estuary and evaluating statutory and regulatory options for solving them. We also appreciate the chance to be part of that evaluation through the ANPR. Our comments primarily cover two of the topics discussed in the ANPR, pesticides and selenium.

PESTICIDES

Not mentioned in the ANPR is the Total Maximum Daily Load (TMDL) for Diazinon and Pesticide-Related Toxicity in Urban Creeks in the San Francisco Bay Region. This TMDL for all urban creeks in the San Francisco Bay Region, which EPA approved in May 2007, contains a pesticide-related toxicity target as well as a very comprehensive implementation strategy. Our comments on the topic of pesticides are framed to correspond to selected questions in the ANPR, with the question restated herein in italics.

b. What, if any, actions should EPA take under its authority to improve the effectiveness of regulating pesticide contamination of the Bay Delta Estuary watershed?

Regardless of any other action EPA takes to improve the water quality for aquatic species in the Estuary, long-term reduction in pesticide-related impairment cannot be achieved without improving EPA's pesticide approval process. In November 2008, EPA's Office of Pesticide Programs (OPP) and Office of Water (OW) introduced a joint project to integrate EPA's aquatic effects characterization methods and provide a common basis to achieve the water quality

protection goals of the Clean Water Act (CWA) and the Federal Insecticide Fungicide and Rodenticide Act (FIFRA). This is a most welcome and important endeavor, because pesticides currently being used in accordance with approved label instructions are causing and/or contributing to toxicity in waters of the U.S. and State.¹

To illustrate just one reason why this project is so important, one fundamental difference between the two offices is the toxicity testing procedures used by OW versus the effects characterization procedures used by OPP. Many, if not all, of California's pesticide-toxicity waterbody impairments were discovered using the OW toxicity testing procedures. OPP's effects characterization procedures were unable to demonstrate these concerns with aquatic toxicity at the time these pesticides were registered. Currently, other registered pesticides, such as bifenthrin, other pyrethroids, and fipronil, are being found to cause wide-spread toxicity in California water bodies.²

Recent updates on the EPA OW/OPP project have indicated that the common methodology being drafted by the two offices is likely to result in a pesticide registration process that more effectively considers aquatic impacts. We strongly encourage regional EPA staff to participate in and support this project, because we view it as the kingpin in EPA's efforts to regulate pesticide contamination of the Bay Delta Estuary.

h. What new or revised effluent limitations, monitoring requirements or other permit requirements could be included in NPDES permits for discharges of pesticides from Municipal Separate Storm Sewer Systems (MS4s) in the Bay Delta Estuary in order to better meet the regulatory standard of reducing discharges to the maximum extent practicable?

We recommend EPA review the requirements contained in Provision C.9 of the Municipal Regional Stormwater NPDES Permit (MRP)³, which the Water Board issued to 76 municipal entities in the San Francisco Bay Region in 2009, and which implements our TMDL for Pesticide-Related Toxicity in Urban Creeks. In developing the TMDL and these permit requirements, we recognized the following:

- Stormwater runoff from MS4s is a major source of pesticides in our creeks.
- FIFRA regulations prohibit municipalities from controlling pesticide usage at the residential, commercial, and industrial properties within their boundaries. Thus, source control requirements will have limited effectiveness in controlling sources of pesticides in urban runoff.

¹ (1) Hunt, J., D. Markiewicz, and M. Pranger, *Summary of Toxicity in California Waters: 2001-2009*. Prepared for the Surface Water Ambient Monitoring Program. Nov. 2010. (2) Zhang, X., *Detections of Pyrethroid Insecticides in Surface Waters from Urban Areas of California, 1993-2010*. Department of Pesticide Regulation, Environmental Monitoring Branch. December 3, 2010. (3) Trimble, A. J., D. P. Weston, et al. (2009). "Identification and Evaluation of Pyrethroid Insecticide Mixtures in Urban Sediments." *Environmental Toxicology and Chemistry* 28(8): 1687-1695. (4) 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. (5) Weston, D.P., Univ CA-Berkeley. *Pyrethroid Pesticide Toxicity in the Sacramento-San Joaquin Delta: Sources & Impacts on Delta Waters*. Presented to the Urban Pesticides Committee. July 21, 2009.

www.up3project.org/up3_upc_2009materials.shtml

² Ibid.

³ NPDES Permit No. CAS612008, attached

- Pesticide usage patterns vary depending on weather and other factors, and potential sources are widely spread throughout the urban area; thus treatment of urban runoff for pesticides is not practicable or cost-effective at this time.

The TMDL implementation strategy, as incorporated into the MRP, requires municipal permittees to control their own pesticide usage through implementation of Integrated Pest Management⁴ (IPM) policies across all their municipal operations. Permittees are also required to influence the pesticide usage of others, including professional pesticide applicators, those who hire professional applicators, and users of off-the-shelf pesticides, by conducting outreach activities that promote IPM. In addition, municipalities are required to notify pesticide regulatory authorities of unauthorized discharges of pesticides as such discharges are discovered.

Finally, permittees are asked to work toward improving the federal and State pesticide registration processes in the area of assessing potential water quality impacts. The permittees and Water Board staff, along with MS4s, POTWs, and other Regional Water Board staff from across California, have actively commented on the OPP/OW joint project discussed above and on numerous pesticide registration actions being taken by EPA and the California Department of Pesticide Regulation. The successful completion of the OPP/OW joint project to integrate EPA's aquatic effects characterization methods should eliminate the need for our continued comment.

SELENIUM

As the ANPR notes, the Water Board has begun work on a TMDL project to address the selenium impairment listings of the northern segments of San Francisco Bay. The most current scientific evidence was used to develop the ECoS3 estuary model, which can successfully simulate selenium concentrations in the water column and sediments and track mobilization and transport of selenium through the North Bay. However, there are still gaps in our knowledge of the key factors that affect the transfer and potential toxicity of selenium through food webs.

Additional data are now being collected to provide better characterization of the relationship between riverine inputs of selenium and the processes in the North Bay that affect biotic uptake. This new information will be also used to fine-tune the model's calibration, which, in turn, will enhance the accuracy of the model's future predictions.

The forthcoming EPA wildlife criteria and aquatic life guidance criteria are critical to this effort, and we look forward to EPA completing this work. We also look forward to guidance from EPA on implementation of the criteria.

⁴ Integrated Pest Management is a pest control strategy that uses an array of complementary methods: natural predators and parasites, pest-resistant plant varieties, cultural practices, biological controls, various physical techniques, and pesticides as a last resort.

OTHER COMMENTS

We cannot stress enough the importance of EPA's continued support, including funding, for our Regional Monitoring Program (RMP), for the newer Delta RMP, and for continued efforts to integrate all monitoring activities across the San Francisco Bay Estuary.

If you have any further questions, please contact Naomi Feger at 510 622-2328, or via e-mail at nfeger@waterboards.ca.gov.

Sincerely,

Bruce H. Wolfe
Executive Officer

Attachment: Municipal Regional Stormwater NPDES Permit (NPDES Permit No. CAS612008)

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