May 17, 2021

Robert Little
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: Novaluron Proposed Interim Decision (Docket ID No. EPA-HQ-OPP-2015-0171)

Dear Mr. Little:

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 novaluron. BACWA's members include 55 publicly owned wastewater treatment facilities ("POTWs") and collection system agencies serving 7.1 million San Francisco Bay Area residents. We take our responsibilities for safeguarding receiving waters seriously. BACWA is especially interested in pesticides that are used in manners that have transport pathways to the sanitary sewer, as even the most sophisticated wastewater treatment plants cannot fully remove complex chemicals like pesticides.

BACWA has a strong interest in novaluron due to identified pathways to sewers and its high toxicity to aquatic invertebrates. BACWA thanks EPA for recognizing in the Proposed Interim Decision that there exists a pathway from indoor uses of novaluron to the wastewater collection system and wastewater treatment system. BACWA supports the EPA's conclusion that "novaluron indoor uses need be considered for their impacts on wastewater treatment plants (influent) and waterbodies that receive effluent from these facilities." (Novaluron Response to Comments, December 11, 2020, p. 15) However, BACWA is disappointed at EPA's decision to not utilize its down-the-drain model for novaluron.

Estimating aquatic exposures to pesticides in POTW effluents
In its 2020 Draft Environmental Risk Assessment for novaluron, EPA stated that POTW discharge analysis is unnecessary because agricultural discharge would be representative of POTW discharge. We fail to understand how modeling agricultural novaluron applications and subsequent runoff from a treated agricultural field could provide any scientific insights on the discharges of novaluron into the sewer system and its subsequent passage through POTW treatment processes.

To illustrate the differences between agriculture and POTWs, please see the table on the next page, which provides an overview of pesticide uses, pathways to surface waters, and

management approaches for both agriculture and POTWs (from Moran et al. 2020).[1] A key aspect of POTW modeling that differs from agriculture is that POTWs discharge continuously. EPA's POTW modeling approach specifically considers the fact that POTW discharges are continuous.

US EPA has been evaluating POTW discharges from indoor pesticide use and discharges to the sewer system in its pesticides risk assessments since the late 1990s. As described by a US EPA scientific team (Shamim et al. 2014), US EPA uses simplified models like its Exposure and Fate Assessment Screening Tool (E-FAST) in combination with monitoring data and benchtop studies to estimate POTW effluent concentrations.[2] As EPA noted in its pyrethroids ecological risk assessment,[3] *this modeling approach is imperfect, but in combination with monitoring data it has been useful in understanding aquatic risks*.

TABLE 1: Overview of agricultural and urban pesticide uses, pathways to surface waters, and management approaches

	Agricultural	Urban	
	Runoff, irrigation tailwater, and drift	Runoff	Municipal wastewater
Pesticide user	Grower; professional applicator, often assisted by pest control advisor	Professional applicator, maintenance gardener, facility manager, building product manufacturer, mosquito abatement agency, or resident	Professional applicator, facility manager, consumer product manufacturer (impregnated materials), sewer collection system agency, or resident
Types of pesticides commonly used	Insecticides, herbicides, fungicides, rodenticides	Insecticides, herbicides, fungicides, rodenticides, antimicrobials	Insecticides, herbicides, antimicrobials
Common pest control examples	Crop pest control, weed control	Structural and landscaping pest control; mosquito abatement; rodent control; swimming pool, spa, and fountain microbial and algae control; building material protection	Pet flea control, indoor insect control, cooling water systems protection, swimming pool and spa microbial and algae control, sewer system root control liquid product preservation, sanitizers and disinfectants, insecticide and antimicrobial fabrics
Pathway	Direct runoff, tile drain, or drainage ditch, drift	Pesticides washed by rainfall or other outdoor flows (e.g., irrigation runoff) into gutters and storm drains that flow through pipes (sometimes ditches) to surface water (no treatment)[a]	Pesticides are washed off (e.g., animals, clothing) or pesticide-containing solutions are discharged to indoor drains that flow through sewer system to municipal wastewater-treatment plants
Water quality regulation requirements	Limited US federal regulation under CWA. Under California state law, many farms are being required to implement management practices for water quality protection	US federal law requires most cities to implement management practices to address pesticide pollution to the maximum extent practicable. Pesticide TMDLs require achievement of the numerical target.	US federal law requires permits that prohibit effluent toxicity. Pesticide TMDLs may establish monitoring conditions which include pesticide and/or toxicity permit limits.

[a]Some older cities have "combined" systems that collect both urban runoff and sewage; these flow to wastewater-treatment plants except when the system is overwhelmed (usually because of rain). During these occurrences, the stormwater/sewage mixture can flow directly into surface water. A small fraction of all urban runoff flows through swales, basins, or other "green infrastructure" (see text).
CWA = Clean Water Act; TMDL = total maximum daily load.

Table Source: Moran et al. 2020

[1] Moran, K., Anderson, B., Phillips, B., Luo, Y., Singhasemanon, N., Breuer, R., & Tadesse, D. (2020). Water Quality Impairments Due to Aquatic Life Pesticide Toxicity: Prevention and Mitigation in California, USA. *Environ Toxicol Chem*, **39**(5), 953-966. doi:10.1002/etc.4699

[2] Shamim, M. et al. 2014. Conducting Ecological Risk Assessments of Urban Pesticide Uses. In Jones et al. *Describing the Behavior and Effects of Pesticides in Urban and Agricultural Settings*; ACS Symposium Series 1168; American Chemical Society: Washington, DC, 2014; pp 207-274.

[3] US EPA OPP EFED (2016). Preliminary Comparative Environmental Fate and Ecological Risk Assessment for the Registration Review of Eight Synthetic Pyrethroids and the Pyrethrins. Part I. Assessing Pyrethroid Releases to POTWs of Pyrethroids and Pyrethrins (DP Barcode D425791).

Since the mid-2010s, BACWA has been in dialog with EPA scientists to improve the accuracy of EPA's POTW modeling approach, focusing on improvements that can be made with relatively small investments of EPA's scientific staff resources. Our suggestions include recommendations for estimating POTW discharges, as we agree with EPA scientists that EPA's default approach (assuming 100% of the sales of a pesticide active ingredient is discharged to POTWs) is inappropriate. We appreciate that some of our recommendations, (e.g., effluent dilution factors that recognize the prevalence of "zero dilution" discharges) have been implemented in the current version of the E-FAST model.

POTW modeling is needed to inform POTW-specific mitigation measures

Because local agencies in most states (including California) lack the statutory authority to regulate pesticide use in urban areas, it is essential that EPA employs the pesticide consultation processes to assess and prevent urban water pollution as defined by the CWA and our NDPES permits.

If the pesticides reregistration process fails to identify and implement mitigation, an undue burden to address the problem is placed on local governments. Often, there are few ways for a POTW to mitigate a toxic pollutant problem other than extremely costly treatment plant upgrades. In addition, wastewater facilities may be subject to additional requirements established as part of Total Maximum Daily Loads (TMDLs) set for the water bodies by EPA and state water quality regulatory agencies. The cost to wastewater facilities and other dischargers to comply with TMDLs can be up to millions of dollars per water body per pollutant. It is therefore essential that pesticide registration and pesticide registration review processes adequately consider potential impacts to wastewater quality, so that such impacts to the beneficial uses of the receiving water are prevented (i.e., uses and/or discharges associated with endangered species impacts do not occur).

Since OPP controls pesticides labels, even our state pesticide regulatory agency cannot readily address pesticide water pollution and compliance with our NPDES permit if the pesticide discharges stem from consumer pesticide products. OPP action is imperative.

BACWA requests that EPA ensure POTWs are addressed

Based on this example, we request that EPA to ensure that it does not overlook the presence of pesticides in POTW effluents. Novaluron is used in a myriad of ways in the indoor environment (on carpets (as a spray or shampoo), pet bedding, drapery, hard surfaces, upholstery, throw rugs, etc.) for many different pests including fleas, cockroaches, crickets, etc. EPA's Environmental Fate and Effects Division (EFED) can use the detailed label analysis tables developed by EPA's Biological and Economic Analysis Division (BEAD) to identify uses with pathways to POTWs. The comprehensive conceptual model on the next page (from Sutton et al. 2019) can be used as the basis for this analysis. It identifies the pathways between pesticide uses and POTWs and illustrates how pesticides used indoors flow to the sewer system, to POTWs, and ultimately into the environment via effluent, air emissions, and biosolids.

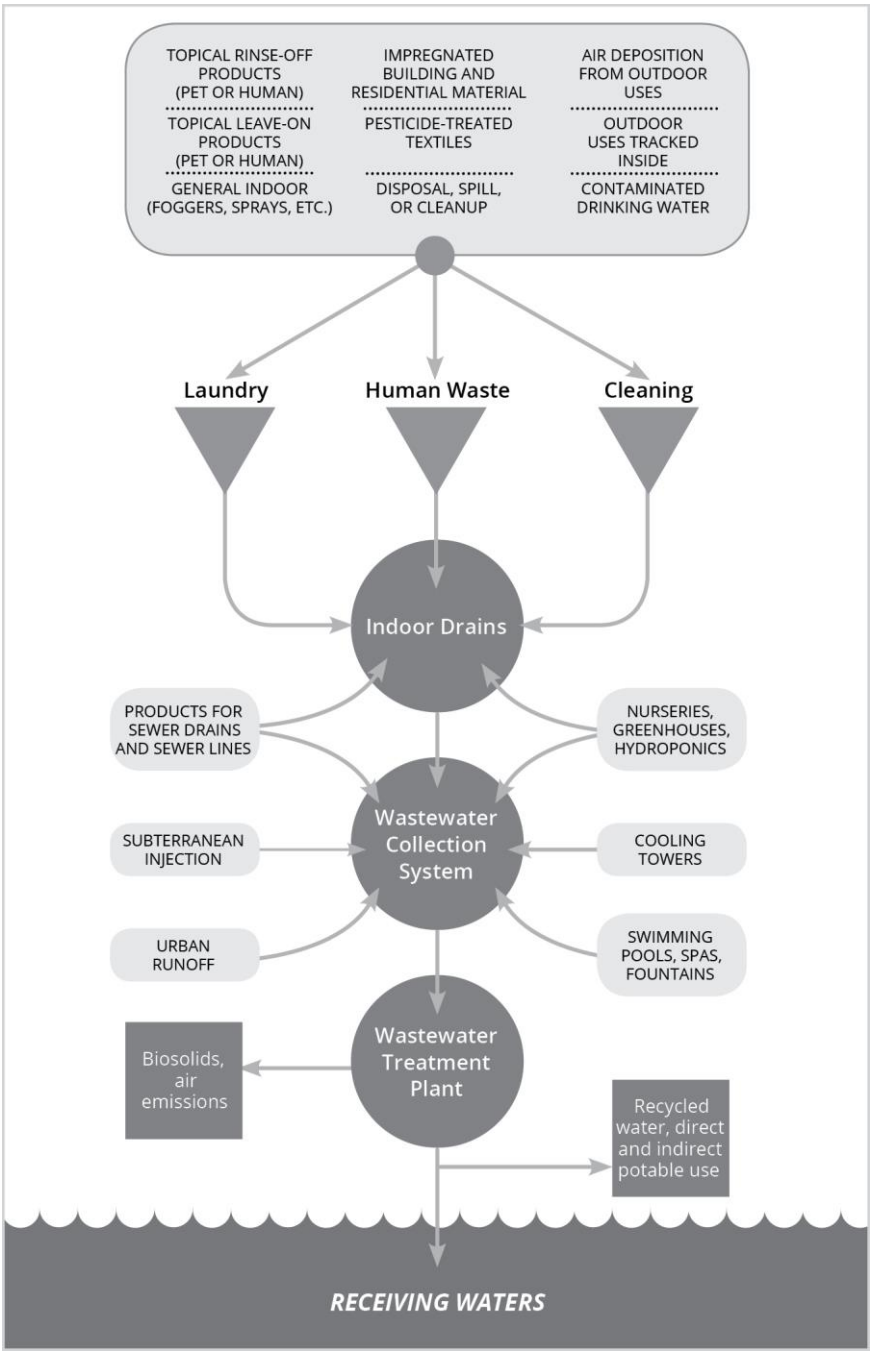


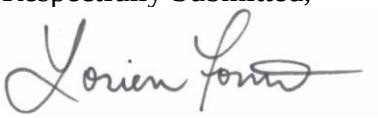
Figure Source: Sutton et al. 2019.

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

Karin North
City of Palo Alto
(650) 329-2104
Karin.north@cityofpaloaloalto.org

Autumn Cleave
San Francisco Public Utilities Commission
(415) 695-7336
acleave@sfwater.org

Respectfully Submitted,



Lorien Fono, Ph.D., P.E.
Executive Director
Bay Area Clean Water Agencies

cc: Edward Messina, Acting Director, EPA OPP
Elissa Reaves, Acting Director, Pesticide Re-evaluation Division
He Zhong, EPA OPP
Frank Farruggia, EPA OPP
Christopher Koper, EPA OPP
Sujatha Sankula, EPA OPP
Greg Orrick, EPA OPP
Nicole Zinn, EPA OPP
Kevin Costello, EPA OPP
Kristina Garber, EPA OPP
Deborah Nagle, Acting Director, EPA Office of Water, Office of Science and Technology
Andrew Sawyers, Director, EPA Office of Water, Office of Wastewater Management
Tomas Torres, Director, Water Division, EPA Region 9
Patti TenBrook, EPA Region 9
Debra Denton, EPA Region 9
Kathryn Meyer, EPA Region 9
Karen Mogus, Deputy Director, California State Water Resources Control Board
Philip Crader, Assistant Deputy Director, California State Water Resources Control Board
Richard Breuer, California State Water Resources Control Board
Tom Mumley, California RWQCB SF Bay Region
Janet O'Hara, California RWQCB, SF Bay Region
James Parrish, California RWQCB, SF Bay Region
Debbie Phan, California RWQCB, SF Bay Region
Jennifer Teerlink, California Department of Pesticide Regulation
Aniela Burant, California Department of Pesticide Regulation
Chris Hornback, Chief Technical Officer, National Association of Clean Water Agencies
Cynthia Finley, Director, Reg. Affairs, National Association of Clean Water Agencies
Karen Cowan, Executive Director, CASQA
Dave Tamayo, CASQA Pesticide Lead
BACWA Executive Board
BACWA Pesticides Workgroup