

October 5, 2026

U.S. Environmental Protection Agency
EPA Docket Center, Office of Water Docket
Mail Code 28221T
1200 Pennsylvania Avenue NW
Washington, DC 20460

Re: Docket ID No. EPA-HQ-OW-2026-2509

Dear Administrator Zeldin:

The Pennsylvania Department of Environmental Protection (PADEP) appreciates this opportunity to review and comment on the United States Environmental Protection Agency's (EPA) Draft Guidance Memorandum with the subject *Draft Guidance for Reducing Risk from Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonic Acid (PFOS) in Biosolids*, as noticed in the *Federal Register* at 91 FR 41020 on July 6, 2026.

The draft guidance memo provides an accurate account of the current state of biosolids regulation nationally as it relates to PFOA and PFOS. However, PADEP submits that more specificity in the memo, and more evidence-based recommendations, would significantly increase the memo's utility. As currently drafted, the recommendations in the draft guidance are general and provide little in the way of implementable guidance to biosolids generators and land appliers, the states that regulate these activities, or the general public.

Generally, the draft memo lacks specific, implementable guidance on sites that are or are not suitable for land application of biosolids with respect to risks from PFAS. For example, the draft guidance recommends "[a]voiding land application of sewage sludge near fishable waters, lakes or reservoirs that are used as a source of drinking water, or areas that may have higher risks for potential groundwater impacts" but provides no specific guidelines for implementing this recommendation, like what "near" means or what areas may have higher risks for potential groundwater impacts. For instance, does EPA recommend that biosolids land application be avoided within a certain distance of private groundwater wells?

The draft guidance also recommends that children under the age of 5 should not have contact with areas where biosolids are or may be land applied in the future but stops short of providing specifics on the risks that establish the need for such avoidance measures for this population as compared with other potentially sensitive populations, or how the recommendation can be meaningfully implemented.

Further, the guidance does not acknowledge or discuss treatment technologies for PFOA and PFOS in biosolids, other than incineration. As detailed with examples from Pennsylvania towards the end of this letter, there are several promising technologies that have the potential to

lessen or eliminate PFOA and PFOS in biosolids, which could be another way to mitigate the risks from PFOA and PFOS in biosolids.

These general recommendations in the draft memo do not provide meaningful, implementable guidance. Providing general avoidance measures without scientific information and data leaves more questions than answers. Indeed, the broad and vague recommendations lead to more questions and raise further concerns on an important, pervasive, and contentious issue where the states are currently leading the way with little implementable, science-based guidance from EPA.

PADEP appreciates the limitations of the existing draft risk assessment and EPA's interest in doing something more to address the public health and environmental concerns around PFAS in biosolids; however, PADEP advises that guidance like the draft memo from EPA will be of little value without an updated underlying risk assessment based on the latest science and that is broader in focus than the existing draft risk assessment.

With that in mind, PADEP urges EPA to base any guidance or new regulations about PFAS in biosolids on an updated, science-based risk assessment that assesses risks more broadly than the current draft risk assessment.

More specific comments on the draft guidance follow.

- On pages 3 and 4, the draft guidance states that the draft risk assessment (DRA) exhibited a number of serious flaws, the first of which was failing to conduct a national survey to document occurrence of PFOA and PFOS in sewage sludge. While it is true that, in the past, the EPA conducted sewage sludge surveys alongside risk assessments to help contextualize expected risks and inform future actions, the dataset used in the DRA may be more comprehensive than any single survey. For example, the most recent national sewage sludge survey conducted in 2006 collected 84 samples from 74 facilities in 35 states over the course of a seven-month period, while the DRA included 26 studies for PFOA and 28 studies for PFOS that sampled from multiple facilities in multiple states and countries over the course of several years. It may be beneficial for EPA to compile the sampling data from all the studies used in the DRA and determine if it would be statistically comparable to a typical national survey. It is also important to point out that one of the studies in the DRA (Venkatesan and Halden, 2013), as noted on page 12 of the DRA, retroactively tested samples from the 2001 national survey for PFOA and PFOS.
- On pages 5 and 6, the draft guidance appears to endorse Michigan's Department of Environment, Great Lakes, and Energy's (EGLE) strategy developed to reduce PFAS loading from industrial dischargers. EGLE's strategy utilizes a tiered approach for limiting concentrations in sewage sludge for land application, routine monitoring at the wastewater treatment plant, and source reduction through identification of significant PFAS dischargers and subsequent pretreatment initiatives. EGLE was able to accomplish the pretreatment initiative since they are delegated approval authorities for the industrial pretreatment program (IPP). There are several states that do not have approval authority for an IPP, so any guidance from EPA should include recommendations for states without IPP program primacy to encourage implementation of this as a best practice. The

guidance should also discuss how or if EPA intends to implement changes to how IPP is implemented to reduce PFAS discharges to publicly owned treatment works.

- Page 7 includes the following four recommendations on practices for bulk land applicators of biosolids.
 - *“Avoiding land application of sewage sludge near fishable waters, lakes or reservoirs that are used as a source of drinking water, or areas that may have higher risks for potential groundwater impacts.”* 40 CFR 503.14(c) already requires a 10-meter isolation distance from waters of the United States. It is not clear whether the recommendation in the draft guidance is meant to be more restrictive than the current regulation. If EPA is intending for stricter limitations than the setback in the current regulations, EPA should include more specific requirements to be protective of water resources from PFAS in biosolids.
 - *“Avoiding applying sewage sludge in areas where children under the age of 5 have access or may have access in the future. Landowners should also be aware that there are other potential sources of PFAS that could impact or be present on their land.”* Practically, any area where biosolids are land applied in bulk is potentially accessible to people of any age group. The draft guidance lacks specific location types or scenarios where EPA recommends avoiding bulk application. To be implementable, any such recommendation should specify measures that land applicators should implement to restrict access (such as fencing) and more details about what sites these measures should be implemented at. The guidance and supporting information should also indicate the basis for these recommendations. The recommendation also seems to indicate that the landowner should be aware of other potential sources of PFAS on their land. The draft guidance should expand on this and provide more information on those potential sources, as landowners are likely to have little expertise on potential sources of PFAS.
 - *“Conducting land application on farms with lower risk crops for human exposure, like farms growing grain, fiber crops, or corn for ethanol production.”* EPA should expand upon this by providing the basis for the recommendation and include scientific studies and information used to support it.
 - *“Avoiding land application for agricultural practices that have higher risks for human exposures.”* To safeguard human health, EPA should provide examples or guidelines describing scenarios that are considered higher risk for exposure.
- Page 8 includes the following three recommendations on practices for land application by the general public.
 - *“Researching the supplier of the sewage sludge.”* States are at various stages of dealing with PFAS and biosolids. In states where monitoring for PFAS in biosolids has not yet been required, little if any data may be available on PFAS in biosolids

- generated by specific facilities. EPA may want to consider that it may not be useful to point the public to explore data where none may exist.
- “*Avoiding application of sewage sludge in locations where children may have access to the soil, like playgrounds, schools, parks, or around residential homes.*” As noted previously, this recommendation is vague and provides minimal information in terms of quantifiable protection of public health. PADEP recommends that EPA establish quantitative rather than qualitative recommendations for protection of public health. EPA should provide actionable and implementable guidance or requirements that biosolids generators, land applicators, and states that regulate these activities can be used to protect public health, safety, and the environment.
 - “*Avoiding application to garden beds intended for growing higher risk foods most likely to uptake PFOA and PFOS, such as leafy greens and root vegetables, and where egg-laying hens have foraging access.*” This recommendation is vague and provides minimal information in terms of quantifiable protection of public health. PADEP recommends that EPA establish quantitative rather than qualitative recommendations for protection of public health. EPA should provide actionable and implementable guidance or requirements that biosolids generators, land applicators, and states that regulate these activities can be used to protect public health, safety, and the environment.
 - Page 8, under “Source-identification, pollution prevention and monitoring” indicates that the different types of PFAS present in biosolids may provide indication of the likely source of the chemicals to the sewer system. EPA should provide additional guidance or information about this to help identify industrial sources based on PFAS composition.

Regarding the questions EPA posed in the second part of the supplementary information section of the *Federal Register* notice, DEP provides the following feedback.

Are the recommendations for farmers and bulk land applicators of biosolids sufficient to provide clarity? What other information should the agency consider?

- As noted previously, the recommendations for farmers and bulk land applicators are unclear, lack specificity, and/or are redundant with current regulatory requirements. One additional recommendation for farmers and bulk land applicators would be to assess the PFAS impacts of past land application through site evaluation. While costs for such assessments would need to be supported, identification of the existing PFAS content in the soils, groundwater, and local surface waters would help assess impacts of past land application activities.

Are the recommendations related to surface disposal and incineration of sewage sludge sufficient to provide clarity to stakeholders? What other information should the agency consider?

- Yes, the final recommendation for both activities appears to be referring stakeholders to the EPA's most recent *Interim Guidance on the Destruction and Disposal of Perfluoroalkyl and Polyfluoroalkyl Substances and Materials Containing Perfluoroalkyl and Polyfluoroalkyl Substances*. However, DEP urges EPA to provide publicly accessible data on destruction technologies and disposal options, which is crucial for evaluating their efficacy and tradeoffs.

Are the recommendations related to the protection of public health and pollution prevention sufficient to provide clarity to states, Tribes, and utilities about how to reduce concentrations of PFOA and PFOS in sewage sludge and biosolids? What other information should the agency consider?

- Yes, the final recommendation appears to be for states to follow the strategy that EGLE developed, but there should be additional guidance included for states that do not have delegated authority for IPP, as noted previously.

Several states have taken an approach to reducing PFAS concentrations in sewage sludge that is not risk-based but instead focuses on achieving practical reductions of PFOA and PFOS by addressing discharges from industrial facilities through the implementation of source identification and targeted source reduction. The EPA is seeking feedback and data demonstrating whether and how these approaches can reduce concentrations of PFOA and PFOS in biosolids and sewage sludge, and feedback and data on the effectiveness of these reductions in mitigating risks to public health.

- Pennsylvania has not implemented this approach at this time and cannot offer any feedback or data.

The EPA is seeking feedback on practices not included in the draft guidance that can reduce risk when land applying biosolids. Please provide any conditions, controls, monitoring, best management practices, or permitting practices and any examples of implementation from State, Tribal, or local programs.

- Pennsylvania does not currently have feedback on practices not included in the draft guidance that can reduce risk when land applying biosolids. Pennsylvania is currently in the process of updating our general permits for the beneficial use of biosolids and may have future feedback after that process is complete.

The EPA is seeking feedback on practices not included in the draft guidance that can reduce risk when surface disposing or incinerating sewage sludge contaminated with PFOA and PFOS. Please provide any conditions, controls, monitoring, best management practices, or permitting practices and any examples of implementation from State, Tribal, or local programs that the EPA should consider.

- If we broaden thermal destruction of PFOA and PFOS from incineration (excess oxygen) to include gasification (limited oxygen) and pyrolysis (oxygen-free) then Pennsylvania

has several facilities that could potentially provide facility-specific operational information.

- The Morrisville Municipal Authority in Bucks County operated an Ecoremedy Fluid Lift Gasification system as a pilot study through August 2021. The May 2022 WEF conference paper can be purchased at www.accesswater.org/?id=-10082019.
- EarthCare Solutions in Berks County operates a thermal gasification facility with one train dedicated to biosolids cake and another train for poultry litter.
- Ephrata Borough in Lancaster County has a facility that uses Bioforcetech BioDryers followed by a PYREG pyrolysis reactor creating a biochar.
- Derry Township Municipal Authority in Dauphin County is commissioning an Ecoremedy Fluid Lift Gasification system to process their biosolids producing an inert residual byproduct called FLG Sand™ which is suitable for beneficial use applications comparable to construction sand.

What next steps should the EPA take regarding the Draft Risk Assessment, and how would this help provide clarity about potential risks from use and disposal of biosolids and sewage sludge? Should the agency also re-evaluate the underlying framework for the Draft Risk Assessment, and if so, how? What specific data or other information is available that may help inform the agency's potential next steps on the Draft Risk Assessment and other potential future actions related to PFAS in biosolids and sewage sludge?

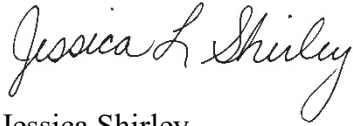
- EPA should address the comments received on the DRA, modify the assessment as appropriate, and publish a final risk Assessment. A final risk assessment, with specific, actionable, data-driven, and implementable approaches should be used to establish regulations and/or guidance that address and manage the risks associated with PFAS in biosolids. Pennsylvania and other states rely on EPA for their technical expertise, research capabilities, federal requirements, and national recommendations to help states protect public health and safety.

Given that risks can depend on land use decisions (e.g., risks are different for growing textile crops than produce), should EPA evaluate policy options that would consider current and future land use practices (e.g., different land use or planted crops after a change in ownership)? What strategies should the EPA consider for protecting public health, future land uses, landowners, and property values?

- Pennsylvania believes that these are important questions that would benefit from further inquiry by EPA and urges a rigorous, scientifically informed approach to further research on this subject.

Thank you for the opportunity to comment on this important draft guidance.

Sincerely,

A handwritten signature in cursive script that reads "Jessica L. Shirley". The signature is written in black ink and is positioned above the printed name and title.

Jessica Shirley
Secretary