

BIOSOLIDS

Internal deliberative pre-decisional - FOR USE BY 2024 PRESIDENT-ELECT TRANSITION TEAM MEMBERS ONLY

ISSUE SUMMARY:

Sewage sludge results from the treatment of domestic sewage in a wastewater treatment facility. Sewage sludge can be disposed of via incineration or landfilling (in a municipal waste landfill or surface disposal). Treated sewage sludge or “biosolids” can be applied to land and provide benefits including nutrient addition and improved soil condition. Land application of biosolids can also have economic and waste management benefits, such as conserving landfill space, reducing demand on non-renewable resources like phosphorus, and reducing demand for synthetic fertilizers. However, chemical and microbial pollutants in sewage sludge can pose risks to human health and ecological systems. EPA’s regulations for sewage sludge are published in [40 CFR Part 503](#) (58 FR 9248) and requirements include pollutant limits for 10 chemicals, management practices, operational standards (i.e., technology requirements to reduce pathogens and vectors), and requirements for the frequency of monitoring, recordkeeping, and reporting. All Part 503 requirements apply to publicly and privately owned treatment works that generate or treat domestic sewage sludge and to anyone who uses or disposes of sewage sludge.

Studies in states including Alabama, Maine, Texas, and Michigan have revealed concentrations of perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) in soil, milk, beef, and groundwater at farms that land applied biosolids. This has created concerns for exposures given the high toxicity, persistence, and accumulation of these chemicals in plants and animals and resulted in a lawsuit filed against the EPA for the absence of PFAS regulations for biosolids. The EPA is evaluating exposures that result from applying biosolids to agricultural lands in a risk assessment for PFOA and PFOS and gathering more data on the sources of per- and polyfluoroalkyl substances (PFAS), and their occurrence in wastewater treatment facilities, to determine what actions may be needed to reduce exposures.

KEY POINTS:

- Assessing potential risk of pollutants found in biosolids is the top priority for EPA’s Biosolids Program.
- Since 2004 the EPA has conducted [biennial reviews](#) to identify pollutants found in biosolids and obtain data (e.g., occurrence, fate and transport, toxicity) that can be used in assessing potential risk.
- In addition, the agency has obtained additional data by conducting periodic [national sewage sludge surveys](#) and through collaborations with states and stakeholders. Over 700 chemicals, including several PFAS, have been found in biosolids nationwide. The EPA is planning its next national sewage sludge survey in FY2026, including nationwide monitoring of 40 PFAS in sewage sludge, which will inform risk assessments and potential management options.
- In 2023 the EPA’s Science Advisory Board (SAB) reviewed an updated risk assessment framework that will inform the prioritization and screening of chemicals in the future. The EPA is finalizing the risk assessment framework and will provide a response to the SAB comments in FY2025.
- The EPA is currently developing a risk assessment for PFOA and PFOS in sewage sludge, which is expected to be released for public comment in Fall 2024.

- In a related matter, environmental NGOs filed a complaint in June 2024 asserting that the agency has failed to perform its mandatory duty to regulate PFAS in sewage sludge under CWA Section 405(d).

ONGOING/UPCOMING REVIEWS FOR FY2024:

- **End of 2024:** The EPA intends to release the draft risk assessment for PFOA and PFOS in sewage sludge for public comment. The draft risk assessment will include estimated human health risks due to exposures to drinking water, diet, and incidental soil ingestion and the biosolids program intends to finalize the assessment in summer 2025.
- **January 2025:** The EPA anticipates receiving the results of the POTW questionnaire describing PFAS sources to POTWs, as well as wastewater and sewage sludge management practices, as part of the [POTW Influent PFAS Study and National Sewage Sludge Survey](#).
- **May 2025:** The EPA anticipates releasing Biennial Review No. 10 with updated list of chemicals and their concentrations found in sewage sludge based on a review of scientific literature.

KEY EXTERNAL STAKEHOLDERS:

- ☒ Congress
 ☐ Industry
 ☒ States
 ☐ Tribes
 ☐ Media
 ☐ Other Federal Agency
☒ NGO
 ☐ Local Governments
 ☐ Public
 ☒ Other: Wastewater Treatment Facilities

MOVING FORWARD:

- The Biosolids Program will implement its risk assessment framework for contaminants found in sewage sludge and complete the PFOA/PFOS risk assessment.
- The Biosolids program will perform a national sewage sludge survey for PFAS using method 1633 in collaboration with EAD's POTW influent study.
- The Biosolids program will use the results of the risk assessment and survey results for PFOA/PFOS concentrations to determine if and what type of regulations are needed to reduce exposures.
- OW and ORD are working together to model exposures to chemicals in biosolids and to study soil concentrations and plant uptake at biosolids application sites.
- OW is communicating with the regions, states, and other agencies (USDA, FDA) to address concerns related to PFAS contamination.
- The EPA is consulting with DOJ in response to the lawsuit regarding PFAS contamination in biosolids.