

Blueprint for Our Blueways

Agenda for New York Harbor
August 2017



About Us

The **Waterfront Alliance** is a coalition of more than 950 organizations working together to protect, transform, and revitalize our harbor and waterfront. We are a unified voice for our shared waterfront, through building consensus on important waterfront policy and planning issues, and producing special events and public programs.

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Image: Ian Douglas

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EXECUTIVE SUMMARY

New York is a city of water, with our waterways serving as a vital resource for commerce, transportation, education, and recreation. Millions of people who inhabit our island metropolis are rediscovering our maritime roots and celebrating our shared waters.

Over the last several decades, our waterfronts have experienced a remarkable transformation, and much progress has been made in recent years toward expanding use and access. The blue highways are busier than they have been in generations. These waters once teemed with ships, bringing passengers and products from around the world. New York now claims the third largest commercial port in the country. With the expansion of NYC Ferry bringing waterborne transit to neighborhoods across the city, the nation's largest fleet of urban ferries is still growing.

Thanks to progress spurred by the Clean Water Act, many of New York's waterways are healthy enough for recreational use, as more people are boating, fishing, and swimming in our shared waters. Across our region, networks of stewardship groups and concerned citizens have contributed to improving our urban

habitat through restoration initiatives and water quality testing.

But there is still a long way to go to ensure that the waterways can continue to be an economic engine and environmental resource for all. To commemorate our tenth anniversary in 2017, the Waterfront Alliance released the inaugural **Harbor Scorecard**, an online tool to gauge coastal flood risk, water quality, and access to the water in New York City's community districts. How safe are you from a major storm? How healthy is the water near you? Can you get to and on the water?

The Harbor Scorecard provides accessible, community-level data for New Yorkers to learn how well their neighborhood, and their borough, compares against their neighbors, to inspire local dialogue and advocacy to decision-makers to invest in cleaner water, better coastal defenses, and more recreational access to the waterways.

The waterways that surround us are also a powerful reminder that we live among nature, and share the benefits the waters provide and the risks they pose.

Left to right: Paddling in Soundview, Bronx with Youth Ministries for Peace and Justice; flooding in Bayswater, Queens; decommissioned aircraft carrier *Baylander* at West Harlem Piers; riprap shoreline in Long Island City, Queens.



EXECUTIVE SUMMARY (continued)

The threat of sea level rise and more frequent and more powerful coastal storms require all of us to act to protect our city for future generations. It is incumbent upon our City's next leaders to invest their time and resources to make our waterways strong, healthy, and open for all.

The Waterfront Alliance has prepared this briefing document outlining a five-point agenda to ensure that those who seek leadership in public office will commit to a progressive agenda for a harbor that is:

	OBJECTIVES	RECOMMENDATIONS
STRONG	Protected from the increasing threat of climate change, including coastal flooding and sea level rise	<ul style="list-style-type: none">• Adopt a regional, multi-city approach to coastal resilience• Commit to social equity when planning for resilience• Commit to 80x50, significantly reducing our carbon footprint
HEALTHY	Safe for recreational use and habitat restoration, meeting the Clean Water Act standards of "fishable and swimmable"	<ul style="list-style-type: none">• Improve oversight of CSO remediation processes to reduce discharge• Prioritize green infrastructure (GI) for improved stormwater capture• Improve ambient water quality testing• Prioritize green infrastructure and incentives for stormwater capture
OPEN	Accessible for use and enjoyment across all communities, and welcoming to multiple types of vessels	<ul style="list-style-type: none">• Expand on-water opportunities citywide• Improve regulatory clarity for on-water access• Improve processes for maritime cultural operators• Expand capacity for ferry service and plan for expansion
WORKING	Productive gateway for international and regional commerce, providing good-paying jobs and environmental benefits	<ul style="list-style-type: none">• Preserve and protect existing maritime uses• Improve access to and awareness of maritime careers• Support maintenance dredging, our "hidden infrastructure"• Support future growth industries
MANAGED	Efficient oversight of diverse activities, integrating regulatory functions with long-term planning and public use	<ul style="list-style-type: none">• Strengthen Waterfront Management Advisory Board (WMAB)• Develop comprehensive financing plan for waterfront maintenance• Review waterfront permitting process



STRONG Harbor

Protected from the increasing threat of climate change, including coastal flooding and sea level rise

In October 2012, Hurricane Sandy ravaged the East Coast, causing 44 deaths and \$19 billion of damages to New York City alone. Five years later, Hurricane Sandy continues to serve as a reminder of our city's vulnerability to the impacts of climate change. Rebuilding has been a slow, painful, and costly task that is still ongoing, and future storms may cause more costly damage. A new, unreleased report by federal climate researchers projects increasingly frequent and severe extreme weather events, with the largest increases in precipitation occurring in the northeast.

These consequences pose risks to our entire city, not just coastal residents: from threats to our energy and food supplies and other commercial activity, to mass transit outages in the short term as well as disruptions to repair damaged tunnels. Across the northeast, sea levels have risen by approximately one foot in the last 100 years, a rate that exceeds the global average, and is projected to accelerate.

Recent sea level rise projections include a new "extreme" scenario for New York, with increases up to 12 feet now plausible, if unlikely, according to research institute Climate Central. The accelerating pace of climate change and sea level rise ensure

that the "100-year floodplain" is not a fixed boundary; the land within that risk zone is nearly certain to grow over time. Waterfront Alliance's Harbor Scorecard, using data from Climate Central, projects a 1-in-2 chance of a major flood for more than 400,000 New Yorkers by 2060. That is roughly the population of Miami or New Orleans, cities also facing significant climate risks. The effects in New York will be unjust; more than 40 percent of those at risk of major flooding face substantial social or economic barriers to recovery.

There is no silver bullet to prepare for the impact of climate change on New York's waterfront. Adaptation and mitigation require a variety of strategies, from hard infrastructure such as flood barriers, to natural features and green shorelines. In the wake of Hurricane Sandy, the City of New York established the Special Initiative for Rebuilding and Resiliency (SIRR), which produced a plan to address how New York City can rebuild, called *A Stronger, More Resilient New York*. That plan included more than 250 actionable recommendations for increasing resilience of infrastructure citywide. In the years since, discrete projects, many initiated through the Rebuild by Design process, have begun to take shape. (See table on following page.)

Dry weather, high-tide flooding inundated Broad Channel, Queens, a low-lying neighborhood on Jamaica Bay, in 2016.



Image: Dan Guarino

STRONG HARBOR (continued)

PROJECT	LOCATION	DESCRIPTION	STATUS
East Side Coastal Resiliency Project	Manhattan's east side, from 23rd Street to Montgomery Street	Proposed integrated flood protection system of berms, deployable floodwalls, and other features intended to reduce coastal flooding.	The project's \$767 million in funding includes \$338 million in federal allocations. Environmental review will begin winter 2017/18, and groundbreaking is anticipated in spring 2019.
Lower Manhattan Coastal Resiliency Project	Lower Manhattan, from Montgomery Street to Battery Park City	Proposed concept to reduce flood risk from coastal storms and sea level rise.	The project has been allocated \$318 million in funding, only a portion of the estimated cost of completion. Stakeholder input is ongoing, with the next round of public workshops scheduled for this fall.
Hunts Point Resiliency	Hunts Point, Bronx	Proposed project to protect critical industrial and food distribution facilities and develop resilient energy supply.	The project has been allocated \$45 million in federal and City funding. A Collaboration Lab was held in July to receive public feedback; the project is currently in feasibility analysis for flood protection concepts.
Living Breakwaters	South shore of Staten Island	Proposed coastal green infrastructure project with nature-based features for wave attenuation that aim to reduce the risk of event-based and long-term shoreline erosion, to improve safety and prevent damage to buildings and infrastructure.	The project has been awarded \$60 million of federal funding for implementation. Stakeholder feedback is ongoing, and the design for the project is being finalized.
Red Hook Integrated Flood Protection	Red Hook, Brooklyn	Proposed project to use temporary and permanent features to reduce risk of coastal flooding in the two lowest-lying areas of Red Hook, Atlantic Basin and Beard Street near Van Brunt Street.	The feasibility analysis identified challenges with a deployable barrier system, resulting in a reduction in scope. The project has been allocated \$100 million in City and federal funding for design and construction, which is expected to begin in 2020.

Many other initiatives to rebuild or strengthen our coastlines are also underway, including:

- The citywide **Build it Back** program, to repair more than 5,000 homes damaged by Sandy and rebuild above flood levels, has spent or allocated \$2.2 billion in federal relief funds
- The City's Office of Recovery and Resiliency has developed a \$38 million program called **Raised Shorelines** to adapt to rising sea levels by increasing the height of coastal edges, as well as creating a set of design guidelines to incorporate climate projections in all City-led capital projects.
- The U.S. Army Corps of Engineers has issued a draft **Reformulation Plan** for Jamaica Bay and Rockaways to protect the southern shore against coastal flooding. The tentatively selected plan includes a tidal gate, levees, and other on-shore protection, with costs estimated at \$4 billion. A final report is due this year.
- In the near-term, the Army Corps has performed **beach replenishment** on New York's Atlantic shorelines, including

Image: Bjarke Ingels Group



a \$25 million project to build T-Groin breakwaters in Sea Gate, Brooklyn.

A concept rendering of Manhattan's Stuyvesant Cove Park with flood-protection measures as part of the East Side Coastal Resiliency project, during dry-weather conditions.

The execution of these plans is a positive step forward. New York must continue to show leadership to protect our coastal communities. We face a major collective challenge to protect against more intense storms and sea level rise, exacerbated by the current political environment. The Trump administration has demonstrated that it will not be a reliable ally in the fight to slow climate change and its impact on our coastlines. Its budget proposal outlines \$6 billion in cuts to the U.S. Department of Housing and Urban Development, including funding for the Community

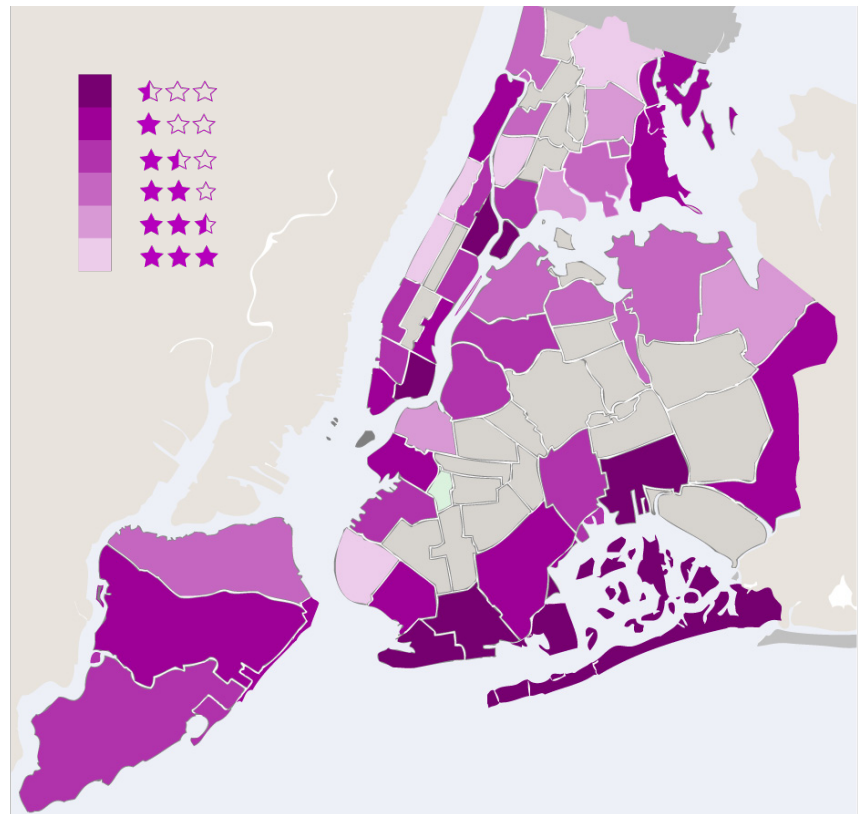
Development Block Grant program, a significant resource for resilience projects. The withdrawal of the United States from the Paris climate agreement worsens the risks our region faces in the years to come, making local action even more crucial.

Adopt a regional, multi-city approach to coastal resilience.

New York City cannot address its coastal flood risks alone, nor is it alone in the region in facing such risks. With inaction in Washington, the burdens of leadership fall to states and municipal governments. New York should spearhead a multi-level, intergovernmental coalition to adopt a plan for combating climate change and sea level rise at the local level. Such a commission should set measurable goals, and guidelines for action, aligning coastal states and cities toward ensuring that New York and other regions at risk receive a fair share of available resources. Goals should include seeking nature-based risk reduction measures with multiple benefits, where feasible.

Commit to social equity when planning for resilience.

OneNYC, the City's current blueprint for sustainability and resiliency, is the first such plan to include equity as a guiding principle. Low-income communities and communities of color face more immediate, and more severe, threats from climate change. Advocates for environmental and social justice have raised concerns coastal resilience funding has not been equitably distributed. The Harbor Scorecard shows that 40 percent of New Yorkers in areas with high risk of flooding face high social and economic barriers to recovery. Low-lying neighborhoods with historically disenfranchised populations face higher risks of exposure to toxic and hazardous materials during and following storms. The RAND Corporation identified solutions for



improving affordability of insurance and risk reduction measures for low-income homeowners, including income-based insurance vouchers, low-cost loans for risk mitigation, and expanding the Home Resilient Audit program.

The Harbor Scorecard measures New York City community districts' relative risk of coastal storm flooding, socioeconomic vulnerability, and corresponding risk of hazardous contamination, based on data from Climate Central..

Commit to 80x50, significantly reducing our carbon footprint.

In 2014, New York City established a policy of "80x50", to reduce greenhouse gas (GHG) emissions at least 80 percent by 2050, the target necessary to meet the goals of the Paris climate accords. *Roadmap to 80x50*, a subsequent report based on state-of-the-art modeling, found that current efforts will reduce GHG emissions, but not enough to meet the 80x50 benchmark. An executive order this year reaffirmed the City's commitment to the goals and principles of the Paris accords. New York must continue to act to achieve the necessary emissions reductions to meet our stated targets.

HEALTHY Harbor

Safe for recreational use and restoration, meeting “fishable and swimmable” Clean Water Act standards

Over the last generation, thanks to progress spurred by the Clean Water Act and capital improvements made by the City and the State, many of New York’s waterways are clean enough for regular recreational use, as more people are boating, fishing, and swimming in our shared waters. New York Harbor is also now a more conducive place for fish, shellfish, and marine bird populations, even as commercial shipping grows. We must work even more diligently to ensure that progress continues.

The policies put forward by new leadership at the EPA suggest that it will not be an ally for progress. The agency is pursuing the largest regulatory rollback in its history, dismantling progress toward clean air and water. Among other actions, EPA has filed legal plans to repeal rules curbing water pollution and has proposed cutting staff necessary to oversee and implement brownfield remediation and Superfund cleanups, both of which would adversely impact New York.

We still have a long way to go in order to meet the standards of “fishable and swimmable” waters. While toxins in our waterways have been reduced considerably, significant problems persist. One significant cause of water pollution is combined sewer overflow (CSO), which occurs when excess stormwater and untreated wastewater discharge directly into the city’s waterways. On average, approximately 20 billion gallons of sewage are dumped into the waters each year,

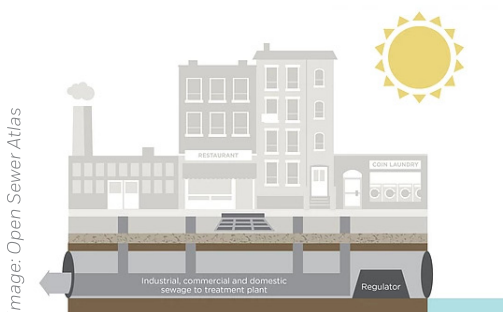


depending on rainfall volumes. We must take several steps to ensure that our waterways are not only protected but improved, to foster the wellbeing of millions of residents and visitors and support the regional economy.

A humpback whale off Rockaway peninsula in 2016. An increasing number of whales have been sighted in and around New York Harbor in recent years.

Improve oversight of CSO remediation processes to reduce discharge.

We are at risk of underinvesting in solutions to our antiquated combined sewer system that pollutes the waterways during precipitation events. In 2005, the City and State executed an order to reduce CSO volume in New York City. This agreement called for a citywide and waterbody-specific long-term control plans (LTCPs) to achieve specific standards consistent with water quality goals of the Clean Water Act. Twelve years later, six LTCPs have been approved, of which with several more pending or under development. Unfortunately, these plans are flawed and fall short of what is needed to properly clean our waters. They fail to



An illustration of combined sewer overflow. New York’s combined sewer systems become inundated with stormwater during precipitation events. Raw sewage and stormwater runoff is discharged into local waterways via combined sewer outfall.

meet federal health standards for contact with the water. After implementation, they will continue to allow billions of gallons of sewage to overflow annually into our waterways.

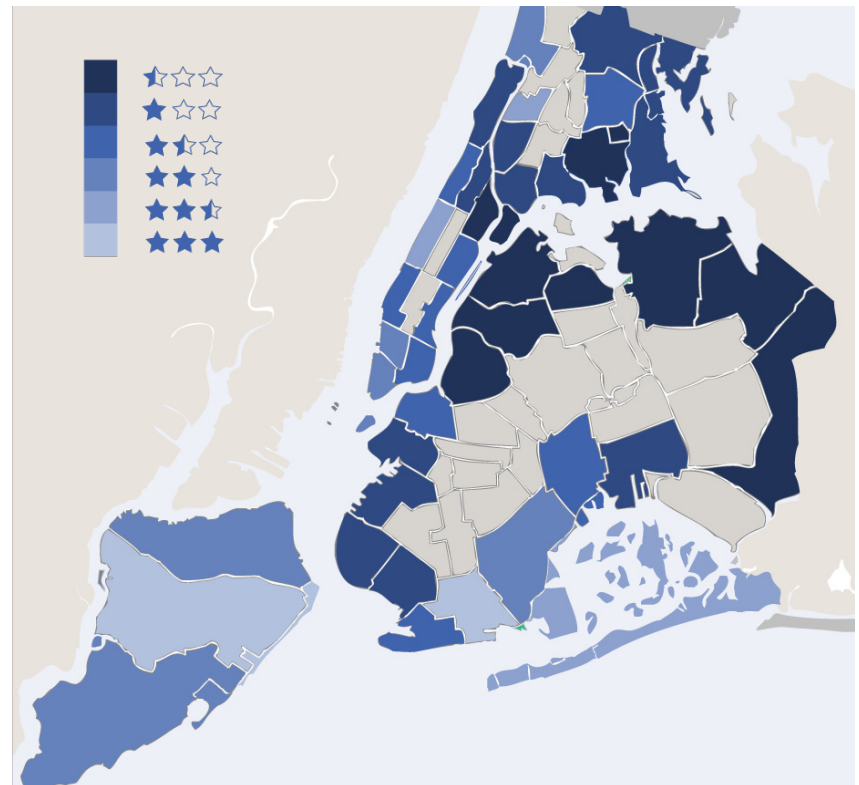
Several plans do not reduce sewage outfall, opting instead for an untested chlorine disinfection technique, which would kill indicator bacteria rather than clean the waterways. Twelve years into the process, several plans allocate a decade or more to complete the system upgrades. Additional review of and financing for CSO remediation plans is necessary for public health and environmental sustainability.

Improve ambient water quality testing.

Water quality samples are taken at dozens of locations across the city's waterways by both NYCDEP and citizen scientists. The Harbor Scorecard reveals significant disparities: official water testing samples, generally taken in mid-channel locations, fail to meet EPA standards for safe swimming in approximately 20 percent of samples. Samples collected by citizen scientists, at nearshore areas where people are using the water for recreation and education, fail the same standards in roughly 33 percent of tests. The City should conduct a review of citizen science results to identify potential modifications to timing and locations of its sampling program. Additionally, the City should commit to adopting the EPA's current water quality standards, rather than the State's outdated standards, which EPA has found do not protect public health.

Prioritize green infrastructure and incentives for better stormwater capture

Green Infrastructure captures stormwater runoff from streets, sidewalks, parking lots, and rooftops to reduce flow into overburdened sewers, as well as provide new community green space, using



engineered systems that typically feature soils, stones, and vegetation. Greater review should be applied to ensure that NYCDEP will meet the long-term goals established through its Green Infrastructure Program, launched in 2011. Crucially, every agency, not just DEP, should commit to GI in all public construction projects, and have the necessary resources to do so.

The Harbor Scorecard measures New York City community districts' relative water quality based on combined sewer overflow volume and EPA standards for bacteria that pose health risks, and oxygen levels for fish survival. Data from NYC DEP, NYC Water Trail Association, NYC Soil & Water Conservation District

In addition to public investments, the City should develop a mix of incentives, and penalties, encouraging property owners to reduce their stormwater runoff. The City should study how and whether to reform NYCDEP's current stormwater revenue mechanisms, which are based on metered water usage. One approach commonplace in more than 1,000 municipalities nationwide would be to create a stormwater fee, based on a property's impervious area, in which rate payments reflect a property's contribution to discharge and pollution, rather than usage. Use of green infrastructure, porous pavement, or green rooftops could reduce rate payments.

OPEN Harbor

Accessible for use and enjoyment across all communities, and welcoming to multiple types of vessels

More and more New Yorkers are interested in getting not only to the water's edge, but onto and into the water: from paddling and sailing, to fishing and oyster monitoring. Despite its 520 miles of coastline, New York City remains largely unwelcoming to active use by people and vessels, limiting opportunities for communities to enjoy and utilize their waterways. The launch of NYC Ferry service in 2017 has been a major step forward, harnessing our "blue highways" in transit-starved waterfront districts and expanding New Yorkers' mental maps of our coastal city. Yet there are still too few neighborhoods with access to the full scope of educational, cultural, and environmental resources our waterways provide.

Over the last few decades, New Yorkers have flocked to new waterfront parks and open space, but many of those spaces have been built or retrofitted with upland uses in mind, restricting access into

and onto the water. The many historic, educational, and cultural vessels that call the harbor home have very few places to berth, particularly outside of Manhattan. Piers are too often designed without maritime access in mind. And while non-motorized boating continues to grow, there remain too few sites to safely launch or land human-powered craft.

The Harbor Scorecard demonstrates how access to swim in the water for recreation and or touch the water for education is unevenly distributed, with more than half of all of New York's waterfront districts restricted from using the waterways. Counting recreational boat launches, historic boat programming, ferry landings, tour and charter locations, and marinas, there's just one place to board or launch a boat for every four miles of our city's coastline. We must do better, and there are small steps we can take now to ensure that all New Yorkers have equitable access to the waters that surround us.

Attendees at Waterfront Alliance's annual City of Water Day festival learn to fish, paddle, and more on New York's waterways.



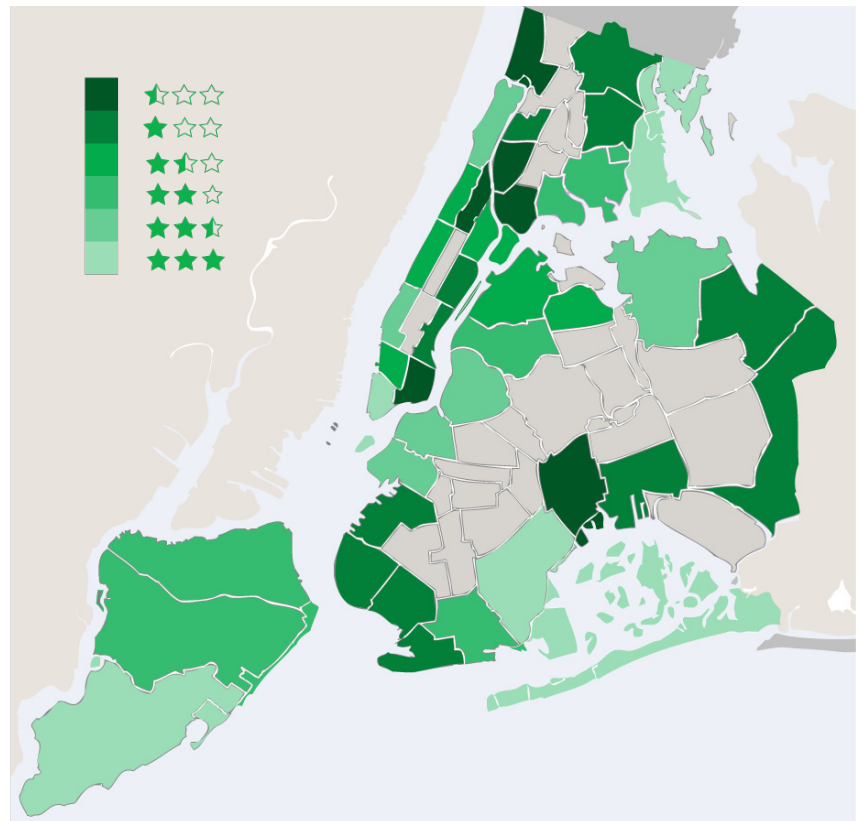
Images: David Gonsier

Expand on-water opportunities citywide.

Create a citywide network of environmentally-friendly community docks and water access infrastructure, which will strengthen connections and access across our city of water and improve safety in times of emergency. As NYC Ferry has employed a network approach to building new landings serving several commuter routes, recreational water uses could benefit from a similar approach. This would allow expanded access to the water, serving as satellite classrooms for local schools and environmental education, and providing destinations for fishing, sailing, or paddling instruction. A district-by-district approach to water access fails to capture the programmatic benefits of a true regional network. A \$30 million, multi-year citywide capital program for new floating docks, get downs, or soft shorelines in public waterfront spaces, especially in districts with limited access, will reconnect residents with our waterfront and our maritime tradition.

Improve regulatory clarity for on-water access.

Access to the waterways for swimming, wading, non-motorized boating, or cultural programming is also limited by a complex network of rules, permissions, and restrictions that pose obstacles to all but the most seasoned maritime users. Safety is and should always remain the highest priority when considering when and where water access is available. However, because there is no single set of criteria for decision-makers, whether public or private, to determine whether conditions are safe for water use, restriction, rather than permission, has in many ways become the default position.



At the same time, there is no single point of contact for prospective water users seeking permission. The public trust doctrine, that our natural waterways are to be preserved for public use, must continue to be a bedrock guiding principle.

The City should work with mariners, educators, park managers, and other stakeholders to develop improved standards that increase safe access to the waterways for temporary recreational, cultural, and educational uses.

Improve processes for maritime cultural operators.

New York is at risk of losing its connection to our maritime heritage, as many non-profit historic and cultural vessels face significant challenges to find long-term docking space to accommodate public programming. Many prospective vessels

The Harbor Scorecard measures New York City community districts' relative access to the waterways based on number of facilities to launch or board a boat and number of locations offering direct contact with the water for recreation or environmental education, including bathing beaches and waterfront parks with natural shorelines or get-downs. Data from NY-NJ Harbor Estuary Program, NYC Water Trail Association, NYC Parks, Waterfront Alliance.



Image: Marcus Santos, New York Daily News



Image: NYC Ferry

NYC Ferry, vessel at left and service map at right, launched its first phase of service in 2017 and will feature six routes serving 21 landings by 2018.

opt to pass over New York altogether when visiting historic port cities on the east coast. The City should expand opportunities for long-term homeports for nonprofit cultural vessel operators through designating pier space with necessary utility services, strengthening the DockNYC program to expand maritime public programming.

Expand capacity for NYC Ferry and plan for service expansion.

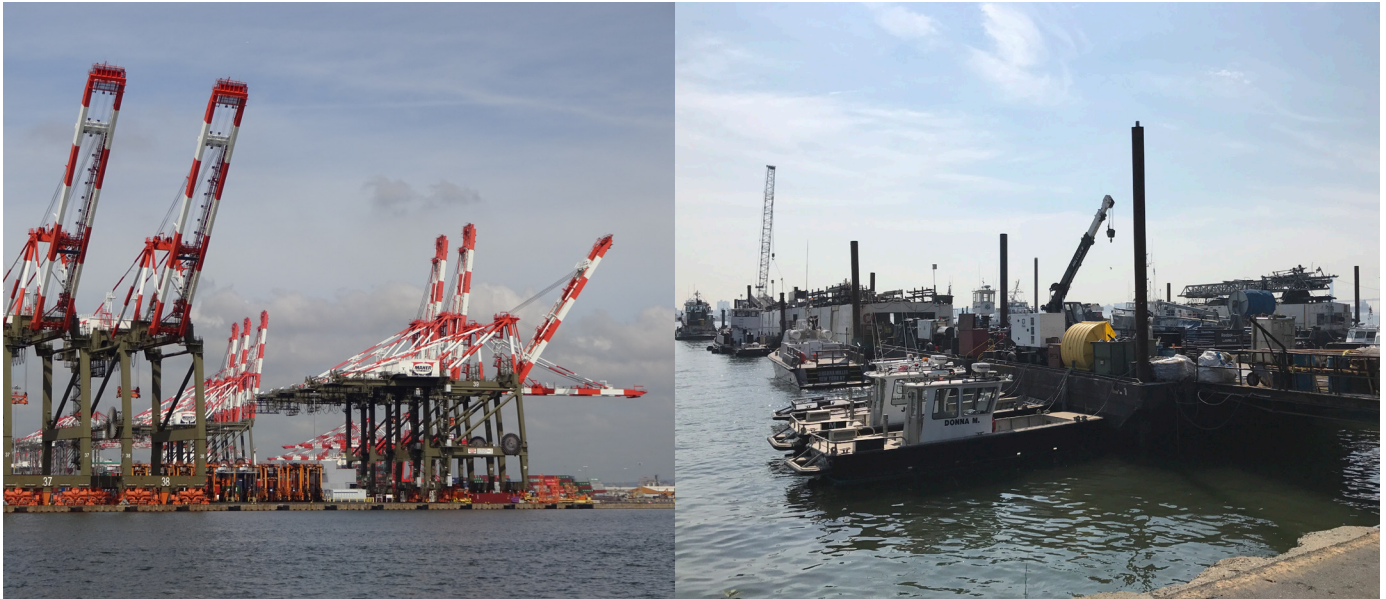
The City's new commuter ferry service, NYC Ferry, has proven a robust demand for waterborne transportation since its launch —ahead of schedule—in June 2017, exceeding preliminary ridership projections. Some passengers have experienced crowding or longer wait times as a result of heavy demand. With three more routes launching between August 2017 and summer 2018, as well as

critical repairs to the L train in 2018 that will necessitate additional ferry service as part of a wider solution, it is critical that capacity can meet demand. A plan is already in place to build additional vessels as well as larger vessels for peak service times; the City must continue to invest in capacity to support this growing service.

Additionally, the launch of NYC Ferry has led to calls for service expansion in other transit-starved districts across the city. Areas proposed for future service following the first phases of implementation include Coney Island; Stapleton, Staten Island; and Brooklyn Navy Yard. The City must define a clear process to implement the next phase of NYC Ferry, which would include setting clear metrics to determine other future routes and landings.

WORKING Harbor

Productive gateway for international and regional commerce, good jobs, and environmental benefits



The New York region's port industry features large container terminals for commercial shipping as well as many small businesses providing maritime support services. Maher Terminals in Elizabeth, NJ at left; Miller's Launch in Staten Island at right.

The Port of New York and New Jersey is our region's gateway to international commerce. As the largest maritime port on the eastern seaboard and the third largest in the United States, following Los Angeles and Long Beach, our port supports 336,000 jobs—larger than more prominent sectors such as broadcasting and entertainment—and more than \$53 billion in business activity. Indeed our natural harbor is responsible for the growth of our region—New York's preeminence as a business capital is a direct consequence of its ports. New York is now positioned to claim the title of top US port, but there are steps we must take in order to sustain and grow this critical industry.

Our region's port facilities and maritime support industries are underappreciated by the public and tucked away in Newark, Elizabeth, Bayonne, and corners of Brooklyn and Staten Island. Yet they remain a linchpin of the regional economy and critically important to the environmental health of the region. The efficiency of waterborne shipping, whether cargo ships carrying a capacity equal to hundreds of millions of bananas, or tankers and barges delivering energy and

removing waste and recyclables, diverts millions of annual truck trips.

While the industry has expanded over the past generation to bring much of the region's container and terminal operations to New Jersey, many of the maritime support services, including tugs, barges, and ship repair services, which make our ports run smoothly, are located here. New York also still retains two container terminals in Staten Island's north shore and Red Hook, Brooklyn, and is home to many more maritime-dependent industrial facilities that distribute construction materials, energy, and other necessities.

In recent years, the City has invested more than \$100 million in infrastructure improvements as part of a program to reactivate the South Brooklyn Marine Terminal (SBMT) with long-term, maritime-dependent uses to increase job opportunities for local residents. The City must continue to develop policies that support existing publicly and privately-managed maritime facilities and plan for future needs, accounting for new technologies and growth industries.

Preserve and protect existing maritime uses.

In many districts, these maritime and industrial waterfront uses face significant pressure from real estate market forces, as waterfront communities navigate the balance between industrial use, jobs, recreational use, affordable housing needs, and gentrification. The designation of six Significant Maritime and Industrial Areas (SMIAs) in 2002 reflects the City's commitment to sustaining its working waterfront. Yet some planners have raised the call for converting the Red Hook Container Terminal (RHCT), operating at a modest annual deficit subsidized by the Port Authority, from industrial to residential and commercial use.

The City and its partners at the Port Authority must develop a plan for the future of the terminal, as well as other private maritime facilities facing pressures from land speculation, to prioritize industrial and job-intensive uses on the waterfront in SMIA's and their immediate surroundings.

Improve access to and awareness of maritime careers.

Employers and educators alike have spoken of a need for improved maritime workforce development strategies to support the skills necessary to ensure the viability of New York's working waterfront. Yet, in part as a result of the industry operating out of public view, many residents are unaware of the economic opportunities available in maritime careers. The median annual wage in the waterborne transportation sector is \$72,000, with more than three-fourths of those jobs accessible to New Yorkers without a bachelor's degree. (Postsecondary degrees command even higher wages: graduates of SUNY Maritime College rank first in earning power, with mid-career salaries of \$147,000.)

The City's New York Works plan outlines several strategies for job growth, including a "Cradle to Career" initiative linking New Yorkers to jobs in transportation, distribution, and logistics. The City should

The newly-reactivated South Brooklyn Marine Terminal served as a staging area for delivery of construction materials for the New York Wheel on Staten Island.



Image: Mammoet

support this multi-sector partnership with resources that expand awareness and visibility for maritime careers among students and parents, toward training programs that build a workforce that is representative of New York's diverse population. Programs must be designed to serve a wide range of students, from those looking for near-term employment to those seeking further education, while allowing those who wish to work to continue to build technical skills in training programs.

Support dredging, our “hidden infrastructure.”

Our natural harbor requires dredging to meet the needs of modern container ships and other vessels. A major channel deepening project was completed in 2016 to prepare the port for a new class of ships that can transit the recently-expanded Panama Canal. Shipping channels will require maintenance to ensure they continue to function properly. New York City should work for federal legislation that provides the Port with its fair share of Harbor Maintenance Trust funds to ensure that all channels are fully maintained to maximize their economic potential. Furthermore, small maritime businesses, marinas, shipyards, and other industrial waterfront users are responsible for dredging their own berths.

Finding a suitable place to dispose of dredged material has long been a challenge, and there is still no long term, environmentally sensitive system in place in New York. A model for long-term support is right across the river. New Jersey reuses most of its dredged material in a beneficial way, under a regulatory process that provides for appropriate oversight and monitoring. We urge the City to work with its partners in the State, as well as our neighbors in New Jersey, to

Image: Sims Metal Management



develop a sustainable policy and regional approach to managing dredge material in our port.

We should revisit the Regional Sediment Management Plan, which included among its key priorities a comprehensive beneficial use plan to foster inter-agency collaboration to identify long-term placement sites.

Support future growth industries.

The Clean Energy Standard requires 50 percent of New York State's electricity to come from renewable energy sources by 2030. Offshore wind power generation poses a significant opportunity to meet this critical goal. In March 2017, the Bureau of Ocean Energy Management entered into a lease for nearly 80,000 acres approximately 30 miles off the coast of New York for exploration of offshore wind development. Although power generation is not expected to begin until approximately 2027, New York City must position itself as the hub for significant maritime support services this growth industry will require.

A wind turbine partially powers the Sims Municipal Recycling's Sunset Park Material Recovery Facility. The project has been awarded WEDG certification for excellence in waterfront design for maritime and industrial uses.

MANAGED Harbor

Efficient oversight of diverse activities, integrating long-term planning and public use



The strong tides and currents of New York's waterways can damage waterfront infrastructure left unattended or in need of maintenance.

New York City's 520 miles of waterfront and waterways serve many functions—parks and recreation, jobs and economic opportunity, commercial and recreational transportation, and much more—and boast a complex network City, state, and federal agencies overseeing their use and maintenance. This “alphabet soup” of regulatory and administrative oversight poses obstacles to efficient management, public use, project planning, and other important social and economic functions.

With the Port's transition from New York to New Jersey in the 1960s, the City was faced with a challenge to administer formerly industrial piers and miles of underutilized waterfront. Today, we are emerging from another period of significant transformation, with a 21st century waterfront with new demands to integrate multiple uses.

The waterfront can be a challenging and even hostile environment. Currents flowing through our tidal estuary eventually erode most anything built at the water's

edge. When a bulkhead collapses into the waterways, there is sometimes confusion on who is responsible for its repair, as the maintenance required for piers, bulkheads and other waterfront infrastructure is literally hidden below the surface. Furthermore, waterfront stakeholders have long faced a complex regulatory process to obtain permission to build new projects or maintain their waterfront assets.

To that end, we recognize significant progress in recent years as new and innovative management practices have begun to take shape.

- **Maintenance:** This year, the City launched the Waterfront Facilities Maintenance Management System (WFMMS), a comprehensive database for all City-owned waterfront assets for use by City agencies and contractors. The WFMMS will be an important step forward to coordinate inspection and maintenance of our waterfront parks, public waterfront infrastructure, and marine environments.

- **Permitting:** Last year, the City developed an online portal center to assist permit applicants by consolidating information and resources from partner agencies into a single, one-stop resource, called Waterfront Navigator. A separate initiative is underway to assist with environmental mitigation often required through the permit process. The City is developing a “mitigation bank,” a process common in other states but unused in New York City, to remediate degraded wetlands at Saw Mill Creek on Staten Island and sell credits to permit applicants who are unable to perform mitigation activities at their own project site.

Yet a new governance model for the waterfront is necessary to direct and manage this ongoing transformation. We face several challenges: ensuring equitable public access, retaining maritime industrial activity, restoring our natural habitats, and protecting coastal populations from climate-related threats. We need governance to match.

A frequent concern among many stakeholders—from industrial maritime businesses to recreational boaters—is the absence of a centralized, lead actor to coordinate planning efforts, studies, funding, and technical assistance to waterfront users. We encourage the creation of a single local government body—a Mayor’s Office of the Waterfront—to advocate for water-dependent uses citywide and serve as a primary point of contact for water users.

The City needs a centralized body to lead, track, manage, and coordinate the various citywide plans that are strengthening and revitalizing the waterfront. A Mayor’s Office of the Waterfront will improve coordination of our city’s “Sixth Borough,” yielding efficiencies and long-term cost savings by preventing duplicative functions and prioritizing comprehensive and standardized maintenance of waterfront infrastructure. Additionally, there are other important



Images: NYCEDC



steps we can take toward improving and streamlining governance of the waterfront.

Top, current conditions at Saw Mill Creek Marsh on Staten Island, the site of New York City’s first wetland mitigation bank. Below, rendering of restored marsh.

Strengthen Waterfront Management Advisory Board (WMAB).

A forum for City agencies to work cooperatively with waterfront stakeholders and civic organizations, the WMAB has not met since 2013, but is in the process of being reconstituted. This board can provide leadership and vision to help to advise on the implementation of key initiatives, including coastal resiliency measures, the launch and growth of NYC Ferry, efforts to improve water quality and stormwater management, and protecting and preserving maritime industrial uses. This new version of the WMAB, which will expand to include more non-governmental members and grassroots advocates, must be tasked with a substantive agenda to ensure that the administration’s commitments are either carried forward or reconsidered and strengthened. In order to take full advantage of its diversity of expertise, the WMAB should take an active role in shaping work in progress, rather than respond to presentations or plans that are



The remains of an industrial pier along the shoreline in Greenpoint, Brooklyn.

more fully formed. This may require building capacity to meet more frequently than the semi-annual (once every six months) meetings now currently required under the law.

Develop comprehensive financing plan for waterfront maintenance.

Our waterfronts require extensive investments in maintenance and upkeep to keep piers, bulkheads and other infrastructure in place, and these responsibilities are borne by a multitude of public agencies. At the same time, the waterways remain a vital hub of commerce and employment for the region. As public use and enjoyment of the waterfront increases, we have not kept pace with the upkeep required for challenging natural conditions that erode in-water infrastructure. While wealthy neighborhoods can afford to cross-subsidize public space with luxury development, this is not the case across our city. Deferred maintenance is common in under-resourced areas, exacerbating inequity. We must develop a sustainable financing model that addresses the challenges associated with maintaining

public waterfronts, employing new revenue-generating tools to address operations budget shortfalls.

Review waterfront permitting process.

The City should investigate how to expand its capacity for processing waterfront permit applications. Currently, NYC Small Business Services is responsible for issuing permits for all construction related to improvement or maintenance of publicly owned waterfront properties, as well as all privately owned marine structures such as piers, docks, bulkheads, and seawalls. The City also recently issued an RFP to develop standards for waterfront construction, similar to building codes. That process should incorporate user feedback, possibly by convening experts from the practitioner and maritime small-business community, to ensure that regulatory reform improves clarity for prospective applicants.

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