




# BCEQ Earth Day Week Conference

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# Presentation Outline

- UWFP Overview
- Harlem River Watershed Plan
- River Herring restoration on the Bronx River
- Links & more resources

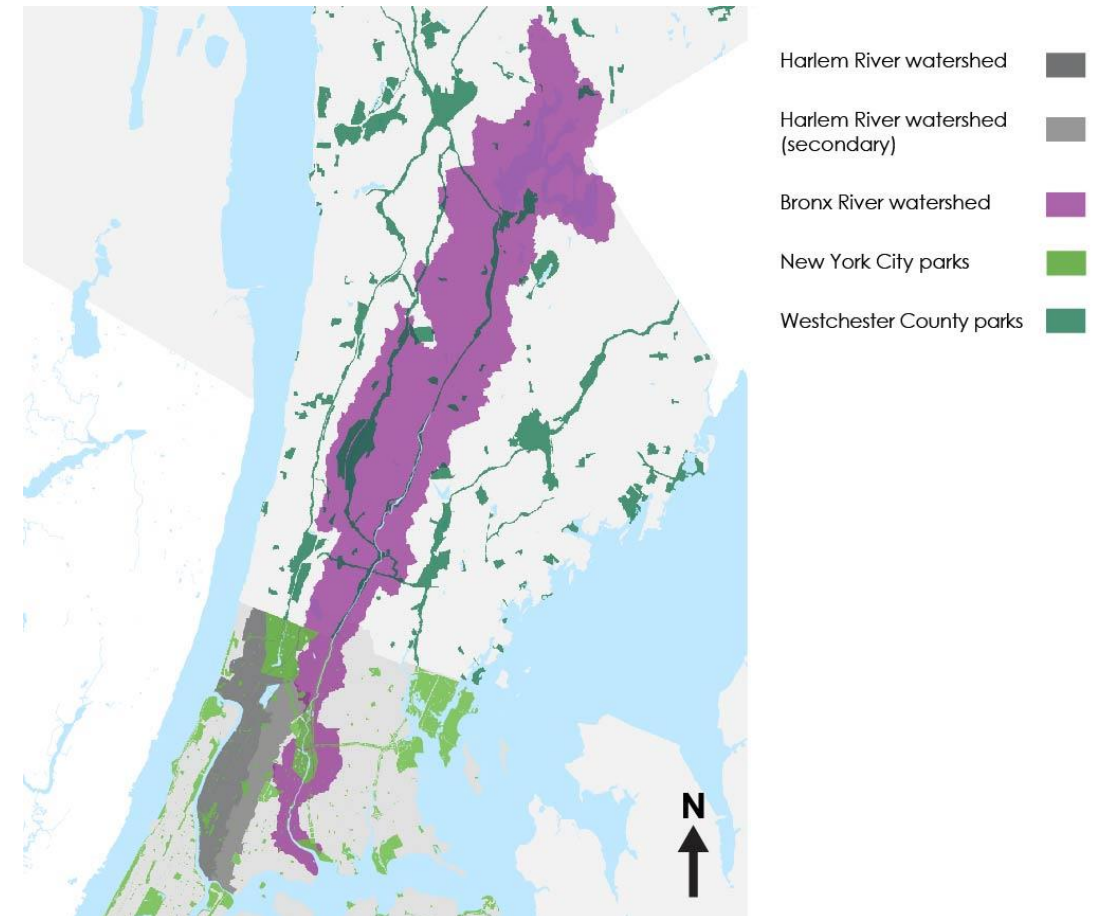


# URBANWATERS

## FEDERAL PARTNERSHIP

*Restoring Urban Waters, Revitalizing Communities*

- **15** federal partners, **19** locations
- **Goal:** reconnect overburdened & economically distressed communities with their waterways
  - improve coordination among federal agencies
  - collaborate with community-led revitalization efforts to improve our Nation's waterways that promote economic, social, & environmental benefits
- Bronx & Harlem location is led by **US Department of Interior** and the **US Geological Survey**



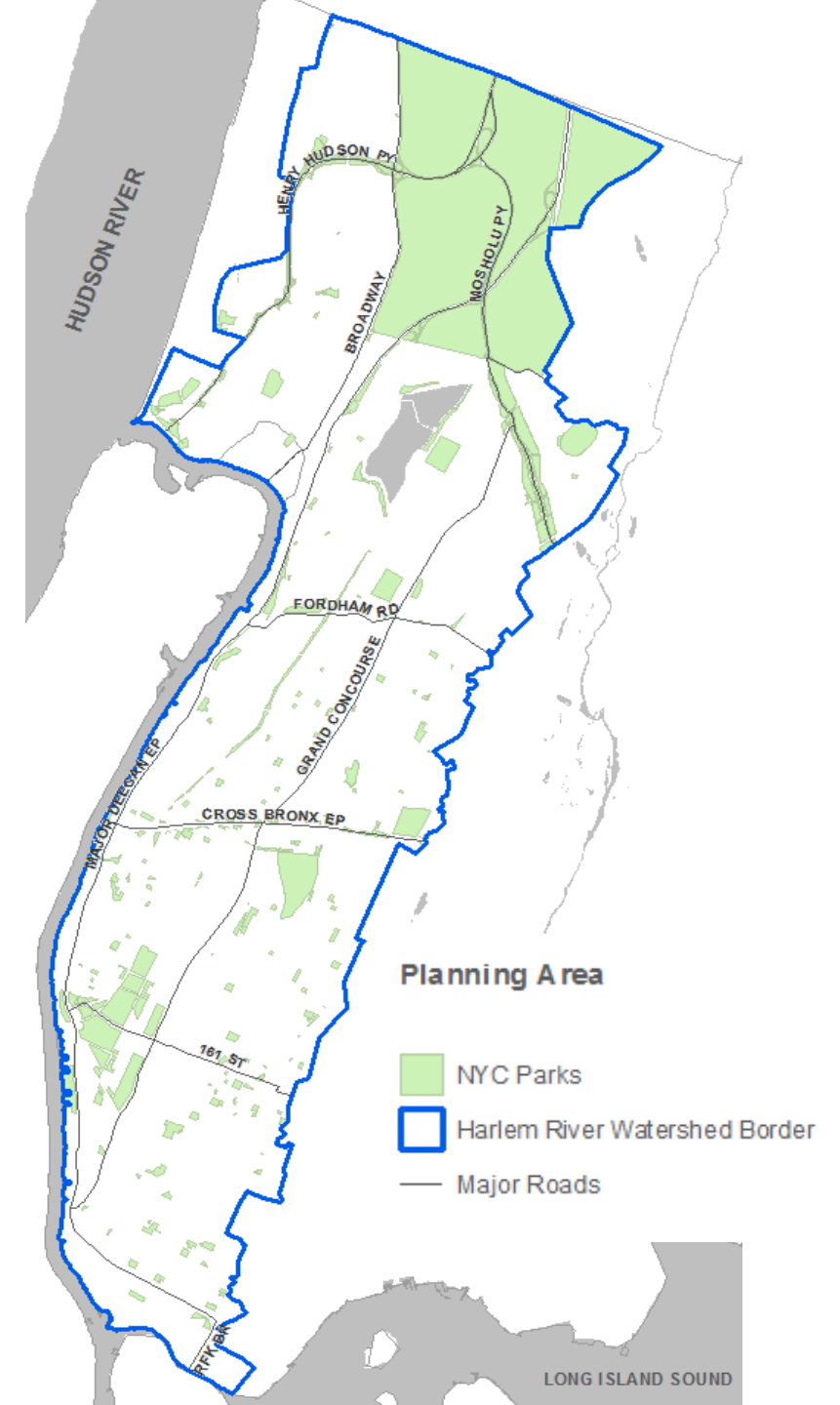




# Harlem River Watershed & Natural Resources Management Plan for the Bronx

# Harlem River Watershed Plan

- Recommend actions & projects to guide protection & restoration of resources within the Harlem River Watershed in the Bronx
- Identify priorities as a focus for future funding
- Generate typical scoping designs for key projects
- Build on priorities identified through other community-based planning efforts (e.g., BOA & Harlem River Greenway Plan)
- Get community input and reflect community and stakeholder priorities





# Vision & Goals

The Harlem River watershed is a **critical ecological & social resource** where clean water, healthy habitats, public well-being, & **access to these benefits** are valued and protected. It is a place where environmentally sound practices, policies, **education & stewardship** help maintain diverse native habitat & improve water quality, as well as public health, recreation, & a high quality of life available to local & adjacent communities.

- **Protect, restore, & enhance natural resources**
- **Manage stormwater through green infrastructure**
- **Promote access & connectivity**
- **Maximize public engagement & education**



# And now... A Sneak Peek!

- Also, please enter your email in the chat if you'd like to be notified when the final plan is available

A large school of alewife fish swimming in water. The fish are silvery with a prominent dark lateral stripe running along their sides. They are densely packed, filling the frame. The water is slightly murky, giving the scene a natural, underwater feel. The lighting highlights the scales of the fish, creating a shimmering effect.

# Restoring Alewife to the Bronx River



# Alewife (*Alosa pseudoharengus*) & Blueback Herring (*Alosa aestivalis*)

- Anadromous fish (spawn in freshwater then migrate to the ocean)
- Reach sexual maturity after 3-6 years and return to natal waters to spawn
- Iteroparous (repeat spawning)
- Important forage fish for a range of species including commercial and recreational fish and birds of prey
- Cycle nutrients between freshwater and saltwater ecosystems
- Once plentiful in rivers and tributaries in the northeast – streams described as “running silver”
- Threats include habitat alteration (dams), habitat degradation (pollution), bycatch (Atlantic Herring fishery)



Top: River herring captured during electroshocking. Bottom: Osprey catching river herring as prey (credit: Vic Zigmont).

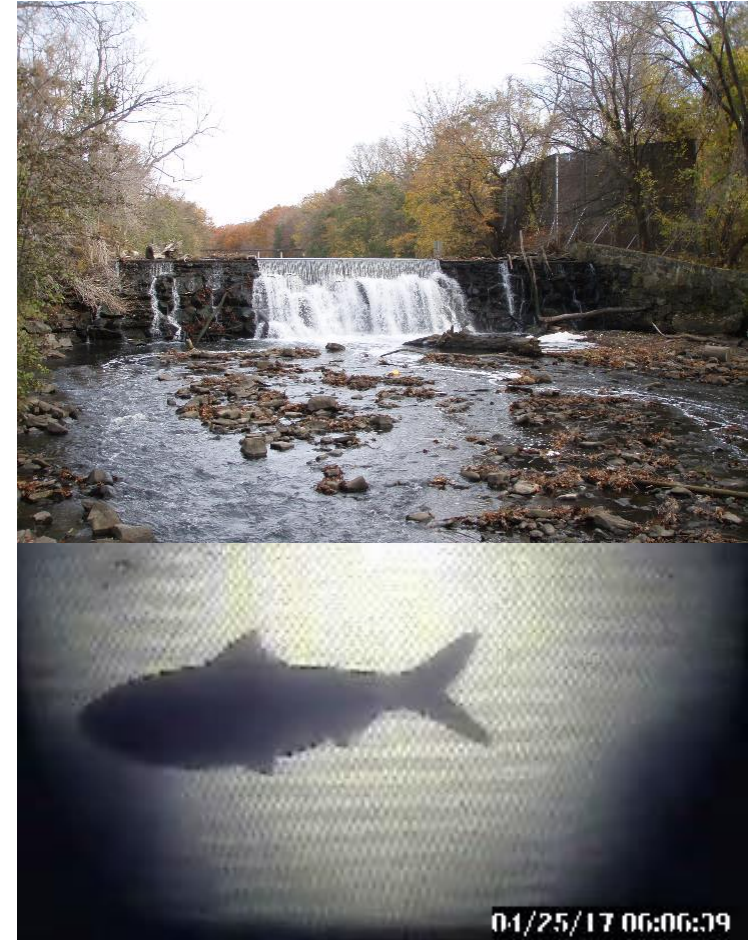
# Diadromous Fish Restoration Efforts

## Project Goals

- Reconnect access to spawning habitat
- Jumpstart native population & establish self-sustaining fish run
- Engage community partners in community-based science monitoring

## Timeline

- 1600s: Man-made dams limit upstream migration
- 2004: Fish restoration feasibility study
- 2006: First Alewife fish stocking
- 2015: River herring and eel fishways opened at first dam, monitoring began
- 2017: First river herring observed using fishway
- 2017-present: Annual fish stocking and monitoring



Top: E. 182<sup>nd</sup> St. Dam pre-fishway installation.  
Bottom: Underwater video footage of river herring using the fishway to migrate upstream.






# Bronx River Diadromous Fish Habitat Restoration Project Area

Bronx, NY

 Dam with Engineered Fishway

 Dam

 Bronx River

 NYC Parks



0 0.5  
Miles

Prepared By Forestry, Horticulture  
and Natural Resources

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Data Source: NYC Parks

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# First barrier: East 182<sup>nd</sup> Street Dam

East 182<sup>nd</sup>  
St. Dam  
with Alaska  
steep-pass  
fishway and  
eel ladder  
installed in  
2015.





# Fishway and Eel Ladder Use 2015-2019



312 River herring



> 1,300 American eel



161 Sunfish spp.



69 Largemouth bass



27 White sucker



13 Brown bullhead



19 Common carp

Total Fish > 1,900



# Upstream Impediments: Bronx Zoo & Stone Mill Dams





# Looking Forward

- Restoring connectivity upstream is the next step in establishing a native, self-sustaining herring run
- The first dam removal feasibility study in NYC will provide a wealth of information to inform future restoration practices
- Monitoring at E 182nd Street fishway and annual stocking will continue; WCS & CUNY plan to conduct eDNA research to help inform stocking efforts



Still frames from underwater video footage of stocked Alewife in the Bronx River (2019). Courtesy of the Jake Labelle, Wildlife Conservation Society.

# Links & more resources

WE ACT recently launched free online learning modules for grades 4-12

- [www.weact.org/home/getinvolved/education/mini-modules/](http://www.weact.org/home/getinvolved/education/mini-modules/)

Partnerships Academy Webinar Series: *NYC Community Groups, Parks, and the COVID-19 Crisis*

- [cityparksfoundation.org/build-anywhere/](http://cityparksfoundation.org/build-anywhere/)

For more on the Urban Waters Federal Partnership

- [www.epa.gov/urbanwaterspartners](http://www.epa.gov/urbanwaterspartners)

Virtual River Rally begins May 18

- [www.rivernetwork.org/connect-learn/river-rally/](http://www.rivernetwork.org/connect-learn/river-rally/)
- Scholarships are available!

# Thank you!

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Image: Lindsey Morgan Whorton, Gothamist