



PFAS & THE SOLID WASTE INDUSTRY

Jesse Maxwell
Advocacy & Safety Senior Manager
jmaxwell@swana.org

About SWANA

- Largest solid waste & recycling association
- Both public and private sector
- 47 Chapters in U.S., Canada, & Caribbean
- U.S. and Canadian member of ISWA



About SWANA

Mission

SWANA is an organization of professionals committed to advancing from solid waste management to resource management through their shared emphasis on education, advocacy, safety, and research.

Chicago offered its residents free fertilizer made from biosolids — but didn't say it contains PFAS

Maine passes first PFAS biosolids ban, taking stand against forever chemicals

Fury over 'forever chemicals' as US states spread toxic sewage sludge

Colorado has been spreading biosolids with "forever chemicals" on farms, records show. How dangerous is it?

PFAS in Sewage Sludge, Industrial Wastewater Targeted for Rules

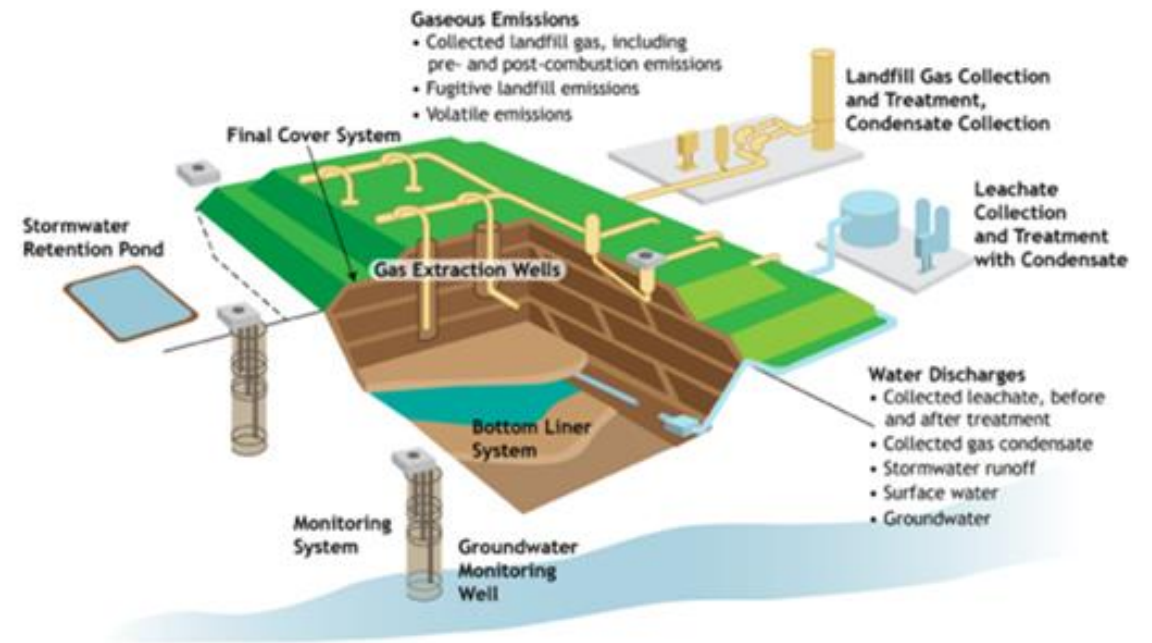
Landfill Impacts

- Products containing PFAS are in solid waste
- PFAS accumulates in landfill leachate
- Leachate collected and often sent off-site for treatment
- PFAS difficult/costly to remove
- Treatment plants may no longer want to manage leachate
- Landfills may no longer want to take biosolids



Factors Affecting PFAS Types & Concentration in Leachate

- Type and amount of waste landfilled
- Age of the landfill
- Sampling locations and years
- Climate
- Industrial discharges



Challenges

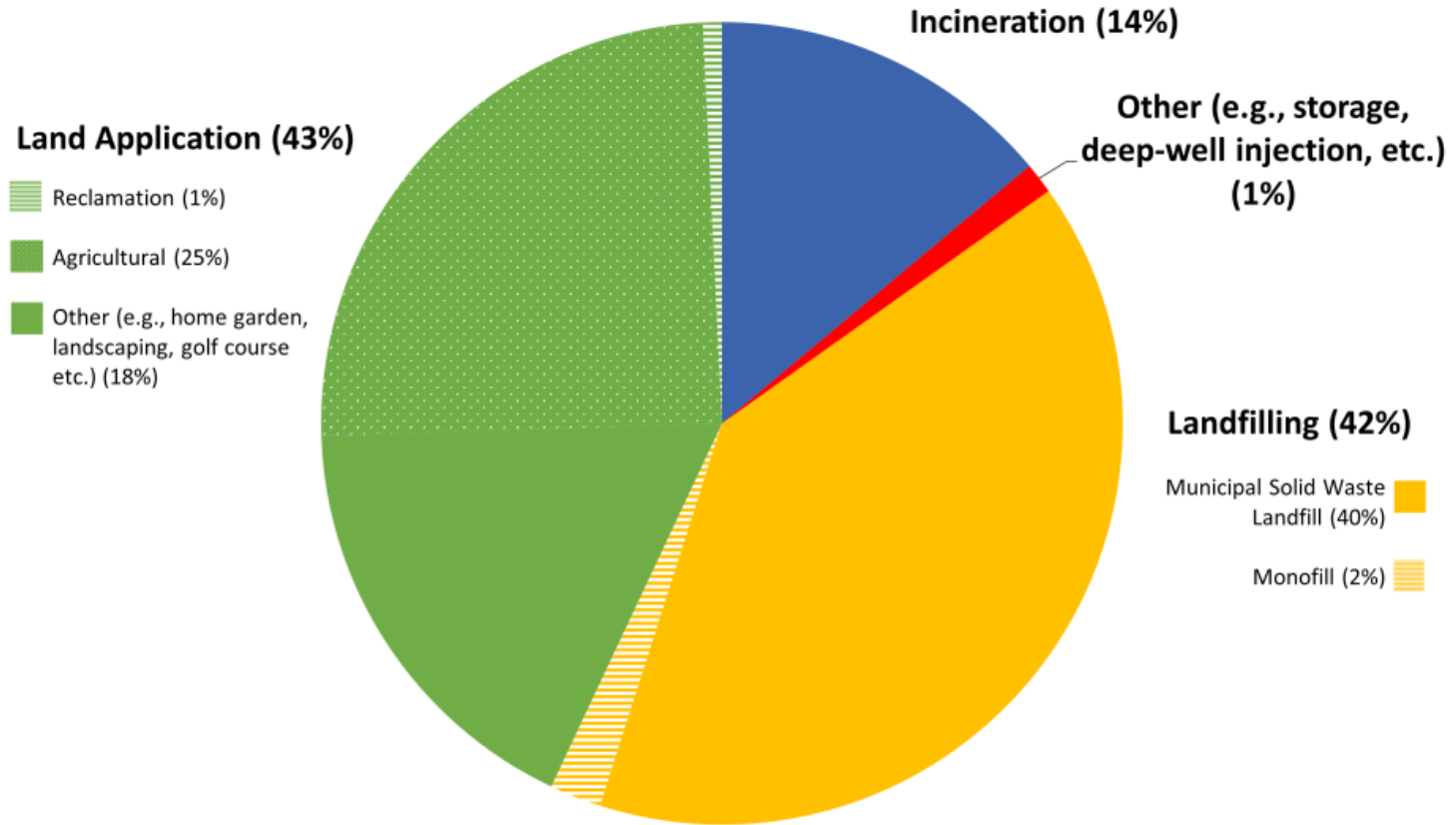
- Leachate usually contains PFAS above advisory level
- Leachate volume is substantial in the United States
 - **16 billion gallons/year**
- A SWANA report identified leachate treatment options
 - Effective but costly
 - Waste costs for business and residents will increase

WWTP & PFAS From Leachate

The most common off-site approach is to export leachate to a wastewater treatment plant (WWTP where) it is mixed with wastewater and treated.

- Over 60% of active landfills discharge PFAS to wastewater (EREF, 2018)
- Contribution relatively minor (Masoner et al., 2020)
- Non-leachate sources contribute greater mass to effluent than leachate

Biosolids Use & Disposal from 2021 Biosolids Annual Program Reports



<https://www.epa.gov/biosolids/basic-information-about-biosolids>

EPA & PFAS



- Interim Guidance on Destruction and Disposal of PFAS-Containing Materials
 - Explores solid waste management as source & solution
- EPA PFAS Strategic Roadmap
 - Restrict & reduce discharge
 - Biosolids risk assessment
 - CERCLA designation

Destruction & Disposal Guidance

**Interim Guidance on the
Destruction and Disposal of
Perfluoroalkyl and Polyfluoroalkyl
Substances and Materials
Containing Perfluoroalkyl and
Polyfluoroalkyl Substances**

*INTERIM GUIDANCE FOR PUBLIC COMMENT
DECEMBER 18, 2020*

- Interim guidance published December 2020
 - Accepted public comment
 - SWANA submitted
- More data expected by end of 2022
- Guidance update in Fall 2023

Destruction & Disposal Guidance

Solid Waste Industry Sources

- Landfill leachate
- Non-consumer waste

Solid Waste Disposal & Destruction

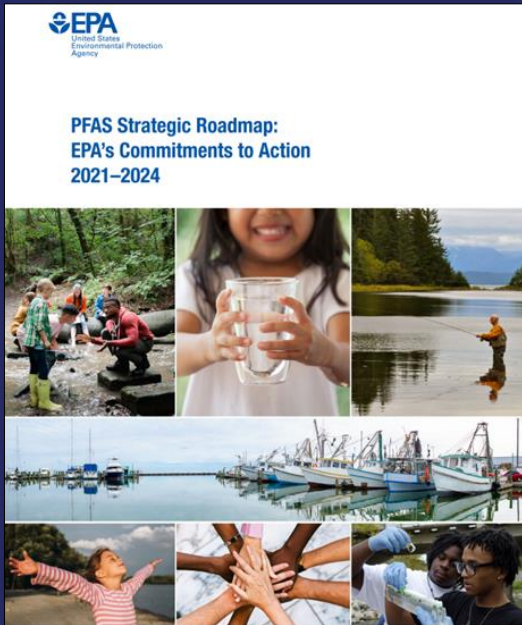
- Landfills
- Municipal waste combustors

Destruction & Disposal Guidance

“To varying degrees, hazardous waste or MSW landfills are **feasible and effective** disposal options for PFAS and PFAS-containing materials.”

“Care must be taken to apply the leachate control technologies that are effective at containing (e.g., solidification or recirculation) or destroying PFAS....”

Strategic Roadmap



- National monitoring for PFAS in drinking water
- Establish drinking water rule for PFOA/PFOS
- Seek public input on CERCLA designation for other PFAS compounds
- Clean Water Act limits on PFAS discharges
- **Perform risk assessment on biosolids**
- **Designate PFOA/PFOS as hazardous substances under CERCLA/Superfund**

Restrict & Reduce Discharge

Effluent Limitation Guidelines (ELG)

- Technology-based regulatory limits
- Landfill study completed by Fall 2022
- Decision about future rulemaking by end of 2022

NPDES Permitting

- Leverage federally-issued NPDES permits to reduce PFAS discharges
- Issue new guidance to state permitting authorities to address PFAS in NPDES permits

Biosolids Risk Assessment

- Assessment of PFOA and PFOS in biosolids
- Concerns about contamination of agricultural fields and livestock
- Will determine if regulation is appropriate
- Expected Winter 2024

EPA Proposed PFOA/PFAS CERCLA Designation

- Required reporting on releases
 - Superfund designation
 - Cost recovery for clean-up
-
- SWANA submitting joint comments on rule proposal with NWRA
 - Public Comments due November 7

RCRA

New Mexico Petition

- Petition by governor for EPA to address PFAS contamination under RCRA
- EPA responded by starting two rulemakings:
 1. Propose adding 4 PFAS chemicals as RCRA Hazardous Constituents
 - PFOA, PFOS, PFBS, and GenX
 2. Clarify RCRA Corrective Action Program Regulations

Advocacy

SWANA member of a “Receivers Group”

- Includes wastewater associations
- Educates Congress and EPA re impacts of regulation

Key Advocacy Points

- Landfills receive discarded materials that contain PFAS – they did not manufacture or use them
- Landfills are recognized as potential ways to control migration of PFAS into environment

Advocacy

- Solid waste industry seeking very limited CERCLA exemption for landfills from Congress
 - Major costs
 - Landfills are a good repository for PFAS materials
- Unwilling to rely on EPA's enforcement discretion; does not protect landfills from financial liability
- Advocacy priority is for Congressional action to protect PFAS receivers

Proposed Exemption

No public water system, municipal wastewater treatment plant, or landfill shall be liable under the CERCLA clean-up costs from the discharge of effluent, the disposal or management of biosolids, the disposal of filtration media resin, or the discharge of leachate.

*Does not apply not to gross negligence or noncompliance with any Federal or State law or permit



QUESTIONS?

Jesse Maxwell
Advocacy & Safety Senior Manager
jmaxwell@swana.org