AWWA New Jersey
American Water Works Association

American Water Works Association – New Jersey Section

Water Utility Council

Position Paper: PFAS in Residuals and its Potential Impact on Management Alternatives.

February 8, 2023

The American Water Works Association, New Jersey Section (AWWA NJ) has prepared this position paper in response to the New Jersey Clean Water Council's solicitation of public testimony focused on how to address the presence of PFAS in residuals and its potential impact on management alternatives. Residuals are byproducts of drinking water and wastewater treatment processes and are regulated through NJPDES permits. Treating drinking water and wastewater containing PFAS may lead to PFAS in residuals. AWWA NJ is concerned about PFAS in residuals from both water and wastewater treatment processes. Residuals from water treatment processes contain PFAS, especially residuals from processes now being deployed to remove PFAS from drinking water. Disposal of water or wastewater residuals in water supply watersheds or groundwater recharge areas may contaminate water supplies with PFAS. And water utility customers will probably share in the costs for protecting drinking water from PFAS and the disposal of PFAS containing residuals from drinking water processes regardless of the ultimate success of "polluter pays" litigation.

AWWA NJ is made up of more than 1,300 members united in a mission to provide safe drinking water to the people of New Jersey. Our members include most of New Jersey's public and investor-owned water utilities along with engineering and environmental professionals and allied industry businesses.

The AWWA NJ offers the following testimony regarding how best to address PFAS in residuals.

The NJDEP should prioritize the investigation of residuals that are being land applied when further investigating the potential impact of residuals upon ground water and surface water as recommended in Assessing Per- and Polyfluoroalkyl Substance Release from Finished Biosolids (Water Research Foundation Project 5042, 2022).

The NJDEP should not begin collecting data from land appliers and preparers of residuals for land application until enhanced methods for analytical identification and quantification and a better understanding of long-term leaching under field conditions become available as recommended by Water Research Foundation Project 5042. The collecting and reporting of data that has methodological deficiencies may trigger public concerns and inappropriate policy decisions like those AWWA NJ members have experienced prior to the adoption of PFAS maximum contaminant levels for drinking water.

Further work is needed to quantify what influent, effluent and biosolids concentrations are acceptable to ensure no significant risk from leaching, bioaccumulation and off-site migration to sensitive receptors are acceptable before the NJDEP will be able to establish meaningful monitoring requirements in future NJPDES permits. Water Research Foundation Project 5042 can provide the NJDEP with insights into when and how the NJDEP should proceed with its efforts to establish monitoring requirements for residual generators.

Pretreatment and source control are currently the most cost-efficient methods for addressing potential risks from PFAS in biosolids (Water Research Foundation Project 5042). Quarterly or annual PFAS monitoring of biosolids may suffice because the available data suggests that the temporal variability of PFAS in biosolids is small. The characterization of PFAS in biosolids ought to include target short and long-chain PFASs typically analyzed by commercial laboratories and analytical methods to characterize the potential for precursor transformation. Research is in progress into how effectively incineration (Water Research Foundation Project 5111) and pyrolysis (Water Research Foundation Project 5107) of residuals can destroy PFAS molecules and to validate the findings of Project 5042 using a larger sample size (Water Research Foundation Project 5031). Several technologies for the destruction of PFAS in addition to those presented herein are being proposed by vendors.

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