

**BLOGS**

Environmental Protection Agency (EPA);Groundwater

# EPA Releases Long Awaited Risk Assessment of PFOA and PFOS in Biosolids

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## Background

On January 14, 2025, the EPA released for public comment a risk assessment report evaluating the potential risks associated with land application and land disposal of biosolids containing two types of PFAS, PFOA and PFOS. Biosolids are generated as a byproduct during the treatment process by wastewater treatment plants. They are commonly applied to land as a nutrient rich source of fertilizer but have come under recent scrutiny because of concerns that PFOA and PFOS in wastewater influent may accumulate in biosolids and permeate into the environment when applied.[1] EPA uses risk assessments to make decisions about whether additional regulatory actions are needed to protect human health.

## Results of Risk Assessment

EPA found human health risks for select groups of specially exposed individuals—those living near or primarily consuming products from land application sites—when the sludge contained above 1 part per billion (ppb) (equivalent to 1000 parts per trillion or ppt) PFOA or PFOS.[2] It also found human health risks from drinking contaminated groundwater sourced near unlined/clay lined surface units (i.e. sewage sludge monofils or lagoon) when the sludge contains 4 to 5 ppb (4000-5000 ppt) of PFOS or 1 ppb (1000 ppt) PFOA. According to EPA, 1 ppb is on the low end of typical US sludge concentrations. The assessment only covers Clean Water Act regulated units, not those covered under other regulatory like programs like RCRA.

The results of assessment are variable based on the assumptions, and here EPA assumed 40 years of application at a rate of 10 dry metric tons per hectare per year (median value selected from agronomic calculation tool and crop application literature), and assumed the sludge disposal units operate for 50 years under varying weather conditions.[3]

## Related People

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## What's Ahead

Comments to the risk assessment are accepted through March 16. EPA is seeking comments on the modeling variables, including the scenarios used, sewage sludge application rates, environmental fate and transport parameters, and human exposure assumptions. It remains to be seen whether the new presidential administration pursues the public comment on the current draft risk assessment.

The release of the draft risk assessment will not necessarily lead to regulation. In the early 2000s, EPA decided not to regulate dioxins in biosolids despite initially proposing numeric standards for land applied sludge following a risk assessment that considered similar exposure pathways considered by the PFAS risk assessment.<sup>[4]</sup> Further, the risk assessment must be finalized prior to proposing any future regulatory numeric standards or practice standards.

Even if no regulations or practice standards materialize, plaintiffs attorneys may attempt to use the EPA's draft risk assessment in the course of litigation. Additionally, EPA is recommending that states and POTWs monitor sludge, identify problematic dischargers, and implement industrial pretreatment programs, while also evaluating risks with their own disposal sites and practices. Several states have instituted their own non-enforceable biosolid programs, including Minnesota and Michigan. Both require action where levels of PFOS in biosolids exceed 20 ug/kg (or 20 ppb).

It also remains to be seen whether the fertilizer exemption under CERCLA is tested in the course of potential cost recovery litigation. PFOA and PFOS are listed hazardous substances under the federal cleanup law, however Section 101(22) of CERCLA exempts "the normal application of fertilizer" from the definition of "release", which may include application of certain biosolids. Releases may also be exempted under the federally permitted release defense depending on the underlying permit conditions.

If you have questions regarding the risk assessment report, please contact the authors of this post or your regular Lathrop GPM attorney.

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[1] See, for example, <https://www.nytimes.com/2024/12/27/climate/epa-pfas-fertilizer-3m-forever-chemicals.html>

[2] U.S. EPA Draft Sewage Sludge Risk Assessment for PFOA and PFOS Fact Sheet (January 2025), *available at* <https://www.epa.gov/biosolids/draft-sewage-sludge-risk-assessment-perfluorooctanoic-acid-pfoa-and-perfluorooctane>

[3] U.S. EPA Draft Sewage Sludge Risk Assessment for PFOA and PFOS (January 2025), *available at* <https://www.epa.gov/biosolids/draft-sewage-sludge-risk-assessment-perfluorooctanoic-acid-pfoa-and-perfluorooctane>

[4] <https://www.epa.gov/biosolids/risk-assessments-round-two-focusing-dioxins-and-pcbs-sewage-sludge>