



January 28, 2025

Safer Consumer Products Program
California Department of Toxic Substances Control (DTSC)
1001 I Street
Sacramento, CA 95814-2828
CalSAFER Public Comment Portal: <https://calsafer.dtsc.ca.gov/cms/commentpackage/?rid=12781>

Subject: Comments on DTSC’s Background Document on Quaternary Ammonia Compounds in Cleaning Products and Beauty, Personal Care, and Hygiene Products

On behalf of the Bay Area Clean Water Agencies (BACWA), we thank you for the opportunity to provide comments on DTSC’s Draft [Background Document on Quaternary Ammonium Compounds in Cleaning Products and Beauty, Personal Care, and Hygiene Products](#)¹.

BACWA is a joint powers agency whose members own and operate publicly-owned treatment works and sanitary sewer systems that collectively provide sanitary services to over seven million people in the nine-county San Francisco Bay Area (Bay Area). Every day, BACWA members provide wastewater treatment for millions of gallons of wastewater that is discharged to local creeks and rivers, bays, and the Pacific Ocean. Wastewater treatment is critical for protecting public health and the environment, and we take our responsibilities for safeguarding receiving waters seriously.

Wastewater treatment involves physical, chemical, and biological processes. Unfortunately, recent experience has demonstrated that certain Quaternary Ammonia Compounds (QACs) have the potential to dangerously disrupt the biological treatment process. Specifically, certain QACs can inhibit the growth of nitrifying bacteria -- beneficial microorganisms that are critical for the removal of ammonia and nitrogen from wastewater. Ammonia is toxic to aquatic organisms, and nitrogen can lead to harmful algae blooms, so the inhibition of nitrification at wastewater treatment facilities has the potential to cause immediate and harmful impacts on the downstream aquatic environment.

DTSC’s draft Background Document on QACs in Cleaning Products and Beauty, Personal Care, and Hygiene Products (“Background Document”) includes a limited assessment of the adverse impacts of QACs after they are used, when they often end up in wastewater. The Background Document notes that “Consumer products that are washed down the drain are a source of QACs in wastewater, where they can persist after wastewater treatment (Arnold et al. 2023; Mahony, McNamara and Arnold 2023).” The Background Document notes that QACs are toxic to algae, aquatic invertebrates, and fish.

Persistence after wastewater treatment is not the only adverse end-of-life impact from QACs. Interference and inhibition of the wastewater treatment process itself is also an adverse end-of-life impact, because it can lead to unacceptable levels of other pollutants (e.g., ammonia, nitrogen, turbidity, and suspended

¹ “Background Document on Quaternary Ammonium Compounds in Cleaning Products and Beauty, Personal Care, and Hygiene Products.” December 2024. Prepared by Department of Toxic Substances Control, Safer Consumer Products Program. Available online at <https://dtsc.ca.gov/wp-content/uploads/sites/31/2024/11/QACs-Background-Document-Final-Accessible.pdf>

solids) being discharged to the environment. The inhibition of nitrification and resultant treatment plant interference has been noted in scientific literature, but it is not just an academic concern. At least two California wastewater treatment facilities, including those run by Goleta Sanitary District and the City of San Luis Obispo, recently experienced treatment interference that may have been due to QACs. Additional information is at the links below:

- Lessons Learned from San Luis Obispo Water Resource Recovery Facility - Presentation to the Bay Area Pollution Prevention Group, August 2, 2023. Available at <https://bacwa.org/wp-content/uploads/2023/08/HDR-Falk-and-SLO-Lehman-QACs-2023-08-02.pdf>
- “The SLO Mystery: What Caused a Sudden Drop in Nitrification? Nitrification Loss at SLO Raises Questions About Causes and Cures. California Water Environment Association. Available at <https://www.cwea.org/news/mystery-at-the-san-luis-obispo-water-resource-recovery-facility/>
- “Treatment Plant Q&A: Can QACs Disable Wastewater Treatment?” California Water Environment Association. Available at <https://www.cwea.org/news/treatment-plant-qa-can-qacs-disable-your-process/>

In these recent episodes, cleaning products may have been the primary source of QACs that led to treatment plant interference. BACWA understands that many cleaning products are registered as disinfectants under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), meaning they fall outside of DTSC’s regulatory purview. However, the same or other QACs may be used in other products that are not making a pesticidal claim, and these products would fall under DTSC’s purview.

The stated purpose of the Background Document is to help DTSC decide “whether to conduct additional research or potentially list one or more products containing QACs as Priority Products” (page 1). Additionally, the “Questions to Interested Parties” asks, “Are there other hazard traits relevant to QACs that are not mentioned in this document?” (page 7). BACWA responds to these prompts as follows:

- **QACs Hazard Traits.** QACs have an end-of-life hazard trait that is not mentioned in the draft Background Document, but this hazard trait should be added to the document. Wastewater treatment plant inhibition and interference is an important hazard trait that is included in the statutory definition of “adverse waste and end-of-life effects” used by the Safer Consumer Products program².

Specifically, the definition of adverse waste and end-of-life effects includes “(C) Effects on solid waste and wastewater disposal and treatment, including operation of solid waste and wastewater handling or treatment facilities, and the ability to reuse or recycle materials resulting from the treatment of solid waste and/or wastewater;” and “(D) Discharge(s) or disposal(s) to storm drains or sewers that adversely affects operation of wastewater or storm water treatment facilities.”

QACs are actively demonstrating this end-of-life hazard trait in consumer products in California.

- **Additional Research** is needed to determine which specific QACs and which specific consumer products may be responsible for recently observed treatment plant interference in California. It is not known whether the observed interference was due to FIFRA-registered products, or to other products that are not registered as pesticides. BACWA supports additional research on this topic by DTSC and other scientific partners.

In the future, if specific QACs found in non-FIFRA registered products can be identified as the cause of treatment plant interference, then that product(s) and QAC(s) should be designated as a priority for DTSC

² California Code of Regulations, Title 22, Division 4.5, Chapter 55, Article 1. § 69501.1.(8) Definitions. Available online at <https://govt.westlaw.com/calregs/Document/IAD7F28F45B6111EC9451000D3A7C4BC3>

action. Unfortunately, at this time, BACWA is not aware of information supporting such action.

Thank you for your consideration of our comments. If you have any questions, please contact BACWA's Pollution Prevention committee leads:

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

Robert Wilson
City of Santa Rosa
(707) 543-4369
rwilson@srcity.org

Respectfully Submitted,

Sincerely,

A handwritten signature in black ink that reads "Lorien Fono". The signature is written in a cursive style with a long horizontal flourish at the end.

Lorien Fono
Executive Director
Bay Area Clean Water Agencies

Cc: Bay Area Pollution Prevention Group Pesticides Committee