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Chester Water Authority

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RE: Summary of Testimony Provided by Sharon Fillmann, Chief of Treatment and ~~Planting~~ to the Pennsylvania Department of Environmental Protection's Proposed Disinfection Requirements Rule

Public Hearing, April 5, 2016

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1. Chester Water Authority (CWA) is supportive of the Pennsylvania Department of Environmental Protection's (DEP) efforts to increase public health protection by adopting regulations that are more stringent than Federal regulations.
 - a. when there is a valid, documented public health issue in Pennsylvania that needs to be addressed;
 - b. when there is sufficient accurate, scientific data to support more stringent regulatory changes;
 - c. when cost analyses are accurate and represent actual costs that public water suppliers will incur;
 - d. when accurate, scientific analyses demonstrate that simultaneous compliance evaluations have been performed to assess the complete impact to public water systems; and
 - e. when an accurate cost-benefit analyses has been performed to demonstrate that meeting proposed regulations that are more stringent than Federal regulations will not jeopardize or compromise compliance with current drinking water regulations with known and documented valid health effects.
2. The Proposed Rule does not demonstrate through valid, scientific analysis that there is indeed a public health issue in Pennsylvania that is a direct result from chlorine residuals less than 0.2 mg/L in distribution systems. The Proposed Rule does not demonstrate that a public health issue will be addressed so as to provide increased public health protection by increasing the disinfection residual requirement from 0.02 to 0.2 mg/L. The DEP has used illogical, unreasonable and scientifically undocumented and unsupported data to draw generalizations and conclusions pertaining to the occurrence of a proposed public health issue.
3. The DEP has not used scientifically sound data to assess the ability of chlorine residuals to resolve a public health issue (e.g. *Legionella*) in Pennsylvania.
 - a. Scientific data and presentations shared by industry and research experts during TAC (Small Water System Technical Assistance Center) meetings, Stakeholder meetings, Large Public Water System meetings and the PA AWWA Section Disinfection Residuals Forum, have demonstrated that there is no valid public health issue that a 0.2 mg/L distribution chlorine residual issue will address.
4. The DEP has erroneously applied average monthly chlorine residual data for all Pennsylvania public water systems to conclude that the majority of public water systems already meet the proposed increased distribution residual of 0.2 mg/L in the distribution systems. In so doing, the proposed rulemaking states, "It is anticipated that the large majority of water systems will be able to comply with this requirement with little to no capital costs...Based on more than 82,000 monthly average distribution system disinfectant residual values...95.6% of the average values already meet or exceed the increased minimum residual of 0.2 mg/L...and only 4.4% of the average values are below the minimum residual."

CWA response: The use of the average data to draw the conclusion that the majority of public water systems already meet the proposed 0.2 mg/L is inappropriate, flawed and overestimates the number of systems that already meet this proposed requirement. Through the meetings noted in section 3a above, the DEP was made aware of this overestimation, some water suppliers including CWA provided data to demonstrate the inaccuracy, yet the DEP has not formally requested that water suppliers provide the data needed for the DEP to reevaluate to make an accurate compliance assessment.

5. The DEP has relied on statements from HACH Company, a manufacturer and vendor of chlorine residual analyzers, to determine method detection limits, method limits or practical quantitation limits and to rely on HACH Company to make generalized statements (without supporting data quantification) regarding interferences with chlorine residual analyses.

CWA response: CWA understands that hypothetically there may be some instances where iron and manganese may interfere with chlorine residual analyses and result in false-positive chlorine residual data. However, neither HACH (during the PA AWWA Section Disinfection Forum in Fall 2015) nor the DEP has provided data to support the statement regarding interferences from iron or manganese nor have either HACH or DEP been able to answer the following questions:

- What chemical form or oxidation state must iron or manganese be present in order to create a false positive chlorine residual interference
- What concentration must the iron or manganese (in the appropriate oxidation state) be present to generate a false-positive chlorine residual interference
- What is the magnitude of the false-positive chlorine residual interference, given iron or manganese in the appropriate oxidation state and at the appropriate concentration
- What is the magnitude of the interference if iron or manganese is present in the appropriate oxidation state and at a concentration below the secondary MCLs (0.3 mg/L iron and 0.05 mg/L manganese)

Based on the information and data sharing provided in 3a above, CWA cannot and does not support the DEP's Proposed Disinfection Requirements Rule as published in The Pennsylvania Bulletin on February 20, 2016 due to lack of sufficient scientific data, lack of addressing a public health issue in Pennsylvania, the inability to eradicate or control *Legionella* in premise plumbing by increasing the distribution residuals to 0.2 mg/L, lack of supporting realistic cost-benefit analyses and failure of the DEP to obtain the appropriate residual data from all Pennsylvania Public Water Systems to allow the DEP to accurately assess compliance risks and lack of a scientifically sound study to accurately identify and quantify the potential for simultaneous compliance risks (e.g. chlorine residual vs DBPs) for Pennsylvania Public Water Systems.

CWA, however, does agree that the DEP's existing minimum disinfection residual requirement for distribution systems defined as 0.02 mg/L does not represent a detectable residual that is scientifically and analytically supported. CWA, therefore, proposes that DEP increase the minimum detectable residual from 0.02 mg/L to 0.1 mg/L. A minimum detectable residual of 0.1 mg/L is supported by analytical methodology, researchers and public water suppliers.