



July 6, 2020

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Office of Pesticide Programs (OPP)  
c/o Regulatory Public Docket Center (28221T),  
U.S. Environmental Protection Agency (EPA)  
1200 Pennsylvania Ave. NW.  
Washington, DC 20460-0001

**Subject: Cyfluthrin and beta-Cyfluthrin, Deltamethrin, Esfenvalerate, Fenpropathrin, Phenothrin, Prallethrin, and Tau-fluvalinate Registration Review Proposed Interim Decisions  
(Docket ID Nos. EPA-HQ-OPP-2010-0684; EPA-HQ-OPP-2009-0637; EPA-HQ-OPP-2009-0301; EPA-HQ-OPP-2010-0422; EPA-HQ-OPP-2011-0539; EPA-HQ-OPP-2011-1009; EPA-HQ-OPP-2010-0915)**

Dear EPA Pyrethroids Chemical Review Managers:

On behalf of the Bay Area Clean Water Agencies (BACWA), we thank you for the opportunity to comment on the Registration Review Proposed Interim Decision for the pyrethroids cyfluthrin and beta-cyfluthrin, deltamethrin, esfenvalerate, fenpropathrin, phenothrin, prallethrin, and tau-fluvalinate. BACWA's members include 55 publicly owned wastewater treatment facilities and collection system agencies serving 7.1 million San Francisco Bay Area residents. We take our responsibilities for safeguarding receiving waters seriously.

As detailed below and in the attachments, available data indicate that all pyrethroids and pyrethrins do not have equivalent aquatic risks. Special mitigation measures are warranted for those with high ecological risk. While we greatly appreciate that EPA has proposed product label improvements toward preventing incidents like dumping unused products, EPA's ecological risk mitigation proposal does not include measures that we anticipate will reduce daily discharges or provide measurable reduction in typical POTW discharge risk. BACWA requests that EPA implement additional, individual ecological risk mitigation for the highest risk pyrethroids.

## **Background**

Every day, BACWA members' Publicly Owned Treatment Works (POTWs) treat millions of gallons of pesticide-containing wastewater that is then discharged to fresh or salt water bodies, including local creeks and rivers, bays, and the Pacific Ocean. These waterways provide crucial habitat to a wide array of aquatic species and waterfowl, including several endangered species. In some cases, waters receiving POTW discharges ("receiving waters") may be effluent-dominated in that there is little to no dilution, either because the receiving water is small or there is a lack of mixing at certain times due to thermal or saline stratification.

As discussed in our much-appreciated conversations with EPA and our prior correspondence (including our July 2017 and February 2020 letters, enclosed), BACWA is especially interested in pyrethroid insecticides due to their high aquatic toxicity and ability to pass through POTWs and appear in our effluent and biosolids. Even the most sophisticated wastewater treatment plants cannot fully remove pyrethroid insecticides.<sup>1</sup> Available scientific data (see EPA's Pyrethroids and Pyrethrins Ecological Risk Assessment<sup>2</sup> and BACWA's 2017 letter, enclosed) support EPA's finding that pyrethroids discharges to municipal wastewater systems pose ecological risks. In almost every US state – including California – state law precludes any local regulation of pesticide sales or use. As municipal wastewater treatment facilities have no local option to control use of pesticides consumer products, it is essential to us that EPA implement mitigation measures ensuring that impacts to the beneficial uses of the receiving water are prevented. This is not just a California issue – the Clean Water Act toxicity standards that drive our interest in pyrethroids affect POTWs across the entire nation.

## **Pyrethroids and Pyrethrins Have Differing Ecological Risks – Some Warrant Additional Mitigation Measures**

EPA's Pyrethroids and Pyrethrins Ecological Risk Assessment identified very different risks from POTW discharges of individual pyrethroids and pyrethrins (based on EPA "level of concern" [LOC] exceedances – see EPA summary table on the next page).<sup>3</sup> Despite finding substantial (orders of magnitude) differences in aquatic risks among the pyrethroids and pyrethrins, EPA issued a single risk mitigation proposal with only one set of measures covering all 23 pyrethroids and pyrethrins.<sup>4</sup>

BACWA appreciates that EPA's joint pyrethroids/pyrethrins ecological risk mitigation proposal reaffirms EPA's finding that pyrethroids discharges to municipal wastewater systems pose ecological risks that should be mitigated. While we greatly appreciate that EPA has proposed

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<sup>1</sup> Markle, J., van Buuren, B., Moran, K., & Barefoot, A. (2014). Pyrethroid Pesticides in Municipal Wastewater: A Baseline Survey of Publicly Owned Treatment Works Facilities in California in 2013. In *Describing the Behavior and Effects of Pesticides in Urban and Agricultural Settings* (Vol. 1168, pp. 177-194): American Chemical Society.

<sup>2</sup> US EPA 2016. Preliminary Comparative Environmental Fate and Ecological Risk Assessment for the Registration Review of Eight Synthetic Pyrethroids and the Pyrethrins.

<sup>3</sup> US EPA 2019. Pyrethroids Ecological Risk Mitigation Proposal. Docket ID # EPA-HQ-OPP-2008-0331-0096.

<sup>4</sup> Ibid.

product label improvements toward preventing incidents like dumping unused products, we are disappointed that EPA did not lay out a specific plan to address the main problem – continuous discharges associated with ordinary use of pyrethroids. Due to this gap, EPA’s joint pyrethroids/pyrethrins ecological risk mitigation proposal does not include measures that we anticipate will reduce daily discharges or provide measurable reduction in typical POTW discharge risk.

**Pyrethroids Have Very Different Aquatic Risks via POTW discharges**

(Table from Page 14 of EPA Pyrethroids Ecological Risk Mitigation Proposal;  
 RQ>0.5 indicates significant acute risk; RQ>1 indicates significant chronic risk)

<b>Table 3. Pyrethroids with Indoor Down-the-Drain Uses: Maximum Aquatic Invertebrate RQs</b>						
<b>Chemical</b>	Assessed in PRA or Rationale	Down-the-drain use	FW Inverts in water column		E/M Inverts in water column	
			Acute RQs	Chronic RQs	Acute RQs	Chronic RQs
bifenthrin	PRA	X	43	422	5	35
cyfluthrins	PRA	X	0.07	15	0.8	26
cyhalothrins (gamma,lambda)	PRA	X	26	9	0.4	10
cypermethrins	PRA	X	41	>464	4	30
cyphenothrin	Rationale	X				
deltamethrin	PRA	X	14	107	0.8	4
d-phenothrin	Rationale	X	N/A	N/A	N/A	N/A
esfenvalerate	PRA	X	12	333	2	61
etofenprox	Rationale	X				
fenpropathrin	PRA	-	N/A	N/A	N/A	N/A
flumethrin	Rationale	-	N/A	N/A	N/A	N/A
imiprothrin	Rationale	X				
momfluorothrin	Rationale	-				
permethrin	PRA	X	2	3	0.7	5
prallethrin	Rationale	X				
pyrethrins	PRA	X	0.1	2	0.06	0.3
tau-fluvalinate	Rationale	-	N/A	N/A	N/A	N/A
tefluthrin	Rationale	-	N/A	N/A	N/A	N/A
tetramethrin	Rationale	X				

N/A= There are no applicable down-the-drain uses; FW=Freshwater, E/M=estuarine/marine

Because 100% of POTWs must comply with the Federal Clean Water Act 100% of the time, based on both EPA modeling and available monitoring, additional risk mitigation for pyrethroids is imperative. To address this need, we request that EPA implement additional, individual ecological risk mitigation for the highest risk pyrethroids.

**EPA's Sweeping Ecological Risk/Benefit Finding Should Be Revised to Differentiate Among the 23 Pyrethroids and Pyrethrins and Among the Various Indoor Uses of the 23 Chemicals**

While we agree that there are societal benefits from some pesticide uses like public health pest control, the Ecological Risk Mitigation Proposal treats all indoor uses and all 23 chemicals as having equal costs and benefits. This is untrue. All indoor pyrethroids and pyrethrins uses are not equal in their societal benefits. Because the pyrethroids and pyrethrins do not have equal ecological risks, they do not have equal impacts on POTWs as illustrated in the table above.

A more nuanced approach to completing EPA's statutory obligation to weigh the societal costs and benefits of the 23 pyrethroids and pyrethrins would better serve our nation. Ideally, EPA would evaluate the balance between costs and benefits for each of the 23 chemicals and each use of each chemical, considering the full range of available pest control alternatives for each use. We realize that such a complex evaluation would be impractical. However, a focused evaluation of some individual uses – uses that are most closely linked to the external (non-user) costs of pyrethroids use such as pet flea control – are practical, and are necessary to support EPA's decision.

Thank you for your consideration of our comments. If you have any questions, please contact BACWA's Project Managers:

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Respectfully Submitted,



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Enclosures:

1. BACWA's February 12, 2020 Letter to US EPA on the Pyrethroids and Pyrethrins Ecological Risk Mitigation Proposal for 23 Chemicals (Docket ID No. EPA-HQ-OPP-2008-0331)
2. BACWA's July 7, 2017 Letter to US EPA on the Preliminary Ecological Risk Assessment for

the Pyrethroid Insecticides (Docket ID No. EPA-HQ-OPP-2010-0384)

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