



Presentation to

Wastewater Advisory Committee

Staying on TRAC

*Trends and challenges in MWRA's Toxic Reduction &
Control program*

Matthew Dam, TRAC Director

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Challenges- Staffing

- 47 TRAC positions
- 11 TRAC positions became vacant FY21/FY22
- 14 positions were backfilled in FY22
- Challenges of multiple vacancies
- Strong internal candidates for promotions
- Fewer qualified candidates for some entry level positions
- 3 vacant Sampling Associate positions have posted and reposted

TRAC is covering all work



PFAS challenges

- Developing/ changing regulations and requirements
 - CIRCLA
 - Drinking Water
 - **NPDES**
- Developing technology
 - EPA wastewater draft method 1633



EPA Clinton NPDES permit PFAS industrial requirements

3. Beginning the first full calendar year after the effective date of the authorization to discharge under the General Permit, the Permittee shall commence annual sampling of the following types of industrial discharges into the POTW:
 - Commercial Car Washes
 - Platers/Metal Finishers
 - Paper and Packaging Manufacturers
 - Tanneries and Leather/Fabric/Carpet Treaters
 - Manufacturers of Parts with Polytetrafluoroethylene (PTFE) or teflon type coatings (i.e. bearings)
 - Landfill Leachate
 - Centralized Waste Treaters
 - Known or Suspected PFAS Contaminated Sites
 - Fire Fighting Training Facilities
 - Airports
 - Any Other Known or Expected Sources of PFAS

Until there is an analytical method approved in 40 CFR Part 136 for PFAS, monitoring shall be conducted using Draft Method 1633. Sampling shall be for the PFAS analytes required to be tested in Method 1633, as shown in Attachment H.



40 PFAS analytes listed in Attachment H

Attachment H: PFAS Analyte List

Target Analyte Name	Abbreviation	CAS Number
Perfluoroalkyl carboxylic acids		
Perfluorobutanoic acid	PFBA	375-22-4
Perfluoropentanoic acid	PFPeA	2706-90-3
Perfluorohexanoic acid	PFHxA	307-24-4
Perfluorohexanoic acid	PFHpA	375-85-9
Perfluorooctanoic acid	PFOA	335-67-1
Perfluorononanoic acid	PFNA	375-95-1
Perfluorodecanoic acid	PFDA	335-76-2
Perfluoroundecanoic acid	PFUnA	2058-94-8
Perfluorododecanoic acid	PFDoA	307-55-1
Perfluorotridecanoic acid	PFTriDA	72629-94-8
Perfluorotetradecanoic acid	PFTeDA	376-06-7
Perfluoroalkyl sulfonic acids		
Acid Form		
Perfluorobutanesulfonic acid	PFBS	375-73-5
Perfluoropentanesulfonic acid	PFPeS	2706-91-4
Perfluorohexanesulfonic acid	PFHxS	355-46-4
Perfluorohexanesulfonic acid	PFHpS	375-92-8
Perfluorooctanesulfonic acid	PFOS	1763-23-1
Perfluorononanesulfonic acid	PFNS	68259-12-1
Perfluorodecane sulfonic acid	PFDS	335-77-3
Perfluorododecane sulfonic acid	PFDoS	79780-39-5
Fluorotelomer sulfonic acids		
1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	4:2FTS	757124-72-4
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	6:2FTS	27619-97-2
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	8:2FTS	39108-34-4

Perfluorooctane sulfonamides		
Perfluorooctanesulfonamide	PFOSA	754-91-6
N-methyl perfluorooctanesulfonamide	NMeFOSA	31506-32-8
N-ethyl perfluorooctanesulfonamide	NEFOSA	4151-50-2
Perfluorooctane sulfonamidoacetic acids		
N-methyl perfluorooctanesulfonamidoacetic acid	NMeFOSAA	2355-31-9
N-ethyl perfluorooctanesulfonamidoacetic acid	NEFOSAA	2991-50-6
Perfluorooctane sulfonamide ethanols		
N-methyl perfluorooctanesulfonamidoethanol	NMeFOSE	24448-09-7
N-ethyl perfluorooctanesulfonamidoethanol	NEFOSE	1691-99-2
Per- and Polyfluoroether carboxylic acids		
Hexafluoropropylene oxide dimer acid	HFPO-DA	13252-13-6
4,8-Dioxa-3H-perfluorononanoic acid	ADONA	919005-14-4
Perfluoro-3-methoxypropanoic acid	PFMPA	377-73-1
Perfluoro-4-methoxybutanoic acid	PFMBA	863090-89-5
Nonafluoro-3,6-dioxoheptanoic acid	NFDHA	151772-58-6

Target Analyte Name	Abbreviation	CAS Number
Ether sulfonic acids		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	9Cl-PF3ONS	756426-58-1
11-Chloroicosadecafluoro-3-oxaundecane-1-sulfonic acid	11Cl-PF3OUdS	763051-92-9
Perfluoro(2-ethoxyethane)sulfonic acid	PFEESA	113507-82-7
Fluorotelomer carboxylic acids		
3-Perfluoropropyl propanoic acid	3:3FTCA	356-02-5
2H,2H,3H,3H-Perfluorooctanoic acid	5:3FTCA	914637-49-3
3-Perfluoroheptyl propanoic acid	7:3FTCA	812-70-4



Mass DEP NPDES permit PFAS industrial requirements

5. The permittee shall commence annual monitoring of all Significant Industrial Users^{1,2} discharging into the POTW consistent with the 2022 Federal NPDES General Permit. Monitoring shall be in accordance with the table below. Notwithstanding any other provision of the 2022 Federal NPDES General Permit to the contrary, monitoring results shall be reported to MassDEP electronically at massdep.npdes@mass.gov, or as otherwise specified, within 30 days after they are received.

Parameter	Units	Measurement Frequency	Sample Type
Perfluorohexanesulfonic acid (PFHxS)	ng/L	Annual	24-hour Composite
Perfluoroheptanoic acid (PFHpA)	ng/L	Annual	24-hour Composite
Perfluorononanoic acid (PFNA)	ng/L	Annual	24-hour Composite
Perfluorooctanesulfonic acid (PFOS)	ng/L	Annual	24-hour Composite
Perfluorooctanoic acid (PFOA)	ng/L	Annual	24-hour Composite
Perfluorodecanoic acid (PFDA)	ng/L	Annual	24-hour Composite



PFAS challenges

- Developing method 1633 in-house
- Contracting method 1633
- Industrial Survey
- Considerations while planning to collect PFAS samples
- Special Equipment for composite sampling
- Will the Deer Island NPDES permit look the same?



Review of FY22

Inspections and Permitting

- TRAC inspected all 184 SIUs
- TRAC issued 350 Industrial permits
- TRAC completed 1,436 inspections of industrial facilities
- 554 inspections of oil/water separators at vehicle maintenance facilities and other garages
- 119 inspections of septage haulers and septage receiving sites.

Monitoring

- TRAC collected all required SIU monitoring of 159 SIUs.
- TRAC staff completed 1,452 sampling events at industrial/commercial facilities
- TRAC staff completed 1,472 non-industrial sampling events to support WW Ops

Enforcement

- TRAC issued a total of 224 Notices of Violations to industrial and commercial facilities
- 14 higher-level enforcement actions (13 Notices of Noncompliance, and 1 Penalty Assessment Notice)

TRAC FY22 Annual Report- <https://www.mwra.com/annual/tracindustrialwastereport/iwr-2022.pdf>



Any Questions?

