FORDHAM LANDING
HARLEM RIVER
ACTIVATION
SURVEY 2022
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SUMMARY

After an introduction, this report is laid out in five chapters that proceed geographically from north to south, describing interconnected maritime activation zones envisioned for the Fordham Landing site. Each chapter begins with a narrative and concludes with short-term, medium-term, and long-term actions. Throughout each chapter are references to specific maritime operators, companies, experts, and stakeholders. The end of each of the five chapters features an explanation of how these suggested strategies are reflected in the New York City Comprehensive Waterfront Plan, a roadmap released at the end of 2021 for improving the City’s coastline while enhancing resilience and climate change adaptation, promoting environmental justice, and expanding access to the waters that surround us.

This report was reported in partnership with Dynamic Star LLC to advise their Fordham Landing development project, which comprises approximately 18 acres along the Harlem River on both sides of the University Heights Bridge. The first stage will be developed south of the bridge and will include approximately three quarters of an acre of waterfront public open space and is expected to break ground at the end of 2022. The second stage, requiring zoning changes, will be developed north of the bridge and is proposed to include nearly 2.25 acres of waterfront and inland public open space.
As designed by Perkins Eastman for Dynamic Star, this is the general concept plan for the Fordham Landing waterfront.
INTRODUCTION

MARITIME ACTIVATION AT FORDHAM LANDING

At the Fordham Landing waterfront, maritime activation will serve many purposes: reclaim and revitalize the waterfront for the Bronx community, offer new transit options, offer cultural and educational events, provide active and passive recreation, improve water quality and shoreline habitat with environmental restoration, create jobs and entrepreneurial opportunities, introduce citizen science and volunteer stewardship programs, and more.

To accomplish this, Waterfront Alliance proposes a series of unique zones knitted together with an environmentally sensitive waterfront path that meanders past a protected cove and community boathouse stocked with kayaks and rowing shells, past a town dock, fishing boats, yachts for charter, and a ferry landing. South of the ferry landing, the path leads into another natural zone of restored wetlands and eventually connects with Roberto Clemente State Park.

In the following Maritime Activation Plan (MAP), we present waterfront activation strategies that will make the shoreline welcoming in both directions: pedestrians to the river; boaters to the land. A range of options ensures a range of activity, as commercial and transportation docks, recreation programs, and community spaces invite New Yorkers and visitors to and on the water. We offer short-term and long-term strategies that anticipate not only maritime activation, but climate change adaptation and emission-free transportation.

These activation strategies for modest commercial activity and a strong, shared community space are proposed in context with programs across the river on the Manhattan side, as well as with development underway elsewhere along the Bronx side of the Harlem River. In conducting research, we connected with local operators and international experts. We became acquainted with the challenges of the river and learned of its emerging renaissance.

A HARLEM RIVER RENAISSANCE

From north to south, the Harlem River is at the brink of a renaissance. Restoration and development projects are in progress along the river on both the Bronx and Manhattan sides. An Urban Land Institute report recommends that planners consider both sides of the upper Harlem River as one cohesive community connected by a common waterway, rather than separated by it.

Across from the Fordham Landing project, three separate restoration and building projects will transform the Inwood shoreline. In November 2021, the New York City Public Design Commission approved the construction of a boathouse, pavilion, and floating dock in Sherman Creek Park, on property managed by the New York Restoration Project. The boathouse will be operated by Row New York, and will allow this highly regarded nonprofit—which already has transformed the lives of thousands of young people throughout the five boroughs—to expand programming and bring even more people to the Harlem River. The new boathouse and floating dock are close to a large elementary school, with community gardens, a nature path, a small beach, and restored wetlands nearby. Immediately north of Sherman Creek, the City of New York is building a new two-acre waterfront park along Academy Street. A few blocks north of this, Inwood’s North Cove will be restored as an ecological resource, and City-owned parking lot will be turned into parkland. Construction has begun on the Sherman Creek site; construction will begin on Inwood’s two waterfront park projects later in 2022.

Development projects south of Fordham Landing on the Harlem River on the Bronx side include Bronx Point (home to the Universal Hip Hop Museum), Bankside at the Mott Haven waterfront, and more high-rise buildings along Exterior Street that collectively will bring thousands of new residents to the waterfront.
CHALLENGES

The Harlem River is spanned by seven swing bridges, four lift bridges, and four arch bridges. While many of the 15 bridges that cross the Harlem River have low clearances, this is not necessarily an obstacle for motorized vessel passage, contrary to popular assumption. Except for the Spuyten Duyvil Bridge, which is the northernmost bridge, at the Hudson River, that bears the railroad tracks, the lowest bridge has a minimum of 24 feet at mean high water. The Spuyten Duyvil Bridge is lower in vertical clearance, and is required by law to open on signal at all times for the passage of vessel traffic, as it does for regularly for the Circle Line. Marine passage takes precedence over rail passage. To navigate the rest of the river, ferries and commercial boats need to be under 24 feet in height and/or be “purpose-built.”

While the Harlem River is not appropriate for recreational boaters in kayaks, sailboats, or rowboats (except in a protected cove), the waterway is continuously used by competitive rowers in sleek, light, narrow boats called shells. In this sport, which has an important legacy on the Harlem River, athletes row singly or in groups of two, four, or eight, always accompanied by a coach in a small motorboat.

Most stakeholders agree that it’s possible for rowing teams and motorized boats to navigate safely together on the Harlem River, with mutual caution, coordination, and respect. Vessels must abide by government-regulated no-wake zones on the waterway, which means that boats must slow down to near idle speed in designated areas. There is special concern about jet skiers, which are being seen in greater numbers on the river, and tend to ignore boating regulations.

The local Bronx community may not have much experience with boating or waterfront access, including recreational swimming. The community may need to be reassured of the safety and benefits of access to the water’s edge. Local developers can provide reassurance by describing plans for safety measures (such as guardrails along the shoreline where appropriate) and emergency equipment (like life ring buoys) to be installed at the shoreline. Local developers could also support a community swimming program.
CHAPTER ONE
WATERFRONT ACCESS, LIVING SHORELINE, ENVIRONMENTAL PROGRAMMING

INTRODUCTION
The overarching recommendation is to make restored natural environments the focus of the northernmost and southernmost ends of the Fordham Landing site. Because the banks of the Harlem River are threatened by wave energy, erosion, and sea level rise, establish a living shoreline where possible that integrates native species such as Spartina alterniflora (smooth cordgrass) and ribbed mussels, and incorporates green infrastructure technologies such as bioswales, permeable pavement, and bioengineering that captures storm water. The benefits of a living shoreline are greater biodiversity, storm protection, wave attenuation, sediment retention, and water purification.

Enliven the required waterfront access along the length of the Fordham Landing site by creating a series of unique zones that transition smoothly from one to the next, with pedestrian and bicycle paths amid restored natural habitat, and river access points. From north to south, the waterfront path will gradually become busier and more commercialized, meandering through wetlands, past a protected cove and community boathouse with kayaks and rowing shells, past fishing boats, yachts for charter, and a ferry dock. South of the ferry dock, another natural zone of restored wetlands connects with Roberto Clemente State Park.

Even in the busier zones, where waterfront design incorporates less nature, design can still be environmentally sensitive. Example: Glass esplanade panels are part of Seattle’s waterfront esplanade. These thick but transparent panels let pedestrians look into the water and allow light to penetrate.

Work with environmental programmers to educate the community about this unique river habitat and resilience. Sponsor citizen science programs. Create volunteer opportunities for people of all ages, especially students, to take care of the shoreline; teach stewardship. Ensure that the Bronx community feels invited to the waterfront, and safe there.

HARLEM RIVER WILDLIFE
More than 70 different species have been catalogued across the river at Sherman Creek and North Cove (where New York City is starting construction in 2022 on new river access and restored habitat, including 45 types of birds, as well as mussels, clams, oysters, possums, raccoons, and muskrats. The National Oceanic and Atmospheric Association designated the Harlem River as essential fish habitat for 11 fish species, such as red hake, winter flounder, and Atlantic sea herring. Harbor seals have been seen in the Harlem River.

“We want access to a healthy, clean, green waterfront with options for recreational use.”

Karen Argenti, Board member, Bronx Council for Environmental Quality
Case study: Build an artificial reef, guided by New York Restoration Project

Oyster Castles (brand name) are an element of a living shoreline that feature stacked, eco-friendly, concrete blocks with embedded shells to create new habitat for marine species. Two years ago, the New York Restoration Project installed a 500-foot-long artificial reef, parallel to the shoreline, of Oyster Castles at Swindler Cove, across from the Fordham Landing site. No heavy equipment was used. Several workers lugged Oyster Castles piece by piece into the water at low tide. The project took two months to build, but years to acquire permits for. The New York Restoration Project welcomes partnerships and wants to share knowledge about the science and the bureaucracy of recreating similar reefs.

“This approach could easily be done by other groups. It’s like building with concrete Legos in the intertidal zone. This way of building resilience is adaptable.”

Jason Smith, Director of Northern Manhattan Parks, New York Restoration Project

Last summer, New York Restoration Project’s Jason Smith and his colleague stacked Oyster Castles along the Swindler Cove waterfront to create a living shoreline. Photographs by Ben Hider.
ENVIRONMENTALLY FOCUSED WATERFRONT ACTIVITIES

- Self-guided nature trail
- Coastal cleanups organized by clubs
- Billion Oyster Project community oyster monitoring site
- Waterfront Alliance Estuary Explorers field trips from local schools
- Environmental boat tours
- Canoemobile floating classroom
- Floating greenhouse (aka Jellyfish Barge)

DAYLIGHTING TIBBETS BROOK

A century ago, New York City covered part of Tibbetts Brook, a stream that ran from Yonkers to the Harlem River, and sent it into a sewer tunnel at Van Cortlandt Park. Today, this underground waterway contributes to sewage overflows and the flooding of the Major Deegan Expressway. The NYC Department of Environmental Protection is working on a $130 million plan to “daylight” the stream—uncover the waterway and let it take more of a natural course. Daylighting Tibbetts Brook will create new green space in the Bronx and improve water quality of the Harlem River. The project depends on New York City acquiring land from CSX Transportation, a rail freight company.

Tibbetts Brook empties into the Harlem River via a drain pipe at the Fordham Landing waterfront. The daylighting project will probably unfold in three phases—diverting the Tibbetts Brook baseflow from the sewer system; daylighting of the stream through CSX property; and reconnecting Tibbetts Brook to the Harlem River via pipes that travel underneath the Metro North rail lines. Fordham Landing would be involved in the third and final phase. As part of the Urban Waters Federal Partnership, federal funds and technical expertise will be available to support the project.
ACTIONS

Short term
- Build a living shoreline along the natural areas at the north and south ends of the site.
- Set up informational stands along the esplanade describing Harlem River wildlife.
- Open public restrooms and outdoor hand-washing stations.
- Engage the Boy Scouts and Girl Scouts, Waterfront Alliance Estuary Explorers, and other local youth and community organizations for coastal cleanups and field trips.
- Work with Billion Oyster Project’s Community Water Quality Testing program to establish a testing site with community-based participants.
- Contact Billion Oyster Project, which can partner at any scale. To start, set up a low-cost small in-water cage, known as Oyster Research Station. Larger scale projects needing more space include cage building and shell cleaning. Billion Oyster Project is interested in contributing early to design ideas.

Medium term
- Install accessible oyster cages on a soft shoreline or dock. Example: At the Two Trees site in Brooklyn, on the East River, access is granted to allow staff to pull in small and large oyster cages.
- Schedule visits from the Canoemobile floating classroom.
- Work with the New York Restoration Project and the Billion Oyster Project to create artificial reefs in the north or south ends of the Fordham Landing site, or both.

Long Term
- Coordinate with the NYC Department of Environmental Protection in its project to daylight Tibbetts Brook.
- Open an indoor space for a water lab, to be programmed by partner organizations such as Waterfront Alliance or Billion Oyster Project, shared with other organizations and open to the public.

Case study: Oyster programs at the Domino Sugar site being developed by Two Trees

At the Two Trees site on the East River waterfront in Brooklyn, there are hand-washing stations and plenty of seating at the river’s edge. A davit system is used to pull in oyster crates. Two Trees provides Billion Oyster Project with no-cost indoor space at the base of one of its buildings, to set up equipment for students to measure water quality (salinity, pH, etc.), size of oysters, and other creatures found in the East River. This space is shared with Brooklyn Boatworks, a boat-building organization, and is open to the public.

“We seek creation of waterfront spaces that are safe and accessible for all participants to use and enjoy; for signage to be printed in multiple languages; for people to be able to touch the water, measure oysters, journal, or just sit and enjoy.”

Katie Mosher, Senior Director of Programs, Billion Oyster Project.
How these recommendations for waterfront access, a living shoreline, and environmental programming at the Fordham Landing waterfront dovetail with the New York City Comprehensive Waterfront Plan.

**Chapter: Waterfront Public Access**
- Goal 1: Expand public access to the waterfront with an emphasis on equity by bridging access gaps in historically underserved areas and supporting growing waterfront communities.
- Goal 2: Promote opportunities to get onto and into the water.
- Goal 3: Shape design and programming of public waterfront open spaces to reflect public use needs.
- Goal 4: Promote good stewardship of public spaces on the waterfront.

**Chapter: Water Quality and Natural Resources**
- Goal 2: Protect ecosystems, support ecosystem services, and enhance biodiversity of the natural waterfront, including in-water strategies.
- Goal 3: Help connect New Yorkers with waterfront ecology and raise awareness of water quality and habitat protection.
CHAPTER TWO
PROTECTED COVE, RECREATIONAL BOATING, COMMUNITY FOCUS

INTRODUCTION

A protected cove at the northern end of the Fordham Landing site—with a living breakwater forming the north side of the cove and a community pier forming the south side (if permits can be secured)—would afford options for safe recreational boating and ways to touch the water. On land, a two-story boathouse housing rowing shells and kayaks also could offer meeting and training space. A section of boat racks could be rented to individuals with their own kayaks or shells. This area of community-focused maritime activity would smoothly transition at the north end to a quiet natural area for reflection and environmental programming (see Chapter 1), and at the south end to a busier scene with a town dock and boat rentals (See Chapter 3). The community pier should be accessible to all members of the public and accommodate multiple programs. School field trips and summer camp programs would take place here.

“We have a summer camp program for third to ninth graders—sailing, kayaking, powerboating, scuba diving, oyster research, swimming. It sold out in an hour.”

Rob Crafa, Waterfront Director, SUNY Maritime College, Bronx.

Options for recreational boating were discussed with operators and stakeholders. Sailing was quickly excluded. Even small sailboats—like the 24-foot boats used to teach sailing by the Manhattan Yacht Club and the One°15 Brooklyn Marina—would not be appropriate for the Harlem River, due to the low bridges and relatively swift current. Kayaking in the Harlem River channel was strongly discouraged by boating programmers because of the intermittently dangerous current—but short-term kayaking in a protected cove is not excluded from this inventory. The only human-powered boating that is advised to take place in the Harlem River itself is rowing in shells, supervised by athletic coaches. Please note that rowing shells (sleek, narrow, lightweight, wobbly, meant to skim fast across the water) are very different from rowboats (wide, stable, meant for puttering about). Rowboats are intended for use in a protected area, not for the river.

“IT’s a challenging site. You need to get students down there. Public school students, Bronx Community College—get them all involved. Activity at the waterfront is going to be good for business, and good for residents.”

Rob Crafa, Waterfront Director, SUNY Maritime.
THE HARLEM RIVER'S ROWING LEGACY

At the turn of the 20th century, the Harlem River was lined with rowing clubs and boathouses and hosted important regattas with thousands of spectators lining both sides of the river. It was New York's equivalent of the rowing scene on the Charles River in Boston (where the international Head of the Charles regatta continues to take place each year) and the Schuylkill River in Philadelphia (where the collegiate Dad Vail regatta takes place). By the 1930s, the Harlem River boathouses were gone (evicted in many cases by Robert Moses) and the rowers with them. About 20 years ago, rowers began to return in greater numbers to the Harlem River, and today, crews from community organizations, private schools, and colleges practice on the waterway. Can competitive rowing co-exist with motorized boats on this waterway? Most stakeholders said yes, with mutual caution, respect, and cooperation. Most rowing practice takes place in the early morning and late afternoon/early evening, times in which river conditions are optimal for the sport and students and adults are not in school or at work.

ROWING AT THE FORDHAM LANDING SITE

Harlem River Community Rowing, which offers rowing programs for adults, and Row New York, which offers programs for youth, veterans, and people with disabilities, already have presences on the river on the Manhattan side. Rachel Cytron, executive director of Row New York, and Bob Barnett, president of Harlem River Community Rowing, expressed interest in organizing programs for Bronx residents at the Fordham Landing site, and sharing space. Both organizations currently launch from Inwood’s Muscota Marsh dock, where Columbia University has a boathouse. Row New York, a large organization with rowing programs in other boroughs, will move to the new boathouse and pavilion under construction by the New York Restoration Project at Sherman Creek. Harlem River Community Rowing is looking for permanent space. At Fordham Landing, rowers could launch from the end of a new community pier that would form the south side of the protected cove. If rowing becomes a greater presence on the Harlem River, perhaps regattas could be hosted here once again, and bring the kind of business and pageantry to Fordham Landing and the Harlem River that the Head of the Charles and other famous regattas bring to their cities.
KAYAKS, ROWBOATS, AND PADDLEBOATS

A program offering kayaks, rowboats, or paddleboats for rent should only be undertaken within a protected cove. A small program would probably have 25-30 boats available for use.

FISHING

Residents of the Bronx enjoy fishing, as evidenced by fishing activity at various points across the borough, from Pelham Bay Park to the Harlem River. People are generally aware of health advisories warning against eating fish from polluted waters, so fishing probably would be catch and release. Local developers could install informational signs and a bait station.

Example: El Barrio Bait Station on the East River at the East Harlem waterfront opened two years ago. It’s a place to cut bait, clean fish, and it also provides educational information about the fish in the water.

Case Study: Living breakwater

Using partially submerged structures built of stone and ecologically-enhanced concrete blocks, such as those made by ECOncrete, a human-made breakwater will attenuate waves, reduce erosion, increase diversity of the marine habitat, and improve water quality. One nearby example of a successful living breakwater is in the Hudson River near West Harlem Piers Park, where reef balls installed in 2006 are hosting marine life. A living breakwater being constructed off the Staten Island shore by SCAPE is considered a model for climate-adaptive green infrastructure. As part of the Staten Island Living Breakwaters project, Billion Oyster Project is providing social and science programs for the local community. The proposed Fordham Landing living breakwater could be perpendicular and/or parallel to the shore.

ACTIONS

Short term

- Establish waterfront access.
- Reach out to the Bronx community to describe planned waterfront access, programming, and safety measures, and to receive input. (Refer to best practices for community engagement in the New York City Neighborhood Planning Playbook).
  - If permits can be secured, build a living breakwater at the north side of the protected cove.
- Explore available technologies, such as artificial modules called reef balls.
  - If permits can be secured, build a community pier to complete the enclosure of a protected cove.
- Install a ramp and floating dock at the river end of the community pier.
• Create a community landing at the shore end of the community pier.
• Work with Harlem River Community Rowing and Row New York for infrastructure input. Rely on these organizations to create boating programs that will be attractive to the local community at a reasonable cost.
• Program floating movie screens to get people to the waterfront for early interest.

Medium term
• Start in-cove boating programs with kayaking and paddleboats.
  ◦ Manhattan Kayak Co. indicated interest in the Fordham Landing site, and currently offers kayak and paddleboard rentals on the Hudson River at 44th Street.
  ◦ Wheel Fun Rentals operates kayak and paddleboat rentals in Brooklyn and Queens.
  ◦ Downtown Boathouse, a nonprofit, offers free kayaking in several New York City locations.
• On the shore, set up outdoor racks or a container for storing shells and kayaks. These are precursors to a boathouse. Racks can either be attached to the ground or a wall—or on wheels so that they can be rolled.
• Allocate space on the ground floor of an adjacent building for indoor training and teaching space.
• Partner with an organization that runs summer programs.
• Initiate Billion Oyster Project programs.
• Install a bait station for people fishing.

Long term
• Build a modest boathouse.
• Work with Manhattan Kayak Co., Harlem River Community Rowing, and Row New York to design space for boats.
• Plan for extra boat racks to be rented to individual rowers who have their own shells.
• Incorporate space for a community room, in which rowers can train, teachers can bring students, and nonprofit organizations can meet.
• Incorporate a loading area facing away from the shoreline, for vehicles with trailers to load boats.

How these recommendations for a protected cove, recreational boating, and a community focus at the Fordham Landing waterfront dovetail with the New York City Comprehensive Waterfront Plan.

Chapter: Climate Resiliency and Adaptation
• Goal 1: Broaden awareness of climate risks and how New Yorkers living and working on the waterfront can take action to adapt to the impacts of climate change.
• Goal 4: Identify opportunities for coastal flood protection, where feasible and practicable, to manage the impacts of coastal storm surge and high tide flooding.

Chapter: Waterfront Public Access
• Goal 1: Expand public access to the waterfront with an emphasis on equity by bridging access gaps in historically underserved areas and supporting growing waterfront communities.
• Goal 2: Promote opportunities to get onto and into the water.
• Goal 3: Shape design and programming of public waterfront open spaces to reflect public use needs.
• Goal 4: Promote good stewardship of public spaces on the waterfront.
CHAPTER THREE
TOWN DOCK, MARINA AND/OR MOORING FIELD, BOAT MAINTANCE AND REPAIR

INTRODUCTION

Between the busier commercial and transportation waterfront around the University Heights Bridge and the quieter waterfront stretch at the north end of the Fordham Landing site (where rowers can launch and kayakers can paddle in a protected cove), local developers can create a middle area with a range of docking options: a town dock catering to boat owners in small personal motorized vessels on day trips, a wharf with docking options, and possibly a small marina and/or mooring field for longer stays. Historic, educational, and security vessels could tie up in this area. On land, a small building for boat maintenance would be fitting.

Experts and maritime operators disagree about the feasibility of a marina here (as well as the prospect of an influx of commercial boats to the Fordham Landing site). The Harlem River is, on average, 400 to 500 feet wide. By comparison, the Hudson River averages more than half a mile in width, and the East River is as wide as 4,000 feet. Considering the narrowness of the Harlem River, its swift current, and the low clearance of many bridges, two marina experts—Shea Thorvaldsen, founder, TMS Waterfront, and director of capital projects, One°15 Brooklyn Marina; and Nate Grove, chief of waterfront and marine operations, NYC Parks—voiced reservations about a marina at Fordham Landing. Generally, Mr. Grove thought a marina might heighten dangerous river traffic conditions, and Mr. Thorvaldsen questioned the commercial demand and financial feasibility. Other stakeholders, however, thought a modest marina could be possible. Consultation of navigational charts and bathymetric and geophysical studies will help determine the physical feasibility of a marina and/or mooring field.

A mooring field, where boats anchor to buoys secured with lines to the riverbed, could offer short-term and long-term berths for private boats, and is an alternative to wharf-side mooring. Boaters would pay for a permit on a first-come, first-served basis. Infrastructure accompanying this would include a pump-out station, plus launch service to get boaters to and from their boats.

Example: Hudson River Park Trust operates two mooring fields, near Pier 25 and Pier 40.

Boats, docks, and all waterfront structures must be maintained and cleaned. An on-site maritime repair and maintenance building and team is recommended. Capt. Michael Duffy of the Circle Line recommends investing in a boat lift as part of maritime maintenance.

Rob Crafa, waterfront director at SUNY Maritime College (located at the Throggs Neck waterfront of the Bronx), proposes space for a training classroom and internship program that would teach maintenance and repair of boats and waterfront infrastructure. The program would seek to attract Bronx residents (especially students), offer specialized training, and promote good job opportunities in maritime workforce as well as higher education at maritime colleges.

“[For a maritime training facility], you’d need a classroom, and the docks. It would be good to have upland space to work on boats. It doesn’t need to be much. Let students know what it’s like to work in a boatyard. You’ll need people to repair docks and boats anyway. It’s great to have popular programs, but it’s good to have the back end, where boats get repaired.”

Rob Crafa, Waterfront Director, SUNY Maritime.
ACTIONS

Short term
- Consult navigational charts; perform bathymetric and geophysical studies to determine feasibility of a marina and/or mooring field.
- Contact SUNY Maritime:
  - to create a satellite training program to expose Bronx residents, especially students, to opportunities in the maritime workforce.
  - to staff a repair and maintenance team for the Fordham Landing waterfront.

Medium Term
- Hire a dockmaster.
- Create wharf-side docking options.
- Work with operators of historic and educational vessels, domestic or foreign, which could serve as educational resources and tourist attractions (similar to the South Street Seaport Museum). Examples include:
  - OceanXplorer - Marine research boat, science lab, and floating Hollywood media production studio.
  - W.O. Decker – 1930 tugboat based at the South Street Seaport Museum.
- Build a shed for boat maintenance and repair.

Long Term
- Build a multi-use town dock, where boats can pull up to drop off or pick up passengers, and where boaters can choose temporary docking for an hour or a day. Incorporate a landside charging station for battery-powered vessels.
- Build a mooring field, if deemed appropriate.

“Anything that goes in the water requires a lot of maintenance. You need a group to maintain it.”

Nate Grove, Chief of Waterfront and Marine Operations, NYC Parks
How these recommendations for a town dock, marina and/or mooring field, boat maintenance and repair at the Fordham Landing waterfront dovetail with the New York City Comprehensive Waterfront Plan.

Chapter: Waterfront Public Access
- Goal 1: Expand public access to the waterfront with an emphasis on equity by bridging access gaps in historically underserved areas and supporting growing waterfront communities.
- Goal 2: Promote opportunities to get onto and into the water.

Chapter: Economic Opportunity
- Goal 1: Advocate for a 21st century working waterfront by pivoting to green technology and environmentally sustainable practices.
- Goal 3: Connect investments on the waterfront to employment and career advancement opportunities for New Yorkers.
- Goal 5: Promote the use of our waterways for entertainment, hospitality, and education to provide jobs and drive tourism, including ecotourism.
CHAPTER FOUR
COMMERCIAL VESSEL ACTIVITY, WATERSIDE BUSINESS, WATERBORNE PACKAGE DELIVERY

INTRODUCTION

Vessels arriving at the commercial waterfront stretch north of the University Heights Bridge could include sightseeing cruise boats, dinner boats, party boats, fishing boats, and yachts for private charter. Any visiting vessel, however, needs to be on the smaller side because the narrowness of the waterway (400 to 500 feet) precludes large boat traffic; moreover, vessels are restricted to a height of 24 feet to be able to pass under bridges. The northernmost bridge at Spuyten Duyvil opens on demand.

Two maritime activation experts—Shea Thorvaldsen, founder, TMS Waterfront, and director of capital projects, One°15 Brooklyn Marina; and Nate Grove, chief of waterfront and marine operations, NYC Parks—voiced reservations about an influx of commercial boats at Fordham Landing, due to the narrowness of the river, the low clearance of many bridges, and the preponderance of rowing crews. Generally, Mr. Grove was concerned that more commercial boats would contribute to dangerous river traffic conditions. Mr. Thorvaldsen spoke from a financially pragmatic perspective and believes there is little appetite at this site for commercial maritime activity. Opinions from other operators ranged from willing to try, to very enthusiastic.

In this commercially focused section of the Fordham Landing waterfront, docking options could run the length of a pedestrian-accessible wharf along the river.

If government agencies deem there to be room to extend infrastructure into the river, a multi-use floating dock could accommodate boats of various sizes and designs. Several operators pointed to The Port Authority of New York and New Jersey floating dock at Brookfield Properties in Lower Manhattan as a well-designed hub because it provides for front-loading and side-loading vessels. While this large (.75 acre) structure cost $50 million, a multi-use floating dock on the Harlem River would be smaller and could be built for far less.
If local developers choose to make the small existing harbor, identified in sketches as “The Basin,”
available to commercial docking, boat captains would either maneuver and turn into this harbor to dock,
or pull alongside the wharf bordering the river. Docking decisions would depend on the speed of the
current, the depth of the dredged harbor, the draft and length of the boat, the tide and time of day.

On land, a two-story building could house the dockmaster’s office, with ticketing at ground level and a
cafe and bar on the second level. Other commercial water-related businesses that would be appropriate
here are waterside restaurants, a floating spa, a floating concert venue, and waterborne package
delivery.

In any discussion about more commercial boats in this narrow waterway, planners must consider the
use of the river by rowers in shells, many of them young people training for competition. Most
stakeholders from both the motorized boat and rowing worlds say safe coexistence is achievable, with
mutual caution, respect, and cooperation. Note that No Wake Zones dotting the Harlem River require
motorized boats to slow down to nearly idle power.

**VESSEL SPEED RESTRICTIONS ON THE HARLEM RIVER**

Anyone operating a motorized boat on the Harlem River must operate cautiously, be mindful of
their wake, and obey speed limit signs and no wake zones. When navigating through a no wake
zone, state and federal regulations require that the captain observe the slowest-possible speed at
which a vessel can operate and maintain steerage, no greater than 5 MPH. On the Harlem River, no
wake zones are designated from the University Heights Bridge south to the High Bridge and
between the Spuyten Duyvil Bridge and the Broadway Bridge. Some maritime stakeholders are
calling for these no wake zones to be extended. Also, no vessel may operate within 100 feet of a
shore, pier, dock, or moored vessel at a speed exceeding 5MPH. Anyone who operates a vessel
recklessly, including a Jet Ski, may be cited by the authorities. Please see map on page 4.

**COMMERCIAL WATERFRONT BUSINESS POTENTIAL**

**Major maritime operators indicating interest in Fordham Landing:**
- Classic Harbor Line: already navigates the Harlem River with Manhattan and Manhattan II.
- City Experiences by Hornblower: smaller vessels include Lexington, Manhattan Elite, and Bateaux
  New York.
- New York Cruise Lines: Circle Line, dinner boats, New York Water Taxi

**Partial list of small commercial boats based in New York City appropriate for the
Harlem River:**
- Bay Boat Rental: fishing and sightseeing tours (based in Sheepshead Bay).
- Hudson River Striper Charter: fishing charter.
- New York Harbor Tours: charter tours in 16-passenger Reliance or 6-passenger Tireless (based in
  Lower Manhattan and Brooklyn).
- New York Media Boat: operates several small rigid-hull, inflatable boats with capacities ranging from
  6 to 15 passengers (based at North Cove, Lower Manhattan).
- NYC by Boat: charter tours on a 6-passenger vessel (based in Brooklyn).
- Sportfishing Charters: maximum of four passengers.
Floating spas
- Bota Bota floating spa: this spa and restaurant is based on a refurbished boat docked at the Montreal waterfront.
- Oslo Fjord Sauna Association: Lucas Plummer, sauna master and environmental manager for the association, indicated enthusiasm for a floating spa at the Fordham Landing site.

Examples of floating and sailing restaurants in the waters around New York City
- North River Lobster Company, La Barca Cantina, and Hudson’s (all owned by New York Cruise Lines and all too big to navigate the Harlem River—but Robert Maher at New York Cruise Lines is available for consultation).
- Pier 66 Maritime: popular bar and grill aboard a barge used as a dock for historic boats.
- Baylander: bar and food aboard a historic boat, West Harlem Piers.
- Crew: operates restaurants at the waterfront and aboard boats, including the Pilot schooner (cocktails at the Brooklyn waterfront), Grand Banks schooner (oysters at Tribeca waterfront), Drift In (West Village waterfront restaurant), and Island Oyster (Governors Island waterfront restaurant).
- City Experiences by Hornblower: operates the Bateaux New York dinner boat (all-glass, low, European-inspired).

Floating concert venue
Barge music: docked at Brooklyn Bridge Park.

“There’s an opportunity for an operator to be creative, learn the market and create a profitable business. A fellow operator once said to me, ‘you had better be prepared to bleed green if starting one of these businesses.’ In other words, the initial investment must assume an initial loss for period of time.”

Rick Scarano, Classic Harbor Line and Scarano Boat Building.

Case study: Charter tours with Classic Harbor Line
Classic Harbor Line, which operates ticketed cruises and private charters, envisions a sightseeing tour from Fordham Landing heading north through the Spuyten Duyvil Bridge to view the grandeur of the Hudson River and the Palisades. Classic Harbor Line’s 1920s-style yacht Kingston, capacity 49, already traverses the Harlem River on circumnavigations of Manhattan. Classic Harbor Line would require minimal docking infrastructure, a small ticket booth landside, and—most important—demand at this site for a sightseeing program.
Case Study: Cargo delivery by water

In December 2021, the de Blasio administration committed $18 million in City funding for the Blue Highways pilot program, a joint effort between the New York City Department of Transportation (NYCDOT) and the NYCEDC to spur investment in waterborne delivery of goods. The program also encourages the use of sustainable last mile delivery solutions like electric trucks and commercial cargo bicycles. At the same time, delivery companies have promised to reduce carbon emissions and are open, if not eager, to participate in waterborne delivery.

NY Waterway has committed to move more cargo across the Hudson River and is starting the program by carving out space on its passenger ferries for packages. NY Waterway executive Donald Liloia explained that a vessel dedicated to waterborne freight delivery, however, would require roll-on/roll-off infrastructure that the Harlem River waterfront probably does not have room for.

Case study: Norwegian-style floating sauna

Lucas Plummer, sauna master and environmental manager for the Oslo Fjord Sauna Association, drew parallels between the Oslo fjord and the Harlem River: the transition from industrial hubs to recreational places, improvement of water quality, and the presence of nearby communities that could greatly benefit from a spa. The Oslo Fjord Sauna Association is nonprofit, membership-based, and uses volunteer labor. Excess revenue goes into community events such as free concerts, free sauna days, swimming lessons and educational seminars on marine biology. Mr. Plummer says saunas don’t necessarily use the water they are floating in, and points to a popular sauna on Norway’s Alna River, which does not make use of the river water because it has excessive bacteria counts. Mr. Plummer is interested in further discussion about the Fordham Landing site.

“A sauna can be a part of a campaign for cleaner water.”

Lucas Plummer, Sauna Master and Environmental Manager, Oslo Fjord Sauna Association.
ACTIONS

Short term
- Reach out to commercial vessel operators to engage early in discussions about possibilities. Vessels require a low profile (under 24 feet) to pass under the bridges.
- Plan landing and dock infrastructure according to the needs of commercial vessels.
  - Incorporate charging stations for battery-powered boats.
- Create a program that sets aside a small percentage of commercial revenue to support free and low-cost access to community programs in the protected cove at the north end of the site, stewardship programs, and learn-to-swim classes at the Roberto Clemente State Park pool. Example: One°15 Brooklyn Marina contributes two percent of revenue to community waterfront programs.

Long term
- Inaugurate small package delivery with NY Waterway and New York City, potentially in partnership with a delivery service or customer. This type of pilot project could showcase the opportunity for waterborne freight delivery to other parts of New York City.

How these recommendations for commercial vessel activity, waterside business, and waterborne package delivery at the Fordham Landing waterfront dovetail with the New York City Comprehensive Waterfront Plan.

Chapter: Waterfront Public Access
- Goal 2: Promote opportunities to get onto and into the water.

Chapter: Economic Opportunity
- Goal 2: Harness NYC’s waterfront setting to help diversify the economy and drive equitable economic recovery.
- Goal 5: Promote the use of our waterways for entertainment, hospitality, and education to provide jobs and drive tourism, including ecotourism.
CHAPTER FIVE
FERRY SERVICE

INTRODUCTION

Within a few years, waterfront development and environmental restoration up and down the Harlem River is expected to transform the waterway and bring many more people to the shoreline. Bronx residents and developers envision a new era of waterborne transportation.

Representatives of ferry companies interviewed for this report considered options for Harlem River routes via the Hudson River (the Spuyten Duyvil Bridge will have to be open) and the East River (boats will negotiate low bridges). Both routes are feasible.

Maritime operators who responded to the survey suggested a short-run shuttle service to start, as did community representatives. This would entail a smaller, efficient boat, possibly battery-powered, on short runs across and up and down the Harlem River. After an initial period of building and marketing the shuttle service, a water taxi shuttle could connect to New York City’s wider multi-modal transportation system, as well as other ferry routes on the Hudson and East Rivers.

“The start-up company Zeabuz is pioneering an electric, self-driving water taxi in Norway, capable of carrying 12 passengers at a time. Photograph courtesy of Zeabuz.”

CHAUNCY YOUNG, BOARD MEMBER, HARLEM RIVER WORKING GROUP

“The Bronx is changing. A ferry would be important because this will be a big waterfront community. We are willing to pay a little more.”

ANA LIZ FIGUEROA, BOARD MEMBER, BCEQ
ACTIONS

Short term

- Undertake early outreach to the community and ferry operators.
  - Survey the community to obtain local demographics, estimate the number of people to be served by ferry service, ascertain willingness to pay an unsubsidized fare, etc. Ferry companies may ask for this information.
  - Encourage ferry advocacy within the community. Build enthusiasm. Both the NYCEDC (which operates NYC Ferry) and private ferry operators will want to hear from advocates clamoring for ferry service on the Harlem River.
- Ferry company representatives recommend starting service on the Harlem River with a pilot project—a small boat, a simple landing, a short run. Vessel size, dock layout, and service options can ramp up as demand increases.
- Cross-river shuttle service could begin from southern Fordham Landing (around the University Heights Bridge) to Sherman Creek, where the New York Restoration Project and Row New York are building a large boathouse, educational pavilion, and floating dock.
  - This shuttle could be inexpensive to operate and charge a low fee to passengers.
  - Contact New York Restoration Project to coordinate docking a small water taxi on the Manhattan side at Sherman Creek.
  - Norwegian start-up Zeabuz is pioneering an electric, self-driving water taxi capable of carrying up to 12 passengers at a time.
- Boat service connecting to the new T-shaped dock at Sherman Creek could start quite small, accommodating as few as 10 or 12 people per ride. A boat like this would have a shallow draft, and its impact at Sherman Creek, where there might be concern about the size of the boat, its wake, or interaction with rowers, would be minimal. Small launches carrying rowing coaches already will be utilizing the Sherman Creek dock. Example: see a shallow-draft water taxi at mooreboat.com/boats/shallow-shuttle/
- At Fordham Landing, infrastructure can be simple and functional to start, according to vessel operators. A small floating dock with a ramp can be built for $15,000-$50,000.

“\[I would start with something modest. The goal is to get people on and off the boat.\]”

Donald Liloia, Senior Vice President, NY Waterway

This floating terminal at Brookfield Place in Lower Manhattan can accommodate front-loading and side-loading vessels.

Photograph source: Wikipedia.
Medium term

- After an initial period of building ferry service, a cross-river water taxi can expand to landings other than the Sherman Creek site.
- Look to an emissions-free future and plan for a battery-powered vessel. Incorporate a land-side charging station into waterfront infrastructure plans.
  - Battery-powered water taxis are being launched in many places around the U.S. and the world—San Francisco, Annapolis, Bergen, Singapore, etc. Example: See the 40-passenger electric ferry launched by the City of Rotterdam in 2021.
  - In New York City, Mayor Adams is being urged to pilot electric ferry service as part of NYC Ferry.
  - In the $1.2 trillion Federal infrastructure bill, $2.5 billion is targeted for ferry services, with a special emphasis on low-emission and electric ferries. Grants are awarded through the Federal Transit Administration’s Passenger Ferry Grant Program.
- Contact NY Waterway and New York Water Taxi to discuss service options.
- As proposed by Bronx residents, stops of a water taxi service along the Harlem River on the Bronx side could include:
  - Fordham Landing (multiple stops).
  - River Park Towers residential buildings in Roberto Clemente State Park (which would also connect with Bronx Community College).
  - The new Bronx Point development (which would also connect with visitors to and from Yankee Stadium and Mill Pond Park).
  - Randall’s Island. NYC Ferry passes Randall’s Island but does not stop. A ferry dock on Randall’s Island is used for special events such as concerts.
- Potential Harlem River water taxi landings on the Manhattan side other than Sherman Creek include:
  - Muscota Marsh. This is north of Fordham Landing, past the Broadway Bridge, where dock facilities are currently under repair.
  - Harlem River Park at 142nd Street/Fifth Avenue (across from Mott Haven).
- If a new boat needs to be purchased or designed, the vessel will be “purpose-built” and its characteristics will accommodate the route. Example: Seastreak was designed to head at high speed to Jersey beaches. NY Waterway’s high freeboard (height of a ship’s side between the water line and deck) was designed for navigation on the Hudson because of rocky waters. On the Harlem River, vessels must have a low profile (no higher than 24 feet) to pass under the bridges.

Case study: What makes a good landing?

Think multi-use. The Port Authority of New York and New Jersey’s floating dock on the Hudson River at Brookfield Properties in Lower Manhattan is an example of good dock design because it offers options for front loading and side loading vessels. This waterfront hub opened in 2009 at a cost of $50 million. A multi-use floating dock can be built at Fordham Landing, however, for far less. Several operators recommend EZ Dock (brand name), a heavy-duty plastic modular dock that is low-maintenance, stable, and easy to configure.
Case Study: Working with a private ferry operator, using NY Waterway as an example

NY Waterway manages more than $350 million in ferry infrastructure. The company regularly negotiates ferry service agreements with waterfront developers; some sites eventually develop into bigger transit hubs. (Example: Thirty-five years ago, NY Waterway built a ferry dock on the Hudson River in Weehawken, New Jersey, in partnership with Roseland Properties. This has become Port Imperial, a large intermodal transit hub.) Before entering into a ferry service agreement with a developer, NY Waterway will request demographic information about the people to be served by the route. NY Waterway may suggest that the developer subsidize ferry service at the start to encourage use of the service; for example, the developer could chip in $3 per person toward the full fare, which could be $6 or $7. The company is open to a variety of agreements. The developer could charter a NY Waterway vessel, so that NY Waterway operates the boat, collects the fare, and turns revenue over to the developer. In another scenario, NY Waterway could build the ferry landing but not operate vessels.

“You don’t need to spend millions of dollars. All the boat needs for a landing is a float. It could be connected to a multi-million-dollar pavilion—but the actual connection can be pretty simple.”

Donald Liloia, Senior Vice President, NY Waterway

Long term

- Eventually, ferry or shuttle service can connect to New York City’s wider multi-modal transportation system, and private ferry routes on the Hudson and East Rivers.
  - A shuttle could link Inwood, Harlem River stops, Randall’s Island, and East 96th Street.
- A conversation with the NYCEDC reveals that NYC Ferry does not have plans for expansion. Several elements make a NYC Ferry route stop at Fordham Landing not as likely as service by a private ferry operator.
  - Because of vessel height, the current NYC Ferry fleet is unable to safely travel under the bridges on the Harlem River.
  - While the NYCEDC has been approached by other waterfront developers to discuss ferry stops at their properties, NYC Ferry landings are usually constructed on city-owned waterfront property. The only privately owned NYC Ferry landing is in Greenpoint, Brooklyn (this has been damaged and out of service for many months).
  - NYC Ferry landings are built specifically to accommodate NYC Ferry vessels.
  - NYCEDC has determined operating costs to run ferry service on the Harlem River to be high. In 2018, the agency conducted a ferry feasibility study that included a look at expanding NYC Ferry to Mott Haven on the southern end of the Harlem River, but this idea did not gain momentum.
How these recommendations for ferry service at the Fordham Landing waterfront dovetail with the New York City Comprehensive Waterfront Plan.

Chapter: Waterfront Public Access
- Goal 2: Promote opportunities to get onto and into the water.

Chapter: Ferries
- Goal 4: Strategically plan ferry services within NYC and the region.
- Goal 5: Strengthen the role of ferry landings as hubs to neighborhoods, to other forms of transportation and for emergency response
Appendix 1
Thank you to the following people who kindly granted interviews in early 2022 to discuss opportunities for Fordham Landing maritime activation.

Billion Oyster Project
- Katie Mosher, senior director of programs

Bronx Council for Environmental Quality (BCEQ)
- Karen Argenti, board member
- Robert Fanuzzi, BCEQ president
- Ana Liz Figueroa, board member
- Joyce Hogi, board member
- Daniel Ranells, board member

Circle Line (part of New York Cruise Lines)
- Capt. Michael Duffy, port captain and president of Circle Line

City Experiences by Hornblower
- Anastasija Kuprijanova, director of business development
- Jeff Brault, vice president of public affairs

Classic Harbor Line
- Rick Scarano, managing member

Dart Westphal, environmental advocate, Bronx resident

Harlem River Community Rowing (HRCR)
- Bob Barnett, HRCR president
- Nina Panda, board member

Harlem River Working Group
- Chauncy Young, coordinator

James Rausse, former director of planning and development for the Bronx Borough President
Appendix 1 continued

Thank you to the following people who kindly granted interviews in early 2022 to discuss opportunities for Fordham Landing maritime activation.

**Manhattan Kayak Company**
- Susy Basu, head of client experience
- Jay Cartegena, general manager
- Eric Stiller, president

**New York Cruise Lines**
- Robert E Maher, managing director

**NY Waterway**
- Donald Liloia, senior vice president

**NYC Ferry (NYCEDC)**
- Franny Civitano, vice president
- Megan Quirk, vice president

**NYC Parks**
- Chris Ameigh, deputy director of city marinas
- Nate Grove, chief of waterfront and marine operations

**Oslo Fjord Sauna Association**
- Lucas Plummer, sauna master and environmental manager, Oslo Sauna Association

**Row New York**
- Rachel Cytron, executive director

**Shea Thorvaldsen, founder, TMS Waterfront; director of capital projects, One°15 Brooklyn Marina**

**SUNY Maritime**
- Rob Crafa, waterfront director

**UPS**
- Chris Lutick, director of services
Appendix 2
Documents, programs, and reports that could be helpful in planning for maritime activation at Fordham Landing.

Blue Highways
New York City Department of Transportation and Economic Development Corporation program to encourage use of New York City’s waterways to move goods

Bronx and Harlem River Watersheds Urban Waters Federal Partnership 2021-2022 Work Plan

Bronx, Meet Your Waterfront Plan
Department of Urban Studies and Planning, School of Architecture + Planning, Massachusetts Institute of Technology

Federal Transit Administration’s Passenger Ferry Grant Program
- www.transit.dot.gov/passenger-ferry-grants

Fordham Landing Study
Bronx Council for Environmental Quality

Harlem River Natural Resources Management Plan for the Bronx
NYC Parks in consultation with numerous advisors and agencies

Historical Water-Quality Data From the Harlem River, New York
New York City Department of Environmental Protection

Neighborhood Planning Playbook
Multiple New York City agencies
Best practices for community outreach and engagement
Appendix 2 continued
Documents, programs, and reports that could be helpful in planning for maritime activation at Fordham Landing.

**New York City Comprehensive Waterfront Plan**
New York City Department of City Planning
Ten-year vision and strategies for a more equitable, more resilient, and healthier waterfront for all New Yorkers
- [https://www.waterfrontplan.nyc](https://www.waterfrontplan.nyc)

**New York City Parks Safe Boating Advisory**

**NYC Ferry Expansion Feasibility Study**
New York City Economic Development Corporation

**Our River, Our Future**
Harlem River Working Group
- [https://harlemriverworkinggroup.org/greenway/](https://harlemriverworkinggroup.org/greenway/)

**Sustainable Communities in the Bronx: Leveraging Regional Rail for Access Growth and Opportunity**
New York City Department of City Planning
University Heights chapter

**The People's River: A New Vision for the Bronx’s University Heights Waterfront**
Urban Land Institute
- [https://ulidigitalmarketing.blob.core.windows.net/ulidcnc/2019/06/University-Heights-TAP_FINAL.pdf](https://ulidigitalmarketing.blob.core.windows.net/ulidcnc/2019/06/University-Heights-TAP_FINAL.pdf)

**Waterfront Navigator**
New York City’s one-stop waterfront permitting planner
- [https://waterfrontnavigator.nyc/](https://waterfrontnavigator.nyc/)