



New Jersey Drinking Water Quality Institute (DWQI)

September 30, 2020, 9 AM - 12 PM via Microsoft Teams

Members Present:

Keith Cooper	Jessie Gleason	Anthony Matarazzo	Gloria Post
Patricia Gardner	Norm Nelson	Judith Klotz	Tina Fan
David Prantis	Leslie Brunell		

NJDEP Attendees:

Catherine McCabe, Kristin Tedesco, Chelsea Brook, Brandon Carreno, Patricia Ingelido, Lee Lippincott, Filina Poonolly, Sabrina Hill, Tyler Rowe, Linda Walsh, Linda Ofori, James Duffy, Gary Buchanan, Joanna Caporossi

Other attendees:

Albert Schwartz	Brian Pachkowski	David Riker
Ed Jones	Vincent Monaco	Edward Jones
Nadine Weinberg	Jhindan Mukherjee (NJDOH)	Erik Person
J. Murray	Kuper Jones	Leslie Brunell
Liz Homan	Michael Warren	Steve Ertman (HDR)
Laura Cummings	Harry Hechehouche	Matthew Csik
Mike Martin	Karen E Benson	Bill Beattie
Erin DeSantis	Perry Cohn	Lydia Work
Bill Beattie	Samantha Jones	Eric Vitale
Mingzhu Fang	Joseph Guarnaccia	Steve Risotto (ACC)
Brian Pachkowski	Michelle Sanders	Andrea McElroy
Tracy Carluccio (DRN)	Richard Calbi	Harry Hechehouche
Vincent Monaco	Rachel White	Jeff Tittle (NJ Sierra Club)

1. DWQI Chair Remarks

- Chairman Cooper opened the meeting at 9:03 AM. He discussed the ground rules regarding the online meeting etiquette and other procedural steps for the meeting. He also clarified that the meeting would be primarily focused on 1,4-dioxane, and that the presentations and other information would be made available to the public by posting on the DWQI website. Chairman Cooper then began a brief review of the DWQI's MCL recommendation process leading up to



the meeting and stated that the DWQI will be compiling a list of contaminants to be considered in the future.

- Introductions - Members of the Drinking Water Quality Institute (DWQI) then introduced themselves and stated which DWQI Subcommittee they serve on.

2. Review of December 19, 2018 Minutes

The DWQI members then reviewed the minutes from the previous meeting. There were no comments. Anthony Matarazzo made a motion to approve the minutes, and Gloria Post seconded the motion. The minutes were approved unanimously by the members who were present.

3. Statement from the Commissioner

Chairman Cooper introduced NJDEP Commissioner Catherine McCabe as a guest speaker. She spoke for several minutes about the many initiatives and past projects the DWQI has worked on, and she thanked the individuals involved for their efforts.

4. Status of DWQI Vacancies

Chairman Cooper moved onto the subject of current vacancies within the DWQI. He introduced Patricia Gardner, who spoke about the vacancies in more detail. She explained the overall structure of the DWQI, and she then stated that there are currently five vacancies, each of which is designated for appointment by either the Governor, the Senate, or the Assembly. The vacancies include a Water Purveyor and three Environmental Health Experts. In 2019, three members left the DWQI. As a result, the DWQI is currently soliciting information from individuals who are interested in serving on the DWQI. This information will be shared with the Commissioner, who will forward the information to the appropriate governmental bodies for consideration. Any interested individuals should send their information, including their resume, to Brandon Carreno of the NJDEP (brandon.carreno@dep.nj.gov). Appointments will be made by the respective governmental bodies. Chairman Cooper stressed the importance of public input and the need to for the DWQI to have full membership. He urged anyone interested in being considered for membership to express their interest and submit supporting information.



4. Status of MCLs

Chairman Cooper gave a brief overview of the status of previous Maximum Contaminant Level (MCL) recommendations and introduced Kristin Tedesco of the NJDEP, who gave a more detailed update. Ms. Tedesco then discussed the implementation of the MCLs for PFNA and 1,2,3-trichloropropane that were adopted in September 2018. Monitoring of smaller systems (Public Community and Public Non-Transient Non-Community) started in 2019, and monitoring of larger systems serving a population of more than 10,000 began in 2020. Most systems are also reporting monitoring data for PFOA and PFOS along with PFNA, since they are detected in the same analytical method used for PFNA. MCL violations are based on the Running Annual Average of four quarterly results. After the end of the initial monitoring period, systems can apply for a less frequent monitoring schedule for contaminants that were not detected. The MCLs for PFOA and PFOS were adopted on June 1, 2020, and water systems will be required to begin monitoring for PFOA and PFOS starting in the first quarter of 2021. The importance of the adoption of these MCLs by NJDEP was stressed.

5. 1,4-Dioxane

Chairman Cooper then moved on to the presentations on Subcommittee recommendations for 1,4-dioxane. The Subcommittee PowerPoint presentations will be posted on the DWQI website.

The DWQI was asked to evaluate 1,4-dioxane in 2018. The Chairman mentioned that the process for developing the final DWQI recommendation for 1,4-dioxane would take several months. This is because the draft Subcommittee reports will be posted for a 60-day comment period, and all public comments will then need to be considered. Any revisions to the draft reports that are needed to address the comments will be made before the reports are finalized.

Chairman Cooper then introduced Jessie Gleason, the Chair of the Health Effects Subcommittee, who gave a presentation (<https://www.state.nj.us/dep/watersupply/pdf/healtheffects-dioxane-20201002.pdf>) regarding the Subcommittee's Health-based MCL recommendation. She began by giving a brief overview of 1,4-dioxane, including its uses, environmental fate, and the standards and guidance values developed by New Jersey, other states, and USEPA. USEPA classifies 1,4-dioxane as a likely human carcinogen, and all existing state and federal standards and guidelines are based on the cancer slope factor developed by the USEPA IRIS program. The Subcommittee agrees with the USEPA's conclusion that 1,4-dioxane is a likely human carcinogen and that the mode of action by which 1,4-dioxane causes tumors is not yet established. Therefore, its evaluation focused on studies relevant to carcinogenicity of 1,4-dioxane. The Subcommittee recommended a Health-based MCL of 0.33 µg/L which is based on the USEPA IRIS cancer slope factor. There were no questions from DWQI members, other than from Chairman Cooper. He asked why the recommendation was 0.33 µg/L when the NJDEP ground water standard, also based on the IRIS slope factor, is 0.4 µg/L. Gloria Post answered the question, explaining that the current ground water standard is actually 0.35 µg/L, but regulations



require rounding to one significant figure, and the number 5 is rounded up. Therefore, 0.35 µg/L was rounded to 0.4 µg/L. The Health-based MCL is 0.33 µg/L rather than 0.35 µg/L because updated USEPA exposure assumptions were used. The slight change results from the use of the new assumptions (80 kg body weight and 2.4 L/day water consumption) instead of the older assumptions (70 kg body weight; 2 L/day water consumption) that were used to derive the groundwater quality standard of 0.4 µg/L (rounded from 0.35 µg/L).

Chairman Cooper then introduced Tina Fan, the Chair of the Testing Subcommittee, who gave a presentation (<https://www.state.nj.us/dep/watersupply/pdf/dwqi-pql-20200930.pdf>) on the Subcommittee's Practical Quantitation Level (PQL) recommendation. She began with a brief overview of the process for developing an analytical PQL for 1,4-dioxane. The PQL is based on USEPA Method 522, which is certified for drinking water analysis and is recommended by the Subcommittee for testing of drinking water. The detection level for Method 522 ranges from 0.02 µg/L to 0.026 µg/L. The PQL was determined to be 0.1 µg/L based on several sources of information that are described in detail in the Subcommittee's draft report. The Subcommittee also recommends USEPA 541, which uses the same instrumentation as Method 522. There were no questions from DWQI members other than from Chairman Cooper, who asked Dr. Fan how difficult it would be to get certification for USEPA Method 541. Dr. Fan clarified that the Method 541 is not very different from Method 522, and that Method 541 is a bit more challenging but is still achievable.

Chairman Cooper then moved on to the Treatment Subcommittee's presentation (<https://www.state.nj.us/dep/watersupply/pdf/treatment-dioxane-20200925.pdf>), given by Anthony Matarazzo, the Subcommittee Chair. The presentation began with some background on 1,4-dioxane and the Subcommittee's process for evaluation of treatment methods for the contaminant. The Subcommittee found that some treatment methods are more effective in removing 1,4-dioxane, and other factors such as physical footprint, waste disposal, cost, and ability to treat other compounds were also considered in developing the Subcommittee's recommendations. Ability to treat other compounds is important because 1,4-dioxane is typically classified as a co-contaminant in the areas in which it is found. The Advanced Oxidation Process (AOP) was found to be the most suitable and most common method of treatment, based on review of case studies and the scientific/technical literature. Carefully designed AOP systems can be reliably and feasibly used to remove 1,4-dioxane to the recommended Health-based MCL of 0.33 µg/L. Chairman Cooper asked how common AOP treatment systems are in the state. Mr. Matarazzo stated that many public water systems' treatment plants in the state employ ozone, and several also use hydrogen peroxide (H₂O₂) as an oxidant. However, the operational costs of AOP could provide an offset of benefits. Chairman Cooper then asked if the synthetic resins are suitable for use in private wells. Mr. Matarazzo answered that yes, they provide a smaller footprint and could be suitable for public water systems or private wells with limited physical space. However, the synthetic materials are proprietary, and there is not much publicly available information as to what is being used in the resins.



Chairman Cooper then asked if there were additional questions from DWQI members for any of the presenters, and there were no additional questions. Chairman Cooper then asked for a vote from the DWQI members present about moving forward on posting the draft Health Effects, Testing, and Treatment Subcommittee reports. There was unanimous approval for moving forward on posting the draft reports for public comment.

6. Public Comments

Jeff Tittel of the New Jersey Sierra Club asked if it would be better for NJDEP to have a ground water cleanup standard as well as an MCL, since 1,4-dioxane is a ground water contaminant in New Jersey.

Patricia Gardner stated that she was not prepared to talk about this at that moment and would need to follow up with the NJDEP Site Remediation Program. Gloria Post clarified that New Jersey has had a Ground Water Quality Standard for 1,4-dioxane for many years, and that Ground Water Quality Standards become ground water remediation standards when they are adopted. Therefore, the State of New Jersey currently has and has had a ground water remediation standard for 1,4-dioxane and is now trying to “catch up” with establishing a drinking water MCL.

Mr. Tittel then asked a second question. He said that other states such as New York are setting lower standards for 1,4-dioxane and asked why New Jersey chose 0.33 µg/L instead of some of the more stringent MCLs.

Gloria Post clarified that New York set its MCL at 1 µg/L (1 ppb) due to cost considerations. The New York MCL of 1 µg/L is less stringent than the draft recommended MCL of 0.33 µg/L.

Tracy Carluccio of the Delaware Riverkeeper Network asked a question regarding the fourth item on the agenda (PFAS). She stated that the replacement for PFNA used by Solvay is escaping into the environment and has been found in soil and water. Her organization submitted a letter to the NJDEP on this issue in July, but they have not yet received a response. Ms. Carluccio finds this situation to be alarming. She requests that NJDEP tell the public what is being done to address it and what the extent of the situation is.

Chairman Cooper stated that the issue has not been ignored, and that he recognizes that the information presented by Ms. Carluccio is of concern. Patricia Gardner then followed up, stating that she was unfamiliar with the letter, but would look into it and follow up with Ms. Carluccio directly. Gloria Post stated that the toxicology studies of the replacement PFAS are proprietary and were given to the NJDEP with the understanding that they would remain confidential. Therefore, NJDEP cannot share them with the DWQI or the public at this time.



Steve Risotto of the ACC provided the DWQI with a status update on recent scientific findings on 1,4-dioxane. The results of a 90-day rodent study initiated by the ACC will be released in an upcoming peer reviewed publication. Mr. Risotto provided the key findings of the report and requested that the mode of action conclusions in the report be considered by the DWQI. Dr. Cooper stated that when the report is finalized and published, the DWQI will then consider it along with other relevant information.

Jeff Tittel stated that he agrees with everything that Ms. Carluccio had said in her comments. He then asked about the possibility of changing the MCL for 1,2,3-trichloropropane from 0.03 µg/L to a more stringent level of 0.005 µg/L, similar to the MCL adopted by California.

Patricia Gardner said that the NJDEP is considering the adoption of a stricter MCL for 1,2,3-trichloropropane, and that this topic would be included in the rulemaking for the 1,4-dioxane MCL.

Chairman Cooper added that NJDEP's Science Advisory Board had been looking into cumulative impacts of complex mixtures. The Science Advisory Report on this topic was submitted to the Commissioner, but he believed that it has not yet been posted on the NJDEP website.

As there were no more comments from attendees, Chairman Cooper ended the public comment section at 11:14 AM.

7. New Business and Next Meeting Topics

Chairman Cooper asked if there was any new business from DWQI members. There were no new items.

Chairman Cooper would like to schedule a DWQI meeting to discuss new and emerging contaminants in the next several months. This meeting would serve as a starting point for consideration of compounds that for future evaluation by the DWQI. Several years ago, a poll was sent to DWQI members to get their input on which contaminants the DWQI should evaluate in the future. Information from this poll can help inform the discussion at the upcoming meeting. Additionally, Chairman Cooper asked that Institute members share any ideas about contaminants for future consideration before the upcoming meeting.

Chairman Cooper then thanked the DWQI members and members of the public and asked for any last comments or questions. As there were no additional questions or comments, the meeting was adjourned at 11:19 AM.