

Testimony of Bill Tai
for
NYC Department of Parks & Recreation
to the
Committee on Waterfronts, New York City Council
February 27, 2015

Good morning Chairperson Rose, Chairman Garodnick and members of the Waterfront and Economic Development Committees. My name is Bill Tai and I am the Principal Environmental Planner at the NYC Department of Parks & Recreation. Prior to joining the Planning Division, I was Director of the Natural Resources Group at Parks for almost ten years.

The Parks Department has been partnering with the NYC Economic Development Corporation to create the City's first wetland mitigation bank as part of the MARSHES Project. In addition to the update you've heard from my colleagues with EDC, I'd like to provide some additional context for you about this particular location.

Saw Mill Creek Marsh contains the largest expanse of remaining salt marsh along Staten Island's West Shore. NYC Parks currently manages 178 acres of city-owned property there. This unique expanse has sustained breeding populations of sharp-tailed seaside and swamp sparrows, short-eared owls and even wintering northern harriers. In addition to being significant habitat for wildlife and fish, the marsh captures much of the stormwater run-off in this area and as you've heard, more often since Hurricane Sandy, tidal wetlands can be considered natural or green infrastructure and they're valued for their resiliency and ability to provide effective coastal protection.

Since 1994, Parks has acquired property at Saw Mill Creek, primarily for its conservation and natural resource value. That has continued to the present day with our most recent acquisition, completed in January of last year. Working with other partners and leveraging available funds, Parks has carried out wetland restoration work at Saw Mill Creek also.

In 1998, a transportation project at the Chelsea Road Bridge provided for \$112K in wetland mitigation work at the site. Then, with \$225K from the NYS Environmental Protection Fund and other natural resource damage funds, Parks carried out a project to remove a man-made obstruction and re-establish tidal circulation in the area. Six years later, a second phase of that berm removal project was completed with \$560K in state, federal and local funds. These individual efforts each improved approximately 1 to 5 acres. Overall, these projects also cleared 3,000 tires, 15 cars, 3 boats, and 330 cubic yards of debris from the marsh.

Saw Mill Creek provides a good example of one of the primary themes of wetland restoration that you will hear from others too. Most often, restoration projects, and specifically mitigation projects, are relatively small in size. It warrants emphasis, that the pilot MARSHEs initiative at Saw Mill Creek will contribute to restoration over a 68 acre complex, an order of magnitude increase over previous efforts.

Parks has been an active partner in the MARSHEs Project since it began. As the landowner, we have a vested interest in its success. As you've heard, beyond the most active construction, monitoring and maintenance phases of work, Parks will continue to act as the long-term steward of the site as required by the mitigation banking instrument. In fact, the initial sale of credits from the bank will fund this work and guarantees that on-going maintenance continues through the first 5 - year period. Credit sales from the bank support Parks on-going involvement with the bank through its formative period and create a long-term stewardship fund.

In closing, NYC Parks supports the MARSHEs Project, not only because of its benefits for Saw Mill Creek and Staten Island, but for its potential to be repeated elsewhere, magnifying the benefits of focused mitigation work to enhance even more of New York City's wetlands.

Thank you again for this opportunity to speak to you today. On behalf of Parks, we appreciate the Council's interest and attention on such an important initiative.

Members of City Council,

Thank you for allowing Protectors of Pine Oak Woods an opportunity to address the issue of wetlands mitigation banking and the proposed Mitigation and Restoration Strategies for Habitat and Ecological Sustainability (MARSHEs) initiative unfolding along the West Shore of Staten Island.

The proposed Mitigation and Restoration Strategies for Habitat and Ecological Sustainability (MARSHEs) Initiative brings a new, complex mechanism for economic development to New York City. Wetlands banking; with available mitigation credits for purchase, has not been established within our city and the precedent to be set with the approval of this proposal deserves thorough consideration.

A review of the United States Geological Survey Water Supply Paper 2425, Restoration, Creation and Recovery of Wetlands, Wetland Restoration and Creation, written by Mary E. Kentula of the United States Environmental Protective Agency (USEPA) provides a summary of the challenges to tidal marsh mitigation. Kentula writes "The relative merits to destroying the function of an existing wetland or other ecosystem, in exchange for another wetland function involves the consideration of numerous questions such as: (1) Which is more important, the existing or the replacement function? (2) Will the proposed wetland increase wildlife diversity?"

The answer to both questions would indicate MARSHEs is an inappropriate proposal for this site. The first question asks if the benefit outweighs the impact to the area proposed for restoration. Of course, the environmental benefits are negligible at best. The site proposed for restoration is already a rich, varied ecosystem.

The area of tidal wetlands to be restored as proposed by MARSHEs is a complex, vital habitat and the restoration of that habitat will cause undue harm to current flora and fauna. Utilizing the site for migration, breeding and foraging are a collection of neo-tropical passerines, marsh birds and an assortment of gulls, hawks, shorebirds and waterfowl.

On-site, throughout the wetlands intended for restoration, swamp and song sparrows nest alongside salt marsh sharp-tailed sparrows and seaside sparrows. Ibis and egrets feed among the grasses that camouflage the nests of clapper rail, marsh wren and least bittern (NYS listed threatened species). Osprey and eagles utilize the area to forage as do an array of herons and hawks, all of which nest within a half-mile radius of the area proposed for restoration. In nests among the branches of pin oak and chestnut oak, red maple and sweetgum trees and various sumac trees are yellow warblers and common yellow-throats beside american goldfinch, cedar waxwing and brown thrasher.

Butterflies abound. Migrant species, red admiral, common buckeye and the beloved monarch enjoy the many flowers on-site. Many stop to mate and lay eggs which mature on species-specific, native host plants already available on-site. Other butterflies that utilize the varied habitat include sulfurs and hairstreaks, tailed-blue and red-spotted purple.

The brackish, tidal waters that continually rise and fall teem with aquatic life as do the freshwater ponds and puddles. Diamond-backed terrapins patrol the waterways while countless fiddler crabs jostle for position along the banks. In the ponds on the property are green and bull frogs, spring peepers and Southern leopard frogs (NYS listed species of special concern) as well as a previously unknown species of frog; *Rana kauffeldi*. On March 14, 2012, Jeremy Feinberg, a doctoral candidate at Rutgers University announced that DNA evidence of frog sampled on the properties to be restored through MARSHEs showed the uniqueness of this new species.

The second question posed by Mary E. Kentula of the USEPA is "Will the proposed wetlands increase wildlife diversity?" Environmental review would support that restoration would not increase the diversity of wildlife in the area for the great majority of probable species already utilize the site for breeding, foraging and migration.

Understanding the lack of ecological necessity to restore the wetlands proposed for mitigation banking there is no environmental need to move forward with the project. The unimpeded tides rise and fall twice daily through these tidal wetlands. These wetlands, in the heart of industrial Staten Island, were resilient during superstorm Sandy and they will continue their inherent resiliency even without the MARSHEs initiative. The New York City Council should not allow for MARSHEs, or the wetlands mitigation banking which is the economic engine driving MARSHEs.

John Carey writes in the December 2013, Scientific American that "Projects to restore wetlands have largely failed and wasted millions of dollars, primarily because they have attempted to fully engineer all aspects of an ecosystem to their original conditions" (Scientific American 309, 74-79 (2013)). MARSHEs proposes such draconian change to a viable, tidal wetland.

The applicant, Louis Berger and Associates PC reports on the MRI Bank, the first bank approved by the Corps – New York District. They write that "the site was degraded, *Phragmites australis* monoculture underlain with dredge spoils and peat, and was isolated from tidal inundation..." This scenario does not occur at the proposed site for restoration. As previously described, the site proposed for restoration is a rich, vital habitat and benefit to wildlife would be negligible.

A similar, but a more grand restoration has been proposed for 700 acres of wetlands along the lower Savannah River watershed. In June 2013, Chris DeSherer, Managing Attorney for the Southern Environmental Law Center said in reference to the proposed wetlands restoration, mitigation banking system, that "this is a money-making operation masquerading as an environmental restoration project." So too, the proposed MARSHEs in New York City is a masquerade for profit.

Little of New York City's tidal marsh habitat remains. The approval of MARSHEs would endanger those precious few acres of marsh scattered through the five boroughs. A mitigation bank would allow for the destruction of small portions of marsh and the overall net loss would be greater than the supposed benefits of restoring 6, 60 or 600 rich, vital acres of wetlands.

The New York City Council must not approve Saw Mill Creek Pilot Wetland Mitigation Bank on Staten Island, New York.

Thank you,

Cliff Hagen

President

Protectors of Pine Oak Woods

P.O. Box 140747

Staten Island, New York 10314-0747

www.si-protectors.org



166A 22nd Street
Brooklyn, NY 11232 | NYC-EJA.org

On the ground — and at the table.

New York City Environmental Justice Alliance's (NYC-EJA) Testimony to the New York City Council Committees on Waterfronts and Economic Development on the oversight hearing regarding "Examining the Use of Mitigation Banking for Waterfront Restoration." February 27, 2015

Founded in 1991, the New York City Environmental Justice Alliance (NYC-EJA) is a non-profit citywide membership network linking grassroots organizations from low-income neighborhoods and communities of color in their struggle for environmental justice. NYC-EJA empowers its member organizations to advocate for improved environmental conditions and against inequitable environmental burdens. Through these efforts, member organizations coalesce around specific common issues that threaten the ability of low-income communities of color to thrive, and coordinate campaigns designed to inform City and State policies. The impact of climate change on waterfront communities and mitigation measures is central to NYC-EJA's agenda. In our research and advocacy for the Waterfront Justice Project as well as the Sandy Regional Assembly, NYC-EJA has established a track record advocating for wetlands restoration and green infrastructure in NYC's industrial waterfront communities.

NYC-EJA's Waterfront Justice Project

In 2010, NYC-EJA launched the Waterfront Justice Project, New York City's first citywide community resiliency campaign. When the City of New York initiated its overhaul of the Comprehensive Waterfront Plan (Vision 2020) in 2010, NYC-EJA began an advocacy campaign to convince the Bloomberg Administration to reform waterfront zones designated as the Significant Maritime and Industrial Areas (SMIAs.) These are zones created by the 2002 NYC Waterfront Revitalization Program (WRP) to encourage the protection and siting of industrial and maritime uses along the waterfront.

NYC-EJA's research findings emphasize the vulnerability of the SMIA's to potential hazardous exposures in the event of severe weather; the importance of wetlands restoration and green infrastructure projects; and the urgent need to address the public health impacts on vulnerable communities -- as referenced in the New York City Panel on Climate Change 2015 Report, Chapter 5: Public Health Impacts and Resiliency¹. NYC-EJA believes that New York City can and must create policies that mitigate climate change impacts, reducing the risk of hazardous exposures and minimizing the negative impacts associated with industrial uses, in order to foster a healthy economic base for all New Yorkers.

¹ See New York City Panel on Climate Change 2015 Report, Chapter 5: Public Health Impacts and Resiliency (pages 70-72), available at: <http://onlinelibrary.wiley.com/doi/10.1111/nyas.12588/epdf>.

Sandy Regional Assembly

Following Superstorm Sandy, NYC-EJA co-convened and facilitated the Sandy Regional Assembly (SRA), a coalition of community, environmental justice, labor, and civic groups from communities impacted by Superstorm Sandy, as well as communities vulnerable to future weather events. Nearly 200 people of all ages from across the NY-NJ region participated in a community-driven conversation to assess the aftermath of Sandy in January 2013. In collaboration with the SRA Planning Committee, NYC-EJA published the Sandy Regional Assembly Recovery Agenda in April 2013. Following its release, the SRA Recovery Agenda was shared with Mayor Bloomberg's Office, the Special Initiative for Rebuilding and Resiliency (SIRR), NYC Council, and the federal Hurricane Sandy Rebuilding Task Force. The Sandy Regional Assembly recommendations emphasized the importance of wetlands restoration and green infrastructure projects in environmental justice communities.

Wetlands Mitigation Banking & NYC's Waterfronts

NYC-EJA commends the City Council for inviting comments on the MARSHES Initiative to create the City's first wetlands mitigation bank on Staten Island. The decisions guiding this project have the potential to shape future mitigation banking along NYC's waterfronts. For this reason, NYC-EJA strongly urges the City Council to ensure that this project addresses the concerns of environmental justice communities living in storm surge vulnerable neighborhoods and industrial waterfronts. We welcome on-going opportunities to discuss these concerns and strategies to address them.

NYC-EJA's key recommendations include:

- **Wetlands Mitigation Banking must not generate environmental inequities in other areas.** Planning for the wetlands mitigation bank to finance ecological restoration in the Saw Mill Creek Marsh in Staten Island must explicitly address the potential for mitigation banking to enable development in other flood-prone areas of the city -- or encourage high-end residential or commercial development that will result in gentrification-driven displacement pressures.
- **Prioritize opportunities for wetlands mitigation banking in low-income communities and communities of color that are vulnerable to storm surge and sea level rise.** The SMIA's in Brooklyn, Queens, and the Bronx may contain a smaller amount of wetlands acreage than in Staten Island -- but there is a need to promote ecologically sensitive development in these areas, nonetheless. City policy should protect ecologically sensitive areas located inside or immediately adjacent to the South Bronx, Sunset Park and Newtown Creek SMIA's, where Special Natural Waterfront Areas (SNWAs) or Recognized Ecological Complexes (RECs) have been identified, and prevent the loss of net tidal and freshwater wetlands in these areas.
- **Require that in order to be eligible to participate in the mitigation bank (i.e., to purchase credits), projects must first mitigate the potential loss of wetlands and/or lost opportunities for local wetlands restoration.** This will ensure that local communities are not adversely affected by projects participating in the wetlands mitigation bank.

- **Provide mitigation alternatives and climate resiliency strategies for *all* communities, including industrial waterfront communities.** Ensure that green infrastructure projects and other mitigation measures are incorporated into development projects in storm surge vulnerable low-income communities and communities of color where mitigation banking may not be feasible. Such measures may include increased permeable surfaces, trees, rain gardens, enhanced tree pits; low-impact development technologies; storm water retention and improved storm drainage; and restored, reclaimed, rebuilt wetlands and salt marshes.
- **Define the criteria used to evaluate which projects will be eligible to participate in the mitigation bank (i.e., to purchase credits) and invite public comment before selling any credits.**
- **Ensure community oversight regarding decisions about which projects are eligible to participate in the mitigation bank by purchasing credits.**

NSWC's Opposition Bullet Points for Mitigation Banking at Saw Mill Creek | 2015

On behalf of the North Shore Waterfront Conservancy of Staten Island, Inc., (NSWC or NSWCSI) and the waterfront and environmental justice communities that we advocate on behalf of. We are opposed to the Saw Mill Creek Mitigation Banking Scheme that is being proposed by New York City Economic Development Corporation.

- We are opposed to the Saw Mill Creek Mitigation Banking Plan because the funding was obtained under false pretenses ; by NYCEDC stating that this was a Hurricane Sandy Resiliency project. And that this funding was going to protect Hurricane Sandy impacted communities and businesses. When in reality Saw Mill Creek is no where near any existing communities and or businesses let alone any that were impacted by Hurricane Sandy.
- We object to the Saw Mill Creek Mitigation Banking Plan because it is unethical.
- Three years later after Hurricane Sandy our waterfront communities are still just as vulnerable as the day Sandy hit.
- This 12 million dollars of Sandy Money is blood money, islanders died and homes and communities were wiped off the face of this planet. That's how this funding came about.
- Mitigation Banking at Saw Mill Creek is a benevolent gesture. But it is the kind of project that a government agency would do once you have every other environmental and Climate Change issue that is directly and/or indirectly affecting your people populated areas - resolved. And clearly we do not. We need Mitigation Alternatives not Mitigation Banking.
- We no longer live in the environment of Henry David Thoreau, John James Audubon or President Theodore Roosevelt. Our environmental conditions are much more dire. But many of our environmental laws are based on their theories of protecting pristine environments and not the environment of the urban people populated areas that exist today. In terms of environmental agencies people are not even considered as part of the environment, although we are. There are more laws to protect a tree frog than there are to protect people. And that is why the U.S. EPA and NYS DEC are okay with mitigation banking because it has nothing to do with people, it's strictly about the environment.

By all means protect and preserve the natural areas that we have. However, Climate Change dictates that you show reasonable judgment and at the same time protect your vulnerable people populated areas first.

- Mitigation Banking offers no Climate Change defense for the communities where the development is taking place, it doesn't even address it. We believe that if you are going to do a Resiliency Mitigation Project then there should be visible resiliency benefits at the front where the development is taking place, the middle and at the end of the project. In order that everyone sees the environmental benefits of this project.

From a marketing stand point it would much easier for a developer to support a Mitigation Alternative Project that saves human lives than a project that does not. We have 8 million plus people on these islands and no visible means of protecting them from Climate Change's sea level rising, storm surges and flooding.

We need Mitigation Alternatives to change that. We are asking that you scrap the Mitigation Banking Scheme for a plan that will work.



The North Shore Waterfront Conservancy of Staten Island, Inc.
P.O. Box 140502
Staten Island, New York 10314

February 27, 2014

Reference: New York City Council's Waterfronts/Economic Development Hearing

On behalf of the North Shore Waterfront Conservancy of Staten Island, Inc., (NSWC or NSWCSI) and the waterfront and environmental justice communities that we advocate on behalf of. We are opposed to the Saw Mill Creek Mitigation Banking Scheme that is being proposed by New York City Economic Development Corporation.

We are opposed to the Saw Mill Creek Mitigation Banking Plan because the funding was obtained under false pretenses. By NYCEDC stating that this was a Hurricane Sandy Resiliency project. And that this funding was going to protect Hurricane Sandy impacted communities and businesses. When in reality Saw Mill Creek is no where near any existing communities and or businesses let alone any that were impacted by Hurricane Sandy.

We object to the Saw Mill Creek Mitigation Banking Plan because it is unethical. All of our waterfront communities are just as vulnerable 3 years later to hurricanes as the day that Hurricane Sandy hit New York City. Nothing has been done to protect us and whatever measures that have been spoken about or written down are not functional enough to become implemented if a hurricane were to hit us today.

This \$12 million of Hurricane Sandy money, is blood money, as islanders died in order to make this funding possible. None of this would be happening if people had not died and homes and communities were not wiped off the face of the planet, that is something that everyone seems to forget.

The mitigation banking project at Saw Mill Creek is a benevolent gesture. It is the kind of project, that a government agency would do when you have every other environmental and Climate Change issue that is directly and/or indirectly affecting your people populated areas - resolved. And clearly we do not. We need Mitigation Alternatives not Mitigation Banking.

New York City is still very much a tale of two cities. We no longer have the environment of Henry David Thoreau, John James Audubon, or of President Theodore Roosevelt, our

environmental conditions are much more dire. But many of our environmental laws are based on their theories of protecting pristine environments and not the environment of the urban people populated areas that exist today. In terms of environmental agencies people are not even considered as part of the environment, although we are. There are more laws to protect a tree frog than there are to protect people. And that is why the U.S. EPA and NYS DEC are okay with mitigation banking because it has nothing to do with people, it's strictly about the environment.

We cannot retract anything that we have done to the environment, the wheels are in motion, all we can do now is preserve, protect and bolster what we have. With the additional purpose of continuing our co-habitational existence. And with the understanding that no people populated communities not even the ones where the development is taking place should be left behind with no resiliency buffers and no tangible measures to protect them.

It is our strong believe that whatever the environment provided naturally in terms of resiliency from Climate Change's sea level rising, storm surges and flooding, the developer (business, entity, agency, authority) now have to provide the equivalent in resiliency for what is being taking away from that residential community. And that is something that Mitigation Banking does not address.

If we are going to be responsive and responsible to ourselves then Climate Change Resiliency; must include that if a business, developer, entity, authority, agency is at the waterfront and based on their proximity to the water. They should become the first line of defense in protecting the residential community that is behind them. This should also become the standard for tidal wetlands that environmental agencies deem as non consequential and to historic waterfront properties that are being redeveloped. It is not enough to claim that a structure is resilient just because it was placed on stilts while still allowing the water to rush underneath it and towards a low line residential community that has no buffers to protect it.

For marketing purposes and credits it would be easier for a businesses to get behind a project (that actually and visibly in terms of tangibles) saves human lives, than one that only pretends to. Arlington and Mariners Marshes saved human lives, Saw Mill Creek did not and currently will not because there aren't any lives to save there. Preserving wetlands (fresh and tidal) and incorporating them into our waterfront resiliency and in land drainage infrastructure system will help to save human lives. Building jetties, reefs/berms and sea walls that have a connection to one another will help to save human lives.

And putting all of the above on paper so that people will know what your true intentions are will help to build relationships with the people of our waterfront communities. Who have been affected by every Nor 'Easter and Hurricanes Irene and Sandy.

Currently, we have approximately 8 million plus people living on these islands and no existing means of protecting all them and it is shameful. Human lives should matter.

Based on our current environmental clock we need Mitigation Alternatives and we have a very short amount of time to do this. That is, if we are going to keep up with our changing environment.

Sincerely,

A handwritten signature in cursive script that reads "Beryl A. Thurman".

Beryl A. Thurman, Executive Director/President
NSWC

Save All of Arlington Marsh and its Cove.

Let justice be done although the heavens may fall.

**Testimony of Ray Fusco, Assistant Vice President of Ports &
Transportation, New York City Economic Development
Corporation to the**

Committee on Waterfronts, New York City Council

February 27, 2015

Good morning Chairperson Rose, Chairman Garodnick and members of the Waterfront and Economic Development Committees. My name is Ray Fusco, and I am an Assistant Vice President in the Ports and Transportation Department at the New York City Economic Development Corporation.

Thank you for this opportunity to provide an update on the MARSHEs pilot project. MARSHEs, or "Mitigation and Restoration Strategy for Habitat and Ecological Sustainability", is an effort to create the City's first wetlands mitigation bank.

Mitigation banking is defined as the large-scale restoration, creation, enhancement, or preservation of a wetland, stream, or other habitat area undertaken expressly for the purpose of compensating for unavoidable impacts to natural resources such as tidal wetlands, in advance of project actions. This is only for instances when such compensation cannot otherwise be achieved at project sites. We must emphasize that the existence of a mitigation bank does not affect the rigor undertaken during the federal, state and local review of waterfront environmental permitting. The requirement to avoid, minimize, and only then mitigate for wetlands impacts, remains in place.

Mitigation banking is a nationally-proven federal program designated under the Clean Water Act to ensure that the policy of "no-net loss" of wetlands could be met. There are 28 states that have established over 1,000 mitigation banks since 1990, resulting in the restoration of over 960,000 acres of wetlands. In New Jersey, within the New York District of the Army Corps of Engineers there are four existing wetland mitigation banks.

NYCEDC, working with NYC Department of Parks and Recreation, is proposing to develop the bank on an approximately 68-acre, City-owned

site at the Saw Mill Creek on the West Shore of Staten Island. The site is comprised of severely degraded wetlands. Prior to coming into the City's possession portions of the site were filled, ditched and suffered from illegal dumping. The present state of the site impedes tidal flow encouraging the growth of invasive species. The area no longer provides the resiliency or habitat function of a healthy wetland. Implementing the Saw Mill Creek Wetland Mitigation Bank will restore and rehabilitate the site.

The West Shore of Staten Island near the Saw Mill Creek is adjacent to hundreds of residents, businesses, and the significant transportation corridor of the West Shore Expressway. The December 2012 Special Initiative for Rebuilding and Resiliency (SIRR) report found that the area incurred some of the most severe flooding of any part of New York City during Hurricane Sandy. SIRR identifies Saw Mill Creek as a priority restoration site. The current degraded condition of the wetland puts local residents and businesses at risk during significant storm events. The restoration of the Saw Mill Creek and the establishment of mitigation banking in New York City is part of the City's official comprehensive resiliency plan post Sandy.

Saw Mill Creek is also listed as a priority restoration site in the Army Corps of Engineers 2009 *Comprehensive Restoration Plan*, which identified sites throughout the New York/New Jersey estuary that possess important ecological functions needing restoration.

To address the site's vulnerabilities, NYCEDC and NYC DPR undertook the process for creating a mitigation bank. The CWA rule empowers federal and state resource agencies to oversee the development of the bank through a process that guarantees better ecological outcomes than traditional mitigation. It also mandates stakeholder involvement through agency and public comment.

The federal and state agencies involved in the establishment of the Saw Mill Creek mitigation bank include the US Army Corps of Engineers, the Environmental Protection Agency, the Fish and Wildlife Service, and National Marine Fisheries Service along with the New York State Department of Environmental Conservation and Department of State.

This group makes up the "Interagency Review Team" (IRT) chaired by the Army Corps. Each of the other IRT members participates in the

federal process of establishing a mitigation bank by providing its own agency expertise on environmental, construction and long term maintenance aspects of the project.

A key component of wetlands banking is a credit system in which credits are sold to entities undertaking construction projects that will affect waters of the United States. This could include any project built within the coastal zone, such as a sewer outfall, a bulkhead restoration, a dock, a ferry landing, or a public esplanade. The credits generated from this pilot are to be made available for priority City initiatives and businesses in need of appropriate compensatory mitigation. Beyond the extensive IRT process for determining the ability of projects to use credits for compensatory actions, NYCEDC is in the process of defining a structure and criteria for credit allocation. Credits are generated as a site is restored under a rigorous accounting system in which ecological “uplift” is demonstrated to the satisfaction of the regulatory agencies. The specific success criteria are defined in a Mitigation Banking Instrument (MBI).

Credit sales are crucial to successful banks because they provide the financial support for the entire wetland restoration and site management in perpetuity.

In contrast, New York’s current mitigation approach is largely ad hoc. Mitigation takes place on a case-by-case basis where restoration sites are identified by project sponsors and regulators through a lengthy negotiation process. For permittees, mitigation ratios are often unpredictable and difficult to identify. Negotiated mitigation actions often take place on small and disconnected sites with no long-term stewardship obligation to guarantee restoration success. Wetlands are exponentially more effective as larger systems and when located adjacent to high-functioning natural areas. While the CWA does oversee the current ad hoc system of compensatory mitigation, the rules for establishing mitigations banks are more explicit in their requirement to establish long-term stewardship funding.

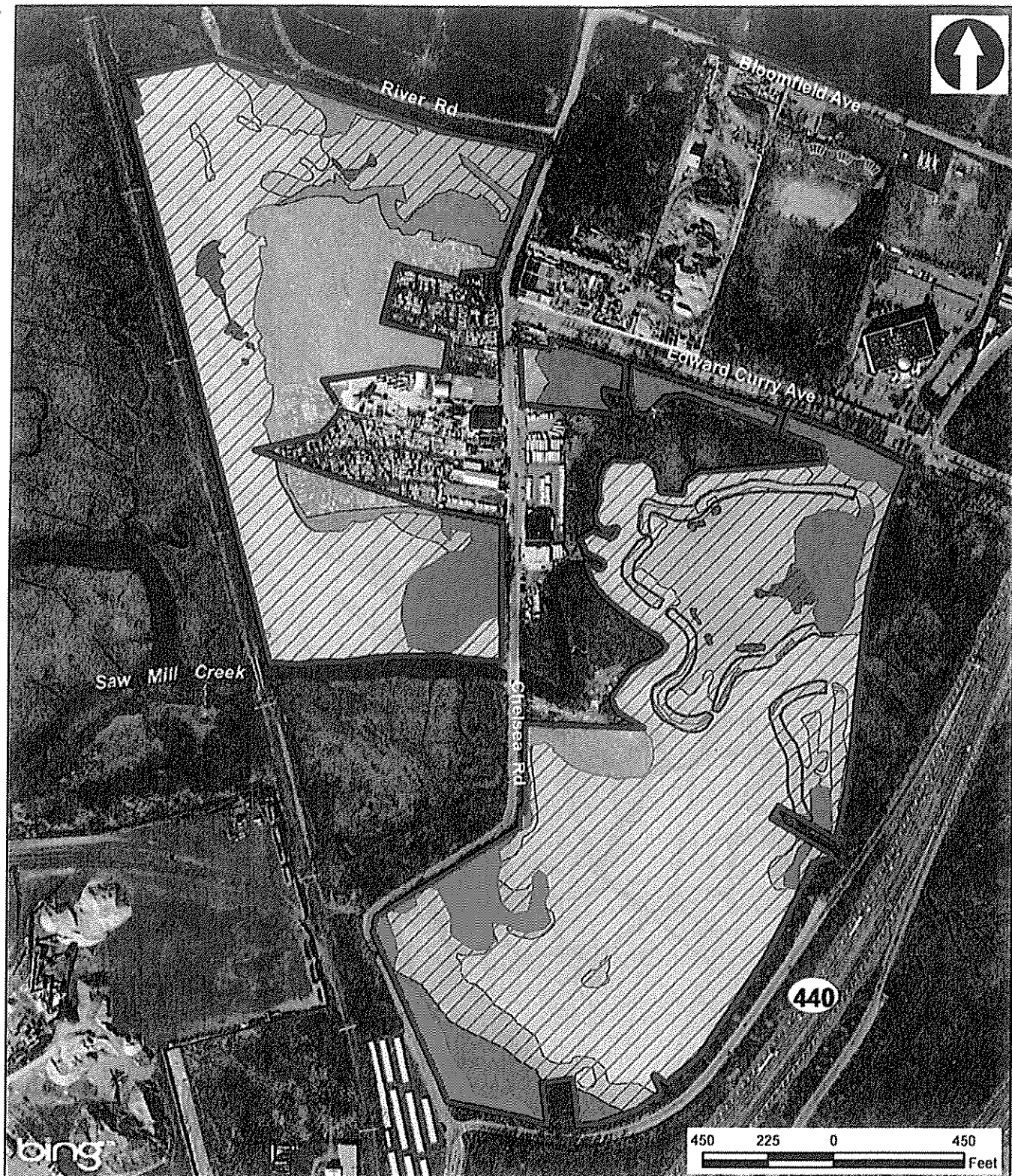
To fund MARSHEs at Saw Mill Creek, initial support will come from Community Development Block Grants/Disaster Recovery funds and the State of New York.

An important element in this pilot project is our Technical Advisory Committee (TAC) made up of more than a dozen environmental and other waterfront stakeholders such as the Environmental Defense Fund, the New York City League of Conservation Voters, the New York City Audubon Society, the Hudson River Foundation, the Regional Plan Association, and the Metropolitan Waterfront Alliance, among others. The TAC has been a vital sounding board in confirming the need for mitigation banking, identifying Saw Mill Creek as a priority restoration site, as well as validating the site design and methodology. We can also affirm that they have provided a healthy dialogue, which has made the project better.

The project is currently in the preconstruction phase. We expect to receive approvals by fall 2015. Restoration and planting will occur over the next two years followed by five to six years of monitoring and maintenance. At the end of that period, all bank credits will be generated and available for use. Once all credits are exhausted, the bank will be closed and long-term stewardship under NYC Parks and Recreation will begin.

In closing, this is a tremendous opportunity that the City can embrace to unlock resources that can be directed to restore large wetland systems while still protecting existing wetlands under current laws. If successful, the model can be implemented at appropriate sites throughout the City such as Jamaica Bay, the Bronx, and northern Queens, using both public and private lands and funds.

We appreciate the opportunity to update both Committees and look forward to your questions. Thank you.



Sources: Image courtesy of USGS, Microsoft Corporation 2013;
Approximate Delineation and Cover Types, Berger 2013.

Legend

	General Project Area		Successional shrubland
	Delineated Wetland (Non-surveyed)		Successional southern hardwood
	Remnant Berm		Chestnut oak forest
	Tidal marsh		Phragmites upland
	Red maple-sweetgum swamp		Urban vacant lot
	Phragmites wetland		
	Panne		

 New York City Economic Development Corporation	
Saw Mill Creek Wetland Mitigation Bank Staten Island, New York Wetland Delineation & Habitat Cover Types	
Louis Berger & Assoc, PC	August 2013 Figure B-1



New York City Office of Management and Budget
255 Greenwich Street, 8th Floor Reception Area
New York, NY 10007

January 16, 2015

Re: CDBG-DR Action Plan Amendment 8

To Whom It May Concern:

NY/NJ Baykeeper appreciates the opportunity to comment on the above referenced Amendment to the Disaster Recovery Action Plan. These comments are specifically in reference to the proposed allocation of funding to the Wetlands Mitigation Bank being planned for Staten Island, NY. This project would be a valuable asset to the area; however, we have some concerns about the distribution of the credits that will be created.

The proposal states that the majority of the funding for the proposed Mitigation Bank would come from the third round of CDBG-DR funding being allocated for Hurricane Sandy recovery efforts. While we support the idea of a wetlands mitigation bank in New York, we feel that this project is not directly related to recovery efforts. Enhancing a wetland on the northwest shore of Staten Island will offer very minimal, if any, flood protection to nearby homes and businesses which are all located more closely to, and are more exposed to, the north shore. Using Sandy funding for this purpose would be an inappropriate use of the funds, which should be directly benefiting the people who were most vulnerable to Hurricane Sandy. We suggest that the proposal be amended to require that the credits created through the plan be allocated to projects which will increase the resiliency of those residents and municipalities who were most impacted by Hurricane Sandy. Additionally, a financing plan should be completed before funds are released in order to confirm that the credits will be distributed appropriately.

According to the plan, the City of New York would be required to pay for the use of mitigation credits generated by the project. Since funds would be diverted from NYC recovery efforts in order to complete the project, we see this as a double charge to the City of New York for the same work. At a minimum, we encourage the proposal be revised to specify a significant discount for credits sold to the City of New York.

The final concern we have with the project is the size of the service area which would be eligible for mitigation credits and the type of projects that would be eligible. The service area extends north as far as the Bronx, where residents would not see any of the benefits of this mitigation. The service area should be limited to projects within the same sub-watershed as the wetlands impact. Eligible projects should also be limited to in-kind wetland impacts. For example, restoration of wetlands should not be used as a credit for a project which has open-water fill, as the two have different impacts which are not equivalent. Additionally, credits should be prioritized for small projects, where doing mitigation on site is not possible or useful. This will ensure that the credits will have the most effective impact possible.

Thank you for allowing us to provide feedback on the proposed plan. Overall, we feel that a mitigation bank would be very beneficial for NYC; however, the credits that are created need to be carefully distributed to projects that will provide maximum flood protection and resiliency.

Sincerely,

Jessica Evans
Post Hurricane Sandy Fellow
NY/NJ Baykeeper



Metropolitan Waterfront Alliance

Testimony of Roland Lewis, President & CEO

New York City Council Committee on Waterfronts and Committee on Economic Development

Oversight Hearing

re: Examining the Use of Mitigation Banking for Waterfront Restoration

February 27, 2015

The Metropolitan Waterfront Alliance (MWA) is a bi-state coalition of over 800 community and recreational groups, educational institutions, businesses, and other stakeholders committed to restoring and revitalizing the New York and New Jersey waterways. Our waterways are alive with active recreation, environmental education, waterborne transportation, and economic activity.

MWA has long been a strong supporter for establishing a wetlands banking system, especially as a tool to help maritime businesses expand their operations by providing a predictable, environmentally sound way to compensate for necessary shorefront maritime improvements. MWA supports Economic Development Corporation's program to develop a wetlands mitigation banking system, known as MARSHEs, to restore 68 acres of the Saw Mill Creek wetlands, an area in northwestern Staten Island fouled by illegal dumping, choked by invasive weeds, and partially filled in over the years. The wetlands degradation worsened during Superstorm Sandy, but once restored, the healthy Saw Mill Creek ecosystem will protect hundreds of nearby businesses by absorbing floods and storm surge.

MWA's comprehensive review of the waterfront permitting process in 2010 proposed the creation of a wetlands banking system to "aggregate permit compliance and ongoing maintenance, reduc[ing] failure rates and non-compliance... and allow[ing] mitigation to occur simultaneously with development, as opposed to waiting for development to proceed and then establishing mitigation measures." An idea bandied about locally for years – championed by the Environmental Protection Agency and put into practice elsewhere around the country – wetlands mitigation banking is an idea whose time has come.

This innovative concept enjoys strong support from our elected leaders across the city. As part of MWA's five-point Waterfront Platform for New York City and corresponding voter guide published in 2013, MWA asked candidates for office to support a new wetlands banking program. Proponents included then-candidate Mayor Bill de Blasio, who "support[ed] innovative measures that enable us to account for negative externalities – such as the loss of wetlands – and provide the funds necessary to invest in large-scale restoration projects" and then-candidate Comptroller Scott Stringer, who "support[ed] piloting a market-based wetland mitigation bank in NYC which promises to protect our precious shoreline (boosting our resiliency in the process) while enabling public and private economic development to proceed." Other supporters, including those serving on these Committees, included Chairwoman Rose, Council Members Gentile, Menchaca, and Miller.

The funding of the wetlands mitigation bank and the start of the innovative MARSHEs program is a win-win-win for the City – the restoration of ecologically important wetlands, increased resiliency for Staten Island, and a much more efficient way for maritime businesses to carry out environmental mitigation as they negotiate the permitting process. This project is also consistent with the goals of PlaNYC, the sustainability plan for New York City, which recommended "establish[ing] a mitigation banking mechanism for public projects" in an effort to "better achieve ecological goals of replacing loss wetlands while making it easier for public institutions and private developers who are attempting to comply with environmental requirements."

MWA strongly supports the MARSHEs initiative and looks forward to working with NYCEDC to ensure that this project can deliver environmental, economic, and resiliency benefits to all New Yorkers.

The importance and history of Saw Mill Creek wetlands on Staten Island
from the Wildlife Conservation Society's Welikia Project

Date: February 27, 2015

Testimony from
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Testimony to
New York City Council's Committees on Waterfronts and Economic Development
Hearing on "Examining the Use of Mitigation Banking for Waterfront Restoration"
City Hall

Dear Committee Members, thank you for inviting me to speak with you today.

My name is Dr. Eric W. Sanderson. I'm a senior conservation ecologist at the Wildlife Conservation Society and the author of Mannahatta: A Natural History of New York City (Sanderson 2009). I have been studying the ecology of New York City for 15 years. The first ten years were dedicated to the Mannahatta Project, about the historical ecology of Manhattan Island prior to European colonization. My colleagues and I described the remarkable 55 ecological communities and the more than 1000 species that once lived on Manhattan or in the surrounding waters. Since 2010, we have been continuing this work over the rest of New York City through the Welikia Project. Welikia means "my good home" in Lenape, the Algonquin language spoken in this region at the time of Henry Hudson's voyage of discovery in 1609. Before coming to New York in 1998, I wrote a Ph.D. dissertation about salt marshes in California. I have written both popular and scientific treatments of the importance of salt marshes for people, wildlife and nature in general.

Today I want to impress on you the importance of salt marshes for people of the City of New York. Salt marshes provide many ecosystem services to human populations, including removing nitrogen from the water column, thereby improving local water quality, anchoring and stabilizing the shoreline, sequestering carbon, providing nutrients to the surrounding marine

ecosystems (thereby enhancing local fish and shellfish production), and providing recreational, educational and scientific opportunities to people. Many important discoveries about biogeochemistry, natural system responses to climate change, and food web dynamics have been made in salt marshes. Salt marshes also provide important habitat for migratory birds and fish, and harbor specially adapted wildlife species, like the diamondback terrapin (Barlow 1969; Barbier et al. 2010; Mitsch and Gosselink, 1993; Tiner 2000)

A wetland is an area that is regularly inundated or saturated by surface or ground water. Plants and animals that live in wetlands (also known as swamps, marshes, bogs, and fens) must have special adaptations to handle being flooded. For a plant, that includes an ability to supply oxygenated air to the roots so that respiration can continue. For animals, it often means special adaptations to move in wet and/or muddy circumstances. Many plants and animals depend on wetlands for their survival.

Salt marshes are wetlands where the water is brackish or saline, typically because of inundation from the sea. Low salt marshes in our region flood every tidal cycle; high salt marshes flood on the highest tides. Salt marsh plants and animals must have adaptations to survive not only oxygen deprivation from flooding, but also saturation from salt, which desiccate living tissue. Plants secrete salt from their leaves, or back it into intra-cellular storage containers called vacuoles until the concentration becomes too great, at which time they senesce, turning bright orange as the trees turn red and yellow in the fall. The diamondback terrapin, mentioned above, has an adaption to cry out the salt to maintain homeostasis.

As part of our work on the Welikia Project, we have been studying the historical wetlands of Staten Island, a particularly rich and satisfying endeavor. Some of the former names of wetlands on Staten Island include: Reed's Basket, Willow Swamp, Haunted Swamp, and The Meadows. In colonial times, salt marshes were fiercely fought over in numerous court cases, because they provide fodder for livestock. Old maps often mark them as "salt meadows." Unfortunately later generations did not appreciate the value of these ecosystems or the various kinds of ecosystem services they provide, leading to land-filling, garbage deposition, changed hydrology, and general neglect and destruction. Tiner (2000) document that in the 19th century, Staten Island had approximately 5600 acres of wetlands. The National Wetlands Inventory maps from the mid-1990s indicated that about two-thirds of these wetlands had been lost to land-filling and development, leaving the island with only about 1800 acres, mostly on public lands. Land-filling was all too common in the mid-20th century, though late 20th century policies made it much more difficult for wetlands to be destroyed. In the early 21st century, these trends are being reversed, through efforts exactly like the MARSHEs Initiative.

Below I present several maps showing the salt marshes in area to be restored by the MARSHES Initiative. These maps document that salt marshes existed in this area at least back to the American Revolution and throughout the 19th century. Interestingly the exact extent of salt marshes seems to have expanded for time, and in direct opposition to the typical trend in New York City, for reasons that are not clear to me. Subsidence, changing sea level, land development, and cartographical differences over time all probably play a part in explanation.

Figure 1. shows this part of Staten Island during the American Revolution, in approximately 1782. The map was drawn by Charles Blaskowitz, a surveyor and cartographer working for the British military during the Revolutionary War. We have used the geographic information system database we constructed for the Welikia Project to show the project boundaries (purple) and current salt marsh boundary (green). The Blakowitz map shows that the salt marshes of this area were contiguous with a band of salt marshes extending along the western shore of Staten Island. A note indicates that inland of the marsh were "wood" or a forested ecosystem. The project area is shown as partially wetland and partially upland in this comparison.

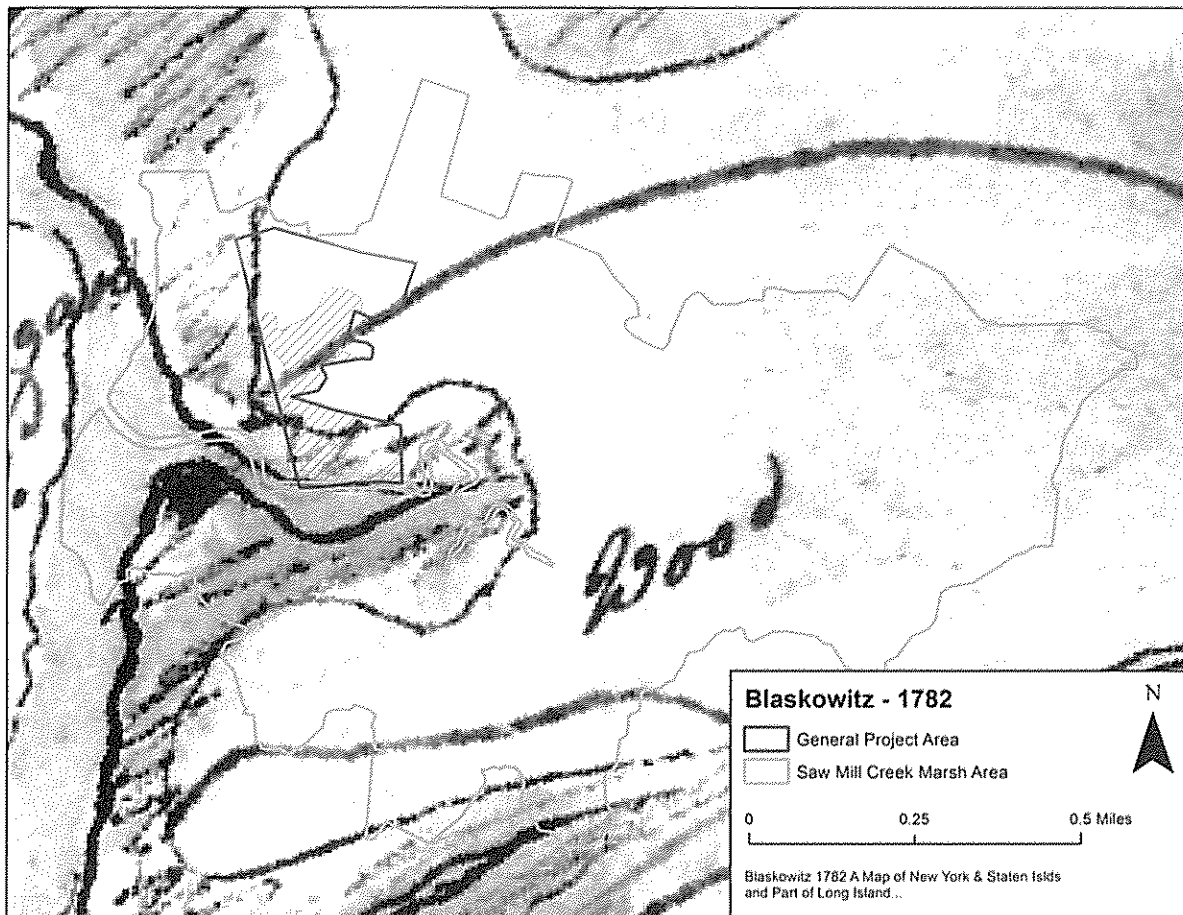


Figure 2. shows the same area as it appeared on the famous Chart of New York Harbor produced by Ferdinand Rudolf Hassler and colleagues at the U.S. Coast Survey in 1844. The U.S. Coast Survey was the first scientific agency of the US Federal government, established in 1807. They used well-documented, scientific techniques to map local waters and coastal environments, including much of New York City. The 1844 Chart was mapped at a scale of 1:40,000 and our current georeferencing of this map is within 3 meters of its modern location based on the root-mean-square error. This comparison shows that the study area falls in an area half in the tidal marsh (the fine stippling) and half in the forest (shown by the rough stippling that covers the eastern two-thirds of the map). Some of these forests may have been subject to salt intrusion and inundation, in which case they may have been Atlantic cedar swamps, but I cannot confirm that is the case. Note that the southern part of this detail view shows an area converted to farmland with at least one structure in the Saw Mill Creek Marsh Area. The original of this map is held by the Library of Congress.

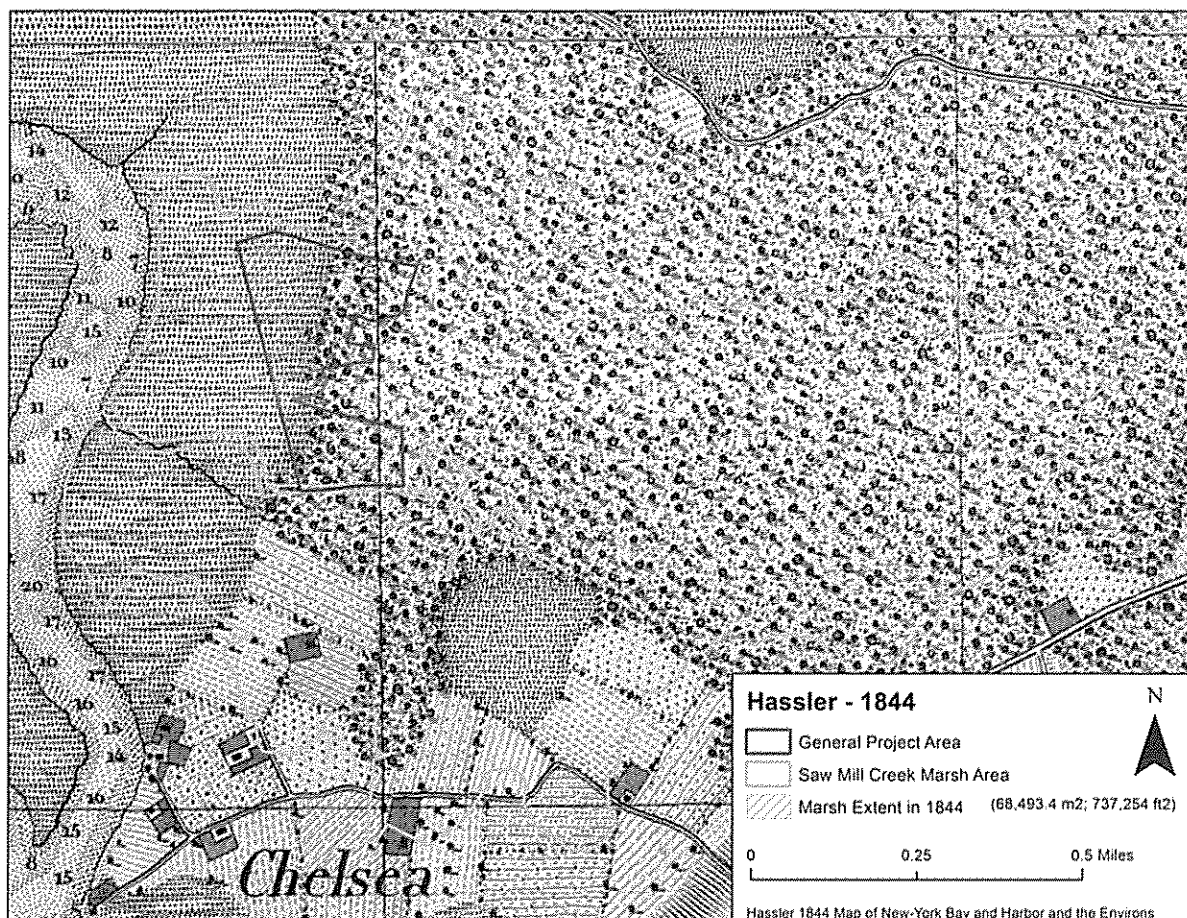


Figure 3. shows this same area when it was surveyed by H.L. Whiting and R.B. Palfrey in August 1875. These surveyors worked for later iteration of the coast survey. Apologies for the poor quality of the reproduction of this 1:10,000 scale survey. Again this area shows extensive coastal wetlands neighboring a series of forested areas, but with incursions of farmland on the north, east and south.

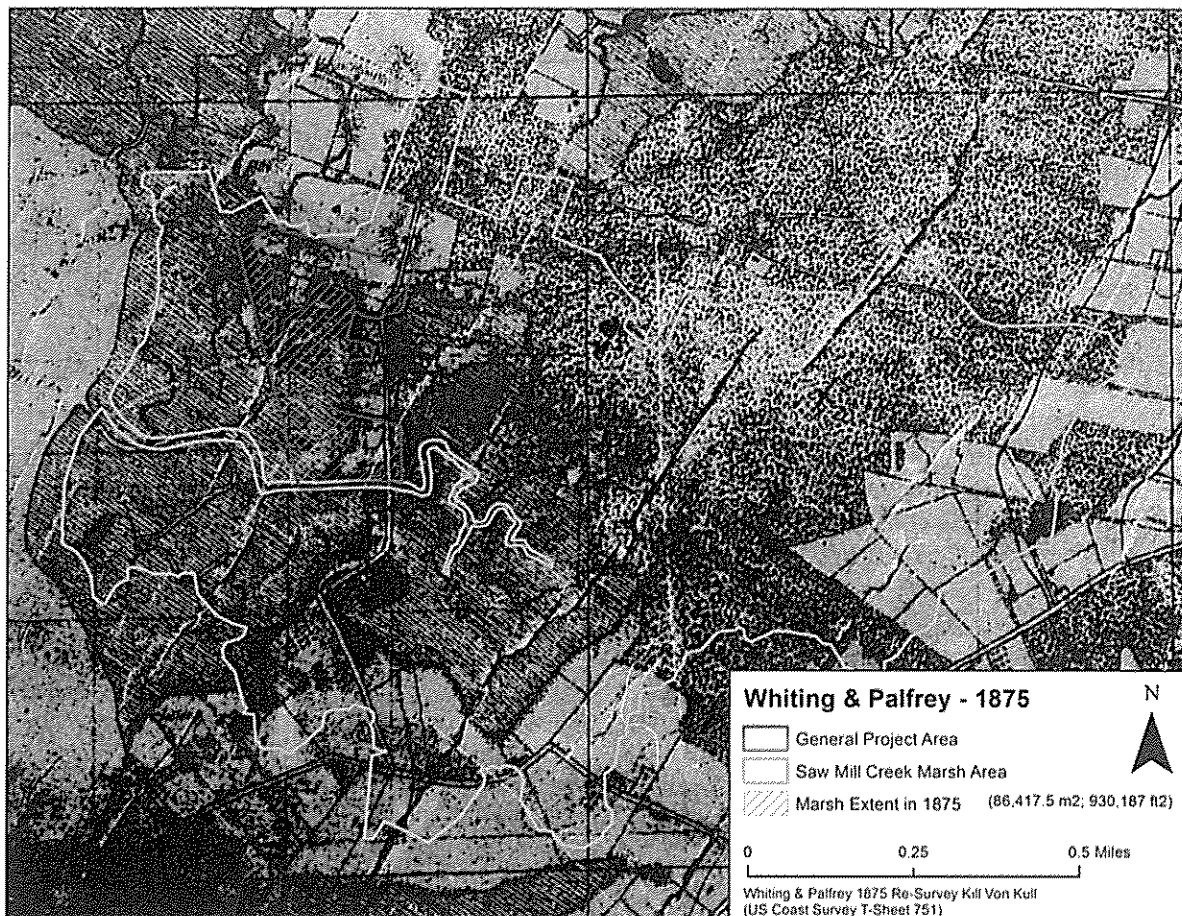


Figure 4. shows this region in 1891 when it was mapped for the Atlas of the Metropolitan District under the supervision of Joseph R. Bien and C.C. Vermule. This work represents the combined efforts of the U.S. Coast and Geodetic Survey and the Geological Survey of New Jersey. This map shows a changing landscape, or at least a reinterpretation. Chester road (now Chelsea Road) cross the marshland and appears to have influenced the drainage patterns. Salt marsh filling is associated with the margins of the road on either side, and the forested areas, including two streams, have been reduced in extent. Note that this map predates the railroad and Interstate highway.

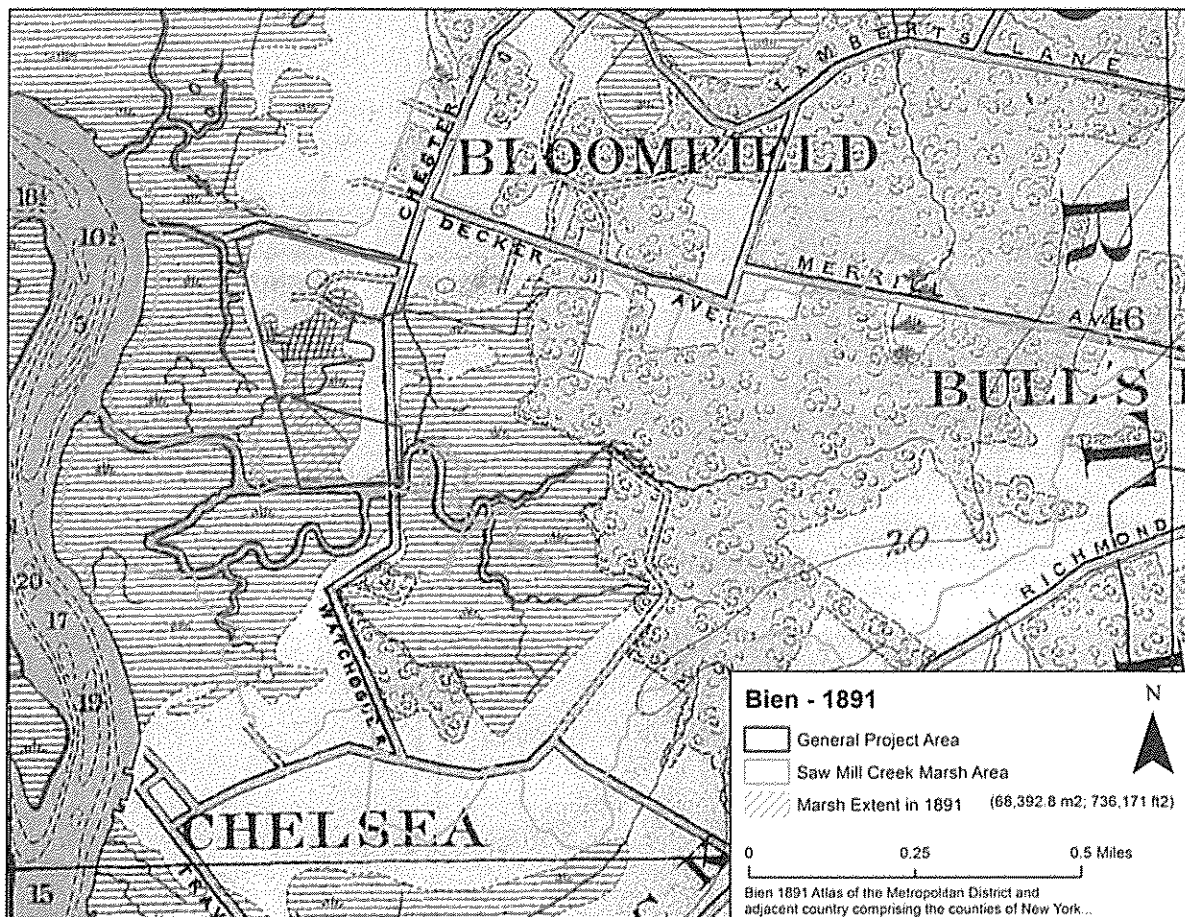
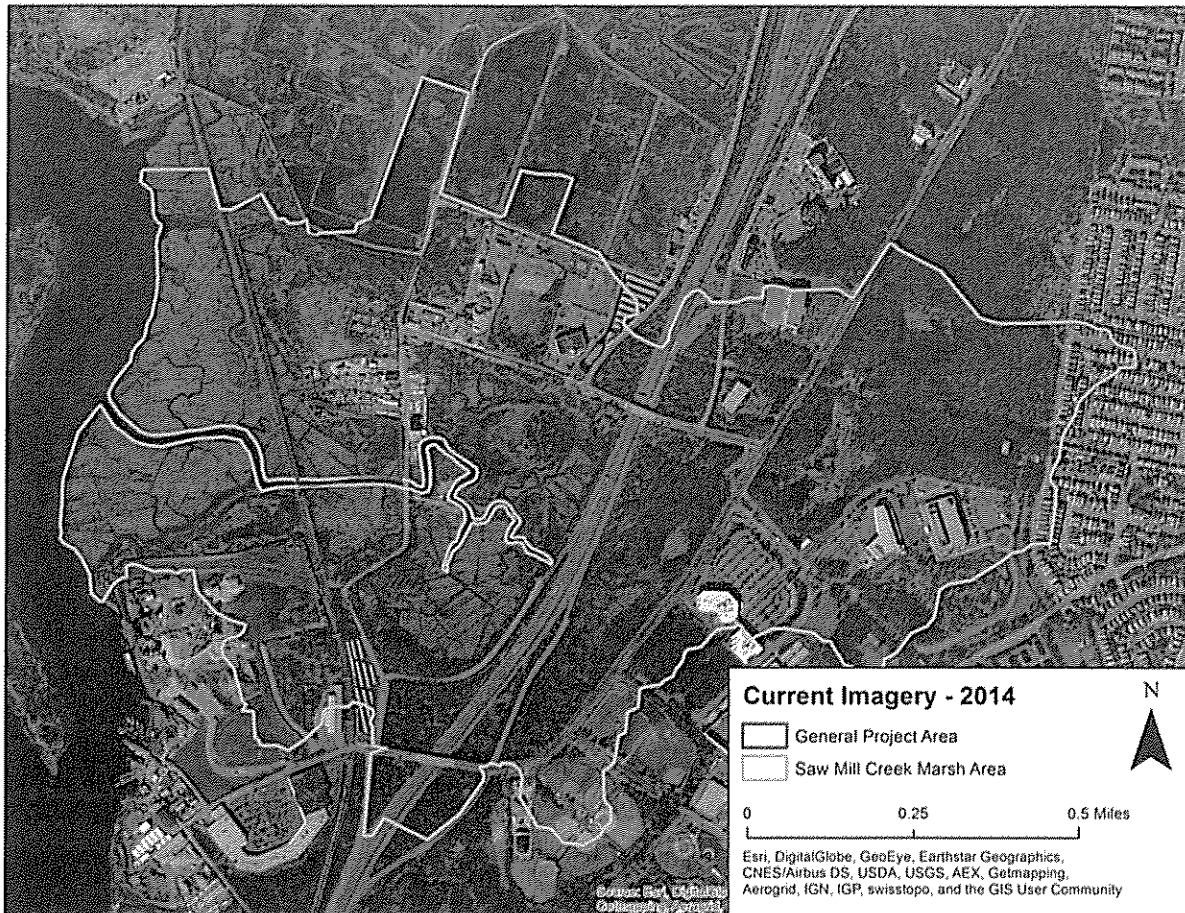


Figure 5. shows the study area from the MARSHES Initiative report prepared by the New York City Economic Development Corporation for comparison. Current imagery is from ESRI and Digital Globe.



Finally I would like to conclude by informing the committees members of the new Visionmaker/NYC web forum developed by the Wildlife Conservation Society to encourage democratic sharing of visions of New York City's future. A beta-version of this web forum was unveiled in January 2014 for Manhattan as Mannahatta2409.org (see Figure 6); this summer we will be launching Visionmaker across all of New York City, including Staten Island, so that policymakers, citizens, and schoolchildren can all collaborate on the future nature of New York City.

Figure 6. Splash screen for Mannahatta2409.org, a webforum to develop and share visions of the future of New York City. During the summer of 2015, the Wildlife Conservation Society will launch a revised and rebranded webforum called Visionmaker/NYC, which will cover all five boroughs of New York City.



Acknowledgements: I would like to thanks to Christopher Spagnoli of WCS for preparing the figures for this testimony.

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I represent: NY/NJ Banker

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