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Submitted via the Comments Submission Portal: <https://oehha.ca.gov/comments>

Pesticide and Environmental Toxicology Branch
Office of Environmental Health Hazard Assessment
California Environmental Protection Agency
P.O. Box 4010, MS-12B Sacramento, California 95812
Attention: PHG Program

RE: Second Public Review Draft Technical Support Document; Haloacetic Acids in Drinking Water (August 2022)

The Chlorine Institute (“CI” or “The Institute”) is a 190-member, not-for-profit trade association of Chlor-alkali producers worldwide. The Institute’s producer members account for the majority of the chlorine production capacity in the U.S., along with the majority of caustic soda and caustic potash production, and hydrochloric acid production, along with one hundred percent of chlorine repackagers. The Institute’s mission chemicals¹ are used throughout the U.S. economy and are paramount to the protection of public health.

The Institute appreciates this opportunity to provide comments on the Office of Environmental Health Hazard Assessment’s (OEHHA) Second Public Review Draft Technical Support Document (TSD) proposing individual Public Health Goals (PHG’s) for five haloacetic acids (HAA’s) in drinking water. Our comments are intended to reinforce those previously made by the American Chemistry Council (ACC) on May 1, 2020, regarding the First Public Review Draft.

As stated in the 2020 ACC comments, millions of lives have been saved and countless illnesses have been averted by chlorinating drinking water. A 2001 statistical analysis of U.S. community water system disinfection practices concluded that chlorine-based disinfectants are by far the most widely used for both centralized (primary) and residual (secondary) disinfection in the distribution system.¹ Although several methods are available to disinfect drinking water, only chlorine-based disinfectants provide residual levels in drinking water that help control microbial growth in the distribution system.

Although alternative disinfection technologies may reduce disinfection byproducts (DBP) during the centralized treatment phase, these technologies do not protect during the distribution phase from contaminants such as bacteria (e.g., Legionella), viruses (e.g., hepatitis A), and parasites (e.g., Cryptosporidium). Contamination during distribution is of increasing concern given aging water system infrastructure. Therefore, the proposed PHG’s increase public health risk if the result is a move away from proven chlorine-based treatment technology.

¹ Gibson, M. and Bartrand, T. A. (July/August 2021). Understanding Community Water System Disinfection Practices in the United States. *Journal of the American Water Works Association*.

The proposed PHGs are predicted by the TSD to provide a marginal reduction in cancer deaths. This prediction is based on a theoretical reduction in lifetime cancer risks due to exposure to DBP. It should be recognized that the studies that point in the direction of a relationship between cancer risk and DBP exposure are not consistent. Whereas the reduction of contaminants of any kind in drinking water may be desirable, the reduction of DBPs that present a *theoretical* risk must not come at the expense of reducing the *known* risks of exposure to pathogenic microorganisms, which chlorine-based water disinfection neutralizes throughout the distribution system.

As the development of a PHG is a risk-based process, the public health risk of decreasing levels of chlorine disinfectants and the concomitant increase in microbial risk should be a necessary component of this process. If the proposed PHGs were to become final, water systems using chlorine-based disinfection could not readily achieve them, potentially jeopardizing the public health of Californians. The TSD should include a risk-benefit comparison of tradeoffs between the proposed PHG's and the loss of the ability to utilize chlorine-based disinfection methods. This shortcoming is recognized on pgs. 234 & 235 of the TSD, and the responsibility is deflected to other parties. Additionally, there needs to be a wider analysis of the available studies to resolve the inconsistencies within the data.

We are concerned about the manner in which this document was developed and reviewed. Although the announcement of the second draft indicates revisions have been made in light of previous comments, no substantive changes have been made to the conclusions of the second draft relative to the first as reported within the summaries.

Summary

We urge OEHHA to reexamine the basis of the PHGs. That review should include a comparison of results in this study to that of other studies on this subject. There should be a review of the correlation between actual health impact data and the theoretical conclusions of the TSD. Further, a risk-benefit analysis of setting the PHGs at very low levels and the impact on water - disinfection processes should be an essential element of supporting the final PHGs. Lastly, we look forward to reviewing OEHHA's response to the issues raised by commenters to both the first and second drafts.

We appreciate OEHHA's consideration of these comments and others submitted and look forward to your thorough consideration of and response to all comments.



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