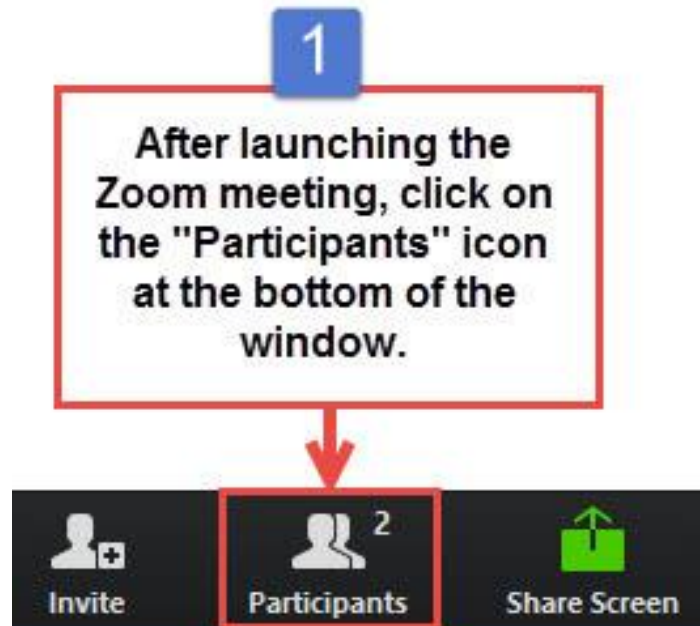


Zoom Meeting Logistics

- If you have translation service needs please indicate what language or accommodation is needed and we will provide services.
- Slides will be posted on MassDEP's website following the presentation and attendees will be notified.
- To minimize background noise, attendees are on mute.
- Please enter your full name and affiliation in the participants panel.
- Please enter questions in the chat.

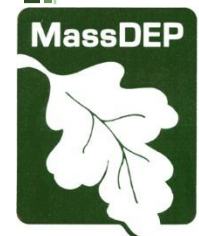


PFAS Testing Study for NPDES POTWS & Sludge Study Part 2

February 5, 2026

1:00-3:00PM

Agenda Item	Speaker	Duration
Opening Remarks	MassDEP	5 minutes
Updates of Projects	MassDEP	30 minutes
Open Discussion		80 minutes
Closing Remarks	MassDEP	5 minutes
	Total	120 minutes



PFAS Testing at all Massachusetts POTWs

Timeline:

January 2025-June 2025

Scope:

- Sample all 114 NPDES POTWs
- Method 1633 for POTW influent, effluent, and sludge
- Total Oxidizable Precursor Assay (TOPA)
- Adsorbable Organic Fluorine (AOF)

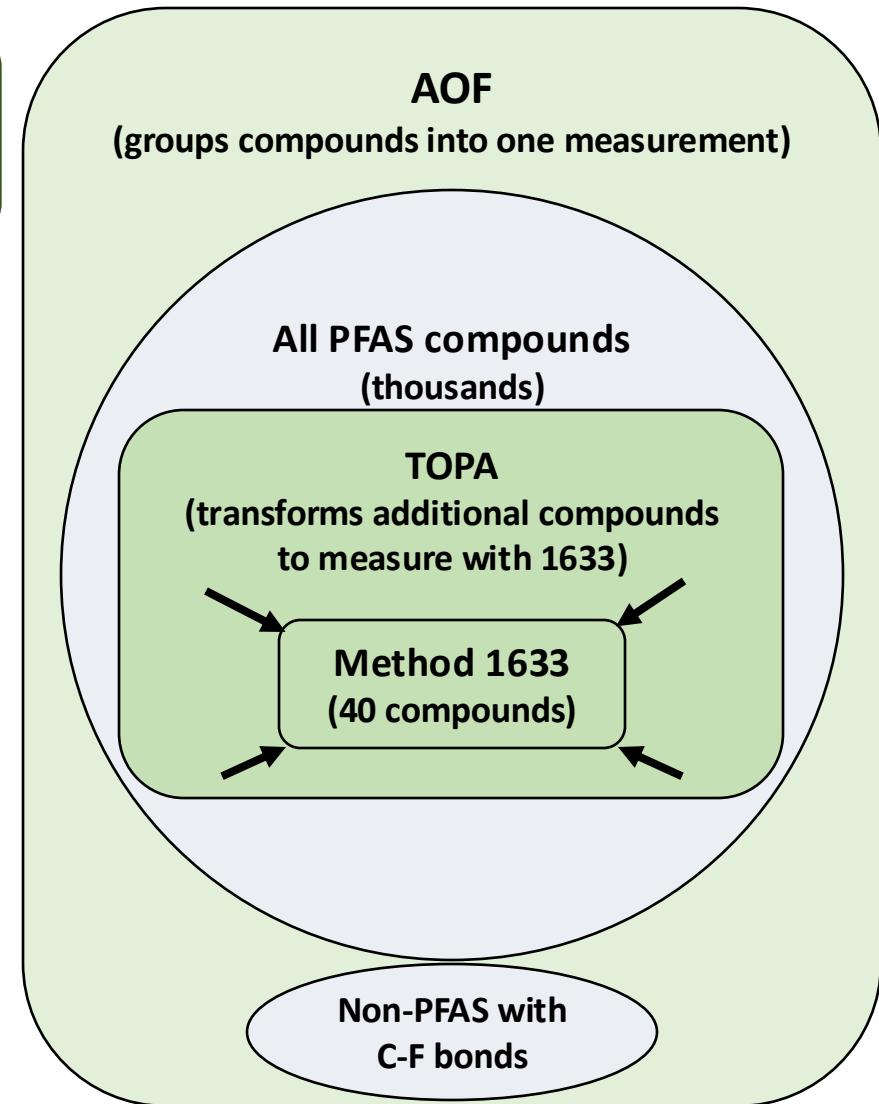
Status:

- Available for review at [Mass.gov/DEP/PFAS](https://www.mass.gov/DEP/PFAS)

PFAS Testing at all Massachusetts POTWs

Test methods chosen to measure specific compounds, approximate all PFAS, and compare to permit data

- **EPA Method 1633:**
Measures 40 PFAS compounds in wastewater matrices.
Required in NPDES permits
- **Total Oxidizable Precursor (TOP) Assay:**
Transforms (oxidizes) some PFAS precursors into PFAS that can be measured via EPA Method 1633.
- **Adsorbable Organic Fluorine (AOF):**
Approximates measuring all PFAS in aggregate by measuring organic fluorine, which is contained within PFAS as well as some other molecules such as pesticides and pharmaceuticals.
Required in NPDES permits.



PFAS Testing at all Massachusetts POTWs

Conclusions

- PFAS is widespread in wastewater and sludge.
- The standard lab method for measuring PFAS misses a large fraction of PFAS in wastewater and sludge.
- Predicting which POTWs receive large industrial PFAS contributions is not straight-forward. Identifying PFAS sources must be done on a facility-by-facility basis.
- The study suggests ways to improve PFAS lab data quality for future analysis.

PFAS Testing at all Massachusetts POTWs

MassDEP response to study

- **Guidance for POTWs and AOS holders**
 - Answers **commonly-asked compliance questions**
 - Discuss **optimal sample size and number** with the lab.
 - **Grab samples** instead of composite samples for NPDES facilities
 - Test **sludge above 2% Total Solids** as a solid whenever possible (ng/g)
 - Report results **down to the detection limit** (J-flag data)

Sludge Study

Part 1

How much sludge is produced in Massachusetts and how is it managed?

Part 2

How options are available for addressing PFAS in sludge and what do they cost?

Sludge Study

Part 1

- Surveyed POTWs and sludge management facilities on volumes of sludge produced and managed
- Documented and quantified “current” capacities of management/disposal options
- Developed 5-year projections of capacities of management/disposal options
- Septage management study

Part 2

- Evaluated PFAS impacts on sludge disposal methods
- Summarized PFAS reduction and management technologies for wastewater and sludge
- Determined contributions of PFAS into POTWs from indirect discharges
- Performed sludge disposal scenario analysis
- Identified options and costs for sludge disposal

Sludge Study - Part 1

Conclusions

- No spare capacity for management of Massachusetts sludge in current facilities and regions used
- Massachusetts production projected to increase by approximately 2.5% from 2023 to 2028
- Projected shortfall of sludge management capacity in the coming years
- Massachusetts highly susceptible to disruption

Sludge Study - Part 2

Conclusions

- Conventional sludge management capacities (incineration, land application, and landfilling) will likely decrease, both within and outside of Massachusetts affecting disposal costs region-wide.
- Options to improve sludge management include expansion of conventional sludge management capacities, additional sludge volume reduction, new PFAS treatment facilities, and source reduction of PFAS before wastewater enters treatment plants.
- Wastewater treatment plant operators, regulators, and legislators can take specific actions related to extending the available sludge disposal capacity, and to promote PFAS reduction and destruction technologies

What has MassDEP done in response to the Sludge Study?

PFAS Reduction/Destruction
Technology Pilot Evaluation for
NPDES POTWs

Bid solicitation released on
COMMBUYS 10/16/2025

Capital Fund award amount
up to \$2.9M

Awarded to AECOM/CDM
Smith 12/23/2025

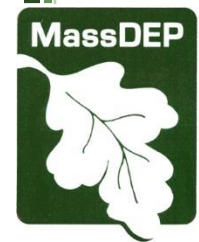
Project completion: 2026



Pilot Project

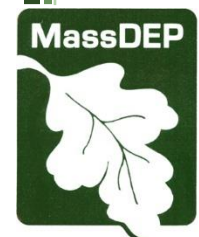
RFQ Components

- Pilot Technologies- PFAS reduction/destruction
- Pilot Locations- Pilot wastewater and/or sludge from MA POTWs with permitted discharge at least 5 MGD or greater
- Pilot Inputs- Representative of process stream where pilot would be implemented at full-scale
- Sampling Locations- Pilot inputs and outputs
- Fluorine Mass-Balance and PFAS characterization

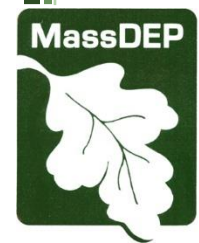


Additional MassDEP Projects

- 310 CMR 32.00 Regulation Revisions
- USGS Phase I and II: Report development
- USGS Phase III: Grab versus Composite Sampling
- NPDES/Residuals PFAS database improvements
 - PFAS data: [EEA Public Portal](#)
- Upcoming Conferences:
 - NEWMOA April 2026
 - MAWEA May 2026



Questions?



Sludge Study - Part 2

Conclusions

- Conventional sludge management capacities (incineration, land application, and landfilling) will likely decrease, both within and outside of Massachusetts affecting disposal costs region-wide.
 - Options to improve sludge management include expansion of conventional sludge management capacities, additional sludge volume reduction, new PFAS treatment facilities, and source reduction of PFAS before wastewater enters treatment plants.
 - Wastewater treatment plant operators, regulators, and legislators can take specific actions related to extending the available sludge disposal capacity, and to promote PFAS reduction and destruction technologies

	What?	Why was it included in the study?
Method 1633	Lab method measuring 40 different PFAS in non-drinking water matrices included as a NPDES permit requirement	Analysis of results based on the study testing with consistent sampling and laboratory against permit gathered data.
TOPa	Lab method that converts unknown, non-target PFAS precursors in water, soil, and tissue samples into measurable, stable compounds. Not a NPDES permit requirement.	Analysis of precursors that are not measured using Method 1633.
AOF	Lab method that is generally used as a screening tool measuring PFAS and other organofluorine contaminants (such as pesticides and pharmaceuticals) and is included as a NPDES permit requirement.	Analysis of results against Method 1633 data to understand uses of AOF permit data.

