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Philadelphia Water comments to The Environmental Quality Board

Public Hearing on the proposed rulemaking

[25 PA CODE CH.109] Safe Drinking Water: Disinfection Requirements Rule [46 Pa.B. 857]

Pennsylvania Department of Environmental Protection
Southeast Regional Office, Schuylkill and Delaware River Conference Rooms
2 East Main Street, Norristown, PA 19401

April 5, 2016

Philadelphia Water (PW) is in the process of reviewing PA DEP's proposed rulemaking and proposed changes to Chapter 109 relating to implementation of the Disinfection Requirements Rule. At present, we would like to outline some of the issues that we intend to comment on and will provide full formal comments to the proposed rulemaking prior to April 19, 2016.

1. PA DEP has offered a variety of public health concerns - to the EQB and the drinking water community - as a means for raising the required minimum detectable disinfectant residual from 0.02 mg/L to 0.2 mg/L. Some of these health concerns include *Legionella*, *Cryptosporidium*, *Salmonella*, and *E. coli*. However, throughout the stakeholder process, **scientific experts and water systems remain unclear as to which public health concern PA DEP will address by raising the residual.** Scientific experts in drinking water quality have attested to the following:
 - a. *Legionella* is a premise plumbing concern, not a distribution system issue.
 - b. *Cryptosporidium* is not responsive to disinfection treatment.
 - c. The *Salmonella* outbreak, which PA DEP cites in the proposed regulation's preamble, solely occurred in a non-disinfected ground water system that was not properly maintained. The Revised Total Coliform Rule (RTCR) would be effective in capturing and responding to sanitary defects and distribution systems deficiencies, like those that can be attributed to the *Salmonella* outbreak cited by PA DEP.
 - d. *E. coli*, as well as coliform data, and the associated levels of disinfectant residual are not necessarily related. Water system data has shown that *E. coli* and coliforms may be present in waters with sufficiently high disinfectant residual levels.

Given the lack of any identifiable public health benefit, it is misleading for PA DEP to cite the above reasons to the EQB as a means to increase the required minimum disinfectant residual.

2. Despite identifying any public health benefits and PA DEP's initial statewide compliance costs, **there are numerous known, significant costs and risks associated with PA DEP's current disinfection requirements proposal.** These include water systems incurring significant increases in costs (capital and operational) and resources, compliance risks, and increased potential for generating scientifically proven carcinogenic disinfection byproducts (DBPs).

- a. Significant increase in costs (capital and operational) and resources - To meet the proposed minimum required residual and achieve utility target operating levels, **PW estimated \$25 million dollars in capital costs and \$2.5 million dollars in annual operating and maintenance costs.** The estimated time to implement the changes to achieve utility target operating levels is at least 4 years.
- b. Water systems, under the current proposal, will be giving **public notification** for residuals less than the 0.2 mg/L **when there is no scientifically defensible public health benefit.** This will likely desensitize the public and result in a breakdown of public confidence.
- c. To meet the proposed residual levels, systems will need to increase disinfection chemical usage at water treatment facilities and will also need to provide increased disinfection within the distribution system. Within the distribution system this will require the addition of expensive booster chlorination stations. Increasing disinfection at the treatment plant and the addition of booster stations will likely expose the public to dangerous substances, in particular **higher exposures to scientifically proven carcinogenic DBPs.**

Given the lack of any identifiable public health benefit and the certainty of risks, PA DEP is urged to collaborate with water systems to define a minimum required disinfection level that is practical and achievable.

3. Currently, there are on-going national efforts to establish a science-based minimum residual level. **PW welcomes and recommends PA DEP to increase participation in these national efforts to make better data-driven decisions by adopting an interim goal for distribution system disinfection requirements.** This goal was put forth during the second Disinfection Requirements Rule Stakeholder Meeting on March 30, 2016 and proposes the following:
 - a. Defining the minimum detectable level as 0.1 mg/L.
 - b. 95% compliance; when the goal is not achieved in two consecutive months, the water system will be required to submit a mitigation plan to find and fix the problem (similar to RTCR). Failure to implement the plan subjects the water system to fines and further enforcement actions by PA DEP.
 - c. Design a PA information collection program to gather state-wide data and better understand the relationship between disinfectant residual and health effects. By doing so, PA will become a leader in information collection, analysis, and actions taken based on sound science while balancing real costs and benefits.
4. **PW recommends that PA DEP allow water system to continue utilizing heterotrophic plate count (HPC) bacteriological analysis to achieve compliance** for those instances when the measured residual does not meet the required minimum disinfection level. The current proposal removes this provision. HPC analysis, for PW, has proven to be an effective parameter in demonstrating bacteriological activity within distribution system waters. Waters with low disinfectant residual and low bacteriological activity are not unsafe for consumption. **Removing this provision may arguably weaken public health protection.**

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