PFAS Position Statement

Introduction

The Mid-Atlantic Biosolids Association (MABA) recommends that regulatory and legislative groups work to contain PFAS releases at their source, through use of the industrial pretreatment program, product bans, and other preventive measures. The US Environmental Protection Agency (EPA) is driving development of PFAS analysis protocols in wastewater and biosolids, using new risk assessment tools to determine the need for regulatory standards and limits for concentrations of two PFAS compounds: PFOA and PFOS. Regulatory and legislative groups should await these protocols and federal guidance before obligating biosolids generators to spend public money.

Additionally, MABA recommends that products manufactured using PFAS chemicals be required to disclose PFAS concentrations.

What we know about PFAS in biosolids

PFAS concentrations in wastewater and biosolids have been going down because of greatly reduced manufacture of PFOA and PFOS in commercial products since 2011, though their use has not been eliminated globally. The cessation of manufacturing of PFOA and PFOS in the U.S. has resulted in significantly declining levels of PFAS in human blood samples, which demonstrates the health improvement potential of eliminating sources of PFAS compounds.

States of Maine, Michigan and California have conducted comprehensive surveys of wastewater systems for potential PFAS contamination of biosolids that have demonstrated relatively low and consistent background concentrations arising from household and watershed sources and relatively few numbers of wastewater facilities significantly impacted by industrial releases of PFAS. Michigan's approach to regulating PFAS compounds with an emphasis on source control has been widely viewed as successful with demonstrated reductions in PFAS concentrations at wastewater treatment facilities (WWTF's) with industrially impacted biosolids.

The "track down" of PFAS at industrial sites, airports and other suspected locations has proved effective at identifying "hot spots" of potential PFAS sources, and subsequent regulatory clean up responses to reduce PFAS releases to public sewers have also been effective.

Federal regulations for PFAS have not yet been released and current regulations vary state to state. The EPA is developing guidance for land application, landfill disposal and incineration of biosolids. The EPA released the first biosolids PFAS testing protocol in January of 2024, Method 1633 which analyzed 40 PFAS compounds.

Many new technologies are being developed to either remove, capture or destroy PFAS. However, additional research is required to fully understand the fate of PFAS across these novel technologies which may not be affordable or practical, at this time, to implement at WWTF's.

Research has shown PFAS in rainwater and background levels of PFAS around the world. In cases of farmland which have had historically non-industrial impacted biosolids applied, the average background levels of PFAS concentrations are similar to land that hasn't had biosolids applied to it.

Exposures to PFAS compounds come from ubiquitous sources in the environment, such as in household dust released from furniture and carpeting, in individual and community water supplies, in biosolids, and in everyday products such as food wrappers and cosmetics. Research is still ongoing to determine the potential for human health effects from biosolids borne PFAS.

What do we know about the EPA's Risk Assessment of PFOA and PFOS in biosolids?

EPA's approach to characterizing the health risk of PFOA and PFOS in biosolids to humans, plants, and animals uses a deterministic model, producing a single risk value for "most or highly-exposed" individuals. Specifically, within the Biosolids Risk Assessment the model uses a farm family with land applied biosolids to evaluate exposure to PFAS across various pathways. This model often represents the worst-case scenario related to health impacts from biosolids and is not representative of typical conditions. It is MABA's stance that a probabilistic approach, producing a range of risk estimates, would be more effective in understanding the risk relative to various populations.

What we recommend to regulatory and legislative groups for addressing PFAS in biosolids

Regulatory and legislative groups should continue efforts to identify sources of PFAS releases to public water sources and to evaluate the risk of releases to publicly owned sewer systems, including airfields, landfills, military, firefighting, manufactures with historical PFAS use, and industrial laundries, drawing on work of officials in other states.

Regulatory and legislative groups should participate in national research projects that seek to explore the fate of PFAS compounds in the environment, as are currently underway at Temple University (Dr. Erica McKenzie) and University of Arizona (Dr. Ian Pepper), and by the Water Research Foundation (P.I. Dr. Drew McAvoy) and by the Association of Clean Water Administrators (Jake Adler), participating in such research as resources allow.

We recommend, too, that regulatory and legislative groups conduct cost-benefit evaluations of all proposed PFAS regulations. The current focus by elected officials and media is apt to skew agency decisions in ways that will have negative consequences related to the fate of biosolids in the circular economy. Limiting biosolids resource recovery can present challenges to farmers, increase greenhouse gas emissions, and result in negative economic impacts to the public.

The "polluter pays" principle that guides many environmental protections should be applied to reducing human and environmental risks from PFAS. This approach relies on the other principle that regulatory decisions be transparent and science based.