Watershed and Embayments Workgroup Meeting Summary
Wednesday November 8, 2023
Meeting held in Larchmont, NY and remotely via Zoom

In-Person Attendees:
Kelly Streich - CT DEEP (Co-chair); Sue Van Patten - NYSDEC; David Ansel - Save the Sound; Nikki Spiller - Harbor Watch; Jim Ammerman - LISS/NEIWPCC; Samara Scantlebury - NYSDEC; Evelyn Powers - IEC; Chris Eagler - NYSDEC; Mark Tedesco - EPA LISO; Peter Linderoth - Save the Sound; Lillit Genovesi - NY Sea Grant; Lindsay Potts - Save the Sound; Christian Murphy - Bronx River Alliance; Rebecca Pryor - Guardians of Flushing Bay;

Virtual Attendees:
Jean Pillo - ECCD; Dianne Greenfield - City University of NY; Michele Golden - NYSDEC; Shauna Kamath - NYSDEC; Emily Hadzopulos - TNC; Esther Nelson - EPA R2; Harry Yamalis - CT DEEP; Sarah Healy - NYSDEC; Jimena Perez-Viscasillas - NY Sea Grant; Paul Stacey - Footprints; Holly Drinkuth - TNC; Emma Coffey - CT DEEP; DeAva Lambert - CT DEEP; Elizabeth Tanzi - EPA R2;

Introduction:
The meeting was called to order at approximately 11:05am by CT co-chair Kelly Streich. David Ansel welcomed the group to Save the Sound's office and laboratory. In-Person attendees introduced themselves while Zoom attendees entered their names/affiliation in the chat.

2025 CCMP Revision:
An update to the revision process was provided. Prior to the October Management Committee meeting, a review of the current implementation actions and ecosystem targets was undertaken by EPA and partners. Also, Coastwise Partners interviewed Management Committee members as well as some program support staff. The outcomes were presented at the Management Committee meeting. Coastwise Partners recommended the establishment of a Revision Oversight Group to establish the CCMP revision framework for approval by the Management Committee. The ROG meets weekly to cover certain key items and develop a framework for the Management Committee to review and approve at their January meeting. Following approval, theme teams will begin meeting to develop the content. Workgroup members will be invited to participate in this part of the process, which will start in early 2024.

Guest Presentation:
Targeting Point Source Pollution on the Bronx River, Christian Murphy - Bronx River Alliance
Christian provided a presentation of activities by the Bronx River Alliance to track down bacteria pollution entering the river from a number of discharge pipes. *Presentation is attached*.

Guest Presentation:
Stewarding Flushing Waterways from Source to Sound, Rebecca Pryor – Guardians of Flushing Bay
Rebecca introduced the history of Flushing Bay and the many challenges to public access and water quality.

Zoom meeting adjourned at 12:40pm:

- **Following the regular schedule cycle, we will meet on 2/14, 5/8, 8/14, and 11/13 in 2024.**

Tour of Save the Sound's Laboratory:
Elena Colon provided a tour of the laboratory and answered questions on their process and certification. During the tour, Lindsay Potts was processing samples using the colilert method.

In-Person meeting adjourned at 2:00pm.

Targeting Point Source Pollution on the Bronx River

November 2023

Christian Murphy, Bronx River Alliance

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Bronx River Watershed

Forested area
Valhalla, NY

Starlight Park
Bronx, NY

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Industrial History of the River

Bronx River Restoration

- Back-breaking work by volunteers in the Bronx transforms the Bronx River
- In the 1980s and 90s, Elected officials in NYC and NY State get involved in the effort
- Several blueprints and guidelines for restoring the Bronx River are developed, eventually creating the river corridor that we see today

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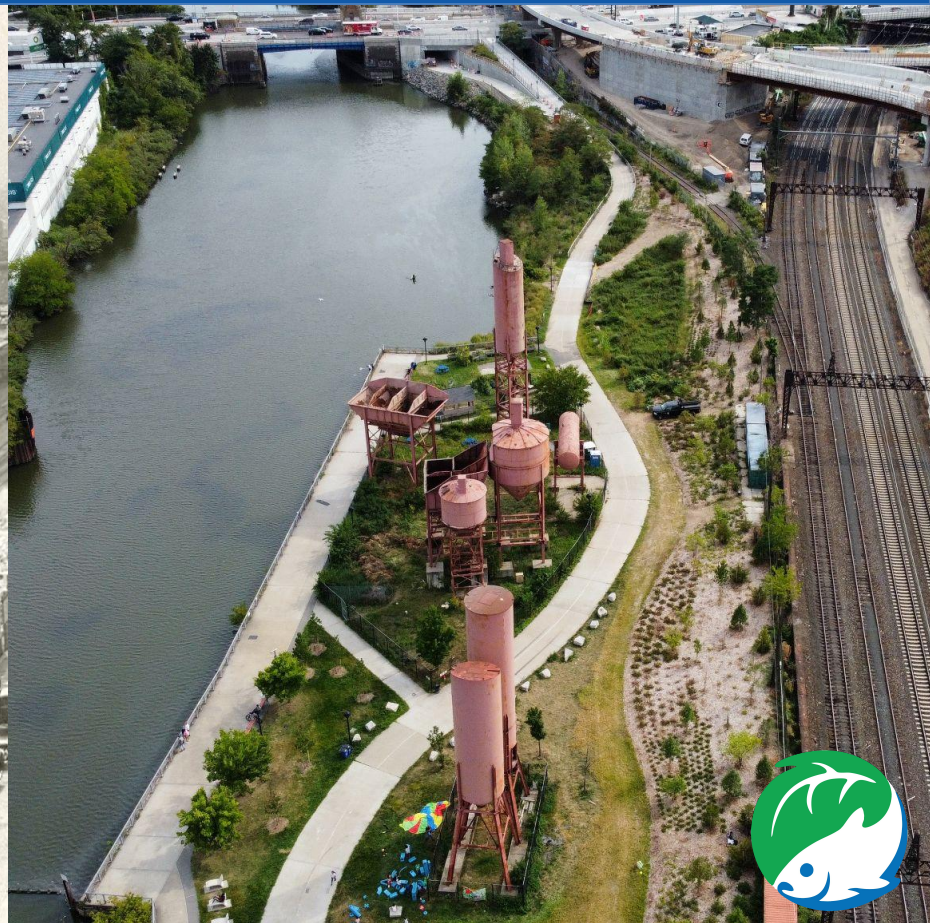
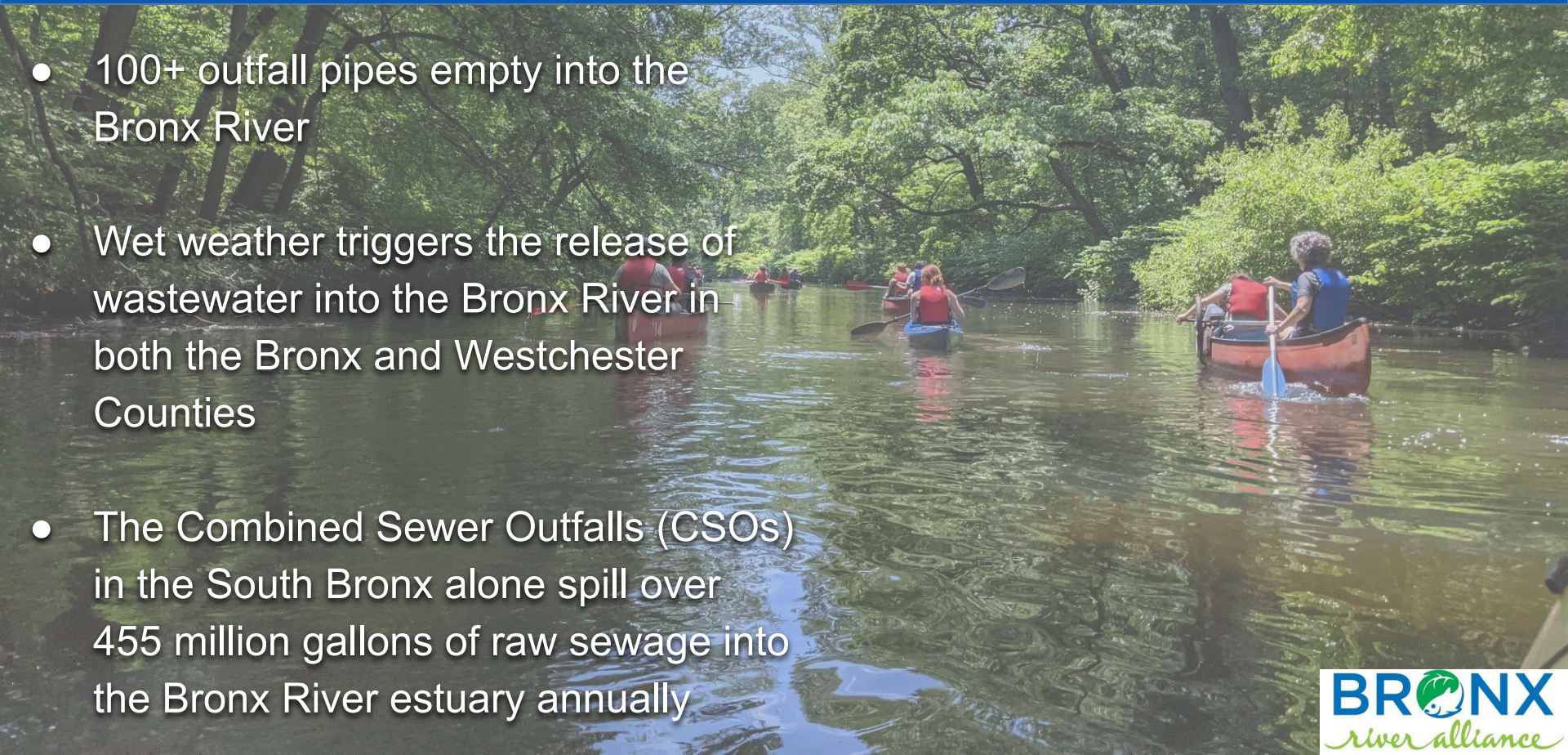
Bronx River Restoration



Exposure to Contaminated Water



- 100+ outfall pipes empty into the Bronx River
- Wet weather triggers the release of wastewater into the Bronx River in both the Bronx and Westchester Counties
- The Combined Sewer Outfalls (CSOs) in the South Bronx alone spill over 455 million gallons of raw sewage into the Bronx River estuary annually

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Exposure to contaminated water

Unnamed outfall in southern Yonkers

- Sewer trunk lines run along the Bronx River
- 5 Combined Sewer Outfalls (CSOs) release raw sewage in the lower 3 miles of the Bronx River
- Dozens of Municipal Separate Storm Sewer System (MS4) outfalls unexpectedly release untreated wastewater into the river in Westchester
    - Some of these pipes discharge continuously during all weather conditions

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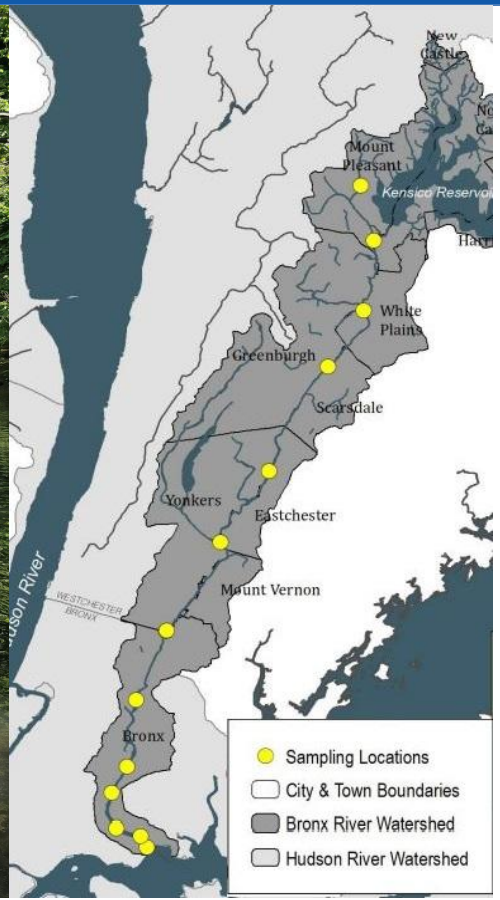
Monitoring Fecal Indicator Bacteria



- 15 Enterococcus sampling sites along all 23 miles of the Bronx River
- From 2015-2022 testing at all 15 sites occurred every two weeks between May - October
    - We adhere to an EPA-approved QAPP
- Volunteers adopt sites to collect samples at throughout the season
- Two sampling sites adjacent to outfall pipes (one Bronx CSO, one Westchester MS4)

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Monitoring Fecal Indicator Bacteria

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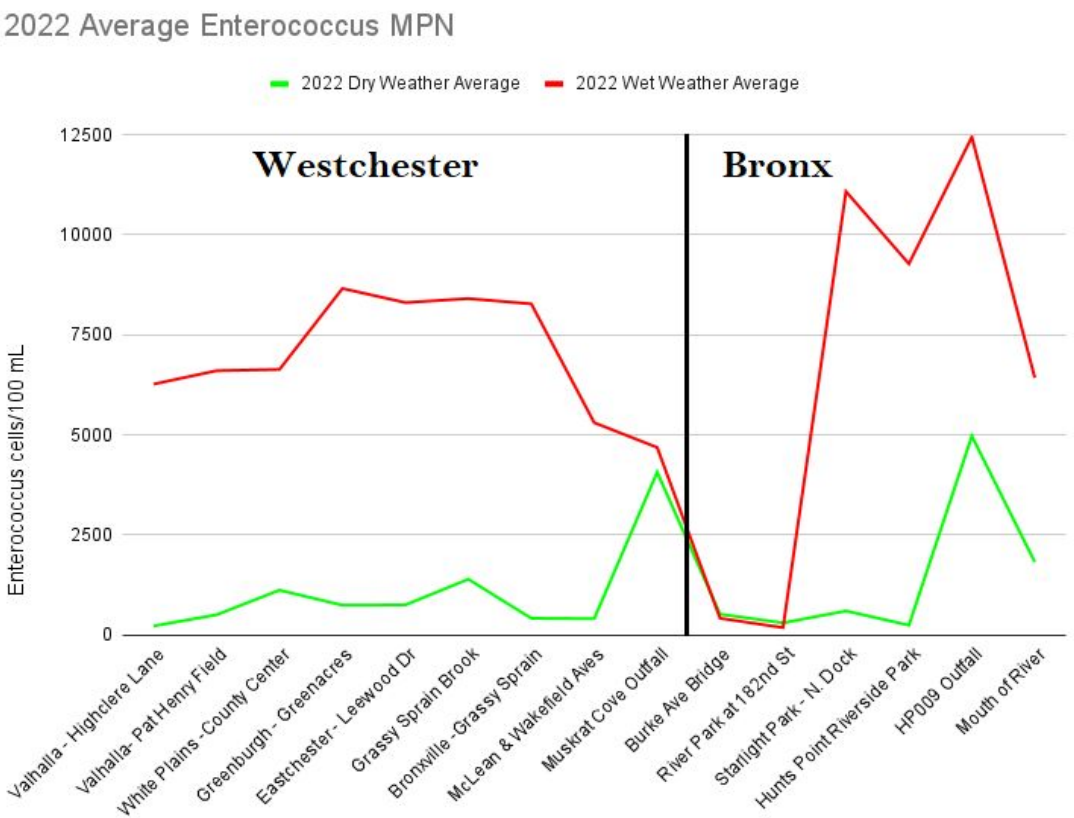
Monitoring Fecal Indicator Bacteria



- Seasonal averages show that Enterococcus bacteria levels are higher during wet weather
- Some sites have elevated bacteria levels during dry weather

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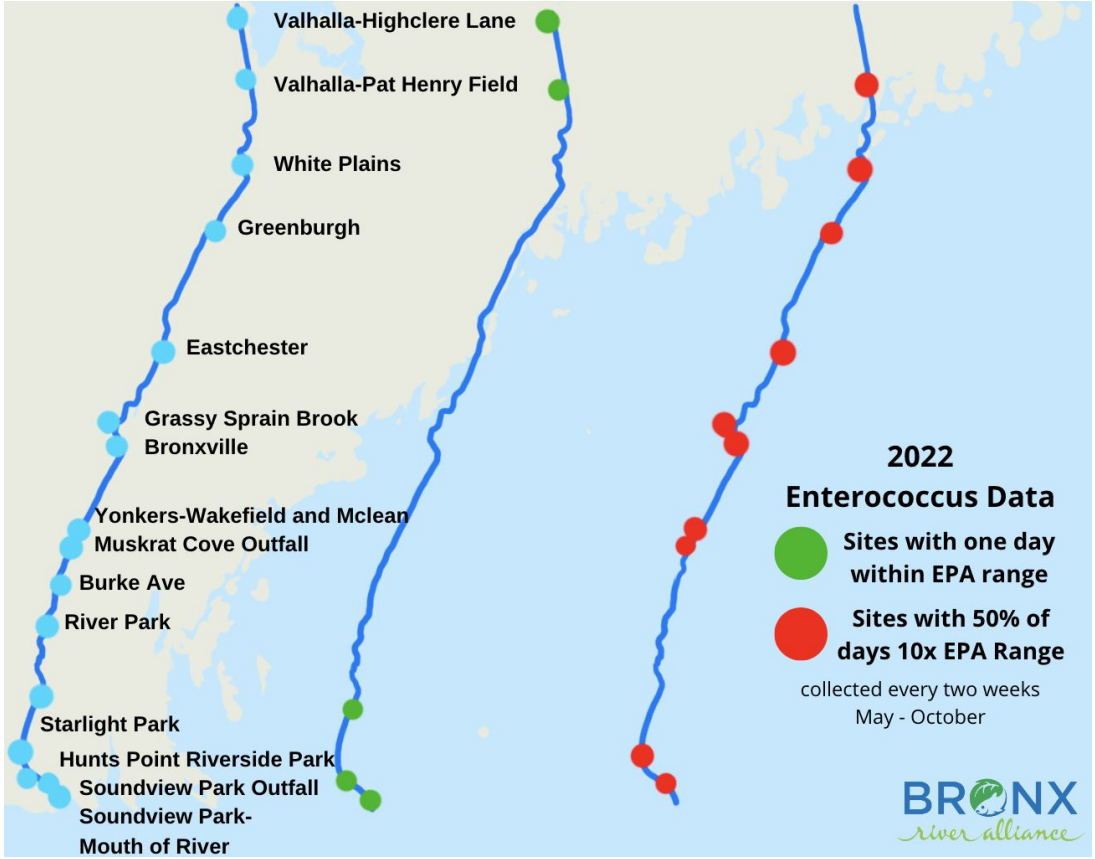
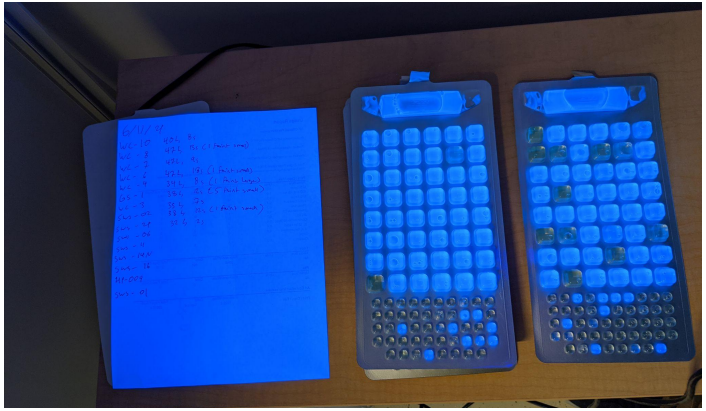
Monitoring Fecal Indicator Bacteria





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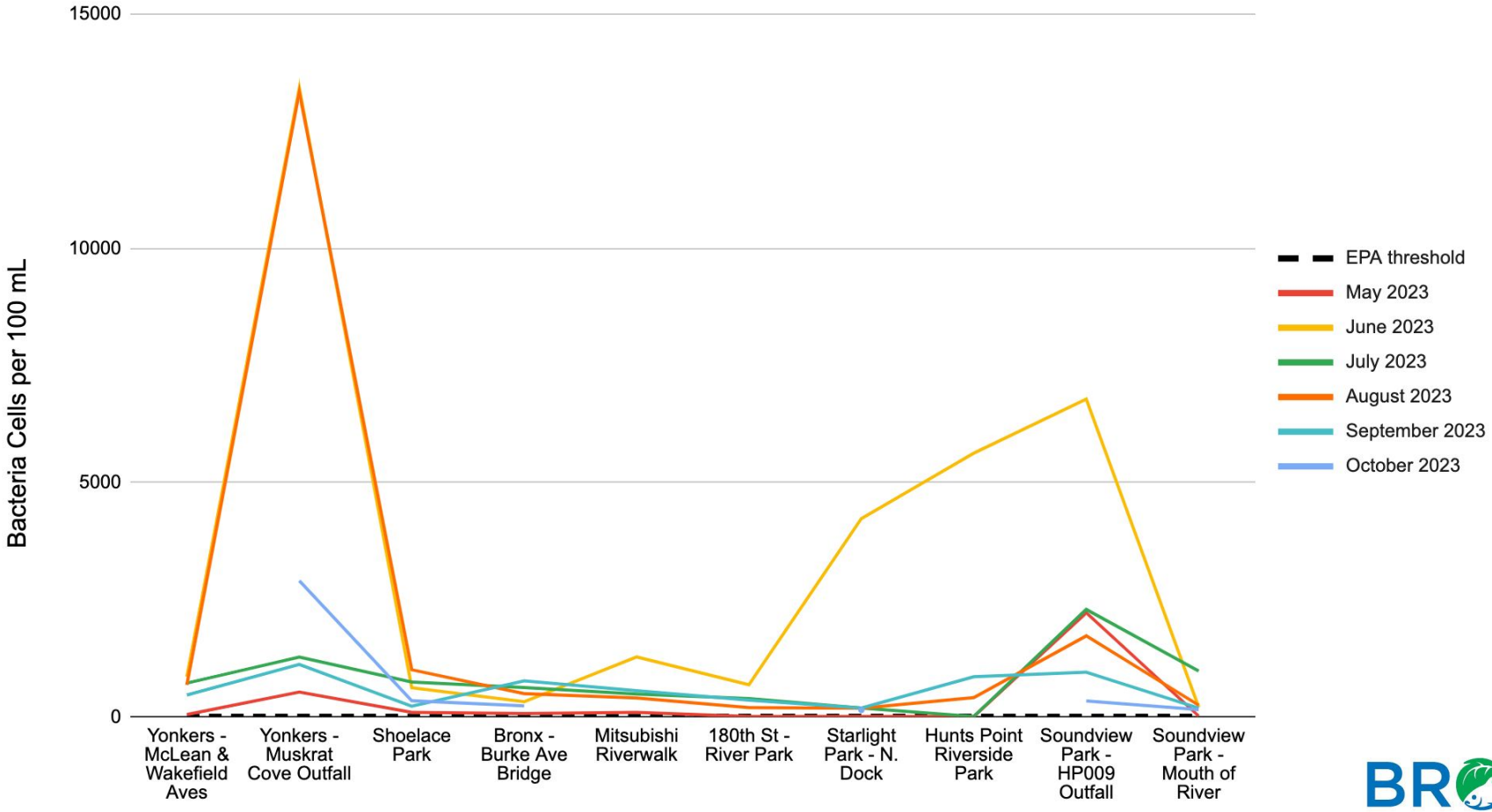
2023 Monthly Enterococcus Averages



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Monitoring Fecal Indicator Bacteria

“How do you know the bacteria is human in origin?”

- Toilet paper and “flushable” wipes occasionally seen near outfall pipes
- Enterococcus concentrations often exceed 24,196 MPN, the maximum detection limit - too high to attribute to wildlife
- Microbial Source Tracking by United States Geological Survey (USGS) found an abundance of humans markers at sampling sites
- Westchester MS4 pipes have been TV’d and repaired in the past

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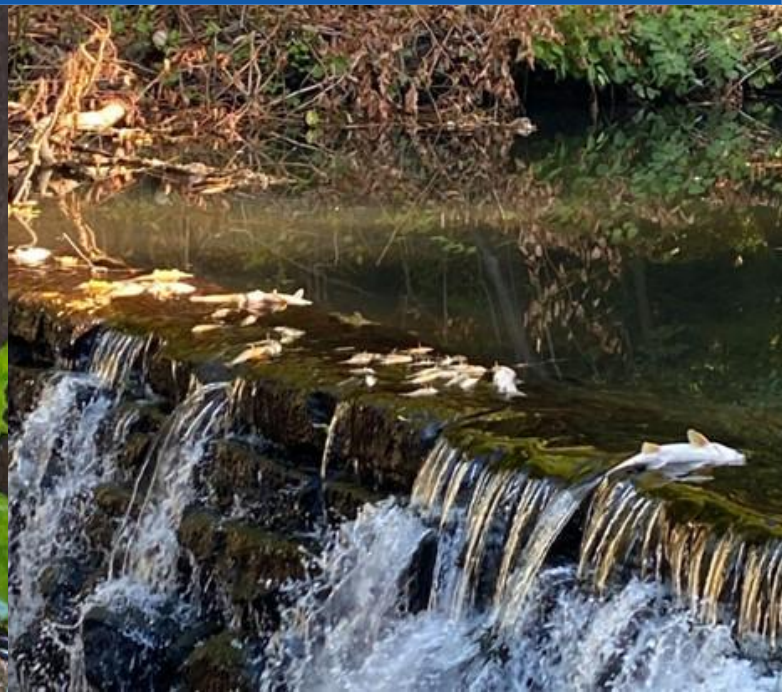
2022 Fish Kill - Unknown Cause



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Targeting Point Sources of Wastewater

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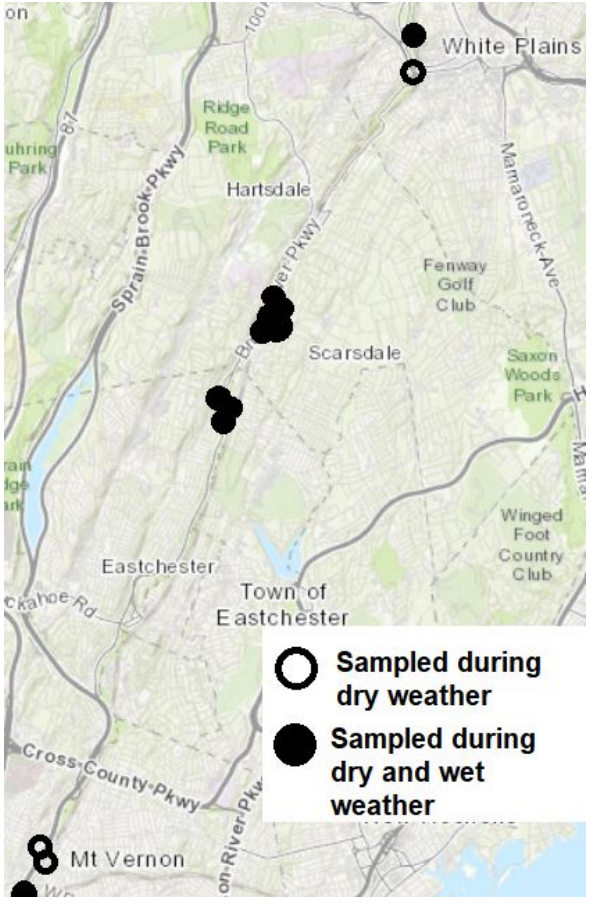
Targeting Point Sources of Wastewater



14 outfalls sampled

White Plains:
- 2 outfalls

Scarsdale:
- 4 outfalls

Crestwood/Tuckahoe
- 5 outfalls

Mount Vernon:
- 1 outfall sampled, *26ppm nitrate nitrogen recorded*

Yonkers:
- 2 outfalls

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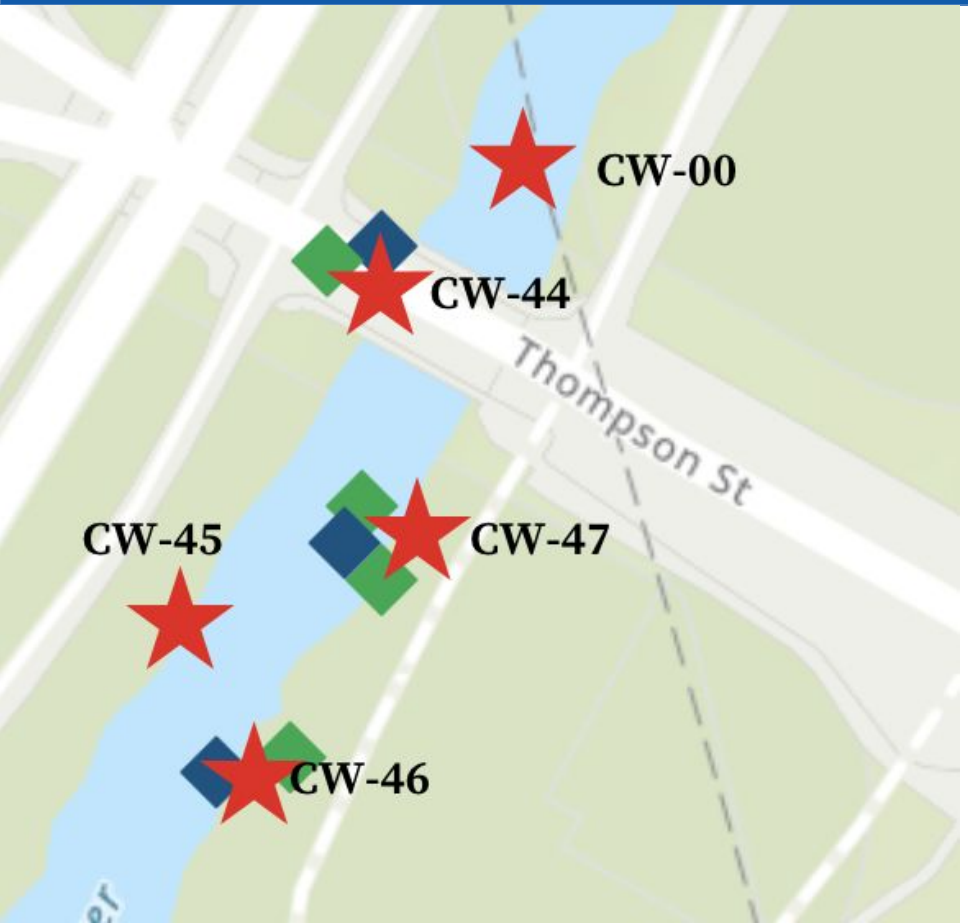
Targeting Point Sources of Wastewater

A: CW-46 (Crestwood/Tuckahoe)
B: SD-18 (Scarsdale)
C: Oak Street Outfall (Mount Vernon)*

***Date**
top: 4/10
bottom: 8/24

Targeting Point Sources of Wastewater



Site	Enterococcus Value (cells/mL) 6/27/23	8/14/23
CW-00		1353
CW-44		573
CW-47 TUK-2	24196	767
CW-45		767
CW-46 TUK 1	19863	1334

Key

- Pipes where sample was taken
- Westchester non consortium outfalls
- MS4 drainage structure

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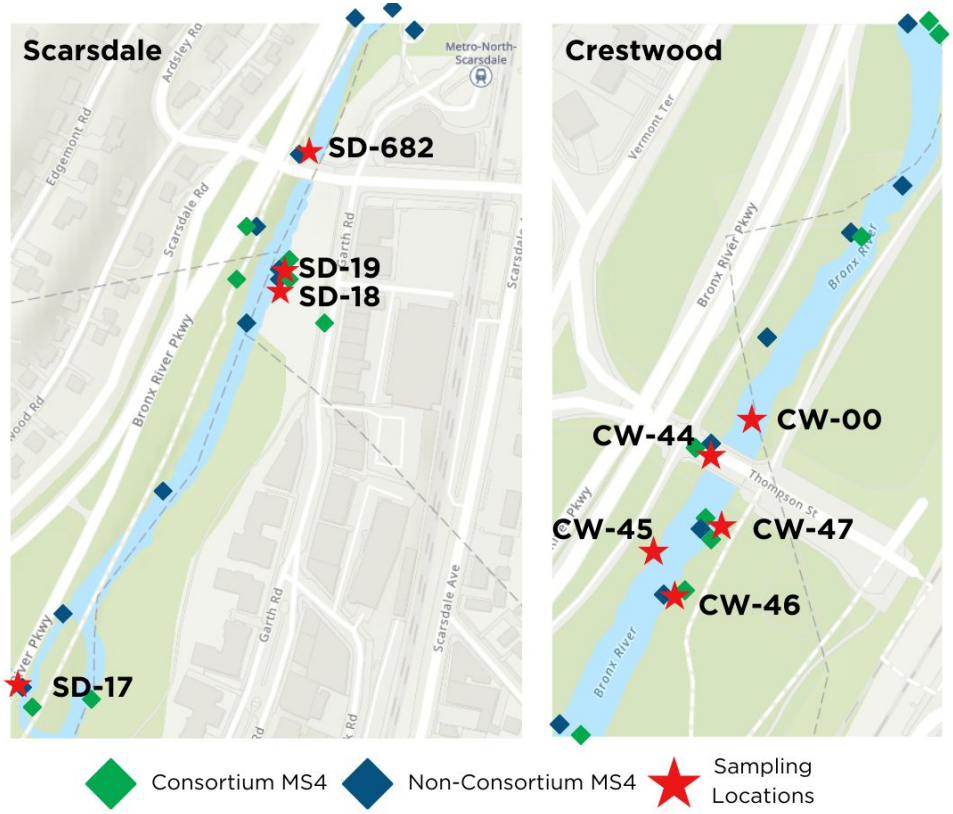
Targeting Point Sources of Wastewater



Enterococcus Values

Site Name	6/27	8/14	9/5
SD-682	-	862	122
SD-19	152	75	546
SD-18	3076	670	120
SD-17	24196	8664	109
CW-00	19863	1353	41
CW-44	-	573	52
CW-47	-	767	241
CW-45	-	767	146
CW-46	24196	1334	317

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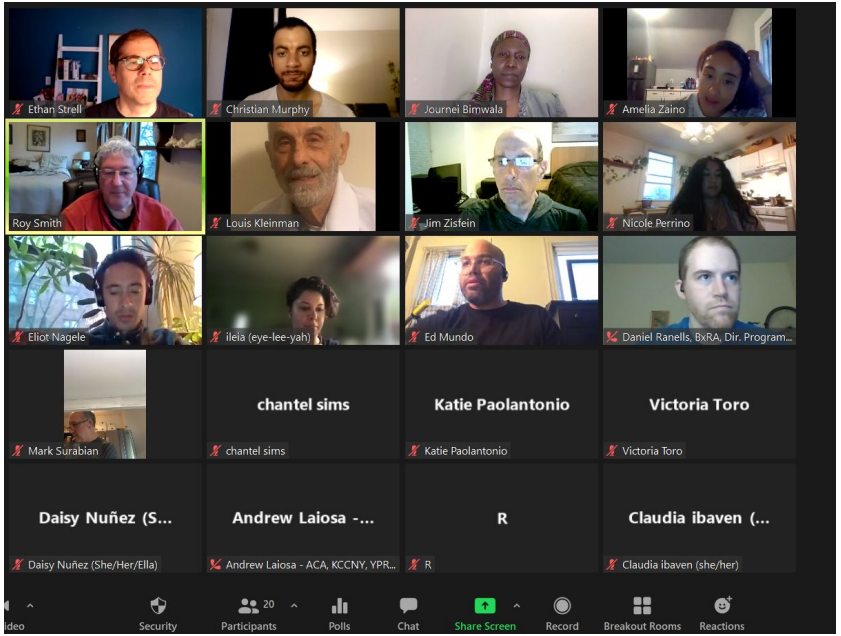
Leveraging Data for Advocacy

- New EPA grant funding for three years
- Continue revisiting pipes, choosing new locations, and expanding our parameters
- Reviewing SPDES permits
- Get a TMDL for the Bronx River
- Sharing information with:
  - Elected officials
  - Agencies
  - Ecology Team
  - Community Boards
  - Local partners
- Westchester Consolidation Plan is a possible solution



Bronx River All Teams meeting

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Thank You!

Email me: christian.murphy@bronxriver.org

Email the Ecology Team: ecology@bronxriver.org

Visit us at: www.bronxriver.org

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