



December 10, 2020

Ms. Alexandra Dapolito Dunn, Assistant Administrator
Office of Chemical Safety and Pollution Prevention (OCSPP)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

RE: 1,4-Dioxane; Supplemental Analysis to the Draft TSCA Risk Evaluation
Docket ID: EPA-HQ-OPPT-2019-0238]

Dear Assistant Administrator Dunn,

The Association of State Drinking Water Administrators (ASDWA) is the professional association that serves the men and women (and their staff) who lead and implement the 57 state and territorial drinking water programs serving as the primacy agencies to administer the Safe Drinking Water Act (SDWA). ASDWA submitted a letter on November 25, 2020 requesting a 40-day extension of the current 20-day comment period to extend the due date from December 10, 2020 to January 20, 2021. We appreciate EPA's consideration of this extension to provide ASDWA the opportunity to more thoroughly review and understand how this risk evaluation may affect impacts from 1,4-dioxane to both groundwater and surface water sources of drinking water and the actions and decisions states and state drinking water programs will need to consider for ensuring public health protection. In the interim, ASDWA is providing the following recommendations.

ASDWA and its members are particularly interested in the implications of this risk evaluation because the manufacture, use, and disposal of 1,4-dioxane has the potential to impact drinking water sources. From the federal drinking water perspective, 1,4-dioxane has significant potential regulatory implications for state primacy agencies and water systems as this contaminant is on EPA's [Fourth Contaminant Candidate List \(CCL4\)](#), indicating the potential for a future drinking water regulation. This chemical has already negatively impacted both groundwater and surface water sources of drinking water in some states from industrial wastewater streams, wastewater treatment facilities, produced water, groundwater discharges, and landfill leachate. Regulatory actions under TSCA are needed in a timely manner to prevent further contamination of groundwater and surface waters.

ASDWA recommends that EPA expand this risk evaluation to add exposures from 1,4-dioxane in drinking water because the Agency has not established a Safe Drinking Water Act (SDWA)

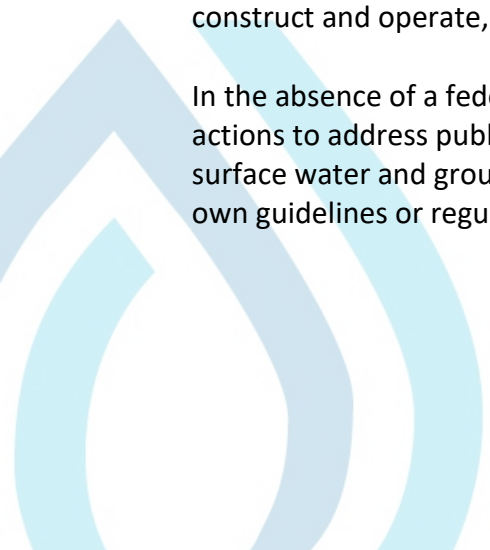
regulatory standard (or Maximum Contaminant Level [MCL]) for 1,4-dioxane. This would follow the same reasoning for which EPA added general population exposures from environmental releases to surface water via the ambient water pathway - because there is no nationally recommended Ambient Water Quality Criteria under the Clean Water Act (CWA). The Agency's reasoning to include ambient water, but not drinking water is not consistent with the approach provided in the risk evaluation. This determination is fundamentally flawed because the SDWA does not "...adequately assess and effectively manage these exposures." In addition to drinking water, this risk evaluation should assess all potential exposures and not assume that other EPA-administered statutes or regulatory programs (including the SDWA) will provide viable or economically feasible options to eliminate and/or reduce risks from 1,4-dioxane.

While ASDWA did not previously comment on this draft risk evaluation, we have provided comments on several TSCA Significant New Use Rules (SNURs) and reiterate that EPA should use a holistic approach to consider potential impacts to drinking water, human health, and the environment from chemicals (including 1,4-dioxane) throughout any part or all of the chemical's lifecycle - from manufacturing through processing, distribution, and disposal. By not including evaluation of exposures for 1,4-dioxane in drinking water in this risk evaluation, EPA is essentially passing the burden and cost of removing 1,4-dioxane from both surface water and ground water sources of drinking water on to the public water systems (PWSs) and their customers.

Contamination of both groundwater and surface water sources of drinking water from 1,4-dioxane is extensive. The results of the Third Unregulated Contaminant Monitoring Rule (UCMR3) found that of the 4,916 PWSs tested, 1,077 PWSs in 45 states detected 1,4 dioxane above 0.07 ppb, and 6.9% of PWSs detected 1,4 dioxane above 0.35 ppb. Since the UCMR monitoring universe is the approximately 4,000 PWSs that serve over 10,000 people plus approximately 800 smaller systems, these sample results only a fraction of the over 50,000 Community Water Systems (CWSs), which are a subset of the over 150,000 PWSs.

The additional PWSs that may be impacted by 1,4-dioxane and are not included in the UCMR3 are typically small groundwater systems with limited capacity to assess and address 1,4-dioxane. The vast majority of UCMR3 PWSs were surface water systems. Removal of 1,4-dioxane with conventional water and wastewater treatment processes are generally ineffective. Advanced oxidation appears to be the best drinking water treatment process using a combination of ozone, hydrogen peroxide, and ultraviolet (UV) light but is very expensive to construct and operate, and is not economically feasible for many PWSs, especially small PWSs.

In the absence of a federal standard, some states across the country are taking additional actions to address public health impacts from 1,4-dioxane drinking water contamination in both surface water and groundwater sources. However, other states are unable to develop their own guidelines or regulations that are more stringent than federal standards, and/or do not



have the resources to conduct sampling programs. Below are three states that have developed state-level regulatory actions in the absence of a federal standard:

- New York has established a MCL for 1,4-dioxane at 1 ppb;
- California has established a health action level of 1 ppb, and
- New Hampshire has established an ambient groundwater quality standard (AGQS) level of 0.32 ppb.

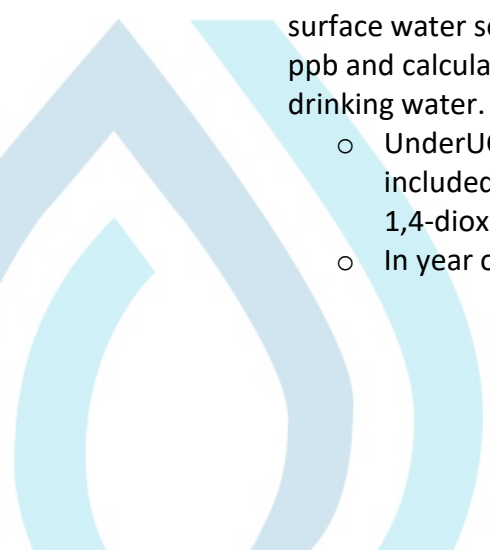
Additionally, 14 other states have established groundwater or drinking water standards or guidelines with levels ranging from 0.3 to 77 ppb.

Below are examples from New Hampshire and North Carolina that highlight some of the additional impacts from 1,4-dioxane contamination of drinking water sources.

- In the State of New Hampshire (NH), 1,4-dioxane has impacted groundwater sources of drinking water from disposal of products at hazardous waste sites, unlined and lined landfills, industrial sites, and from groundwater discharges. The [2019 NH fact sheet](#) shares that results from targeted sampling where approximately 5% of 200 PWS sources detected 1,4-dioxane (that had historical detections of chlorinated solvents). The fact sheet also explains that, “Typical domestic wastewater can contain 1-2 µg/L (or ppb) of 1,4-dioxane.” Starting in 2010, NH added a 1,4-dioxane sampling requirement for all groundwater discharge permit renewals and found that about 50 percent of the discharge sites had 1,4-dioxane detections at levels above 0.32 ppb. Other NH sampling efforts found:
 - Six of 18 Large Septic Systems (primarily associated with industrial or long-term health care facilities) had 1,4-dioxane levels of 0.26 ppb to 3.3 ppb.
 - Three of 7 rapid infiltration basins had 1,4-dioxane levels of 0.53 ppb to 0.83 ppb.
 - Over 100 of 500 waste sites had 1,4-dioxane levels above 0.32 ppb.
 - Forty-four of 77 wastewater samples from municipal and industrial NPDES discharges had detections of 1,4-dioxane at an average level of 0.447 ppb.¹

In addition, EPA’s [2013 EPA Enforcement Memo](#) highlights 1,4-dioxane impacts to 45 private drinking water wells (not covered under SDWA) in NH and estimates costs for removal at approximately \$3million.

- In the State of North Carolina (NC), 1,4-dioxane has impacted both groundwater and surface water sources of drinking water. NC developed a groundwater standard of 3.0 ppb and calculated a surface water criterion of 0.35 ppb for surface water sources of drinking water.
 - Under UCMR3, NC had the top 4 surface water detections in the county. This included 46 of 148 PWSs that detected 1,4-dioxane and of those, 22 PWSs had 1,4-dioxane levels above 0.35 ppb.
 - In year one of a subsequent 2014-2016 Cape Fear River Basin study, some



surface water samples detected 1,4-dioxane levels ranging from 171 to 1,030 ppb.²

As previously discussed, 1,4-dioxane has significant potential regulatory implications for state primacy agencies and water systems as this contaminant is on EPA's [Fourth Contaminant Candidate List \(CCL4\)](#), indicating the potential for a future drinking water regulation. In this regard, ASDWA requests that EPA explain why the Office of Water is relying on the TSCA risk evaluation to make a regulatory determination for 1,4-dioxane, when OCSPP is excluding drinking water exposure from its analysis. A comprehensive and holistic risk assessment and risk management approach is needed by the Agency. Using each statute as a shield to preclude a comprehensive approach addressing ALL routes of exposure is not acceptable to ASDWA's members, the water systems, and the public that the systems serve. ASDWA continues to stress the need to harmonize the regulatory approaches between OCSPP and the Office of Water so that potential downstream water contamination from chemicals such as 1,4-dioxane is not left to the state primacy agencies and water systems to solve. Preventing contaminants from entering drinking water sources is more effective and less expensive than having to remove them once drinking water has become contaminated. Protecting drinking water sources (and preventing contamination) is essential for sustaining safe drinking water supplies, protecting public health and the economy, and protecting the environment.

ASDWA appreciates this opportunity to provide comments and looks forward to further engaging with EPA on this topic. Please feel free to contact me at aroberson@asdwa.org if you would like to discuss these comments in more detail.

Sincerely,



J. Alan Roberson, P.E.
Executive Director
Association of State Drinking Water Administrators

Cc: Jennifer McLain – OGWDW
Yvette Colazzo - OPPT
Joel Wolf – OPPT

¹Source: New Hampshire Drinking and Ground Water Bureau

²Source: North Carolina Public Water Supply Section

