February 23, 2023

The Honorable Brian J. Feldman
Senate Education, Energy, and the Environment Committee
Miller Senate Building, 2 West
Annapolis, Maryland 21401

Re: Senate Bill 512 – Drinking Water - Legionella Pneumophila Bacterium - Minimizing Growth and Transmission

Dear Chair Feldman and Members of the Committee:

The Maryland Department of the Environment (MDE or Department) has reviewed Senate Bill 512 and would like to share some information. MDE has met with bill sponsor regarding our concerns and working to provide amendments.

SB 512 would require a minimum concentration of at least 0.5 milligrams per liter (mg/l) of chlorine in a drinking water distribution system, require suppliers of water to provide certain notifications relating to planned and unplanned disruptions, and require the Department to compile a best practices guide relating to legionella pneumophila bacteria (legionella). SB 512 would also establish a special fund relating to legionella.

SB 512 is in direct conflict with the Federal Safe Drinking Water Act- Disinfection Byproducts Rule. Federal law establishes maximum residual disinfectant levels ("MRDLs") for chemical disinfectants. The MRDL for chlorine and chloramines (another type of chemical disinfectant) is based on "the running annual average of monthly averages of samples taken in the distribution system, computed quarterly," which must be "less than or equal to the MRDL." The MRDL for chlorine is 4.0 mg/l, although suppliers of water may temporarily increase residual disinfectant levels of chlorine or chloramine "to address specific microbiological contamination problems … such as distribution line breaks, storm runoff events, source water contamination, or cross-connections." Id.; c.f., 40 CFR § 141.65(a). The MRDL reduces the breakdown of chemical disinfectants in the distribution system into disinfection byproducts ("DBPs"), which can cause cancer, nervous system problems, and other negative health effects in very small quantities. The bill prescribes a level of "at least 0.5" mg/l for chlorine disinfection residual. The Department is concerned that a chlorine level of 0.5 mg/l could still cause DBPs to form in the distribution system at higher levels that cause increased violations of the DBP MCLs and endanger public health. This requirement would be especially impactful on the state's largest systems (Baltimore City and WSSC). These large systems already struggle to balance maintaining a detectable chlorine residual in the distribution system while staying in compliance with the maximum DBP levels. The Department recommends a minimum residual chlorine level of 0.2 mg/l in the distribution system to strike an appropriate balance between disinfection and formation of DBPs.

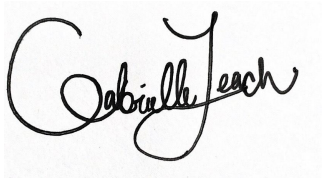
SB 512 also implicitly mandates the use of chlorine as opposed to other, accepted chemical disinfectants and the bill makes repeated reference to chlorine as a required disinfectant in the water supply. However, not all public water systems that disinfect use chlorine. Additionally, nearly 1,000 water systems do not presently disinfect; these systems would be required to install chlorine-based disinfection.The Safe Drinking Water Act recognizes at least three (3) types of appropriate chemical disinfectants, including chlorine, chloramines, and

chlorine dioxide. Various public water systems in the State of Maryland use these approved disinfectants in their water supply. SB 512 would effectively require these public water systems to switch to chlorine disinfection by requiring a residual disinfectant level of chlorine. This switch could be expensive and unnecessary for public water systems that use another form of approved chemical disinfection with no corresponding benefit to public health.

Additionally, the primary issue with legionella is not introduction via an external source into the distribution system, but due favorable conditions in private plumbing systems. Such a treatment in the external distribution system may not prevent the growth of legionella in a private hot water system inside a building.

Thank you for considering the Department's information regarding this legislation. We will continue to monitor SB 512 during the Committee's deliberations, and I am available to answer any questions you may have. Please feel free to contact me at 410-453-3235 or by e-mail at Gabrielle.Leach@maryland.gov.

Sincerely,



Gabrielle Leach
Deputy Director
Legislative and Intergovernmental Affairs

Cc: The Honorable Clarence Lam