



# Northern Intermediate High Redundancy



- Northern Intermediate High (NIH) includes the Towns of Reading, Stoneham, Wakefield, Wilmington, and Winchester, and the City of Woburn.
- 6 Construction Contracts
- 36,000 Linear Feet of New Water Main – 12 to 48 inch diameter
- Construction Time: 11 years



# Northern Intermediate High Redundancy









*Presentation to*

**MWRA Board of Directors**

***Public Engagement and Involvement for the  
Updated CSO Control Plan***

October 22, 2025



# Engagement Process Goals

- Provide up-to-date information to facilitate involvement and feedback
- Invite active participation from all stakeholders
  - Public Meetings
  - Watershed Group Meetings
- Conduct expansive outreach, including to Environmental Justice populations
- Commit to being receptive and responsive to public comment and suggestions





# Joint Project Website

The Partners created a public resource for everything associated with the Updated CSO Plan

- Running timeline of all meetings and events
- Presentation slides, recordings, and supporting materials for all public meetings
- Translated flyers for upcoming meetings
- Stakeholders can subscribe to emails on the Updated CSO Plan
- <https://voice.somervillema.gov/joint-cso-planning>



CITY OF CAMBRIDGE



MASSACHUSETTS WATER RESOURCES AUTHORITY



CITY OF SOMERVILLE

[Home](#) / Combined Sewer Overflow Control Planning Program - Joint efforts by Cambridge, MWRA, and Somerville

**Combined Sewer Overflow Control Planning Program – Joint efforts  
by Cambridge, MWRA, and Somerville**

#### Stay Informed

 Subscribe to receive emails about this project



# Public Meetings

- Hosted 5 public meetings to share information on plan development and obtain timely public input
  - Meetings were 2-3 hours and staff answered over 450 questions in real time
- Held a listening session for stakeholders to share priorities and concerns
- Over 170 attendees at each meeting

| Public Meeting    | Topic                                           | Date               | Participants |
|-------------------|-------------------------------------------------|--------------------|--------------|
| 1                 | CSO Overview & Intro to CSO Plan                | June 29, 2022      | 226          |
| 2                 | Plan Priorities & New Typical Year Development  | December 15, 2022  | 177          |
| 3                 | CSO Tools & Alternative Development             | November 15, 2023  | 243          |
| 4                 | Alternatives Screening & Affordability Analysis | January 22, 2025   | 355          |
| Listening Session |                                                 | April 3, 2025      | 173          |
| 5                 | Results of Alternative Analysis                 | September 25, 2025 | 170+         |
| 6                 | Present Draft Plans                             | Spring 2026        | Planned      |
| 7                 | Present Final Plans                             | Winter 2027        | Planned      |

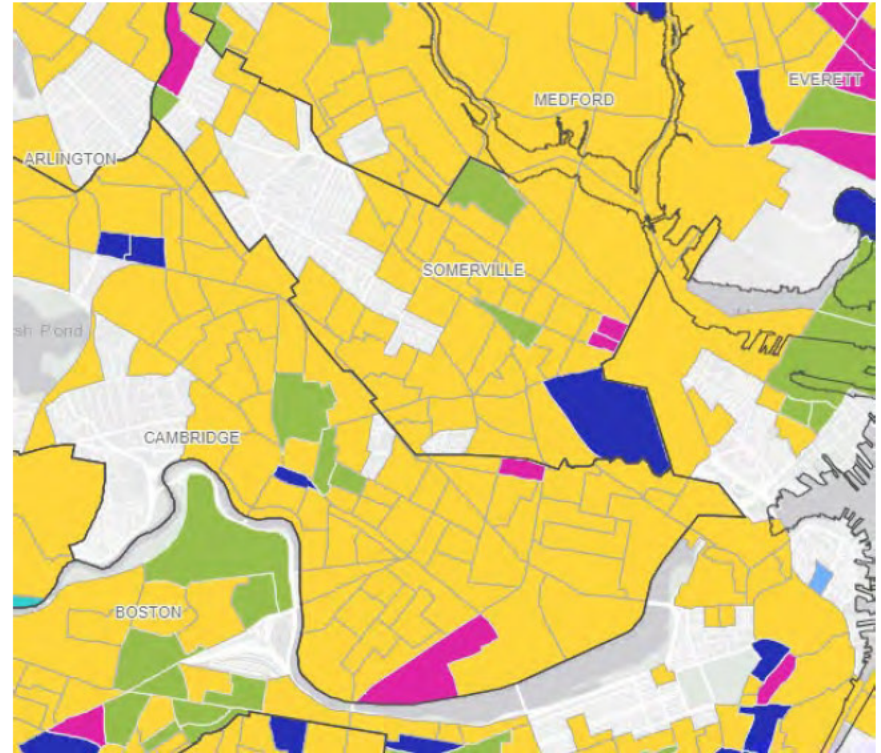


# Public Meeting Outreach and Accessibility

- Flyers were developed prior to meetings and translated into 8 languages
- Notifications distributed at community events and sent to over 200 contacts including MEPA's EJ list
- First three meetings interpreted in multiple languages and interpretation was offered for all others



## Environmental Justice Block Groups





# Public Meeting Feedback Surveys

| Survey             | Date                         | Format       | Respondents |
|--------------------|------------------------------|--------------|-------------|
| Public Meeting # 2 | December 2022 - January 2023 | Broad Survey | 86          |
| Public Meeting # 3 | November 15, 2023            | Live Poll    | 81          |
| Public Meeting # 3 | December 2023 - January 2024 | Broad Survey | 1,312       |
| Public Meeting # 4 | January 22, 2025             | Live Poll    | 167         |

Please rank these criteria in order of how important they are to the evaluation and comparison of alternatives to control combined sewer overflows.



- Surveys conducted during public meetings and shared with the broader public
- Respondents shared concerns about CSOs, suggestions for plan development, and what is most important to them
- Recurring feedback themes:
  - Act with urgency for both short- and long-term solutions
  - Include green infrastructure in solutions
  - Consider the impacts of climate change



## Engagement with Watershed Groups

- In 2023, the Partners began meeting with watershed groups:
  - Mystic River Watershed Association (MyRWA)
  - Charles River Watershed Association (CRWA)
  - Save the Alewife Brook (StAB)
- Allows for sharing more technical information, hearing specific feedback and recommendations, and receiving advice on public meetings

| Watershed Group Meeting | Date              | Format    | Number of Participants |
|-------------------------|-------------------|-----------|------------------------|
| 1                       | October 24, 2023  | In-person | 21                     |
| 2                       | June 24, 2024     | In-person | 32                     |
| 3                       | December 17, 2024 | Virtual   | 35                     |
| 4                       | September 4, 2025 | In-person | 35                     |



# Commitment to Integrating Public Feedback in the Plan

## Considering climate change

- The Partners established a first of its kind approach – 2050 Typical Year to evaluate projects

## Near-term improvements

- Additional signage prior to storms
- Evaluated floatables and odor control improvements

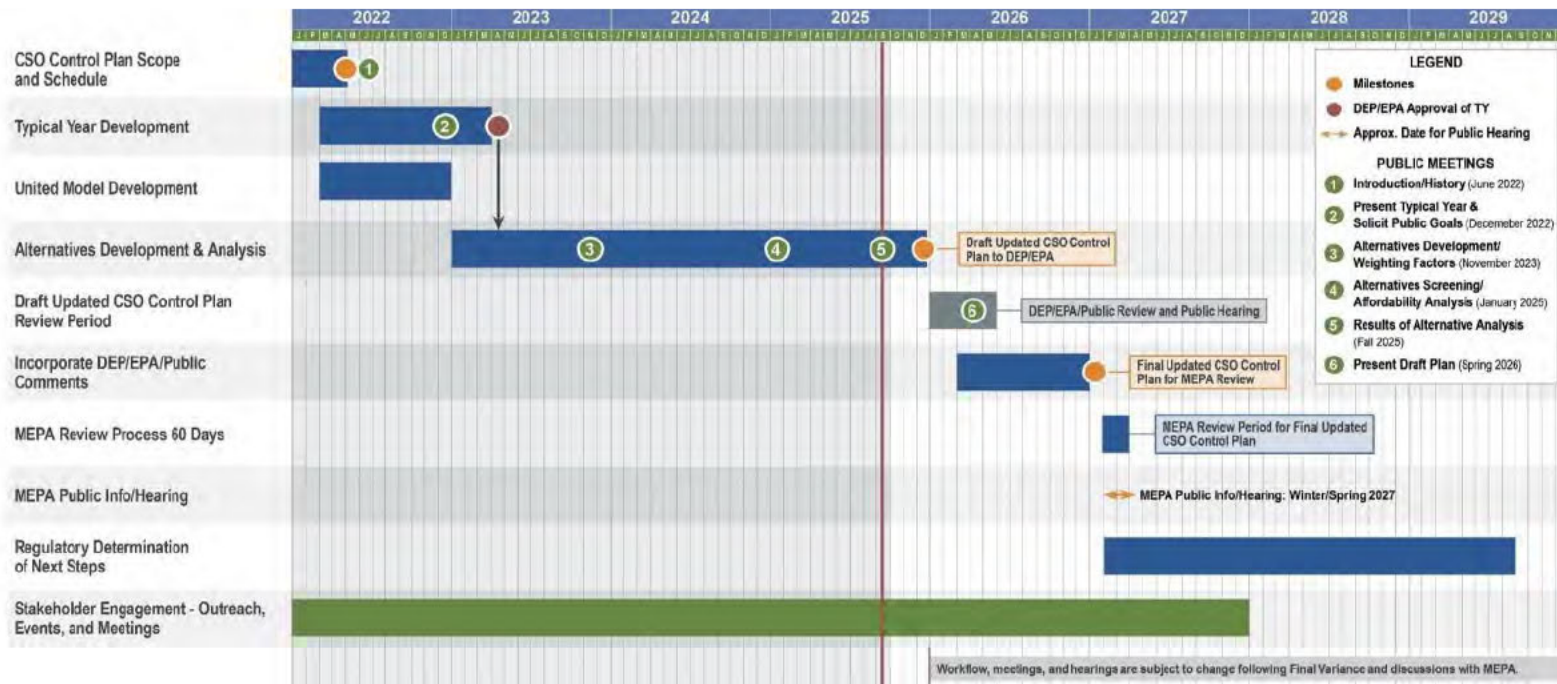
## Incorporating green infrastructure in many alternatives





# Next Steps

- Submit Draft Updated CSO Control Plan by December 31, 2025
- Followed by review by regulators and public meeting and hearing
- Expect robust public involvement during these months prior to submitting the Final Plan in 2027







*Presentation to*

**MWRA Board of Directors**

***MWRA's Outfall Monitoring Overview  
2024 Results***

Oct 22, 2025



# Topics

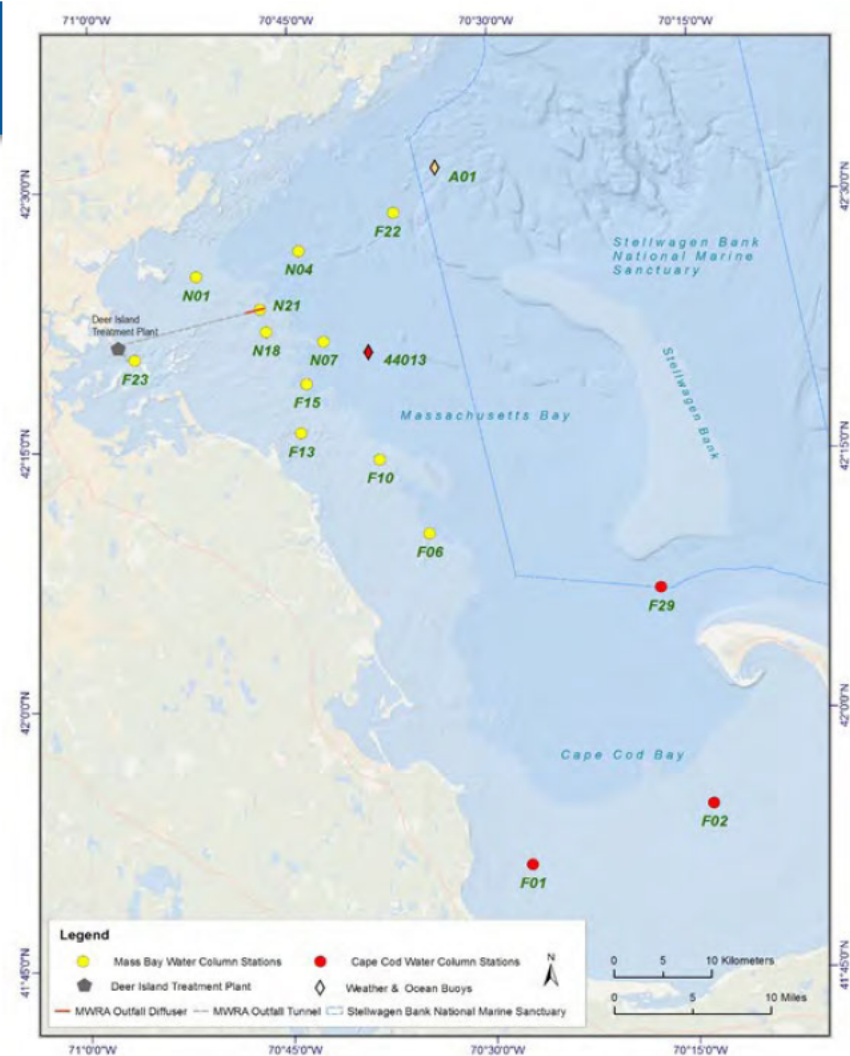
- Background and Overview
- Effluent
- Water column
- Benthic soft bottom communities
- Fish and Shellfish
- Contingency plan





# MWRA Ambient Monitoring

- Annual report to regulatory agencies and the public required November 15. Why?
  - Moving discharge from Harbor to Bay in 2000 caused environmental concerns
  - Comprehensive monitoring program designed for the water column and sea floor.
- Monitoring requirements have been reduced over time as data collected has not shown adverse impacts of the outfall.
- OMSAP reviews the results of each component of the monitoring.





# Outfall Monitoring Highlights – 2024

- Effluent quality excellent (NACWA Platinum 18 award).
- No adverse impacts of the outfall discharge on environmental quality in MA or Cape Cod Bays.
  - Water quality remains generally good. This was the first year since 2020 there was no observation of lower-than -historical dissolved oxygen in Mass Bay.
  - Flounder liver disease remains low.
- Every 3rd year fish and shellfish tissue is analyzed for contaminants like heavy metals and pesticides.
- Contingency Plan threshold exceedance: effluent nitrogen loading.





# Topics

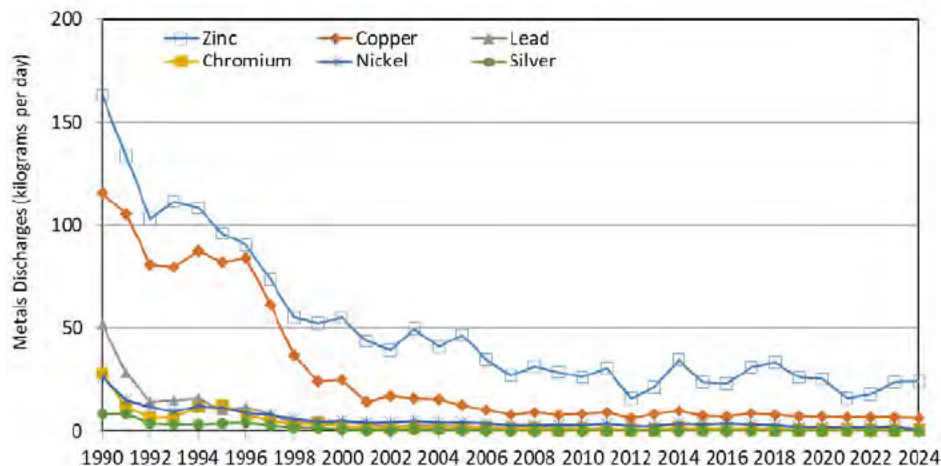
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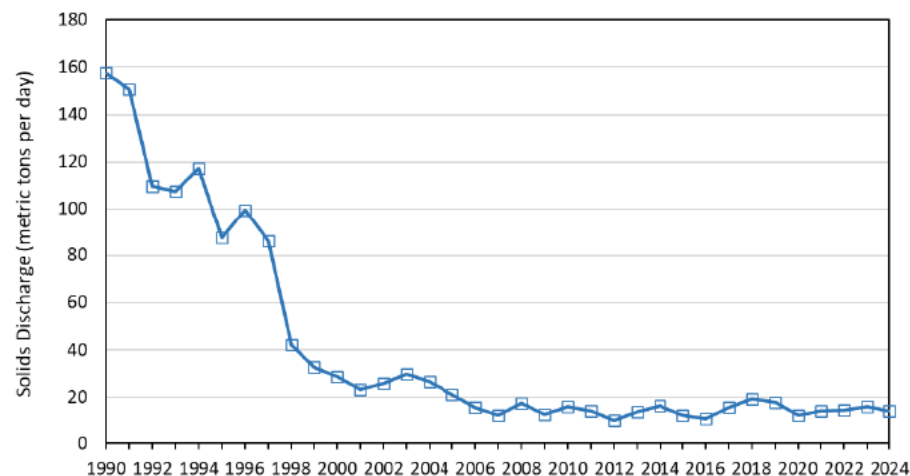
# Metals and solids discharges remain low

## Metals



Year

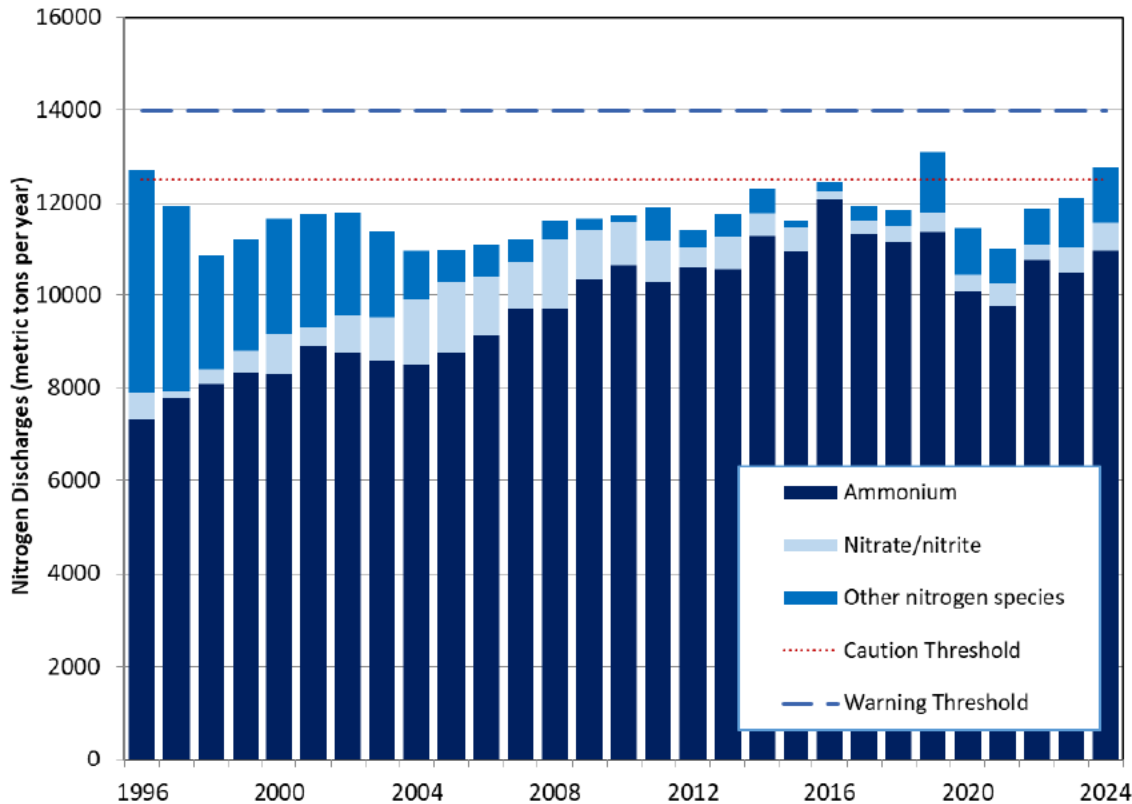
## Solids



Year



# 2024 Effluent Nitrogen Loading



- Annual effluent nitrogen load for 2024 was 12,755 metric tons, exceeding the Contingency Plan Caution Threshold of 12,500 mt.
- This threshold was exceeded once before, in 2019.
- Population growth, plant flows, nitrogen species ratio, and sampling pattern all impact this annual load and its calculation. MWRA staff continue to investigate these factors.
- No adverse impacts observed in the environment.



# Topics

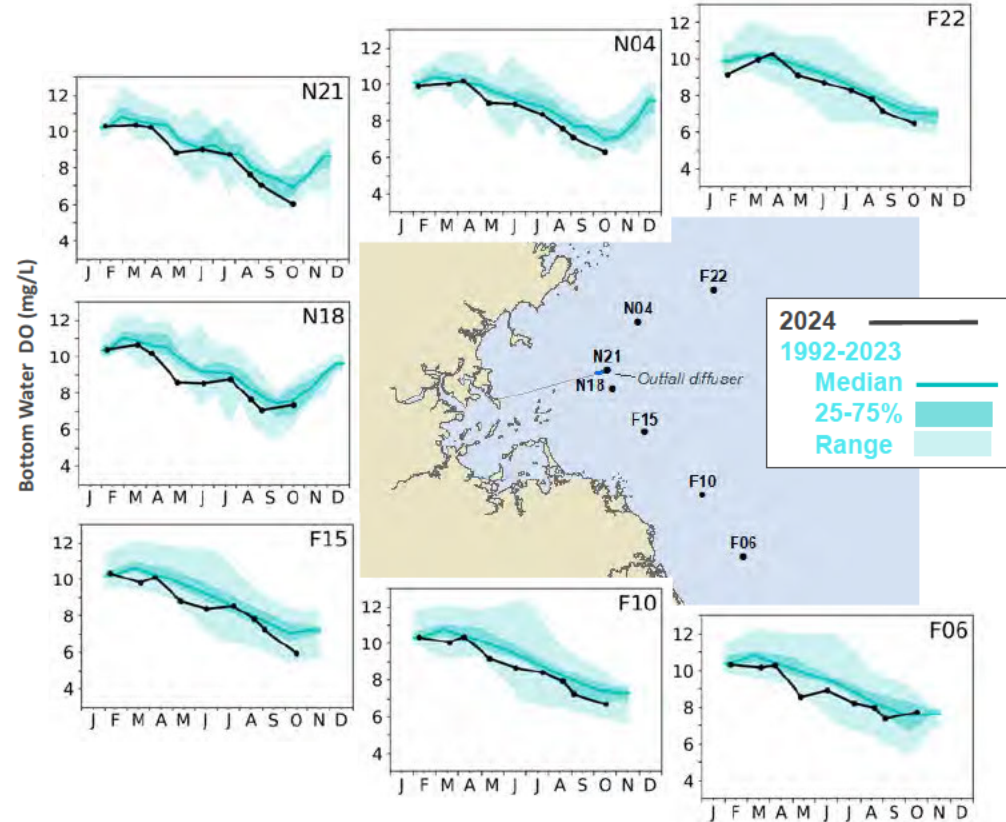
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# Dissolved Oxygen – No exceedance

- Dissolved oxygen showed the typical seasonal decline observed in Massachusetts Bay.
- Unlike the previous three years, these declines did not reach levels below Contingency Plan thresholds.
- In recent years, lower than historical DO has been observed throughout the region, driven primarily by warming water temperatures.





# Topics

- Background and Overview
- Effluent
- Water column
- Benthic soft bottom communities
- Fish and Shellfish
- Contingency plan

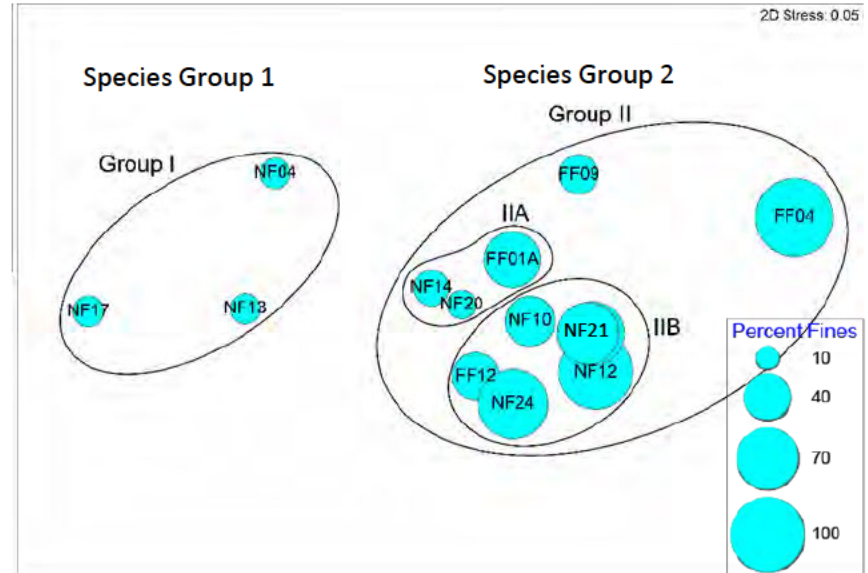




# Sea Floor Biological Communities

- Elevated abundance of *Clostridium perfringens* spores and ammonium levels near to the outfall (effluent tracers)
- However, impacts to ecology are not observed:
  - Soft-bottom species composition shows strong relationships with the sediment texture, rather than outfall proximity.
  - Sediment texture remains consistent with previous years

## Benthic communities by sediment type





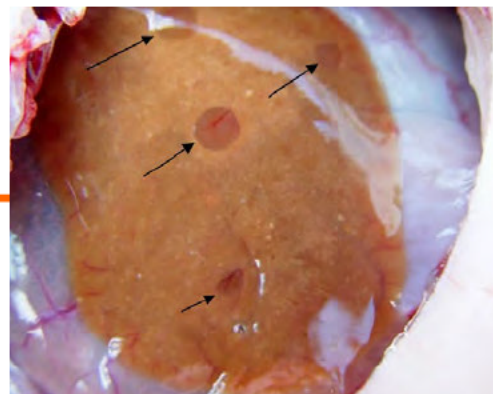
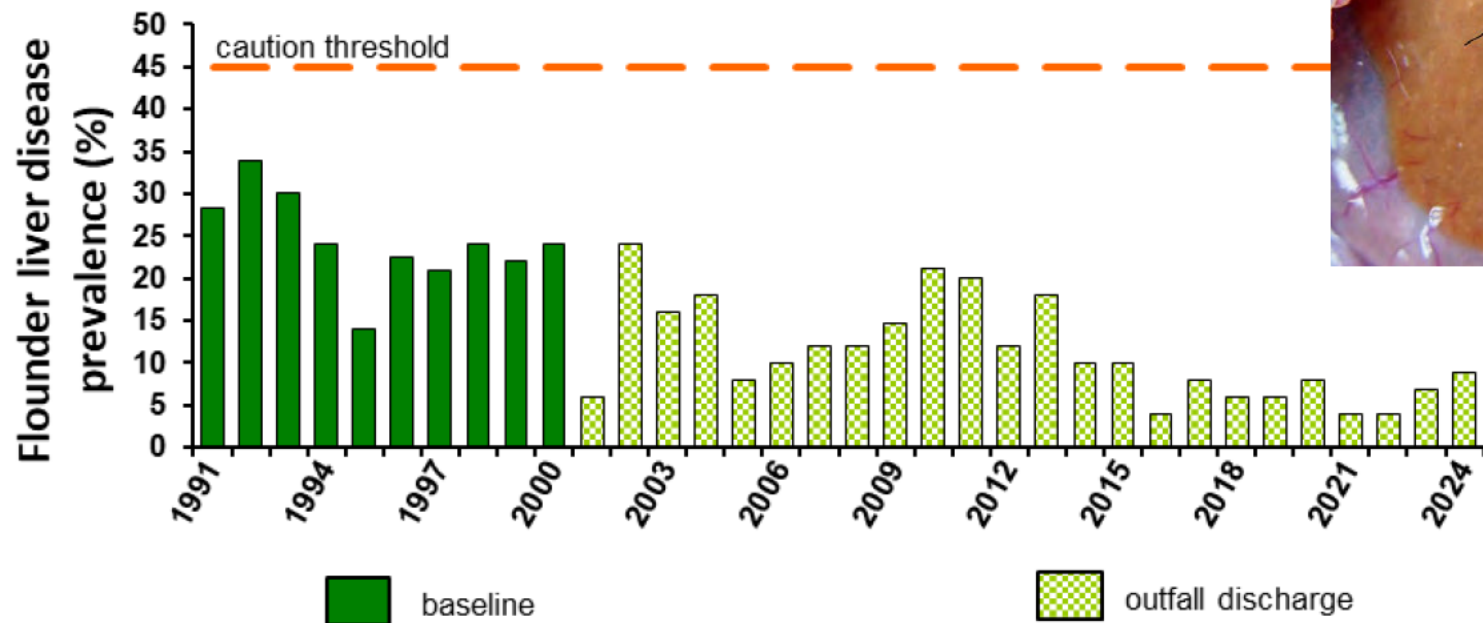
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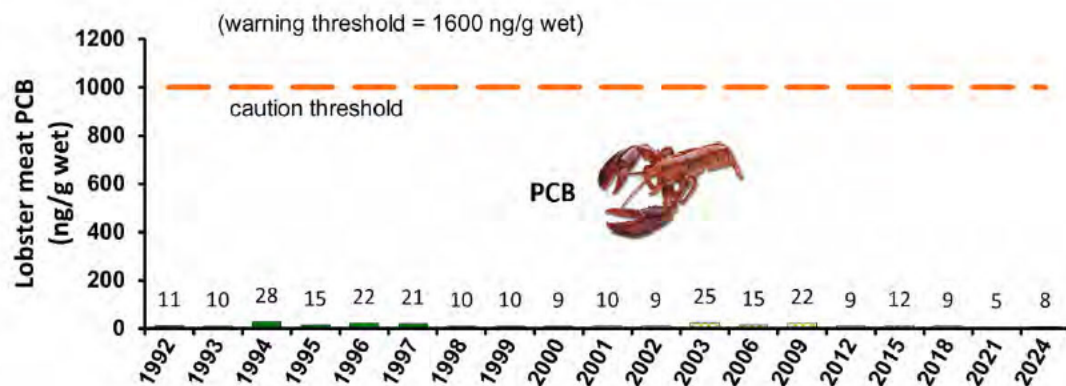
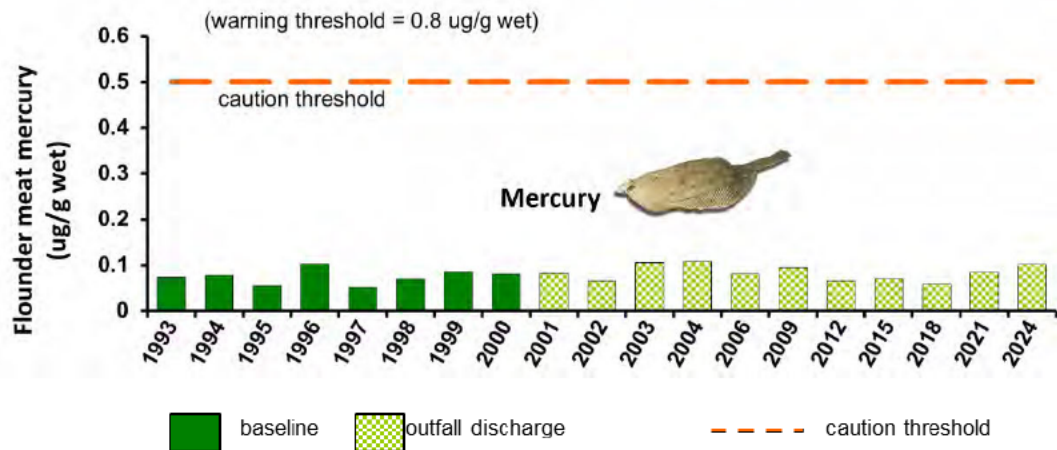


# Flounder health remains excellent





# Contaminants in fish/shellfish



- Fish/shellfish tissue contaminants measured every 3 years since 2006.
- Results continue to show low pollutant levels in flounder, lobster and mussel near the outfall.



# Topics

- Background and Overview
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## Contingency Plan threshold exceedances: 2024

- What is the purpose of the Contingency Plan thresholds?
  - Designed to signal changes from pre-outfall conditions
  - Not to warn of imminent environmental harm
- Exceedances in 2024:
  - Caution-level: effluent nitrogen
    - Exceedance is reflective of population growth and other factors like annual plant flows and sampling pattern. Investigations into this exceedance are continuing. Past modeling work with nitrogen loads set well above the higher warning threshold showed no significant impacts to Massachusetts Bay.



## Contingency Plan threshold exceedances: 2025

- Exceedances in 2025:
  - *Alexandrium*
    - A widespread bloom of the potentially harmful algae (“red tide”) occurred in May/June. Bloom was observed first in Maine/NH before MA and no link to the outfall can be identified at this time.
  - DITP effluent toxicity
    - The June acute toxicity test on the inland silverside minnow (*Menidia beryllina*) failed. There were no operational upsets or significant changes at Deer Island, and all other effluent permit limits were met in June. There is no pattern of toxicity in the DITP effluent, as all tests on samples collected in July, August, and September have met permit limits.



## Video From Outfall Diffuser: July 2023







*Presentation to*

**MWRA Board of Directors**

***Industrial Waste Report #41  
EPA Annual Report Toxic Reduction & Control***

Oct 22, 2025



# Electronic Pretreatment Annual Report

Once Submitted by October 31, 2025, the report can be found at this link....

<https://permitsearch.epa.gov/epermit-search/ui/search>

 United States Environmental Protection Agency

Resources

### Permit Search

Program (required) Program Area (required) Issuer (required) ⓘ

NPDES ⓘ Pretreatment ⓘ EPA Region I ⓘ

Document Type ⓘ

Annual Reports ⓘ

Action Type ⓘ

New ⓘ

NPDES ID:

Regulated Entity Name ⓘ

[Show more...](#)

What is permit search? +

What permits can I find? +

Contact information +

Source +



# Industrial Waste Report - Program Highlights

- 2,200 permitted sewer users
- Focus on Significant Industrial Users (SIUs)
  - SIUs based on flow, nature of discharge or potential to violate standards
- All 177 SIUs inspected
- 967 Total Industrial Inspections
  - 336 at the 177 SIUs
- 1,318 Monitoring events (sampling) at permitted facilities
  - 276 at SIUs
- 457 enforcement actions issued

