Minutes

Feb. 7, 2025

Remote

Attendees:

WAC Members: **Kannan Vembu** (Chair), **Dan Winograd** (Vice Chair)**, Adriana Cillo** (BWSC)**, Craig Allen,** Wayne Chouinard (Belmont), George Atallah, **Dr. Karen Lachmayr, Martin Pillsbury** (MAPC), **Stephen Greene**, **Taber Keally** (NepRWA), **Alfredo Vargas** (Newton), **Jim Ferrara**, **Christine Bennett (**Advisory Board). **(**Members in attendance in **bold**).

Guests: Rebecca Weidman, Matthew Dam, Dave Duest, Devon Winkler, Steve Cullen, Tom Durkin, Denise Ellis-Hibbett (MWRA), Moussa Siri, Paul Lauenstein, Paul Rybiki (WSCAC), Hampton Watkins (Plymouth WWGWDCAC), Susy King, Gary Broberg (MassDEP), Juliet Simpson (OMSAP), Lucas Spagnuolo, Immaculate Mchome (Senate offices), Charlie Jewell, Adam Horst (BWSC), Zhang, Tian (Northeastern), Mia Catalini (PAI), Stacy Pala, Tom Gubrenson (Battelle), Helen Gordon (Apex Co., Environmental Partners), Richard Raiche (Somerville, Advisory Board), David White, Eugene Benson (Save the Alewife), Wendy Robinson (Cambridge), Kim Broberg

Staff: Andreae Downs

Advisory Board—Christine Bennett:

- 2024 Retail Rate survey has been published. See it here.
- AB held an Operations Committee meeting in January. Presentations
    - 8M permitting, related to geothermal well drilling.
    - Constraints in the wastewater system, as more developments request to join—and why communities need to let developers know
    - Wastewater metering update
- Budget season has started. Feb. 13 hearing and presentations
- All AB links here

WSCAC Update—Moussa Siri:

MA in drought, on and off since the summer.

Lynnfield wants an increase in water supply of less than 1mgd, which has stimulated much discussion. Some public supplies now facing PFAS contamination and may want to join MWRA

Next WSCAC meeting is on water supply and conservation efforts over the years.

Joint meeting in March. April is a tour of the Quinapoxet Dam removal, and WAC members are invited to join. Contact Andreae or Moussa (info@wscac.org) if you want to come, so lunch numbers are accurate. WSCAC subcommittees are also meeting in February.

Chair—Only update is questions about WAC's and MWRA's work given the change in federal administration & regulators.

DIRECTOR'S REPORT—Andreae Downs: Wendy Leo, WAC's MWRA liaison, retired Jan. 31, and as of Feb. 7, MWRA has not appointed a new liaison (David Wu, also of NQUAL, was appointed Feb. 10).

The final CSO report was posted in January on the MWRA website

OMSAP meeting was this week—details in the written report. The Outfall Monitoring Science Advisory Panel was established in the 2000 Deer Island NPDES (national pollutant discharge elimination system) permit, but is not in the draft Deer Island permit. Part of the discussion was about how to replace OMSAP if it is not added back to the permit, and MassBays has stepped up to administer (the big expense for this volunteer committee is administrative). The outfall monitoring report showed no impact on water quality of the Mass Bay from the outfall. An exceedance of nitrogen was expected by 2020, but the amount could be vastly increased without creating eutrophication or other issues.

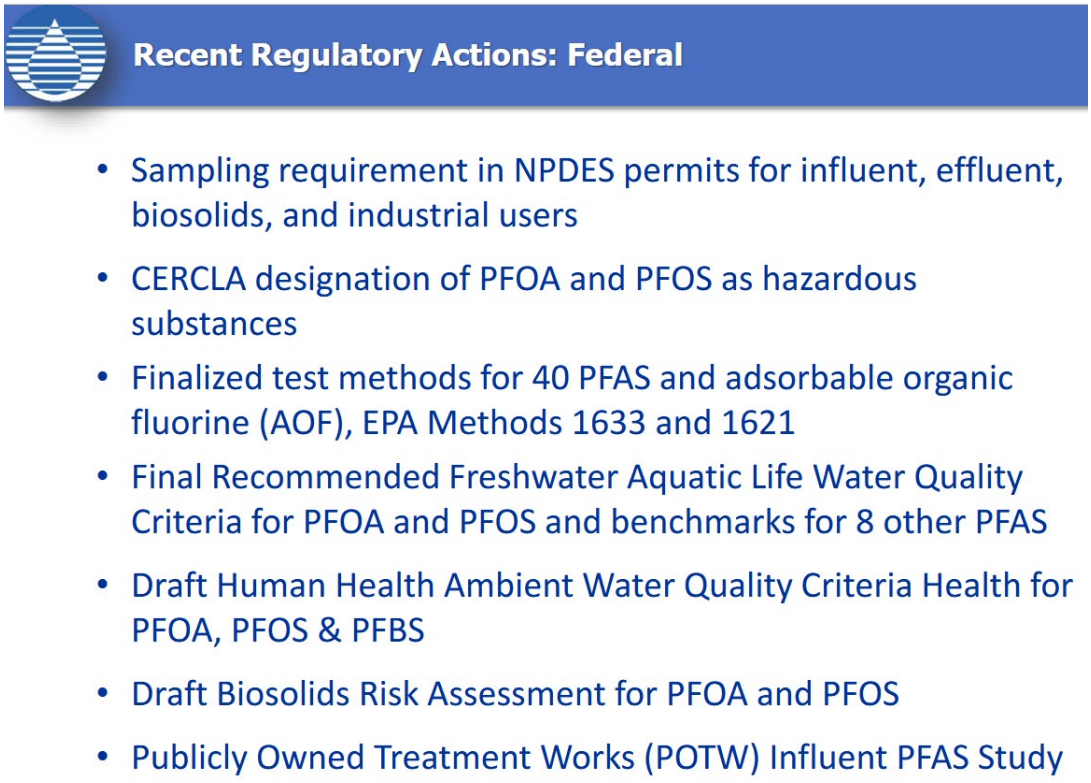
Andreae reminded WAC members to complete their semi-annual and annual ethics training requirements.

PRESENTATION—Rebecca Weidman, COO, and Matthew Dam, TRAC Director

PFAS are used in thousands of products, and there are thousands of PFAS. There is no process in wastewater treatment to remove or add PFAS, plants are passive receivers.

About 3% of MWRA Deer Island flow comes from industrial users which are regulated through TRAC (Toxics Reduction and Control). The plant produces about 32,000 tons of biosolids, which are mostly land-applied.

Regulatory update—quickly: (MA is waiting to see what may change with the new administration, but change will be unlikely until there's a new EPA Regional Administrator)



Wastewater utilities are concerned about the CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) designation, because it could mean that utilities could be held liable for cleaning up PFAS contamination. Legislation proposed to exempt water utilities.

The recommended freshwater aquatic life water quality criteria are important because they could be the basis for setting new limits on freshwater discharges, which could be added to the NPDES permit for the Clinton plant.

The PFAS influent study was announced in May, but there's been no action on that.

At the state level, DEP is starting to study influent and residuals at WWTPs and should be visiting Clinton this month. MWRA already tests for PFAS there because it's in the new permit.

PFAS legislation proposed on Beacon Hill would ban biosolids land application in MA.

As more states ban land application, MWRA will have to reassess how to handle residuals, at a time when both incineration and landfilling are less available.

MassDEP Study

PFAS and Residuals Technology and Management Study

Goal: Establish the current landscape for managing wastewater sludge (POTWs) in Massachusetts.

Part 1: Current and near-term destinations of MA sludge (completed)

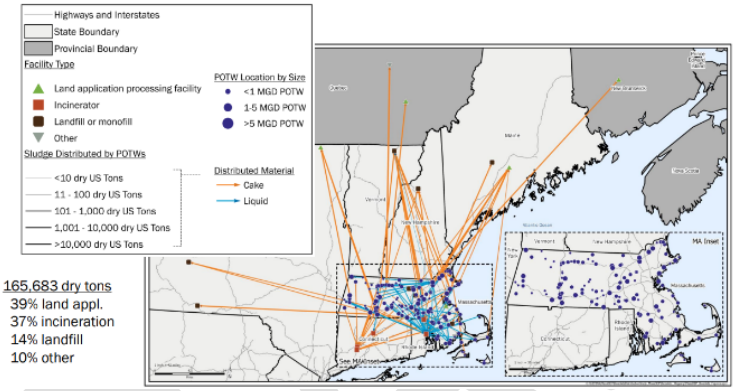
Key findings:

2023 Conditions

- Landfills: Decreasing capacity for sludge acceptance over next 10 years
- Land Application: Northeast processing facilities essentially at capacity
- Incineration: Northeast incineration facilities aging and essentially at capacity

2028 Conditions

- At least ~12,000 dry US tons projected to have no clear outlet (given current management options)



PFAS is in products people use daily and deposit or excrete in wastewater daily. Best way to reduce PFAS in the effluent is to stop producing PFAS. There is no known treatment to remove and destroy PFAS in an operation the size of Deer Island yet, and the likelihood is that when one does become available, it will be expensive, and possibly also an energy hog.

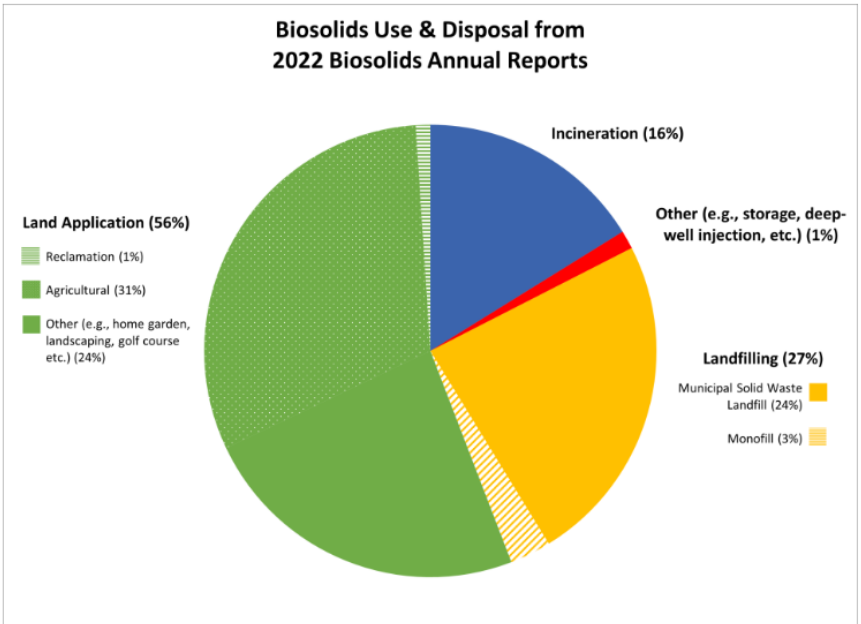
Biosolids risk assessment put out by EPA is out for comment until March 17. If land application is not available, there is little space in landfills or incinerators. Urge you to look at and comment

(Member consensus—yes, draft comments for WAC to approve)

Draft Sewage Sludge Risk Assessment for PFOA and PFOS – Jan. 14, 2025

(https://www.epa.gov/biosolids/draft-sewage-sludge-risk-assessment-perfluorooctanoic-acid-pfoa-and-perfluorooctane)

- 60 day public comment period ends March 17, 2025



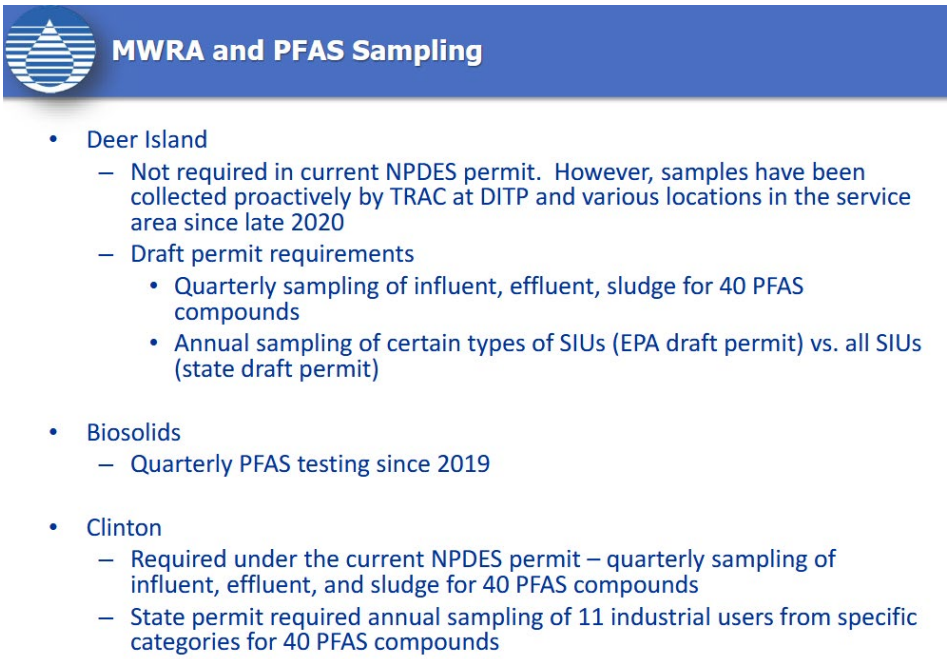
MWRA is now sampling for PFAS in influent, effluent and biosolids per EPA requirements in other NPDES permits.

PFAS: Effluent Limits and Sampling Methods

- Currently no federal or state effluent limits
- EPA withdrew proposed Effluent Limit Guidelines and standards for certain PFAS manufacturers, under the organic chemicals, plastics and synthetic fibers
- Sampling requirement being added to POTW NPDES permits for influent, effluent, biosolids, and industrial users
- Analytical Methods:
  - 1633: PFAS Analytical Method
    - 40 PFAS Analytes
    - Media: Groundwater, surface water, wastewater, landfill leachate, soils, sediments, biosolids, and biological tissue
  - 1621: Absorbable Organic Flourine in Aqueous Matrices
    - Measures organofluorine compounds from PFAS and non-PFAS fluorinated compounds such as pesticides and pharmaceuticals

MWRA is already also sampling some Significant Industrial Users (SIUs), but under the draft permit will have to sample users that are not currently permitted by TRAC, such as carwashes, which may have PFAS in their discharge. This will be a challenge for the TRAC program.

MWRA will has to use a method (1621) that detects compounds that include fluorine—not all of which are PFAS.



Testing results at Deer Island—still uncertainty on what's going on, but TRAC has been testing quarterly in anticipation of future limits

First line—influent—all the wastewater that enters the plant since 2020

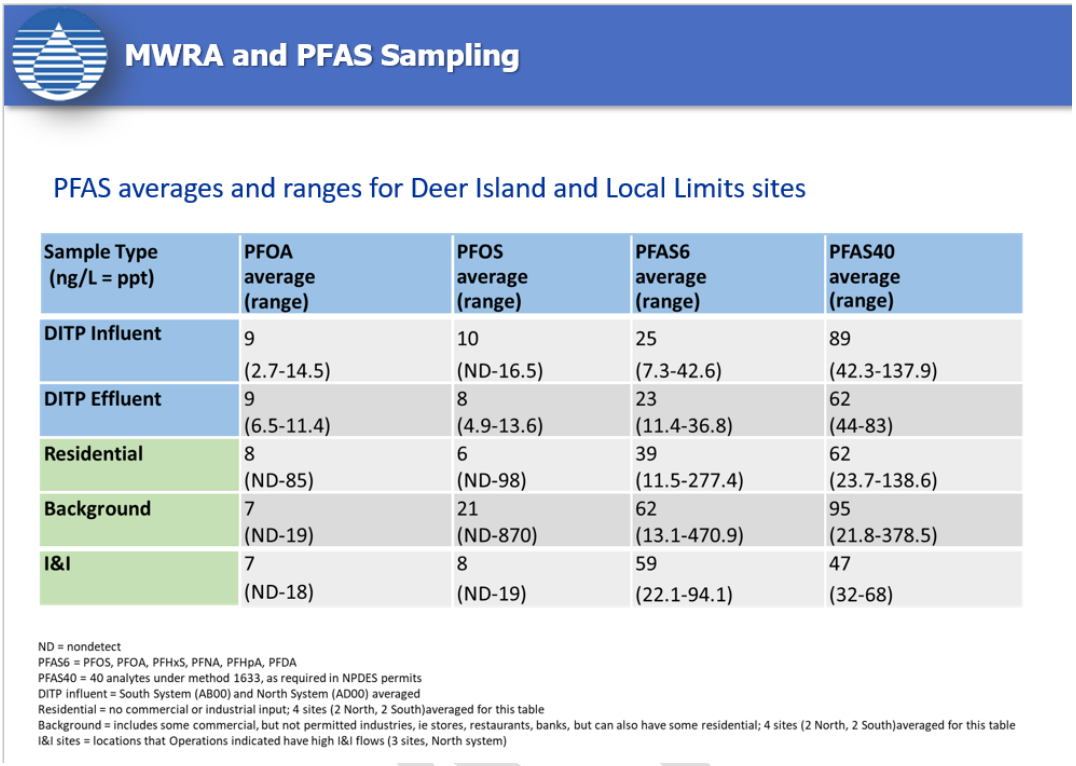
Second line—effluent—all the water leaving the plant after treatment

Third line—ONLY residential sources, from within the system

Fourth line—background—locations throughout the collection system with residential as well as non-regulated sources, such as office space that we don't write a permit for

Bottom line—I/I—these locations have higher I/I than other locations.

All of this is ppt. Average loading outside of industrial sources for the PFAS 40 is on average 89 ppt



MWRA and PFAS Sampling

PFAS averages and ranges for Deer Island and Local Limits sites

Sample Type (ng/L = ppt)	PFOA average (range)	PFOS average (range)	PFAS6 average (range)	PFAS40 average (range)
DITP Influent	9 (2.7-14.5)	10 (ND-16.5)	25 (7.3-42.6)	89 (42.3-137.9)
DITP Effluent	9 (6.5-11.4)	8 (4.9-13.6)	23 (11.4-36.8)	62 (44-83)
Residential	8 (ND-85)	6 (ND-98)	39 (11.5-277.4)	62 (23.7-138.6)
Background	7 (ND-19)	21 (ND-870)	62 (13.1-470.9)	95 (21.8-378.5)
I&I	7 (ND-18)	8 (ND-19)	59 (22.1-94.1)	47 (32-68)

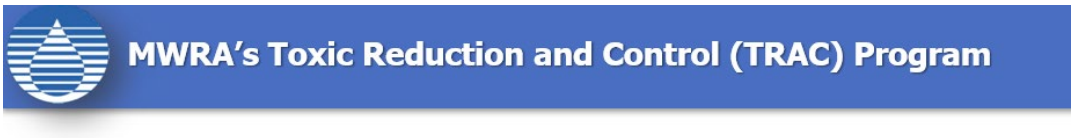
ND = nondetect
PFAS6 = PFOS, PFOA, PFHxS, PFNA, PFHpA, PFDA
PFAS40 = 40 analytes under method 1633, as required in NPDES permits
DITP influent = South System (AB00) and North System (AD00) averaged
Residential = no commercial or industrial input; 4 sites (2 North, 2 South)averaged for this table
Background = includes some commercial, but not permitted industries, ie stores, restaurants, banks, but can also have some residential; 4 sites (2 North, 2 South)averaged for this table
I&I sites = locations that Operations indicated have high I&I flows (3 sites, North system)

Where is the PFAS coming from? – MWRA is going to conduct a local limit study and this is all part of that. Just looking at this, with such consistent numbers—our industrial sources don't appear to be contributing much. So this is residential background. This is why source control is so important. PFAS is being added by all of us.

MWRA is sampling two SIUs in the Clinton sewer shed now, per the permit, and will start measuring 170 in the Deer Island sewer area.

Reminder that a part per trillion is one drop in 20 Olympic-sized swimming pools.

Reminder of what the TRAC program does:



Next steps for PFAS sampling:

- Industrial Surveys to identify all industries on EPA list to sample (on going)—including about 15 additional sites that need to be inspected.
- Review all Local Limits for DITP Service Area and seek guidance on developing a Local Limit for PFAS (Contract to review Local Limits in place)
- Educational Outreach to Households (on-going)
- Website - PFAS pages to educate public (on-going)—collecting information that we can share with the public

Main takeaway: the MWRA is not a source of PFAS; they come from our usage.

The TRAC report (to EPA) comes out annually in October, and is posted on the MWRA website. This year is the first where all reports are electronic.

Questions:

Does DEP PFAS sampling program apply to private wells? (This one is just for wastewater).

DEP—there was an opportunity for private well sampling.

Are there PFAS sampling data for biosolids? Not a slide that MWRA included, but have some data for Deer Island.

Flow & volume for residential, background and I/I? Sample 5 background sites, residential sites as small as 5-10 homes. Hard to find a residential-only site in larger cities. Tough to estimate the flow.

Where are the school materials for PFAS? Still in development.

Are there any labels that identify whether a product contains PFAS? It's hard to find, and not always clear. The OTA is working on identifying what's in various compounds. It's not readily available for consumers; it's more the kinds of products that usually contain PFAS, like oil-resistant paper, water resistant fabrics.

Do CSOs discharge PFAS and are they in local limits?

CSOs are not considered for local limits.

When PFAS are incinerated, does that result in more PFAS in the air & deposited on land?

A: all disposal methods that we would use for residuals do not destroy PFAS, they just move them around. There is work being done to create air standards for PFAS.

If you break the fluorine-carbon bond in a PFAS compound, are the resulting products toxic?

Zhenyu Tian (Northeastern): There are methods to destroy PFAS but the costs are still high. It would be difficult to apply to wastewater treatment plants at the volumes Deer Island sees.

Kannan Vembu: with any incineration, air pollution control is essential—one reason that PFAS incinerators haven't gotten off the ground is that the cost of removing PFAS from the emissions is so high.

In the measured effluent at the concentrations found, how much PFAS is being discharged daily from Deer Island on average?

Have no number now—would have to look at discharge each day. (DEP's Gary Broberg estimated that with 800gallons of flow, a half-gallon of PFAS would be in the effluent)

There is work being done on how PFAS transform in the wastewater treatment process, but no results that MWRA knows of now. A plant the size of Deer Island with thousands of sources will have a tough time removing or destroying PFAS.

Will there be any PFAS regulation under Trump's EPA?

Andreae: Perhaps not, but the work of building policy and collecting data should go on. We know PFAS is harmful to human health, and is ubiquitous.

Next Meeting:

Friday, March 28, 10:30 am - noon; Joint meeting with WSCAC on CEB and CIP Budgets, with Tom Durkin, MWRA

Following Friday will be a discussion of the legal implications of the draft permit for Deer Island.

Andreae encouraged members to go on the April Quinapoxet dam removal tour.