Waterfront Alliance is a U.S. based nonprofit organization with a growing coalition of more than 1,100 partners and shared goal: to bring about real change to shorelines, waterfronts, and coastlines across the nation and in the New York-New Jersey region.

We’re a thought leader, advocating for water and science-based education, climate resilience (environmental and economic), increased waterfront access, and vulnerable communities.

Together, we build, transform, revitalize, and protect accessible waterfronts for all communities.

Estuary Explorers is an experiential climate education program for grades 4 through 12, with multiple offerings, including: hands-on field labs, multi-week programs, and coastal clean-ups.

Many students in our metropolitan region have never visited their local water’s edge and are unable to benefit from their waterfronts as the greatest outdoor classrooms. They have little to no connection to the water that surrounds them and the many benefits our coastlines and waterways provide, including building climate resilience for their communities.

Field labs give students the opportunity to learn at the waterfront in their own communities, often unexplored or unfamiliar to them. While at the water, we teach students about the geography of the harbor, the differences between permeable and non-permeable surfaces, have them measure water quality parameters such as pH and salinity, and draw conclusions on how these scientific metrics factor into the resilience of their shorelines.

Multi-week sessions build off the lessons taught at the waterfront and continue them in the classroom. Waterfront Alliance educators make multiple trips out to your school and lead lessons directly out of our Coastal Resilience Education Toolkit. These lessons include mapping the green and grey infrastructure around a community, investigating how plastic breaks down and affects the environment, and designing a public service announcement in the wake of a major storm.

“The mere fact that kids get to study, research and visit the waterfront in their own neighborhood strengthens the conversations regarding conservation in general. This program is an invaluable resource to our school...”

Emmanuel Anastasiou – Washington Heights Expeditionary Learning School
WATERFRONT ALLIANCE

YEAR 2023

WATERFRONT FIELD LABS AND MULTI-WEEK PROGRAMS WITH SCHOOLS

Estuary Explorers field labs and multi-week programs connect students and teachers across New York and New Jersey to their local waterfront and wild places they may not already know. We teach lessons directly out of our own Coastal Resilience Education Toolkit. Our programs are free of charge to teachers and community groups and can be adapted to meet the needs of most classes.

Estuary Explorers worked with more than 10 schools in the 2022-2023 school year, returning to several of our old partners and forming new relations with schools across New York City. Along with our regularly offered assortment of waterfront activities at the New York Harbor School, the first-ever cohort of students enrolled in the WEDG® (Waterfront Edge Design Guidelines) Professionals Course.

Many students at the New York Harbor School will have careers in engineering and urban planning, and WEDG complements their careers and technical education.

<table>
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<th>Number of Classes</th>
<th>Number of students engaged</th>
<th>Returning</th>
<th>New</th>
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PRACTICAL BENEFITS OF ESTUARY EXPLORERS

- All materials are provided by Waterfront Alliance
- Lessons are taught directly out of the Coastal Resilience Education Toolkit
- Can accommodate class sizes of up to 30 students
- One-on-one meetings and check-ins available for teachers

“It was great having our campers be connected with the waterfront right next to the Castle Hill YMCA! Learning about climate change and resiliency as it relates to the kid’s own community was such a unique experience.”

Ibrahim Diakite – Castle Hill YMCA

Outside of the classroom we engage with people of all ages, provide information on the state of the waterfront, and offer fun and intuitive demonstrations of Estuary Explorers’ educational offerings.
COMMUNITY GROUPS AND ORGANIZATIONS

Waterfront Alliance education programs not only cater to the needs of schools but also to the community groups that make up the fabric of neighborhoods across our region. This past year we’ve had demonstrations ranging from touch tanks and measuring the salinity of the harbor.

- In October 2022 Waterfront Alliance joined the New York Aquarium’s Dive into Hudson Canyon! event by having a table to help spread awareness of designating the Hudson Canyon as a national marine sanctuary and at Hudson River Parks SUBMERGE Marine Science Festival out on Pier 40. Attendees build their own model shorelines and simulate the damage a storm does to an unprotected shoreline.
- For the second year in a row, Waterfront Alliance partnered with the Coastal Preservation Network and their annual Family Earth Fair and engaged 100 attendees with activities like coloring and looking at the biology of oysters.
- In the Bronx, Waterfront Alliance partnered with NYC Parks for the 175th anniversary of the High Bridge (please check if this is right), Waterfront Alliance engaged more than 100 students through a demonstration of how oysters are natural filters of the water and how a delicate balance of salt and fresh water keeps these amazing creatures alive and healthy.
- In June, Waterfront Alliance partnered with the City Island Chamber of Commerce on City Island in for a craft fair to engage with residents on the benefits of waterfront accessibility.
It was a really good way for us to learn more about our local area, get a better understanding of the serious pollution near us, and I think many in the firm feel more strongly about sustainability now than before.”

Christina Brown – Kohn Pedersen Fox

COASTAL CLEANUPS

Coastal cleanups are essential to restoring and protecting our marine environments. They play a vital role in preserving the health of our coastlines for this generation and the next. Like other coastal urban centers around the world, New York City is facing a monumental challenge of addressing its relationship with waste.

- For City of Water Day 2023, Waterfront Alliance partnered with the Castle Hill YMCA and Youth Ministries for Peace and Justice to host a cleanup at the waterfront along Castle Hill Creek and Pugsley Creek in the Bronx. A total of 30 volunteers joined us from Kohn Pedersen Fox Architects, local members of the Castle Hill YMCA, and from Queens. Together, the volunteers filled more than 20 bags of trash and helped restore access to a vital waterfront access point to the community, while learning about the importance of preserving our local ecology. Waterfront Alliance staff also engaged with local community members on cooling assistance and how to apply for air conditioning in New York City.
- In October 2022, Waterfront Alliance partnered with the Bay Ridge Environmental Group in Brooklyn to help with a cleanup along the Bay Ridge Promenade. We participated in and spoke to participants about the benefits of voting “Yes” for the now-passed Environmental Bond Act.
- Waterfront Alliance staff also participated in a cleanup hosted by Empire Dragons in partnership with Guardians of Flushing Bay, Riverkeeper, and NYC Park at Flushing Bay for the annual Riverkeeper Sweep.
COASTAL RESILIENCE EDUCATION TOOLKIT

Waterfront Alliance’s original Coastal Resilience Education Toolkit helps teachers guide their students on the topics of climate change and coastal resilience. With detailed lesson plans, interactive activities, curated links to multimedia resources, and tips for adapting these resources across grades 4 through 12, this education toolkit provides teachers and students with the necessary materials for meaningful and insightful education around climate change and coastal resilience.

This past year, we are proud to announce an updated toolkit that includes 3 brand-new lessons! These lessons include activities centered around plastic, waterfront design, and communicating extreme weather:

- An Investigation into Plastic
- Know Your Waterfront, Shape Your Waterfront
- Exploring Extreme Weather

Along with detailed lesson plans, our toolkit also offers an assortment of extension learning and questions to keep both you and your students engaged in these topics. Also new to the toolkit are 2 ArcGIS StoryMaps: one exploring the topics of extreme weather and how to be prepared for storm events, and another exploring plastics and how they break down into microplastics and nanoplastics in the environment.

Waterfront Alliance educators coordinate activities and help guide teachers in leading lessons directly from the toolkit.
6,000+ STUDENTS
across 40 schools engaged in Estuary Explorers programming since its inception in all 5 boroughs

10+ COMMUNITY EVENTS

20+ SCHOOL PROGRAMS

1,200+ STUDENTS
engaged within 2022-2023

“The program was very differentiated, and since it was hands-on, it was more accessible to students with different learning backgrounds.”

Samantha Soriano – IS 49 Berta A. Dreyfus
Based on teachers surveyed after completing an Estuary Explorers program

100% of teachers believed Estuary Explorers fit within their teaching goals

100% of teachers believed that their students benefit from outdoor learning experiences

100% of teachers believe that they have the skills to implement topics such as climate change and coastal resilience into their own future lesson plans after going through our program

100% of teachers would recommend Estuary Explorers to another teacher
LOOKING AHEAD

- Continue to expand our Estuary Explorers programs to new schools and provide additional classes to our returning schools
- Offering CTLE credits for teachers
- Host a Community Day focused with teacher trainings on how to bring lessons on climate change to their classroom
- Play a vital role in the inaugural Climate Action Days for NYC public schools
- Continue to host and expand coastal clean-ups across the region

“The transparency, flexibility, and passion of the staff is fantastic”

Robert Markuske – New York Harbor School

“We loved the hands-on aspect”

Jamie Garfinkel – IS 141 The Steinway
Thank you to our funders!

During the 2022-2023, Estuary Explorers was supported by the office of City Council Members:

- Chris Marte – District 1
- Julie Menin – District 5
- Shaun Abreu – District 7
- Carmen De La Rosa – District 10
- Marjorie Velazquez – District 13
- Althea Stevens – District 16
- Amanda Farias – District 18
- Vickie Paladino – District 19
- Sandra Ung – District 20
- Tiffany Caban – District 22
- Joanne Ariola – District 32
- Lincoln Restler – District 33
- Justin Brannan – District 43
- Ari Kagan – District 47
- Kamillah Hanks – District 49

For more information, contact:

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Jmadelone@waterfrontalliance.org

Or visit:
waterfrontalliance.org