



# Department of Pesticide Regulation

Lisa M

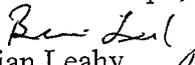


Brian R. Leahy  
Director

## MEMORANDUM

Edmund G. Brown Jr.  
Governor

TO: Michael Thomas  
Assistant Executive Officer  
Central Coast Regional Water  
Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, California 93401-7906

FROM:   
Brian Leahy  
Director  
916-445-4000

DATE: January 6, 2016

SUBJECT: REVIEW OF DRAFT TECHNICAL REPORT, *TOTAL MAXIMUM DAILY LOADS (TMDLS) FOR SEDIMENT TOXICITY AND PYRETHROIDS PESTICIDES IN SEDIMENT IN THE LOWER SALINAS RIVER WATERSHED*

Thank you for your recent letter and request for the Department of Pesticide Regulation (DPR) to review the draft technical report, *Total Maximum Daily Loads (TMDLs) for Sediment Toxicity and Pyrethroids Pesticides in Sediment in the Lower Salinas River Watershed* through the Management Agency Agreement (MAA) process. In addition to the draft TMDL report, you have provided three monitoring studies that detail pyrethroid sediment data and associated toxicity. Your letter also requests a collaborative response to the presence of pyrethroid pesticides in central coast surface waters as per the MAA "Process for Responding to the Presence of Pesticides in Surface Water" (Response Process).

We appreciate the information provided and recommendation that our staffs move forward to collaboratively address pyrethroid concentrations in surface water of the central coast through the Response Process. As noted in your letter, DPR adopted regulations in 2012 that aim to reduce pyrethroid runoff from urban applications. We continue to evaluate monitoring data to determine the efficacy of regulations. DPR Surface Water Protection Program staff will evaluate monitoring data identified in your letter as well as data that DPR and others have collected from the central coast to determine the extent and nature of our response. If DPR finds that mitigation is warranted, we will likely take an approach that is similar to the one we took in addressing chlorpyrifos contamination in the central coast, including coordination with regional stakeholder groups.

We are currently reviewing the draft TMDL report and will work directly with your staff to provide feedback. However, given the shortened timeline and the length of the report, we are not able to provide a comprehensive review at this time.

Thank you again for writing and for affirming your support of the MAA and the efforts currently underway to update the MAA guidance documents. We believe a coordinated effort, utilizing our



Michael Thomas  
January 6, 2016  
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combined authorities and programs, is the best approach to address potential impacts of pesticides to the environment.

I look forward to fostering a collaborative relationship between the Central Coast Regional Water Quality Board and DPR as we move to address the contamination of pyrethroids in agricultural waterways. If you have any questions, please contact Dr. Jennifer Teerlink, Environmental Scientist, at 916-445-3195 or <Jennifer.Teerlink@cdpr.ca.gov>.

cc: Eric Lauritzen, Monterey County Agricultural Commissioner

Tom Howard, Executive Director  
State Water Resources Control Board

Rich Breuer, Environmental Program Manager I  
State Water Resources Control Board

Dawit Tadesse, Senior Environmental Scientist  
State Water Resources Control Board

Daniel McClure, Senior Water Resource Control Engineer  
Central Valley Regional Water Quality Control Board

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Lisa McCann, Environmental Program Manager I  
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Jennifer Epp, Senior Water Resource Control Engineer  
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Central Coast Regional Water Quality Control Board

George Farnsworth, DPR Assistant Director  
David Duncan, DPR Environmental Program Manager II  
Kean Goh, DPR Environmental Program Manager I  
Nan Singhasemanon, DPR, Senior Environmental Scientist (Supervisory)  
Jennifer Teerlink, DPR Environmental Scientist

# 15-0057



EDMUND G. BROWN JR.  
GOVERNOR



MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

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## Central Coast Regional Water Quality Control Board

December 18, 2015

Brian R. Leahy, Director  
Department of Pesticide Regulation  
Pesticide Programs Division  
PO Box 4015  
Sacramento, CA 95812-4015

Dear Mr. Leahy,

**RE: REQUEST FOR TOTAL MAXIMUM DAILY LOAD REVIEW, NOTICE OF DETERMINATION THAT WATER QUALITY OBJECTIVES WERE EXCEEDED FROM CURRENTLY REGISTERED PESTICIDES AND REQUEST FOR COLLABORATIVE RESPONSE**

As per the Management Agency Agreement (MAA) between the State Water Resources Control Board (State Water Board), the Regional Water Quality Control Boards, and the Department of Pesticide Regulation (DPR), I ask DPR to review the attached draft TMDL technical report, *Total Maximum Daily Loads (TMDLs) for Sediment Toxicity and Pyrethroid Pesticides in Sediment in the Lower Salinas River Watershed*.

Additionally, in accordance with the MAA, *Process for Responding to the Presence of Pesticides in Surface Water* (Response Process), I am notifying you of the Central Coast Regional Water Quality Control Board (Central Coast Water Board) staff determination that pyrethroid pesticides and associated sediment toxicity are present in central coast surface waters at levels that exceed water quality standards. This determination is described in the attached draft TMDL technical report.

Finally, I request that our agencies collaboratively respond to the presence of pyrethroid pesticides in central coast surface waters. The Response Process outlines a program for our agencies to collaboratively address these violations. I request that we engage in this process.

The draft TMDL technical report prepared by Central Coast Water Board staff indicates extensive sediment toxicity to invertebrates (*Hyalella azteca*) and concentrations of pyrethroid pesticides in sediment above established sediment toxicity levels in the lower Salinas River watershed. These are violations of the Water Quality Control Plan for the Central Coastal Basin (Basin Plan) narrative water quality objectives for toxicity and pesticides. Due to the sediment toxicity, surface waters in the lower Salinas River watershed are on the federal Clean Water Act 303(d) list of impaired waters and we are required to develop TMDLs. The water quality assessment in the TMDL technical report indicates sediment toxicity in 111 of 159 samples

DR. JEAN-PIERRE WOLFF, CHAIR | KENNETH A. HARRIS JR., EXECUTIVE OFFICER

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collected from 2004 to 2013. TMDL analysis and the following special watershed monitoring studies, all link the sediment toxicity to the presence of pyrethroid pesticides in sediment.

1. *Pyrethroid Insecticides in California Surface Waters and Bed Sediments: Concentrations and Estimated Toxicities*, (Stamer et al., 2006)
2. *Patterns of Pyrethroid Contamination and Toxicity in Agricultural and Urban Stream Segments*, (Ng et al., 2008)
3. *Follow-up Monitoring Report: Pesticides and Toxicity to *Hyaella azteca* in Sediments 2010*, Central Coast Water Quality Preservation, Inc. 2010 (CCWQP, 2010)

TMDL source analyses of watershed land use and pesticide use patterns indicate that irrigated agricultural runoff and municipal stormwater are the principal sources of the pollution. The lower Salinas River watershed is intensively farmed for cool season vegetables (lettuce, broccoli and artichokes) and strawberries, and pyrethroids are very important pesticides for these crops. Pyrethroids are also commonly used for urban structural and landscape pest control. To protect water quality, the TMDL project establishes pyrethroid and sediment toxicity numeric targets and TMDLs. The TMDLs are allocated to municipal and agricultural dischargers.

The TMDL implementation focuses in large part on the four-stage approach outlined in the MAA to meet water quality standards for pesticides and toxicity in the watershed. The four-stage approach includes: 1) education and outreach, 2) self-regulating or cooperative implementation by industry, 3) compliance with DPR authority, and 4) compliance with Central Coast Water Board plans and regulations. We anticipate that DPR's urban surface water regulations should be effective in reducing loading to stormwater systems and that the municipal stormwater permittees (City of Salinas and County of Monterey) will achieve TMDL waste load allocations based in large part on the implementation of the regulation. In conjunction with the MAA, the municipalities are required to develop waste load allocation attainment plans and implement management practices to meet allocations in the TMDLs. Participation in implementation actions and representative statewide monitoring from programs such as DPR's urban monitoring (Protocol 299), special studies by the California Stormwater Quality Association, and the state's Stream Pollution Trend's Monitoring Program can also be used by the municipalities to demonstrate compliance.

Agricultural TMDL implementation is complex in the lower Salinas River watershed given the variety of crops, pests, and field conditions in which pyrethroids are used. However, the TMDL recognizes that agricultural pyrethroids have label requirements to protect aquatic habitats from pyrethroid pesticide runoff and drift. The label requires growers applying pyrethroids to adhere to the following buffer zone requirements:

*Vegetative Buffer Strip*

*Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as but not limited to, lakes; reservoirs; permanent stream; marshes or natural ponds; estuaries, and commercial fish farm ponds).*

*Only apply products containing (name of pyrethroid) onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.*

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*For guidance, refer to the following publication for information on constructing and maintaining effective buffers: Conservation Buffers to Reduce Pesticide Losses. Natural Resources Conservation Services. USDA, NRCS. 2000. Fort Worth, Texas. 21 pp.*

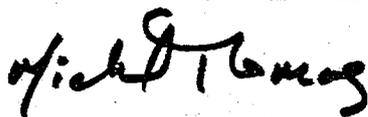
Protecting aquatic beneficial uses is a key goal for the TMDLs and the basis of toxicity and pesticide objectives in the Basin Plan. There is extensive aquatic habitat in the lower Salinas River watershed, widespread use of agricultural pyrethroids, and a lack of buffers and vegetation implementation between fields and aquatic habitat. Additionally, given the widespread sediment toxicity, the label-required minimum management practices may not be sufficient to protect water quality and additional practices will likely be needed.

Owners and operators of irrigated agricultural lands are required to enroll in the Central Coast Water Board's Agricultural Order and to implement pesticide and sediment and erosion control management practices to comply with water quality standards and applicable TMDLs. I've requested that our staff and those of the Monterey County Agricultural Commissioner support the development and implementation of effective management practices to control agricultural pyrethroids from entering surface waters. Other possible collaborators include the UC Cooperative Extension, UC Davis Granite Canyon, Monterey County Resource Conservation District, the agricultural pesticide industry, agricultural commodity groups, and growers enrolled in the Central Coast Water Board's Agricultural Order.

I want to acknowledge DPR's accomplishments and the outstanding work of the Environmental Monitoring Branch to protect water quality. I greatly appreciate DPR's ongoing pesticide monitoring in the watershed and the funding of the development and testing of management practices. We also had outstanding collaboration with DPR and several of the county agricultural commissioners on the central coast in addressing chlorpyrifos water quality problems and developing restricted material conditions. We recently started coordinating with DPR on evaluating the mitigation of pesticide runoff using a woodchip denitrification bioreactor in the Santa Maria River watershed. DPR's urban surface water protection regulations for the application of pyrethroids outdoors are an important regulation for controlling pesticides in municipal stormwater runoff. I also support the process just started to rewrite the MAA to improve its effectiveness as a tool for us to collaboratively protect water quality.

Thank you for considering my request for MAA collaboration on sediment toxicity and pyrethroid pesticide impairments and review of the attached draft TMDL technical report. Please have your staff provide comments by January 6, 2016. I recognize that this is a short MAA review period but we would like your comments before the public comment period, which is anticipated to start on January 8, 2015. However, you may also provide comments during the public period. If you have any questions regarding this letter or the TMDLs, please contact the Central Coast Water Board's DPR MAA coordinator, Peter Meertens, at (805) 549-3869 or [Peter.Meertens@waterboards.ca.gov](mailto:Peter.Meertens@waterboards.ca.gov), or the TMDL Program Manager, Jennifer Epp, at (805) 594-6181 or [Jennifer.Epp@waterboards.ca.gov](mailto:Jennifer.Epp@waterboards.ca.gov).

Sincerely,



Digitally signed by Michael Thomas

Date: 2015.12.18 16:33:30 -08'00'

Water Boards

Michael Thomas  
Assistant Executive Officer

Attachments:

1. TMDLs for Sediment Toxicity and Pyrethroid Pesticides in Sediment in the lower Salinas River Watershed
2. Pyrethroid Insecticides in California Surface Waters and Bed Sediments
3. Patterns of Pyrethroid Contamination and Toxicity in Agricultural and Urban Stream Segments
4. Follow-up Monitoring Report: Pesticides and Toxicity to *Hyalella azteca* in Sediments 2010
5. USEPA Letter to Pyrethroid Registrants

CC:

Mr. George Farnsworth, DPR, George.Farnsworth@cdpr.ca.gov  
Mr. David Duncan, DPR, David.Duncan@cdpr.ca.gov  
Mr. Kean S. Goh, DPR, Kean.Goh@cdpr.ca.gov  
Mr. Nan Singhasemanon, DPR, Nan.Singhasemanon@cdpr.ca.gov  
Ms. Jennifer Teerlink, DPR, jennifer.teerlink@cdpr.ca.gov  
Mr. Eric Lauritzen, Monterey County Agricultural Commissioner, lauritzene@co.monterey.ca.us  
Mr. Tom Howard, State Water Board, Tom.Howard@waterboards.ca.gov  
Mr. Rich Breuer, State Water Board, Rich.Breuer@waterboards.ca.gov  
Mr. Dawit Tadesse, State Water Board, Dawit.Tadesse@waterboards.ca.gov  
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