

Disinfection Byproduct Compliance for Consecutive Systems in Pennsylvania.

Hardin Yeuell and Yuefeng Xie
Penn State Harrisburg
Middletown, PA 17057

Abstract

An objective of the U.S. EPA's Stage 2 Disinfectants/Disinfection Byproducts Rule is to provide more equitable protection to the public through more consistent regulation of consecutive systems. A consecutive system is a public water system that receives some or all of its finished water from one or more other water systems. This study evaluates current DPB levels within forty-nine (49) consecutive systems in Pennsylvania and their thirty (30) respective wholesalers. For the three and half (3½) years of study data, THM levels for the wholesalers averaged 45 µg/L. The THM average for the consecutive systems was 56 µg/L (a 25% increase).

For THM and HAA MCL compliance calculations, the Stage 2 Rule replaces the running annual average (RAA) method with a locational running annual average (LRAA) method. Nine (9) of the forty-nine consecutive systems (18%) had recent THM LRAA values in excess of the Stage 2 THM MCL (80 µg/L). Two (2) other consecutive systems had a THM LRAA just below the MCL. Because most consecutive systems are small systems (89%), serving less than 10,000 people, only single location is monitored; thus, the RAA and LRAA calculations are identical. Accordingly, the Stage 2 Rule change from an RAA to a LRAA calculation will have minimal affect on Pennsylvania consecutive systems state-wide. This study also indicates that THMs (vs. HAAs) pose a more substantial problem for consecutive systems in Pennsylvania.

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