

HUDSON-RARITAN ESTUARY COMPREHENSIVE RESTORATION PLAN
POTENTIAL RESTORATION OPPORTUNITIES
PROJECT SUMMARY SHEETS
Jamaica Bay

Restoration Opportunities
CRP Identification #: Site Name

- 9. Seagirt Avenue Wetlands
- 51. Arvene Urban Renewal Area
- 102. Brant Point
- 103. Breezy Point
- 104. Spring Creek
- 105. Idlewild Park/ Brookville Marsh
- 148. Bayswater Park
- 149. Dubos Point
- 151. Bergen Beach
- 160. Bergen Basin
- 161. Hawtree Point
- 162. Conch Basin
- 165. Motts Basin
- 166. Shellbank Creek
- 810. Shellbank Basin
- 167. Somerville Basin
- 168. Hendrix Creek
- 172. Vernam Barbadoes
- 193. Gerritsen Inlet Dead Horse Bay
- 198. Canarsie Beach
- 200. Mill Basin
- 601. Hook Creek
- 602. Doxey Creek *TBD
- 603. Plumb Beach
- 604. Sheepshead Bay
- 607. Floyd Bennett Field
- 915.1. Canarsie Pol
- 611. West Pond
- 915.2. Black Wall Marsh
- 915.3. Goose Pond Marsh
- 915.4. Duck Point Marsh
- 915.5. Pumpkin Patch Marsh
- 915.6. Stony Creek Marsh
- 628. Rockaway Peninsula *TBD
- 631. Frank Charles Park
- 632. Grassy Bay
- 634. Thurston Basin
- 915.7. Silver Hole Marsh
- 647. Rockaway Reef
- 730. Fresh Creek
- 731. Paerdegat Basin
- 732. Dead Horse Bay
- 914. Sunset Cove Park

*TBD- To be determined

CRP SITE 9. SEAGIRT AVENUE WETLANDS

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Rockaway Peninsula, between Seagirt Ave. and Seagirt Blvd. Queens, NY.

Watershed: Jamaica Bay

Size: 5 acres

Ownership: Corporate, private. *The wetlands were assigned to NYC DPR on September 27, 1995.*

Site Description: Seagirt Avenue wetlands are a remnant of creeks that once drained the Far Rockaway shoreline early in the century. *Site contains a tidal creek with steep eroding shoreline, fringing wetlands, ponds and a filled upland. The land remains undeveloped.*

Current Land Use: GNRA, wetland, open space. The land is zoned as a degraded vacant, 1 & 2 family residential, and open/recreational site with parks/public lands. The surrounding land is zoned vacant, 1 & 2 family residential, and open/recreational site.

Available Habitat: Uplands, intertidal marshes and estuaries/marines.

Proposed Project:

Projected/Estimated Costs:

Project Status: 1995-2001 Acquisition

Partners:

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date: 3/4/1999

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Restoration and preservation of approximately 1 acre of fringe marsh through removal of debris and Phragmites along with planting of native species. Wetlands may require re-grading and the addition of clean fill to decrease steep slope and stabilize the shoreline.

Coastal and Maritime Forests – Restoration and preservation of approximately 8 acres of the upland forested and shrub buffer.

Tributary Connections – Re-assessing the capacity of culverts under Seagirt Boulevard and Nassau Expressway could improve approximately 2,935 feet of waterway.

Enclosed and Confined Waters – Determine the existence of storm water drains and CSO's. Re-contouring along 2,157 feet of the basin will increase flow to the created habitat.

Sediment Contamination - Potential removal and capping based on further sediment testing.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: NYC Parks

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment: NYC Parks

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources: None previously identified. Not surveyed.

I. Restoration Remediation and Design Plans:

REFERENCES:

NYC Parks- <https://www.nycgovparks.org/parks/Q469/>

The NYC Waterfront Revitalization Program: Proposed Revisions for Public Review.



CRP SITE 51. ARVENE URBAN RENEWAL AREA

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.2 miles southeast from the corner of Beach 72nd Street and DeCosta Avenue. Rockaway section of Queens, NY. *Beach 32nd Street to Beach 56th Street is the dune area that is currently undeveloped.*

Watershed: Jamaica Bay

Size: 308 acres

Ownership: NYC

Site Description: *Area consists primarily of low dunes with little stabilizing vegetation. The beach is bounded by the boardwalk. There is substantial flooding in the area from storm surges associated with tropical storms and northeasters. The Arvene Urban Renewal Area is an area of relatively flat topography with elevations less than 10 ft NGVD. There is minimal dune development along the area. The site is fragmented by paved streets and small structures and is in close proximity to residential areas.*

Current Land Use: *The land is zoned as degraded vacant, 1 & 2 and multi-family residential, open space/recreational, commercial, industrial, and institutional with parks/public lands. The surrounding lands are zoned as a vacant, 1 & 2 and multi-family residential, institutional, commercial, industrial, transportation/utilities, and open space/recreational.*

Site occupies a former oceanfront community which has been abandoned for more than 35 years. Two recent housing developments (Waters Edge and Arvene by the Sea) have been constructed from Beach 81st Street to Beach 56th Street. In 2006 a proposal to build Arverne East was approved, however funding constraints have stalled this project. This proposal encompasses a 97-acre site adjacent to Arverne by the Sea that will consist of 47-acres of housing and commercial space, a 35-acre nature preserve and a 15-acre dune preserve.

Available Habitat: *Upland and low dunes, estuaries and marine habitat. This area has supported a large population of seabeach amaranth in recent years. Piping plovers have also attempted to nest on this stretch of the beach.*

Proposed Project: Establishment of the Arvene Shorebird Preserve

Projected/Estimated Costs:

Project Status: *Arvene Shorebird Preserve encompasses 84 acres of dunes facing the Atlantic Ocean from Beach 44th Street to Beach 57th Street.*

Beachfront habitat acquisition, development threat.

Partners: Friends of Rockaway

Project Contact: Friends of Rockaway

Phone:

Website: pages.prodigy.net/rockaway/friends.htm

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal and Maritime Forests – Preservation and restoration of approximately 70 acres of the beach dune and shrub zone from Beach 32nd Street to Beach 56th Street.

Sediment Contamination - Potential removal and capping based on further sediment testing.

Public Access – Renovation and extension of up to 6,341 feet of the beach boardwalk system that runs intermittently along the length of the Rockaway Atlantic coast. Support planned education center and nature preserve.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use: USACE, NYC DHPD

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment: NYS DEC, 1994.

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources: No NR listed sites. Baseline survey performed (Panamerican Consultants, Inc. 1999).

I. Restoration Remediation and Design Plans: NYC DCP, 2010.

REFERENCES:

USACE Fact Sheet: <http://www.nan.usace.army.mil/project/newyork/factsh/pdf/jamarver.pdf>

NYC Department of Housing Preservation and Development:
<http://www.nyc.gov/html/hpd/html/developers/large-scale-arverne.shtml>

Energy and Environmental Analysis, For NYS DEC. 1994. Habitat Evaluation and Mitigation for Gateway Estates.

New York City Department of City Planning. 2010. New York City Comprehensive Waterfront Plan Draft Recommendations.



CRP SITE 102. BRANT POINT

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.1 miles west from the corner of Beach 72nd Avenue and Bayfield Avenue Queens NY. The site is on a west facing point along the Broad and Grass Hassock channels.

Watershed: Jamaica Bay

Size: 7 acres

Ownership: Private, NYC GSA, Trust for Public Land, NYCDPR.

Site Description:

The area was assigned to the NYC Department of Parks & Recreation (NYCDP&R in 1992. An additional parcel of land was acquired by condemnation for the City of New York in 1997 and then transferred to NYCDP&R. The area remains undeveloped in order to preserve the natural wildlife habitat and protect Jamaica Bay. A grounded barge offshore (no longer present {Robert Will, Personal Communication, July 26, 2013}) had acted as an erosion control device and created high quality benthic habitat behind the structure.

The shoreline consists of a steep-banked, high marsh zone. The straight cut bank at the edge of the marsh and the absence of an extensive low marsh demonstrates that the shoreline is actively eroding.

The upland portions of the site near Barbadoes Drive consist of fill material containing construction debris. Some of the fill forms an earth berm between the high marsh and an adjoining vacant parcel to the south. Additional fill material and debris are scattered throughout the upland portion of the park.

*The high marsh area contains saltmeadow cordgrass (*Spartina patens*) as the dominant plant species within an area along the shoreline. Toward the interior of the site, marsh-elder, seaside goldenrod, and common reed become more prominent. The fill areas contain old field and scrub shrub cover types with a high proportion of invasive species, such as mugwort, common reed, and common ragweed. Other species present include poison ivy (*Toxicodendron radicans*), Virginia creeper (*Parthenocissus quinquefolia*), goldenrods, Queen Anne's lace, Asiatic bittersweet (*Cephalanthus*), Japanese knotweed (*Polygonum cuspidatum*), black locust and black cherry. The vacant parcel adjoining the southeast portion of the site contains a disturbed area with short common reed, saltmeadow cordgrass, and sedges (*Cyperus*).*

Current Land Use: *Wildlife Sanctuary. Land is zoned as degraded vacant and open space/recreational site with parks/public lands. The surrounding land is zoned as a vacant, 1 & 2 family residential, and open/recreational space.*

Available Habitat: *Wetland. This site has intertidal marshes and estuary/marine habitat.*

Proposed Project: Marsh, meadow and maritime forest restoration. See Section B, Restoration Recommendations below.

Projected/Estimated Costs: approximately \$8.69 million (fully funded costs; USACE, undated).

Project Status: Draft Jamaica Bay, Marine Park and Plumb Beach, NY Ecosystem Restoration Interim Feasibility Study to be reformulated per Second Interim Disaster Relief Appropriations Act, 2013. Site will be reevaluated in the East Rockaway to Rockaway Inlet – Jamaica Bay Reformulation Study for Coastal Storm Risk Management (CSRM). If site does not provide adequate CSRM benefits, Brant Point will be included in the Hudson Raritan Estuary Restoration Feasibility Study.

Partners: NYCDEP, NYSDEC, NYCDP&R, National Park Service, USACE

Project Contact: Lisa A. Baron, Project Manager, USACE

Phone: (917)790-8306

Website: <http://www.nan.usace.army.mil/project/newyork/factsh/pdf/jamaica.pdf>

Project Funding Source: Feasibility Study funded by USACE and NYCDEP

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - Protects the existing 1.2 acres of marsh but also restores approximately 2 acres of low marsh, 0.7 acres of high marsh. Soil excavated to re-grade for the marsh creation will be used for onsite landscaping. Marsh protection is achieved through addition of hard structure on both off-shore and along the shoreline in vulnerable areas.

Coastal and Maritime Forests – Restores approximately 2.5 acres of meadow, and 2.5 acres of maritime forest. Coastal meadows will be planted with native forbs and shrubs. The maritime forest area will include the planting of canopy trees, understory trees, ferns, forbs, and shrubs.

Habitat for Fish, Crab and Lobsters -

Creates macroinvertebrate habitat by creating three offshore rubble mounds with a footprint of approximately 0.36 acres total. These structures will be placed randomly within a trapezoidal shape which incorporate interstitial spaces of various sizes that can be used as refugia by various species and also provide wave attenuation to the area. Additionally, approximately 6 acres of existing benthic habitat should be assessed for composition, level of degradation and potential enhancements to increase habitat connectivity.

Sediment Contamination – Additional data may be required during Preliminary Engineering and Design (PED) phase to determine final grading/excavation plan. Restoration alternative will improve exposure to potential chemicals of concern in soil/sediment by placing clean growing media within the maritime forest and grasslands reducing exposure to upland receptors.

Benefits, Cost and Comparative Restoration Ratio: TBD

C. EXISTING SITE SPECIFIC DATA INVENTORY (USACE Pre-Draft FS Report, Undated + Supplemental citations if available listed below)

A. Survey, Maps and GIS: NYC DPR, USACE 1997.

B. Site History and Land Use: USACE 1997.

C. Biological Studies/ Fauna: TPL & NYC Audubon 1992.

D. Biological Studies/ General Environment: TPL & NYC Audubon 1992.

E. Geotechnical:

G. Water and Sediment:

H. Historical and Cultural Resources: No NR listed sites. Baseline survey performed (Pan-American Consultants, Inc.)

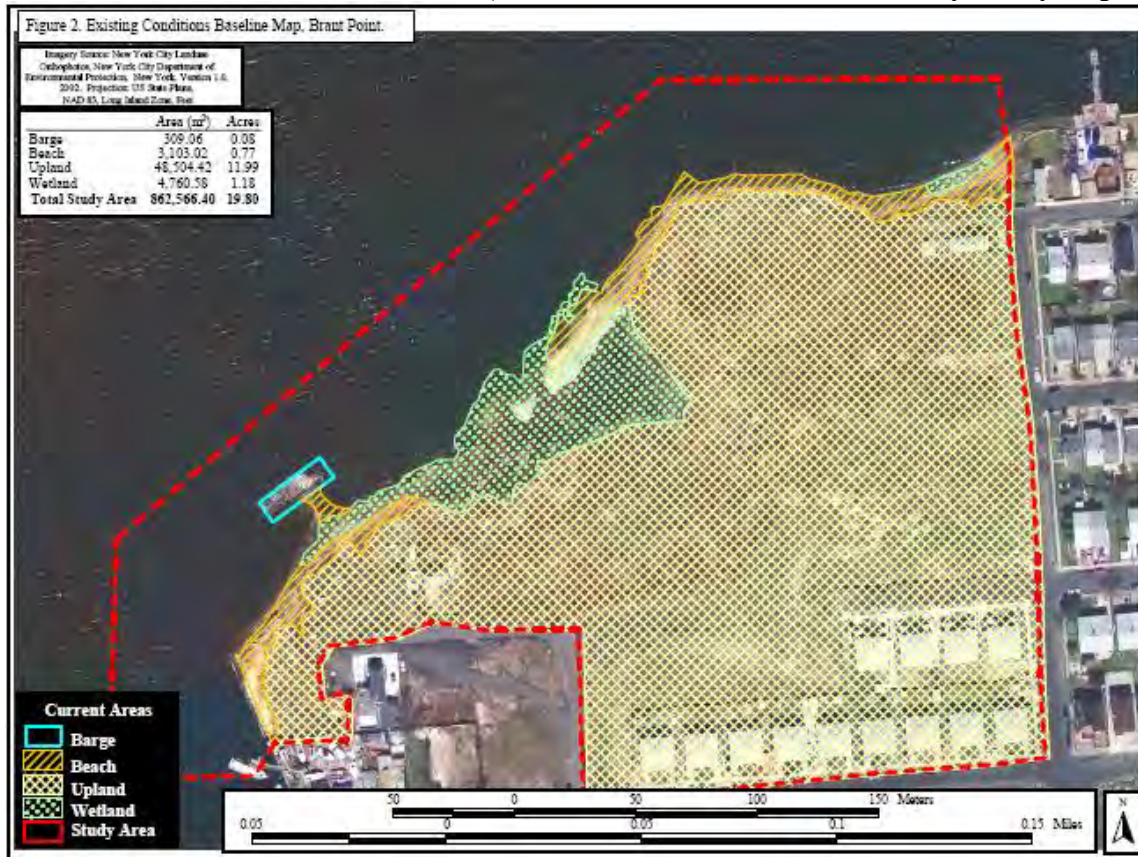
I. Restoration Remediation and Design Plans: USACE 1997

REFERENCES:

- NYC DPR: <http://www.nycgovparks.org/parks/Q464/>
- Robert Will, Personal Communication, July 26, 2013
- The Trust for Public Land & New York City Audubon Society. 1992. Buffer the Bay Revisited an Updated Report on Jamaica Bay's Open Shorelines and Uplands.
- U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.
- U.S. Army Corps of Engineers & NYC Department of Environmental Protection. Undated. Jamaica Bay, Marine Park and Plumb Beach, New York - Environmental Restoration Study Pre-Draft Feasibility Report Kings and Queens Counties, New York.



BRANT POINT EXISTING CONDITIONS (from Pre-Draft Interim Feasibility Study Report)



BRANT POINT RECOMMENDED ALTERNATIVE (from Pre-Draft Interim Feasibility Study Report)



CRP SITE 103. BREEZY POINT-

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: *Located on the western end of the Rockaway peninsula, between Rockaway Inlet and Jamaica Bay on the landward side and the Atlantic Ocean in Queens, NY.*

Watershed: Jamaica Bay

Size: Entire site is 200 acres.

Ownership: *The Beaches are owned by the cooperative. Breezy Point tip was transferred to the National Park Service in 1972.*

Site Description: *Breezy Point is the terminus of the Rockaway Peninsula. It consists predominantly of dune/beach shoreline terrain that extends outward into the Atlantic Ocean. The interior has a small central marsh area complemented by shrubbery, extensive beach grass, and a stunted tree forest. This area supports some of the highest concentrations of beach-nesting birds in New York State and in the entire New York Bight coastal region.*

The beaches of Breezy Point are federally and state protected with limited development. The shoreline of the eastern portion of the site is bulkheaded. Old wooden pilings are located at the eastern end of the site that protects a narrow stretch of sandy beach in front of the wooded bulkhead. The western portion of the site is characterized by a wide sandy beach, a series of wood pilings, and a stone jetty.

The beach areas Bay side of the bulkhead and the recreational beach in the eastern portion of the site are not vegetated. The upland portion of the site behind the bulkhead consists mostly of disturbed, unvegetated areas. Along the edge of the bulkhead, exposed sands are vegetated with seaside goldenrod and mugwort.

This site consists of a portion of Breezy Point Community Park, located on the bay side of Bayside Avenue and abandoned buildings of a former U.S. Coast Guard Station. Sections of the site are actively used by the community of Roxbury, Queens for swimming and other recreational purposes.

Current Land Use: *Gateway National Recreation Area. Site is zoned vacant and completely degraded open/recreational site with federal lands. The surrounding land is zoned a vacant, 1 & 2 family residential, and institutional site.*

Available Habitat: *Mixed dunes, upland and beach. Breezy point tip contains over two hundred acres of ocean front, bay shoreline, sand dunes, marshes and coastal grasslands. Beaches on the peninsula are home to one of the most diverse breeding shorebird areas in the metropolitan area.*

Proposed Project: \$27,710 dune restoration.

Projected/Estimated Costs:

Project Status:

Partners:

Project Contact: Harbor Estuary Program

Phone: (212) 637-3816

Website: www.harborestuary.org

Project Funding Source:

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal and Maritime Forests – Restore approximately 25 acres of beach and dune habitat for shorebirds and wildlife in the Roxbury portion of the site. Cut down the existing bulkhead to mean low water and leave in place. Dune restoration may include; placement of sand, removal of debris, and re-grading along the shoreline.

Shorelines and Shallows – Removal of debris and existing bulkhead and re-grading along approximately 5,692 feet of the shoreline (Roxbury).

Sediment Contamination – Analysis of fill material prior to using in dune restoration.

Public Access – Several public access points exist with potential to upgrade.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: New York Harbor Parks, NPS, USACE 1997.

B. Site History and Land Use: New York Harbor Parks, NPS, USACE 1997.

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources: No NR sites in the project area. Close proximity to three archaeological sites, Fort Tilden HD, and Riis Park HD. Floyd Bennet Field across the inlet. Cultural Resources Baseline Study performed (Panamerican Consultants, Inc. 1999).

I. Restoration Remediation and Design Plans: USACE 1997.

REFERENCES:

New York Harbor Parks: <http://www.nyharborparks.org/visit/brpo.html>

NPS: www.nps.gov

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.



CRP SITE 104. SPRING CREEK- NORTH AND SOUTH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Spring Creek North is bounded by Stanley Ave., Belt Parkway., Crescent St., and 77th St. in Northern Jamaica Bay along the Queens-Brooklyn border. Spring Creek South runs from south of the Belt Parkway, southeast to the intersection with Cross Bay Blvd.

Watershed: Jamaica Bay

Size: North: 29 acres (Continuing Authorities Program [CAP]). South: (301 acres) *151.6 acres (Feasibility Study)*

Ownership: North of Belt Parkway: NYCDPR. South of Belt Parkway: *NPS, GNRA.*

Site Description: Headwaters of Spring Creek flow between the recently remediated and restored Pennsylvania Avenue and Fountain Avenue landfills. Spring Creek is a mostly city-owned property with a few scattered privately-held holdings. *Spring Creek is adjacent to commercial and industrial land uses to the west and residential land uses to the east and north. It is a saline waterbody with a 10 million gallon CSO retention facility and storm sewer flows representing a large percentage of its freshwater inputs. Adjoining lands include low and high marsh as well as filled upland areas up to the creek channel. Spring Creek North is a tidal creek that has retained its meandering pattern and has several smaller side channels; mud flats are present at low tide. A petroleum pipeline crosses the central portion of the site parallel to Flatlands Avenue in Spring Creek North. The shoreline of Spring Creek South is characterized by steep banks. The creek channel has a depth of four to five feet below the adjoining marshes.*

Current Land Use: Active and passive recreation. *Site is zoned vacant with federal lands. The surrounding land is zoned vacant, 1 & 2 and multi-family residential, commercial, and open/recreational site.*

Available Habitat: *The predominant cover types in the southern portion of Spring Creek North consist of low and high marsh dominated by Spartina. The uplands consist of disturbed fields dominated by mugwort. Dense stands of common reed are also present. Spring Creek South contains marsh, dune, grassland, and secondary woodlands that are dominated by invasives (e.g., common reed).*

Proposed Project:

Spring Creek North (CAP): The proposed ecosystem restoration project in Spring Creek North includes excavating and re-contouring uplands to intertidal elevations, removing invasive plant species, and replanting with native plant species to create 10.66 acres of low marsh, 2.33 acres of high marsh, 3.04 acres of high marsh transition, and 7.34 acres of maritime upland (NYCDPR propose 16 acres of maritime forest and berms).

Spring Creek South (Feasibility Study) seeks to improve the habitat in Spring Creek Park, located in northern Jamaica Bay, and bounding the counties of Kings and Queens. The construction, maintenance, and improvement of the network of channels in Jamaica Bay required the dredging of millions of cubic yards of material. Most of this material was deposited in nearby wetland areas, profoundly degrading the salt marsh community at Spring Creek. The proposed project would restore a total of 151.6 acres of habitat including 49 acres of low marsh, 10 acres of high marsh and 6 acres of tidal creek.

Projected/Estimated Costs: South: approximately \$69 million (fully funded costs; USACE, undated) and NYSDEC FEMA Hazard Mitigation Grant funding of up to \$50,810,090.

North TBD (note to be implemented under CAP, could not exceed approximately \$7 million; however, the recently approved Water Resources and Reform Development Act, 2014 raised the CAP maximum to \$10M fed).

Project Status: Spring Creek North: Continuing Authorities Program- Project currently being finalized pending execution of Feasibility Cost Share Agreement with NYCDPR and finalization of designs. Spring Creek South: Designs from Pre-Draft Jamaica Bay, Marine Park and Plumb Beach, NY Ecosystem Restoration Interim Feasibility Study to advance with FEMA Hazard Mitigation Grant Program (HMGP) awarded to NYSDEC following reevaluation for Coastal Storm Risk Management measures/benefits.

Partners: North: USACE, NYCDPR, NPS
South: NYSDEC, USACE, NPS (Feasibility Study: NYCDEP/USACE)

Project Contact: Lisa Baron, Project Manager, USACE;

Phone: (917) 790-8306

Website: <http://www.nan.usace.army.mil/project/newyork/factsh/pdf/springcr.pdf>

Project Funding Source: USACE

HEP Ratification Date: 8/13/2002

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Spring Creek South (concept plan below)—to be revised based on FEMA HMGP Phase 1

Coastal Wetlands – Maximize salt marsh habitat restoration in the northern portion of the southern site by re-grading the adjacent common reed stand to elevations required for a self-sustaining salt marsh. The re-grading will include the creation of approximately 9,333 feet of lower order small tidal creeks to allow inundation of tides farther into the marsh; approximately 49 acres of low marsh and 10 acres of high marsh and 6 acres of tidal creeks.

Shorelines and Shallows – Garbage and other debris will be excavated from approximately 5,500 feet of shoreline.

Habitat for Fish, Crab and Lobsters – Clean up of heavily debris laden shoreline and assess flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure should take place along approximately 27 acres.

Coastal and Maritime Forests – Where applicable excavated material from the shorelines will be placed onsite, recapped with sand and planted with native canopy trees, understory trees, shrubs, forbs, and ferns and other native maritime coastal community species to aid in sediment stabilization along approximately 106 acres. Additionally, the southern portion will have approximately 32 acres of coastal dune habitat restored and planted with native grass species.

Sediment Contamination – Re-grading and restoration actions within Spring Creek would result in a decrease of exposure to potential chemical of concern as refined during the Preliminary Engineering and Design phase.

Public Access – Support improvements to pedestrian access and recreation.

Spring Creek North

Planning is in progress pursuant Continuing Authorities Program (CAP). Plans and Designs to be presented at a later date.

Benefits, Cost and Comparative Restoration Ratio: TBD

C. EXISTING SITE SPECIFIC DATA INVENTORY (USACE Pre-Draft FS Report, Undated + Supplemental citations if available listed below)

A. Survey, Maps and GIS: NYC DPR 1988, USACE 1997

B. Site History and Land Use: Hydroqual

C. Biological Studies/ Fauna: NYC DPR 1988, TPR & NYC Audubon 1992

D. Biological Studies/ General Environment: NYC DPR 1988, TPR & NYC Audubon 1992

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources: No NR sites in the study area. Archaeological sensitivity area overlaps northwest end. Cultural Resources Baseline Study performed (Pan-American Consultants, Inc. 1999).

I. Restoration Remediation and Design Plans: USACE 1997, NYC DCP 2010.

REFERENCES:

NYC DPR. 1988. Ecological Assessment Spring Creek. Natural Resources Group.

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

U.S. Army Corps of Engineers. Undated. Jamaica Bay, Marine Park and Plumb Beach, New York Environmental Restoration Study PRE-Draft Interim Feasibility Report Kings and Queens Counties, New York.

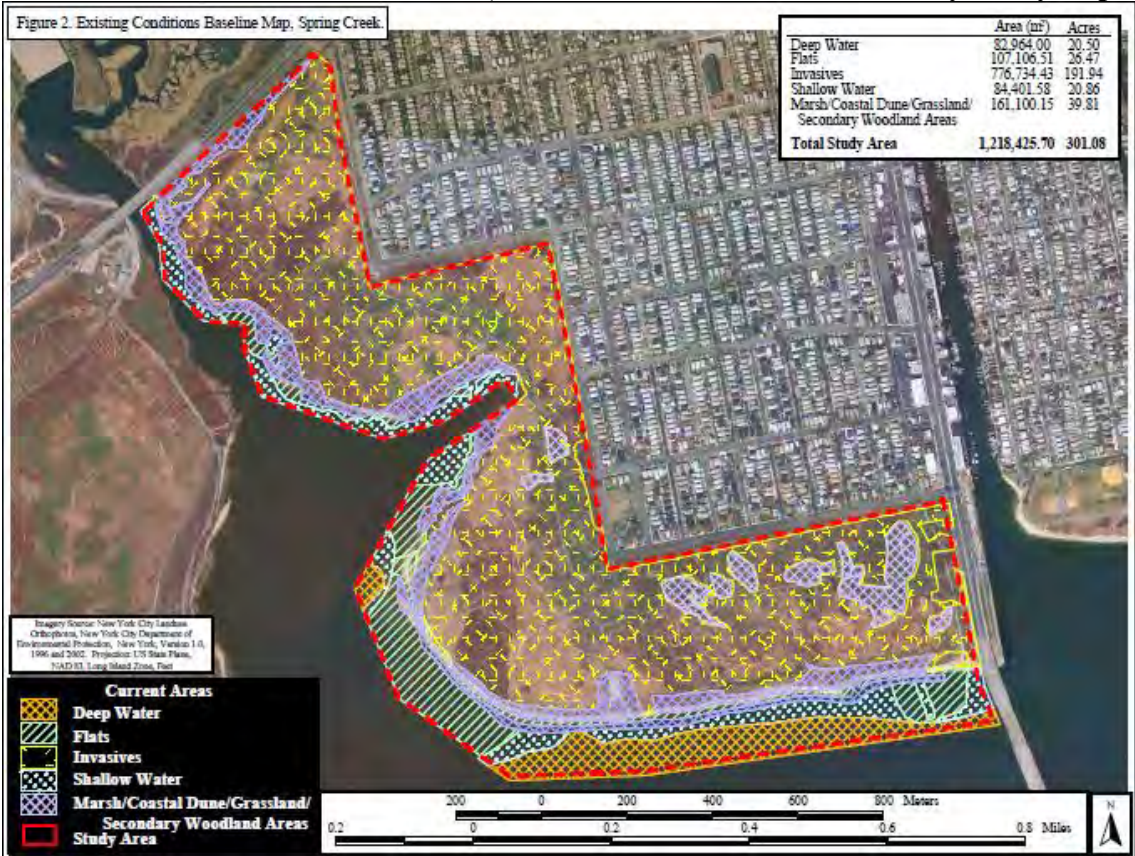
Hydroqual- <http://www.hydroqual.com/Projects/usa/projectAreaFrameset.html>

The Trust for Public Land & New York City Audubon Society. 1992. Buffer the Bay Revisited An Updated Report on Jamaica Bay's Open Shorelines and Uplands.

New York City Department of City Planning. 2010. New York City Comprehensive Waterfront Plan Draft Recommendations.



SPRING CREEK EXISTING CONDITIONS (from Pre-Draft Interim Feasibility Study Report)



SPRING CREEK RECOMMENDED ALTERNATIVE (from Pre-Draft Interim Feasibility Study Report)



CRP SITE 105. BROOKVILLE MARSH/ IDLEWILD PARK

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Candidate Restoration/Preservation Site

Location: Northeast periphery of Jamaica Bay. Southwest of the intersection of Brookville Blvd. and 147th Ave.

Watershed: Jamaica Bay

Size: *Brookville marsh is 23 acres within the 160 acre Idlewild Park.*

Ownership: NYCDPR.

Site Description: *A complex of tidal wetlands in northeastern Jamaica Bay. Idlewild Park contains the largest expanse of high quality salt marsh along the shores of Jamaica Bay. Much of the surrounding area is highly industrialized, and includes JFK Airport, cargo transfer sites, junk yards and former landfills. Tidal flushing in this area is highly compromised, due to basin geomorphology and anthropogenic modifications to the system. Much of the nearby shoreline has been filled. In Spring 1999, NYC DPR restored an adjacent 23 acre parcel of land, recreating woodland, wet meadow and dune-shrub habitats.*

Current Land Use: *Recreation, open space. Designated as a Forever Wild Preserve. Site is zoned vacant and open/recreational site with parks/public lands. The surrounding land is zoned vacant, 1 & 2 family residential, and open/recreational site.*

Available Habitat: *Estuarine - marshes, tidal waterways, intertidal flats; Lacustrine - marshes, open water, grassland, scrub shrub, wetland.*

Proposed Project: Woodland, salt marsh restoration, freshwater wetland, meadow, dune-scrub restoration, fill removed.

Projected/Estimated Costs: \$1,500,000; *\$1,400,000 is reported to be spent from 1995-1998.*

Project Status: NYC DPR preliminary plans; possible plans to develop this area for a future JFK air cargo facility. Rehabilitation; *woodland, wetland, meadow and dune scrub communities restored from 1997-1999*

Partners: NYC DPR, HEP, USACE, NYC DEP, Eastern Queens Alliance.

Project Contact: Michael Feller, NYC Parks/NRG

Phone: (212) 360-1424

Website: www.nycgovparks.org/sub_about/parks_divisions/nrg/

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - Excavate approximately 18 acres of filled areas along the shoreline to restore salt marsh adjacent to approximately 100 acres of existing marsh.

Coastal and Maritime Forests – Restoration approximately 8 acres of the woodland and grassland that buffers the marsh from the residential area.

Tributary Connections – Re-assessment of culverts from Conselyeas Pond and Thurston Basin could increase the hydrology to the Brookville Marshes by opening up approximately 3,333 feet of waterway.

Enclosed and Confined Waters – Re-grading approximately 2,867 feet of tidal creeks will help restore hydrology to the wetlands. Tidal creeks running through the park are the most extensive in, and provide the largest volume of freshwater to the Bay.

Sediment Contamination - Presence of contaminants may need more detail to interpret the significance of specific restoration activities. Preliminary groundwater analysis results from 1995 confirmed the presence of various heavy metals. Subsurface soil analysis had detected polynuclear aromatic hydrocarbons (PAH's) at the site of the former landfill in the northwest section of Idlewild Park, adjacent to the Brookville site.

Public Access – Creation of up to 775 feet of trails to view the wetlands will complement the existing parks and recreation facilities. Support park master plan to create educational center and boat launch.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: USACE 1997

B. Site History and Land Use: USACE 1997

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources: No NR sites within the study area however the area is considered archaeologically sensitive.

I. Restoration Remediation and Design Plans: Eastern Queens Alliance, USACE 1997, NYC DCP 2010.

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

Eastern Queens Alliance, Strategic Plan for the Preservation of Idlewild Park-
<http://www.easternqueensalliance.org/Site/Idlewild.html>

New York City Department of City Planning. 2010. New York City Comprehensive Waterfront Plan Draft Recommendations.



CRP SITE 148. BAYSWATER STATE PARK

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Peninsula in the Rockaways that juts out into the Motts Basin on the eastern shore of Jamaica Bay.

Watershed: Jamaica Bay

Size: 17 acres (*4.8 acres of total habitat*)

Ownership: New York State Office of Parks, Recreation, and Historic Preservation.

Site Description: *The proposed project area at Bayswater State Park was primarily salt marsh as of 1879, with four structures on site. Bayswater Park has a number of special natural features including the last patch of mature native oak forests on Jamaica Bay. Historical documents indicate that the predominant upland areas within the site are natural rather than fill areas. The ecological problems at Bayswater State Park are; presence of extensive areas of nonnative, invasive plant species and potential loss of habitat due to deteriorating seawall.*

Current Land Use: Active and passive recreation. *Site is zoned vacant and completely degraded open/recreational site with parks/public lands. The surrounding land zoned vacant, 1 & 2 family residential, institutional, and open/recreational site.*

Available Habitat: *State Park. The site contains beaches, wetlands, and woodlands.*

Proposed Project: Salt marsh and tidal wetland restoration. The goal of the park is to preserve the existing natural systems and restore, if feasible, what has been lost.

HEP Projected (1997)/Estimated Costs: \$300,000/ approximately \$5.56 million (fully funded costs; USACE, undated)

Project Status: Draft Jamaica Bay, Marine Park and Plumb Beach, NY Ecosystem Restoration Interim Feasibility Study to be reformulated per Second Interim Disaster Relief Appropriations Act, 2013. Site will be reevaluated in the East Rockaway to Rockaway Inlet – Jamaica Bay Reformulation Study for Coastal Storm Risk Management (CSRM). If site does not provide adequate CSRM benefits, Bayswater will be included in the Hudson Raritan Estuary Restoration Feasibility Study.

Partners: New York State Office of Parks, Recreation, and Historic Preservation.
NYCDPR, NYSDEC, NYCDEP, USACE, NPS

Project Contact: Lisa Baron, Project Manager, USACE

Phone: (917)790-8306

Website: <http://www.nan.usace.army.mil/project/newyork/factsh/pdf/jamaica.pdf>

Project Funding Source: USACE and NYCDEP Jamaica Bay Feasibility Study

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - Remove invasive dominated areas by re-grading and creating a tidal channel and associated salt marsh. Restoration may total 4.8 acres and include approximately 3 acres of low marsh, 0.4 acres of high marsh, and 0.8 acres (872 feet) of creek/pool. To stabilize the tidal creek and protect the existing beach and salt marsh habitat, training structures will be created on the banks at the mouth of the creek.

Coastal and Maritime Forests – Restoration to approximately 0.7 acres of dune habitat.

Habitat for Fish, Crab and Lobsters - The training structures will be made of rock placed in a trapezoidal cross section. The rocks will be placed randomly within the shape to create various size interstitial spaces that can be used as refuges by various species.

Sediment Contamination – The restoration action decreases current exposure to receptors following re-grading. Capping of upland soils with sand from the northern portion of the site with an additional 12 inches of growing medium will further reduce any remaining exposure to receptors.

Benefits, Cost and Comparative Restoration Ratio: TBD

C. EXISTING SITE SPECIFIC DATA INVENTORY (USACE Pre-Draft FS Report, Undated + Supplemental citations if available listed below)

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources: Presence of known cultural resources in park area. Baseline cultural resources survey and Phase IB were performed (Pan-American 1999, 2006)

I. Restoration Remediation and Design Plans:

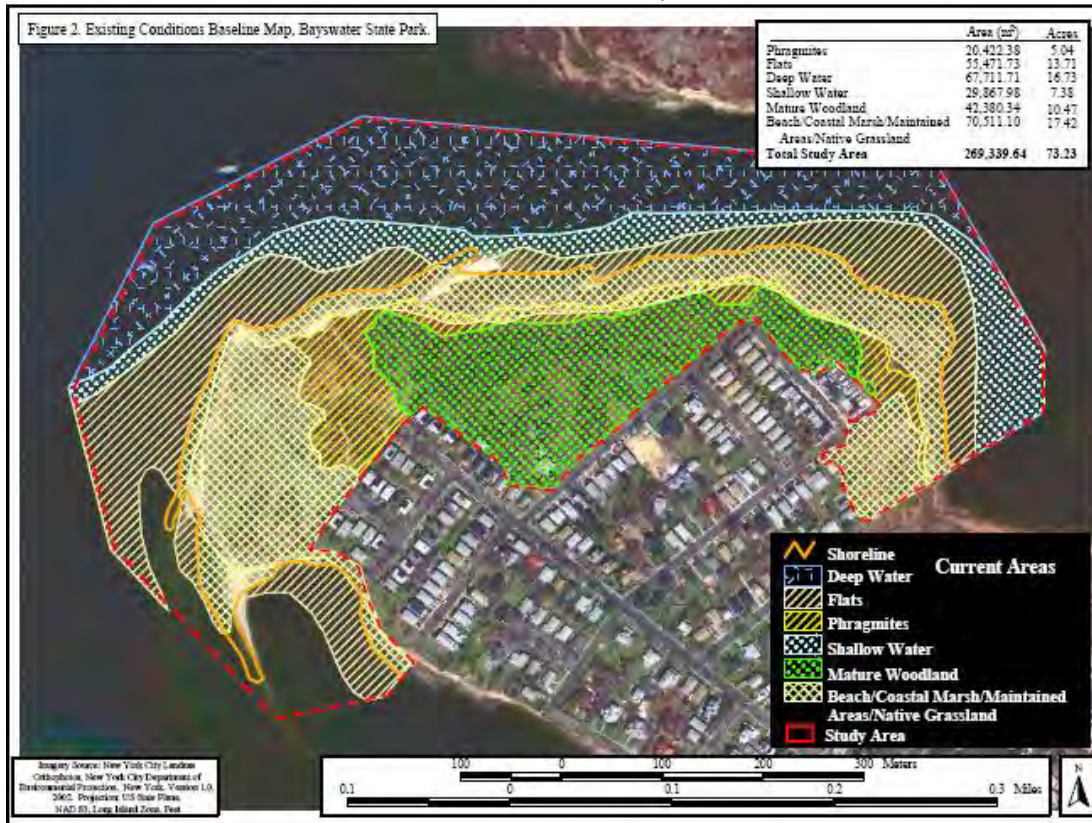
***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers & NYC Department of Environmental Protection. undated. Jamaica Bay, Marine Park and Plumb Beach, New York - Environmental Restoration Study PRE-Draft Interim Feasibility Report Kings and Queens Counties, New York.



BAYSWATER STATE PARK EXISTING CONDITIONS (from Pre-Draft Interim Feasibility Study Report)



BAYSWATER STATE PARK RECOMMENDED ALTERNATIVE (from Pre-Draft Interim Feasibility Study Report)



CRP SITE 149. DUBOS POINT

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.1 miles east northeast from the corner of Bayfield Avenue and Beach 65th Street.

Watershed: Jamaica Bay

Size: 35.9 acres (*total of 6.8 acres to be restored*)

Ownership: NYCDPR

Site Description: *This site contains a diverse native flora within each of the predominant cover types. The zonation of cover types from tidal marsh to upland scrub shrub and old fields provides valuable wildlife habitat within Jamaica Bay. The salt marsh at Dubos Point was mostly untouched until the 1920's. Dubos Point was filled between 1912 and 1919.*

The shoreline of the entire site is bordered by approximately 50-foot-wide bands of low marsh. Along the western and northern shorelines, old wood piles are sporadically present along the marsh edge. Fewer piles exist along the eastern shoreline of the site. Assorted debris is scattered along the mean high tide line and several bare sand patches are present where larger debris has scoured the surface. Dubos point experiences high erosion. The soils within the uplands are derived from fill material. The soil consists of loamy sand and contains large pieces of concrete. The low marsh is on a substrate of sand with a thin layer of organics.

*The interior upland contains a diverse cover of mixed scrub shrub and old field. The scrub shrub is formed primarily by winged sumac, bayberry, black cherry, blackberry and marsh-elder mixed with common reed and goldenrods. The old field community is a mix of forbs and grasses. Predominant species include seaside goldenrod, common reed, switchgrass, common ragweed, mugwort, flat-topped goldenrod (*Euthamia graminifolia*) and evening primrose (*Oenothera biennis*). A high marsh zone of variable width is present. The predominant species include saltmeadow cordgrass, seaside goldenrod, common reed, marsh orach, marsh elder and groundsel-tree. The low marsh is dominated by saltmarsh cordgrass and also includes sea lavender and glasswort.*

The ecological problems at Dubos Point are; presence of areas of nonnative, invasive plant species, high energy littoral zone along western and northern shorelines, mosquito infestation of local properties due to pooling water, dumped trash and debris may impede use of site, fill that removed marsh.

Current Land Use: Wildlife sanctuary. *Site is zoned degraded vacant, open/recreational site with parks/public lands. The surrounding land is zoned industrial, 1 & 2 family residential, and transportation/utilities site.*

Available Habitat: Wetland, low marsh, old field, uplands. See site description for existing vegetation community.

Proposed Project: The area requires salt marsh and tidal wetland restoration and a great deal of debris removal.

HEP Projected (1997)/Estimated Costs: \$423,900/ approximately \$8.95 million (fully funded costs; USACE undated)

Project Status: Draft Jamaica Bay, Marine Park and Plumb Beach, NY Ecosystem Restoration Interim Feasibility Study to be reformulated per Second Interim Disaster Relief Appropriations Act, 2013. Site will be reevaluated in the East Rockaway to Rockaway Inlet – Jamaica Bay Reformulation Study for Coastal Storm Risk Management (CSRM). If site does not provide adequate CSRM benefits, Dubos Point will be included in the Hudson Raritan Estuary Restoration Feasibility Study.

Partners: NYCDPR, NYSDEC, NYCDEP, USACE, NPS

Project Contact: Lisa Baron, Project Manager, USACE

Phone: (917)790-8306

Website: <http://www.nan.usace.army.mil/project/newyork/factsh/pdf/jamaica.pdf>

Project Funding Source: USACE and NYCDEP funding Feasibility Study

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - Restore marsh by creating tidal channels in an existing upland common reed stand and regrading the area to salt marsh elevations. Tidal channels in the northern tip will also be reopened, with the addition of training structures. A total of 6.8 acres will be restored at this site including approximately, 3.5 of low marsh, 1 acre of high marsh, and 0.7 acres (2,164 feet) of creek or pool. Marsh habitat is protected by implementing toe protection surrounding the entire western and northern shore. The north and west shorelines are exposed to high wave forces from Jamaica Bay.

Coastal and Maritime Forests – Potential exists to restore approximately 2 acres of maritime forest.

Sediment Contamination – Chemicals concentrations measured in soil/sediment were minimal. Capping of upland soils with clean growing medium (if needed) for the restoration action would reduce any exposure to receptors in the future 2 acres of maritime forest.

Oyster Reef- Incorporation of a significant hard-structure based fringing oyster bed is possible at this site, likely in concert with a “living shoreline” approach to address coastal resiliency.

Benefits, Cost and Comparative Restoration Ratio: TBD

C. EXISTING SITE SPECIFIC DATA INVENTORY (USACE Pre-Draft FS Report, Undated + Supplemental citations if available listed below)

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

***Work in progress**

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

REFERENCES:

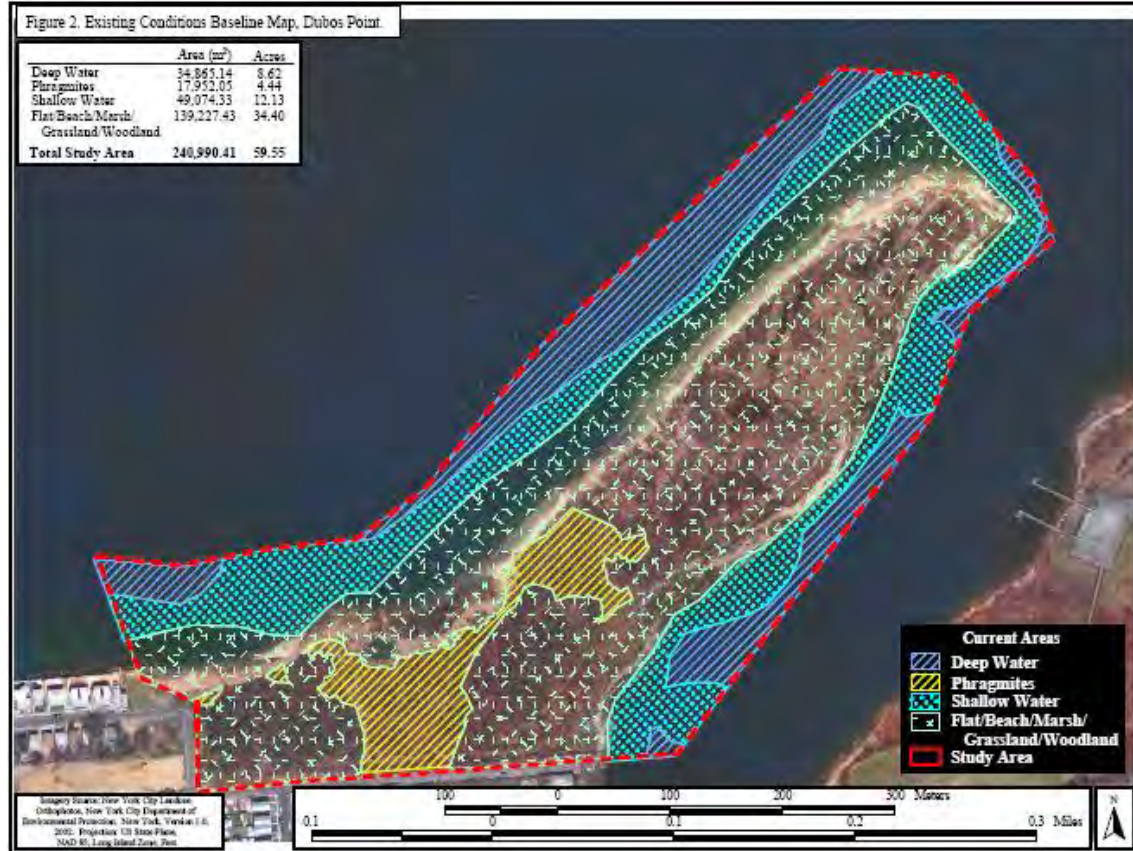
NYC Parks: <http://www.nycgovparks.org/parks/Q459/>

U.S. Army Corps of Engineers & NYC Department of Environmental Protection. undated. Jamaica Bay, Marine Park and Plumb Beach, New York - Environmental Restoration Study PRE-Draft Interim Feasibility Report Kings and Queens Counties, New York.

The Trust for Public Land & New York City Audubon Society. 1992. Buffer the Bay Revisited An Updated Report on Jamaica Bay's Open Shorelines and Uplands.



DUBOS POINT EXISTING CONDITIONS (from Pre-Draft Interim Feasibility Study Report)



DUBOS POINT RECOMMENDED ALTERNATIVE (from Pre-Draft Interim Feasibility Study Report)



CRP SITE 151. BERGEN BEACH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: South of Paerdegat Basin and north of Mill Basin, immediately east of the Belt Parkway.

Watershed: Jamaica Bay

Size: 2 acres, *approximately 30 acres.*

Ownership: NYC Department of Business, NPS.

Site Description: The low marsh area of this site is dominated by *Spartina alterniflora*, as well as other desirable marsh species along with high marsh species where there is a minimal grade change. *There are two degraded marsh areas that would benefit from restoration.*

The shorelines of this site consists of a wide sandy beach in the southern portion and a 15- to 30-foot wide band of low marsh within a cove in the northern portion. Shorelines appear to be heavily debris laden.

*The upland portion of the site consists almost entirely of a diverse shrub habitat containing bayberry, sumac, multiflora rose (*Rosa multiflora*), poison ivy and Japanese honeysuckle. Grey birch, black cherry, and cottonwood occupy more interior locations. Between the shrub habitat and the shoreline, a band of common reed of varying width is present. The low marsh is dominated by saltmarsh cordgrass.*

Current Land Use: *Light recreation, undeveloped parkland (GNRA). The site is zoned open/recreational site with federal lands. The surrounding land is zoned open/recreational site.*

Available Habitat: Estuarine - marshes, tidal waterways, tidal ponds, intertidal flats.

Proposed Project: Restoration of marsh habitat.

Projected/Estimated Costs: No data.

Project Status: NYCDOT partially completed the mitigation project of the area. The seaward half of the area has been completed and more work will be performed on the rest of the project area by 2014.

Partners: NYSDEC

Project Contact: Harbor Estuary Program

Phone: (212) 637-3816

Website: www.harborestuary.org

Project Funding Source: JBDA funds and Bond Act funds

HEP Ratification Date: N/A

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Restoration and creation of approximately 12 acres of salt marsh habitat through the excavation of Phragmites, removal of debris, and re-grading to sustainable marsh elevations.

Coastal and Maritime Forests – Preservation and restoration of existing, approximately 19 acre shrub buffer. The back slope behind the marsh should be graded to a stable slope and planted with shrub buffer. Area should be checked for invasives.

Shorelines and Shallows – Removal of debris and re-grading of along 2,168 feet of shoreline to create shallow water habitat.

Sediment Contamination – Potential removal and capping based on further sediment testing.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.



CRP SITE 160. BERGEN BASIN

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.25 miles east from the corner of 1st Street and 104th Street, Queens NY. *500 meters from the Jamaica wastewater pollution control plant.*

Watershed: Jamaica Bay

Size: 6 acres

Ownership: NYCDEP

Site Description: Bergen Basin is an inlet/ urban creek off of Jamaica Bay within the north-west corner of JFK Airport. . It is a New York State Class I saline waterbody for secondary contact recreation, and fish propagation and survival. Siltation at mouth of creek has lead to restricted tidal flow and poor water and sediment quality in the basin. Active oil barge deposits exist in the basin which may limit restoration potential. *It is listed on the New York State 303(d) TMDL list with pathogens identified as the parameter of concern and CSOs as the primary pollutant or cause.*

The shoreline of the eastern side of the site along Bergen Basin is an unvegetated, mud flat. A bulkhead forms the point where the upland juts out into Grassy Bay. On the east side of the bulkhead, a boat landing is present. On the south side of the site, concrete rip-rap has been placed along the south facing shoreline in front of the water tower. Beyond the tower and further west, the shoreline is characterized by large patches of low marsh, small patches of open sand beach, and a series of three, small, open water embayments cut into the uplands. Near the NYCTA rail line, the shoreline has been rip-rapped. The portion of the site to the west of the rail line has a similar shoreline. Offshore of this site is an extensive sand flat with a depth of one foot below MLLW.

The low marsh areas are approximately 20 to 50 feet wide and are dominated by saltmarsh cordgrass. These areas grade upward to an upland community dominated by common reed with small patches of shrubs and trees. The shrub areas contain sumac, black cherry, cottonwood and an understory of mugwort.

Current Land Use: *The site is zoned industrial. The surrounding land is zoned vacant, 1 & 2 family residential, industrial, and open/recreational site.*

Available Habitat: *This site has estuaries/marines, freshwater ponds, intertidal marshes, and emergent freshwater.*

Proposed Project: Salt Marsh Restoration, \$315,000 tidal wetland restoration.

Projected/Estimated Costs: \$315,000

Project Status: Waterfront access study underway.

Partners:

Project Contact: Daniel T. Falt, Project Manager, USACE

Phone: (917)790-8614

Website: <http://www.nan.usace.army.mil/project/newyork/factsh/pdf/jamaica.pdf>

Project Funding Source: NYSCWCA 1999 NYS Clean Water/Clean Air Bond Act and the City of New York (partial funding): \$379,000

US ACE and NYC DEP Jamaica Bay Feasibility Study Site: to be determined

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Excavation of Phragmites and planting of Spartina spp. to restore approximately 3 acres of tidal wetland.

Coastal and Maritime Forests – Preservation and restoration along approximately 20 acres of scrub shrub and woodland.

Habitat for Fish, Crab and Lobsters – Removal of abandoned water tanks and debris and assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure 3 acres of existing mudflats and shallow water.

Enclosed and Confined Waters – Re-contouring approximately 2,682 feet of the basin will increase flow to the created habitat.

Sediment Contamination – Potential removal and capping based on further sediment testing.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

U.S. Army Corps of Engineers & NYC Department of Environmental Protection. 2010. Jamaica Bay, Marine Park and Plumb Beach, New York - Environmental Restoration Study Draft Interim Feasibility Report Kings and Queens Counties, New York.

The NYC Waterfront Revitalization Program: Proposed Revisions for Public Review.



CRP SITE 161. HAWTREE POINT

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.1 miles west of 104th Street, Queens NY. *This site consists of two locations located along Hawtree Basin. The first location is on the east bank of the creek between Davenport Street and 164th Avenue. The second and larger portion of this site is a mostly vacant parcel located between 103rd Street and Russell Street on the east, 1st Street on the south and 160th Avenue on the north.*

Watershed: Jamaica Bay

Size: 20 acres

Ownership: NYCDPR, National Park Service, GNRA.

Site Description: In the early 1900s, a canal was dug at the southern end of the Hawtree creek to create Hawtree Basin. *Hawtree Point was filled during the development of the communities of Howard Beach and Hamilton Beach.*

The shoreline is characterized by pile and bulkhead supported houses that extend over the water along developed shoreline edges. Along undisturbed portions of the existing tidal marsh, the banks of the channels have a steep gradient that rises into the marsh. Narrow mud flats fringe the undeveloped tidal marshes at low tide. The soils consist of organic peat within the tidal marsh, and silts within the channel.

Within undeveloped portions of the larger site, the cover type consists of a high marsh community dominated by saltmeadow cordgrass with patches of marsh elder and common reed. A narrow, ten-foot wide fringe of saltmarsh cordgrass is present along the channel edge. The smaller site to the south consists of unvegetated sediments and sparse stands of saltmarsh cordgrass. Patches of low marsh are present between buildings.

The ecological problems at Hawtree Point include: presence of monotypic stands of nonnative, invasive plant species, historic structures and canal systems of Hamilton Beach under the fill, all terrain vehicle use along the shoreline of the project area and filled wetlands.

Current Land Use: *Some residential homes are present along the main channel that extends to the east. Several homes in this area appear to be abandoned. The site is zoned open/recreational site with federal land. The surrounding land is zoned vacant, 1 & 2 family residential, transportation/utilities, and open/recreational site.*

Available Habitat: Wetland intertidal shallows, low marsh, scrub-shrub/forested upland.

Proposed Project: [HEP nomination: recommended Salt marsh restoration.]. Protection of remaining marshes by replacing invasive dominated area with 1.7 acres of coastal scrub and grassland habitat and creation of barrier to motorized vehicles by placing boulders along the boundary of the restoration area.

HEP Projected (1997)/Estimated Costs: \$360,000/ approximately \$1.89 million (fully funded costs: USACE, undated)

Project Status: Draft Jamaica Bay, Marine Park and Plumb Beach, NY Ecosystem Restoration Interim Feasibility Study to be reformulated per Second Interim Disaster Relief Appropriations Act, 2013. Site will be reevaluated in the East Rockaway to Rockaway Inlet – Jamaica Bay Reformulation Study for Coastal Storm Risk Management (CSRM). If site does not provide adequate CSRM benefits, Brant Point will be included in the Hudson Raritan Estuary Restoration Feasibility Study.

Partners: NYCDPR, NYSDEC, NYCDEP, USACE, NPS

Project Contact: Lisa Baron, Project Manager, USACE

Phone: (917)790-8306

Website: <http://www.nan.usace.army.mil/project/newyork/factsh/pdf/jamaica.pdf>

Project Funding Source: USACE and NYCDEP funded the Jamaica Bay Feasibility Study

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - An existing patch of salt marsh hay (0.07 acres) will be excavated and re-planted. This area is currently being invaded by the surrounding invasives. Salt marsh hay will be planted in the location after the excavation and regrading of the surrounding land. The net amount of wetland habitat will be the same before and after project implementation.

Coastal and Maritime Forests – Recovery of approximately 1.7 acres of coastal scrub shrub and grassland habitat from the existing invasive dominated areas. Some regrading and grubbing would remove the invasive species and native grasses and shrubs will be planted at the site. This alternative also includes the creation of a natural boulder barrier to motorized vehicles.

Benefits, Cost and Comparative Restoration Ratio: TBD

C. EXISTING SITE SPECIFIC DATA INVENTORY (USACE Pre-Draft FS Report, Undated + Supplemental citations if available listed below)

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

U.S. Army Corps of Engineers & NYC Department of Environmental Protection. undated. Jamaica Bay, Marine Park and Plumb Beach, New York - Environmental Restoration Study PRE-Draft Interim Feasibility Report Kings and Queens Counties, New York.

The NYC Waterfront Revitalization Program: Proposed Revisions for Public Review.



HAWTREE POINT EXISTING CONDITIONS (from Pre-Draft Interim Feasibility Study Report)



HAWTREE POINT RECOMMENDED ALTERNATIVE (from Pre-Draft Interim Feasibility Study Report)



CRP SITE 162. CONCH BASIN (LITTLE BAY)

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: *This site is located at the western end of Conch Basin in Edgemere, 0.1 miles north from the corner of Almeda Avenue and Norton Avenue, Queens NY.*

Watershed: Jamaica Bay

Size:

Ownership:

Site Description: *The shoreline of this site consists of narrow bands of low marsh (5 to 20 feet wide) and rip-rap formed by concrete and asphalt debris. The shoreline is narrow along the northern and western edge of the site, rising quickly to a paved road (Almeda Road) and the entrance to the landfill. In the southwestern portion of the site, a CSO discharges into a short drainage ditch that conveys the effluent into the basin*

Soils within the larger upland area on the south side of the site consist of loamy sand to sand fill material. The low marsh along the shoreline is dominated by saltmarsh cordgrass. The adjoining uplands are dominated by common reed, with seaside goldenrod, marsh orach, and mugwort also present. Along the western and northwestern edges, shrubs and young trees are present, including tree-of-heaven, sumac, and black cherry.

The northern portion of the site adjoins the Edgemere Landfill

Conch Basin (Little Bay) is a relatively, small confined basin in the southeast corner of Jamaica Bay. It has been extensively dredged in the early 20th century. Within the actual borrow pit depths in Little Bay are approximately 64 feet below MLW. The deep hole of Little Bay has short-circuited natural flushing and currents creating a severely degraded benthic community and poor fish utilization. The pits are acting as sediment traps, accumulating fine-grained sediments associated with contaminants that are not generally a problem in the more open water sediments of the bay.

Current Land Use: *Land use consists of a strip of vacant land that runs along Almeda Avenue and extends south and east along Norton Avenue to the Jamaica Yacht Club marina. Site is zoned degraded vacant, 1 & 2 family residential, open/recreational site with parks/public land. The surrounding land is zoned vacant, 1 & 2 family residential, institutional, and open/recreational site.*

Available Habitat: Mixed wetland, beach.

Proposed Project: Salt marsh restoration and removal of debris.

Projected/Estimated Costs: \$423,900

Project Status: Restoration contingent upon acquisition.

Partners:

Project Contact: Harbor Estuary Program

Phone: (212) 637-3816

Website: www.harborestuary.org

Project Funding Source:
HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Removal of shoreline debris and placement of clean fill to increase the coverage of the existing tidal fringe marsh by approximately 5 acres. The restored segments of shoreline should be planted with *Spartina* spp.

Habitat for Fish, Crab and Lobsters – Removal of debris and assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of clean fill and complex structure to increase the size of the mudflats, reduce the slope and increase use and movement between habitats along approximately 4 acres.

Enclosed and Confined Waters – Positions of existing storm water outfalls and CSO's should be examined to determine if force of discharge and scour area would impact marsh establishment. The potential impact of contaminants and freshwater discharge should also be considered during design. Re-contouring the approximately 1,545 foot basin will increase flow and support the created habitat.

Sediment Contamination – Further testing is required to determine the fate and transport of landfill leachate from the Edgemere Landfill.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

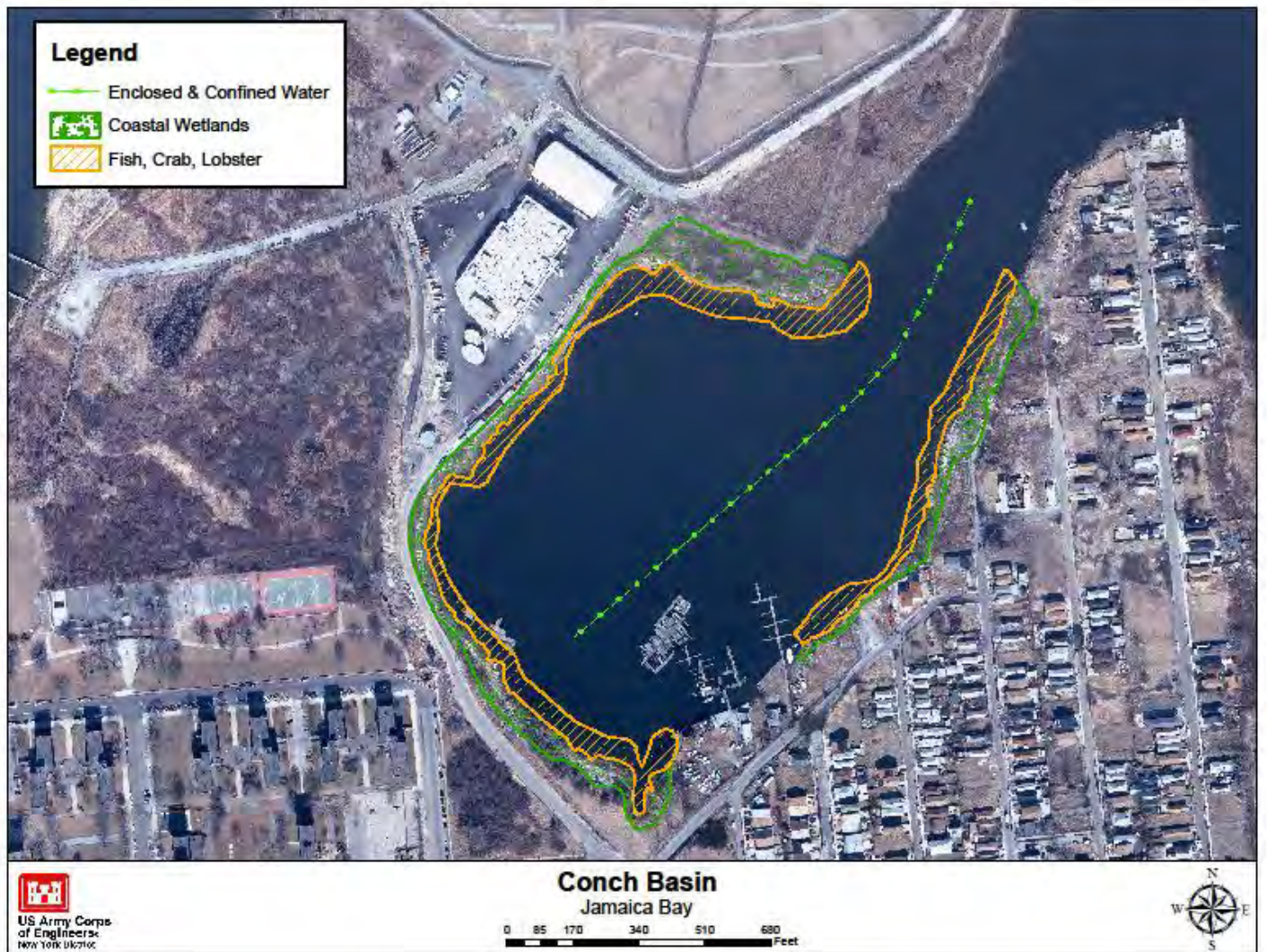
H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.



CRP SITE 165. MOTTS BASIN

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Sites are located in the upper reaches of Motts Basin 0.1 miles east from the corner Dunbar Street and at the head of Motts Basin along the southern shore between McBride Street and Beach Channel Drive in Bayswater, Queens.

Watershed: Jamaica Bay

Size:

Ownership: New York City Department of Parks and Recreation

Site Description: *The marsh in the upper reaches of the site is a continuation of the proposal for Bayswater State Park. The shoreline contains a 30- to 50-foot-wide band of low marsh within a northeast facing cove. More extensive low marsh zones are present adjoining the northern edge of the site. A rip-rap protected CSO outfall is located near the center of the site. The upland consists of old field/grassland with common reed and mugwort as the predominant plant species, the soil appears to be fill material.*

The shoreline of the head of basin site consists of a narrow band of low marsh in the western half and asphalt and concrete rip rap in the eastern half leading up to a bulkhead for a fuel storage facility at the terminus of the basin. A CSO is located in the western portion of the site.

Current Land Use: *Site is zoned vacant, open/recreational, commercial site with parks/public lands. The surrounding land is zoned vacant, 1 & 2 family residential, commercial, transportation/utilities, and open/recreational site.*

Available Habitat: Low marsh, old field/grassland. The upland area contains a mixed old field/grassland with Phragmites and Artemisia vulgaris. The low marsh is dominated by Spartina alterniflora.

Proposed Project: Salt marsh restoration. *Creation of 0.21 acres of high salt marsh habitat as off site compensatory restoration for the 42nd street outfall project.*

Projected/Estimated Costs:

Project Status: *NYC DEP implemented a deciduous hardwood upland restoration along a portion of the southern shore of Motts Basin in 1995.*

Partners:

Project Contact: Harbor Estuary Program; Margot Walker NYCDEP office of storm water management planning.

Phone: (212) 637-3816, (718) 595-4367

Website: www.harborestuary.org

Project Funding Source: No data.

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Restoration and creation of approximately 6 acres of salt marsh habitat. The low marsh could be expanded within the nearshore waters to create a zone suitable for planting *Spartina* spp. This could be accomplished through removal of *Phragmites* and placement of clean dredge material or re-grading (depending on site specific elevations).

Coastal and Maritime Forests – Restoration of approximately 14 acres of the upland scrub shrub buffer at both sites.

Habitat for Fish, Crab and Lobsters – Assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure and clean fill to the mudflats to decrease the slope along approximately 6 acres.

Enclosed and Confined Waters – Positions of existing storm water outfalls and CSO's at both sites should be examined to determine if force of discharge and scour area would impact marsh establishment. The potential impact of contaminants and freshwater discharge should also be considered during design. Re-contouring approximately 2,735 feet of the basin will increase flow and support created habitats.

Sediment Contamination – Presence of contaminants that may need more detail to interpret the significance of specific restoration activities.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

The Trust for Public Land & New York City Audubon Society. 1992. Buffer the Bay Revisited An Updated Report on Jamaica Bay's Open Shorelines and Uplands.

Alderson & Brower. 2012. Harbor History (needs proper citation)



CRP SITE 166. SHELLBANK CREEK

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: *The site is located along Shellbank Creek and Plumb Beach Channel in Gerritsen, Brooklyn NY.*

Watershed: Jamaica Bay

Size:

Ownership: NYC DPR

Site Description: *The area along the northern shoreline and the western half of the southern shoreline is modified by bulkheads, piers and docks for marinas and private homes. The only natural shoreline consists of a large area of low marsh along approximately 3,000 feet of the southeastern shoreline. The northeastern end of the site also contains patches of low marsh interspersed with sand beaches.*

The undeveloped portions of the site along the southern shoreline consist of 80- to 100-foot-wide bands of low marsh dominated by saltmarsh cordgrass. The adjoining uplands contain a mixture of common reed and scrub shrub\woodland. A few of the plant species observed include bayberry, sumac (Rhus), black cherry (Prunus serotina), black locust (Robinia psuadocacia), groundsel-tree, tree-of-heaven (Ailanthus altissima), mugwort (Artemesia), seaside goldenrod (Solidago sempervirens), aster (Aster) and switchgrass. The vacant land in the northeastern portion of the site contains smaller patches of low marsh between sand beach and uplands dominated by common reed (Phragmites australis) and old field\scrub shrub.

Current Land Use: The existing land use at this site consists of marinas and residential housing along the northern shoreline and over half of the western portion of the creek. Along the southern shoreline from the Belt Parkway bridge west to Emmons Avenue, the site contains vacant land. The vacant portions of the site are part of Marine Park operated by NYCDPR. *The site is zoned open/recreational site with parks/public land. The surrounding land is zoned commercial.*

Available Habitat: Estuarine - tidal waterways.

Proposed Project:

Projected/Estimated Costs:

Project Status:

Partners:

Project Contact: Harbor Estuary Program

Phone: (212) 637-3816

Website: www.harborestuary.org

Project Funding Source:

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Excavation of Phragmites and restoration of approximately 7 acres of marsh with *Spartina* spp.

Habitat for Fish, Crab and Lobsters – Removal of debris and assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure to the mudflats and shallow water to increase movement between habitats along approximately 7 acres.

Coastal and Maritime Forests- Restoration of approximately 16 acres of upland scrub shrub and woodland habitat.

Enclosed and Confined Waters – Re-contouring along approximately 3,367 feet of the creek and will increase flushing to the restored habitats.

Sediment Contamination –Potential removal and capping based on further sediment contamination testing.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

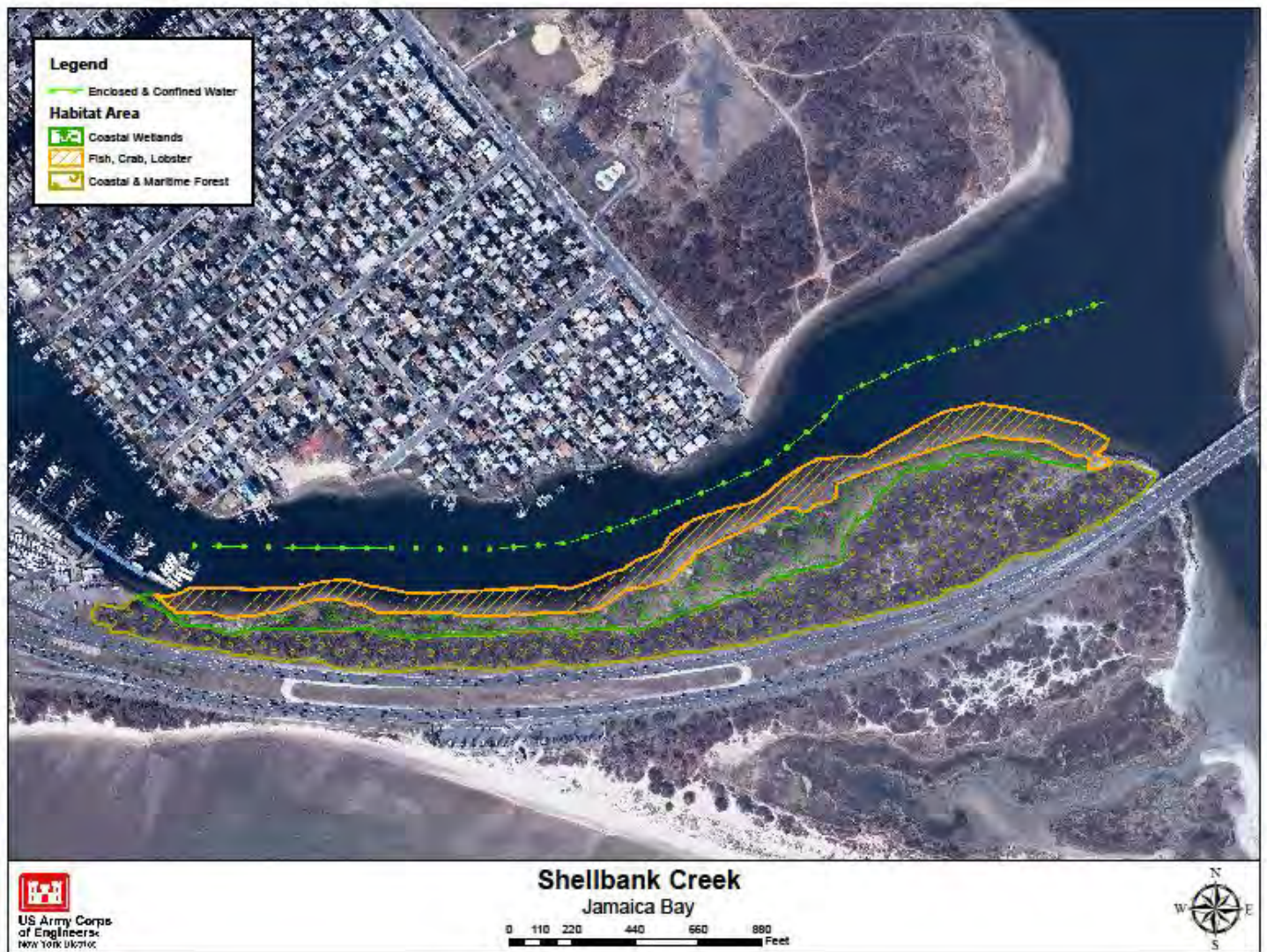
H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.



CRP SITE 810. SHELLBANK BASIN (NEED TO UPDATE AND CONSIDER PROPOSALS FROM NY RISING, 2014)

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Shellbank Basin runs south from 157th Avenue on the east side of Cross Bay Boulevard, in Howard Beach, Queens, New York to Jamaica Bay, 165th Avenue and the Joseph P. Addabbo Memorial Bridge.

Watershed: Jamaica Bay

Size:

Ownership:

Site Description: Narrow dead-end basin in upper Jamaica Bay. The majority of shoreline is bulkheaded, with residential docks and structures. Extremely poor sediment and water quality exists throughout. *Shellbank Basin is listed on the New York State 303(d) TMDL list with pathogens identified as the parameter of concern and CSOs as the primary pollutant or cause. The basin is a saline waterbody, with its only freshwater inputs being storm sewer discharges.*

Current Land Use: *The site is partially federal land. The surrounding land is zoned vacant, 1 & 2 family residential, mixed used, institutional, commercial, transportation/utilities, and open/recreational site.*

Available Habitat: *This site has intertidal marshes and estuaries/marines.*

Proposed Project: Dredging/bathymetric recontouring to improve tidal hydrodynamics. Fill degraded borrow pit at head of basin. A demonstration of impairment of existing habitat and the value of proposed restorations would be required.

Projected/Estimated Costs:

Project Status: This site is partially permanently protected. It has surroundings of residential areas and an airport, with possible influences from paved roads, invasive species and single unit housing.

Partners:

Project Contact: Harbor Estuary Program

Phone: (212) 637-3816

Website: www.harborestuary.org

Project Funding Source:

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Enclosed and Confined Waters – Re-contouring the 5,085 foot creek to improve tidal hydrodynamics.

Sediment Contamination –Potential removal and capping based on further sediment contamination testing.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:



CRP SITE 167. SOMERVILLE BASIN

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.1 miles west northwest from the corner of Beach 58th street and Almeda Avenue, Queens NY.

Watershed: Jamaica Bay

Size:

Ownership: NYC DCAS

Site Description: *Somerville basin is a branch of the old Barbadoes Creek which formerly ran through the northern section of Arvene before that land was filled and re-claimed at the beginning of the century. The western shoreline of the Somerville Basin is characterized by an existing bulkhead at the end of De Costa Avenue and a narrow, debris strewn sandy beach and small patches of low marsh along commercially zoned properties. A series of old piles is located along the edge of this area. The southern shoreline is characterized by a large marina area. The eastern shoreline contains a narrow border of low marsh dominated by saltmarsh cordgrass, above which is a 30- to 50-foot wide band of common reed interspersed with shrubs and small trees, such as groundsel-tree, sumac, black locust and tree-of-heaven.*

Current Land Use: *Open space, park. Site is zoned vacant, open/recreational site with parks/public lands. The surrounding land is zoned multi-family residential, commercial, and open/recreational site.*

Available Habitat: *Wetland. Western shoreline is no longer available for restoration.*

Proposed Project: Wetland preservation and restoration.

Projected/Estimated Costs:

Project Status:

Partners:

Project Contact: Harbor Estuary Program

Phone: (212) 637-3816

Website: www.harborestuary.org

Project Funding Source:

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Preservation and restoration of the approximately 2 acre existing marsh habitat along the eastern shoreline of Somerville Basin. Removal of debris and Phragmites, potential re-grading to accommodate *Spartina* spp. elevations. Protection of the restored low marsh would be required due to the close proximity of the marina and associated boat wake and pollution.

Coastal and Maritime Forests – Preservation and restoration if approximately 4 acres of upland forested and scrub shrub buffer.

Habitat for Fish, Crab and Lobsters – Assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure to increase movement between habitats along approximately 1.5 acres.

Sediment Contamination - Potential removal and capping based on further sediment contamination testing.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.



CRP SITE 168. HENDRIX CREEK

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: *In the Spring Creek section of Brooklyn, 0.5 miles southwest from the intersection of Elton Street and Seaview Avenue.*

Watershed: Jamaica Bay

Size: 6 acres, 10 acres.

Ownership: NYS, NYSDEP

Site Description: Urban creek emptying into Jamaica Bay. Creek is bulkheaded in the upper reaches and its marshes are dominated by Phragmites. It is listed on the New York State 303(d) TMDL list with pathogens identified as the parameter of concern and CSOs as the primary pollutant or cause. CSO discharge may also be inhibiting growth of native vegetation.

Most of the western shoreline consists of a wood bulkhead for the 26th Ward Water Pollution Control Plant, occupying approximately 65-70 percent of the filled wetlands immediately west of the creek. The eastern shoreline and a portion of the southwestern shoreline are undeveloped and are characterized by narrow fringes of common reed that quickly slope upward. The common reed appears to grow to the elevation of the mean high tide. The outfall for the water pollution control plant is located at the midpoint of the basin. A CSO outfall is located at the northern end of the basin.

Current Land Use: *This site consists primarily of the narrow, open water channel of Hendrix Creek. Only the eastern shoreline and a small portion of the southwestern shoreline near the entrance to the basin are undeveloped. Site is zoned transportation/utilities site with parks/public lands. The surrounding land is zoned vacant, transportation/utilities, and open/recreational site.*

Available Habitat: Estuarine - marshes, tidal waterways.

Proposed Project: Fresh water and salt marsh restoration

Projected/Estimated Costs:

Project Status:

Partners: NRDC

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Excavate *Phragmites* and replant with *Spartina* spp. to create approximately 2.5 acres of fringe marsh habitat.

Coastal and Maritime Forests – Restore native species to grassland and scrub shrub along approximately 8 acres of upland buffer.

Oyster Reefs – Potential creation of 10x5 meter experimental reef.

Shorelines and Shallows – Creation, restoration, or enhancement of vegetated and non-vegetated shallow water habitat along 3,323 feet of shoreline.

Habitat for Fish, Crab and Lobsters – Assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure to mudflats and shallow water to facilitate movement between habitats along approximately 3 acre.

Enclosed and Confined Waters – Re-contour approximately 3,818 feet of basin to improve tidal hydrodynamics, with a secondary benefit of improved wetland function. CSO abatement.

Sediment Contamination – Potential removal and capping of sediment based on further sediment contamination testing.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

Hydroqual- <http://www.hydroqual.com/Projects/usa/projectAreaFrameset.html>

The Trust for Public Land & New York City Audubon Society. 1992. Buffer the Bay Revisited An Updated Report on Jamaica Bay's Open Shorelines and Uplands.



CRP SITE 172. VERNAM BARBADOES

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Candidate Restoration/Preservation Site.

Location: Located in the Arverne section of Queens, west of the Edgemere Landfill in the Rockaways.

Watershed: Jamaica Bay

Size: 30 acres (20 acres upland, 10 acres wetland).

Current Ownership: Maintained by NYCDPR

Site Description: Degraded former industrial site. *Site consists of a vacant parcel between NYCTA rail lines to the southwest, Barbados Basin to the northeast, and parkland maintained by NYC DPR located between Barbados Basin and the Vernam Basin. The shoreline within Barbados Basin is variable with the southwestern shore consisting of concrete debris, old pilings and ship wrecks, and the northeastern shoreline characterized by an old wooden pile line behind which is a 15- to 20-foot wide band of low marsh. At the southern end of the basin, a stormwater outfall is present as well as a narrow drainage ditch in the southern edge of the basin. The shoreline facing northwest to Beach Channel Drive consists of dilapidated wood piles and patches of low marsh and sand beach. The southwestern shoreline of Vernam Basin, on the northeastern side of the site, also contains segments of wood piles and patches of sandy beach and narrow bands of low marsh. The eastern shoreline contains a bulkhead and a marina.*

Current Land Use: *The site is bordered by industrial properties to the south and marinas and single family residential properties to the north and east. An industrial use located adjacent to the southern end has encroached on the parkland. Site is zoned degraded vacant, transportation/utilities, open/recreational site with parks/public lands. The surrounding land is zoned vacant, industrial, transportation/utilities, and open/recreational site.*

Available Habitat: Estuarine - marsh, tidal waterways and intertidal flats. This site also contains a coastal meadow scrub supporting diverse grasslands and mixed coastal and dune vegetation. Dominant grasses include little bluestem, switchgrass (*Panicum*), and the finest growth of beach heather (*Hudsonias*) in Jamaica Bay.

Proposed Project: Maritime heathland and grassland restoration, salt marsh restoration, and debris removal. Create access road and install protective guardrail. EPA and NYC plans for brown field remediation and construction of public park/boat launch.

Projected/Estimated Costs: \$144,000 (upland), \$500,000 (wetland).

Project Status: *Transfer of land from NYCEDC to NYC Parks (2007). Restoration not initiated as of 2007 NYSDEC status report. Restoration is being planned.*

Partners: USACE, NRDC, 1999 NYS Clean Water/Clean Air Bond Act and NYC. NYC Parks.

Project Contact: Harbor Estuary Program (upland); Michael Feller, NYC Parks/NRG (wetland)

Phone: (212) 637-3816 (upland); (212) 360-1424 (wetland)

Website: www.harborestuary.org; www.nycgovparks.org/sub_about/parks_divisions/nrg/

Project Funding Source: NYSCWCA 1999 NYS Clean Water/Clean Air Bond Act and the City of New York (partial funding).

HEP Ratified Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Protect the existing tidal marsh and restore tidal marsh in existing degraded areas totaling approximately 17 acres. Install wave attenuation structures to protect created and existing low marsh habitats. This restoration would involve the excavation and re-grading of the vacant parcel on the southwest edge of the site to create additional tidal marsh and the filling of Barbados Basin to create low marsh, and the addition of up to 1,618 feet of tidal creeks.

Habitat for Fish, Crab and Lobsters – Assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure to mudflats and shallow water to facilitate movement between habitats along approximately 5 acres. Removal of concrete, wood debris, and ship wrecks would also be required.

Coastal and Maritime Forests – Protect the existing upland habitats and create maritime heathland and grassland habitat along approximately 14 acres. Upland could be planted with shrubs and warm season grasses along the periphery of the site and upper slope of the excavation.

Sediment Contamination – Removal of contaminated sediments.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use: Existing conditions (USACE 1997)

C. Biological Studies/ Fauna: Recognized shorebird habitat (TPL 1993)

D. Biological Studies/ General Environment: Existing cover type and shoreline description (TPL 1993, USACE 1997)

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment: Soil and elevation characteristics (USACE 1997)

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

The Trust for Public Land and New York City Audubon Society. 1992. Buffer The Bay Revisited An Updated Report On Jamaica Bays Open Shoreline and Uplands.



CRP SITE 193. GERRITSEN INLET (DEAD HORSE BAY)

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: *Located entirely within Brooklyn, site consists of a west-central portion of Barren Island, a part of which straddles the Belt Parkway. The site is bound on the western side by Gerritsen Creek, the Belt Parkway to the north, and Gerritsen inlet and Dead Horse Bay to the south.*

Watershed: Jamaica Bay

Size: 20 acres

Ownership: *Under the management of the NPS as part of the GNRA. The smaller, western portion of the site is within Marine Park, operated by the NYCDPR.*

Site Description: *Beginning at the western end of the site and continuing up to approximately the midpoint of the site, the shoreline consists of mostly open beach up to the elevation of mean high tide. Beginning near the bridge and extending for approximately 1,000 feet, the fore shown beach is bordered by a bluff four to six feet in height. The beach gently grades into an extensive sand flat within the Gerritsen inlet and Dead Horse Bay. The site abuts NPS-owned vacant property. Relatively low-lying areas of upland exist south of the Belt Parkway and west of Flatbush Ave.*

The shoreline consists mostly of sandy beach within the western and central portions of the site. A few patches of low marsh dominated by salt-marsh cordgrass are present, each approximately 20 feet in width. The widest areas are approximately 30 feet in width and are located mostly to the east of a small tidal pool. An abrupt zone of common reed begins at approximately the high tide elevation (~4 ft.) and continues throughout the adjoining uplands on the central and eastern portion of the site. On the western portion of the site, the cover type changes abruptly with elevation to an upland scrub shrub community containing black cherry, black locust, bayberry, sumac, mugwort, seaside goldenrod, common reed and grasses.

The tidal pond within the central portion of the site is a unique feature present at the site and should be preserved. The USGS has mapped the extensive common reed stand as a wetland, though the NWI map has not identified this area as a wetland. The potential exists for a portion of this area to contain a freshwater wetland, with a water table perched above the salt wedge.

Current Land Use: *The entire site is parkland, with the majority of the site associated with Floyd Bennett Field. The land is zoned open/recreational with parks/public land and federal land. The surrounding land is zoned transportation/utilities, multi-family residential, institutional, commercial, and open/recreational site.*

Available Habitat: *Tidal wetland, upland, extensive monotypic Phragmites stand interspersed with small patches of high value habitat.*

Proposed Project: Salt marsh restoration.

Projected/Estimated Costs: *USACE \$4,900,000; the City of New York and the New York State Clean Water/Clean Air Bond Act \$1300,000.*

Project Status: *Preliminary plans by NYCDPR and USACE under Jamaica Bay Environmental Restoration Feasibility Study. See CRP. 732.*

Partners: NYCDPR, NYSDEC, USACE.

Project Contact: Robbin Bergfors, NYC Parks/NRG
Phone: (212) 360-1468
Website: www.nycgovparks.org/sub_about/parks_divisions/nrg/

Project Funding Source: NYSCWCA, 1998 NYS Clean Water/Clean Air Bond Act and the City of New York (partial funding): \$1,300,000

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION
CONCEPT PLANNING FOR THIS SITE HAS BEEN INCLUDED IN THE DESIGN FOR CRP. 732

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands -	Habitat for Fish, Crab and Lobsters -
Islands for Waterbirds -	Tributary Connections -
Coastal and Maritime Forests -	Enclosed and Confined Waters -
Oyster Reefs -	Sediment Contamination -
Eelgrass Beds -	Public Access -
Shorelines and Shallows -	

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

CRP SITE 732. DEAD HORSE BAY

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: *Site is located in the southwest corner of Barren Island (Floyd Bennett Field), on the west side of Flatbush Avenue and south of Dead Horse Bay.*

Watershed: Jamaica Bay

Size: *161 acres (total 130 acres of habitat)*

Ownership: *National Park Service, GNRA.*

Site Description: *This site consists of undeveloped parkland within the GNRA maintained by the NPS. The shoreline consists mostly of a narrow sandy beach with a few small patches of low marsh located along the central portion of the western shoreline. A bluff, approximately five feet high, forms near the center of the site and extends southward along the western shoreline.*

The small patches of low marsh are dominated by saltmarsh cordgrass. Behind the narrow beach, the foreshore and bluff areas contain mostly grassland habitat dominated by common reed. Narrow bands dominated by beach grass and seaside goldenrod are also present, especially along the bluff. The interior of the site contains large stands of common reed and patches of scrub shrub habitat dominated by bayberry and sumac. Along the northern edge of the site, several patches of trees are present that include cottonwood, black cherry and tree-of-heaven.

Prior to 1941, this site was essentially undisturbed. Most of the marsh area and the southern portion of the open water were covered by landfill by the NYC Parks Department in the 1950s. In the northern portion of the site, the 1941 coastal chart shows that the area remained tidal marsh even after construction of the Belt Parkway. Fill of this area apparently occurred during the 1950's in connection with construction of Marine Park. The ecological problems at Dead Horse Bay include: covering of the historic marsh with fill, including the solid waste landfill in the southern project area placed after 1948, erosion and exposure of the solid waste landfill, steep bathymetry of the southwest and southern shorelines, presence of extensive areas of nonnative and invasive plant species.

Current Land Use: *The land is zoned an open/recreational site with federal land.*

Available Habitat: *Grassland and saltmarsh. The area supports both black-crowned (*Nycticorax nycticorax*) and yellow-crowned night herons (*Nyctanassa violacea*). Clapper rails (*Rallus longirostris*) are heard here in warmer months while winter is a good time for spotting ducks. The Park's upland contains groves of native trees like smooth sumac (*Rhus glabra*) and non-native trees like the tree of heaven (*Ailanthus altissima*). Although the basin consists of over 160 acres, more than 75 of those are underwater.*

Project Status: Draft Jamaica Bay, Marine Park and Plumb Beach, NY Ecosystem Restoration Interim Feasibility Study to be reformulated per Second Interim Disaster Relief Appropriations Act, 2013. Site will be reevaluated in the East Rockaway to Rockaway Inlet – Jamaica Bay Reformulation Study for Coastal Storm Risk Management (CSRM). If site does not provide adequate CSRM benefits, Brant Point will be included in the Hudson Raritan Estuary Restoration Feasibility Study.

Partners: NYCDPR, NYSDEC, NYCDEP, USACE, NPS

Project Contact: Lisa Baron, Project Manager, USACE

Phone: (917)790-8306

Website: <http://www.nan.usace.army.mil/project/newyork/factsh/pdf/jamaica.pdf>

Project Funding Source: USACE and NYCDEP funded the Jamaica Bay Feasibility Study

Proposed Project: Recommended plan maximizes marsh habitat by creating a tidal channel in the northern portion of the site and regarding the existing upland *Phragmites* stand to salt marsh elevations to create a 31 acre tidal marsh system. Sand would be beneficially reused on site to create additional restoration opportunities and buffer areas. In total, plan restores 130.7 acres which includes 31 acres of low marsh, 7 acres of high marsh, 4 acres of creek and 27.7 acres of dunes.

Projected/Estimated Costs: approximately \$66.7 million (USACE, undated)

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Design maximizes marsh habitat by creating a tidal channel in the northern portion of the site and re-grading the existing upland *Phragmites* stand to salt marsh elevations to create approximately 31 acres of low marsh, 4 acres of creeks (4,122 feet), and 7 acres of high marsh. By the removal action, the fringe marsh will be able to support native wetland plant species with high habitat value. This measure will serve as the least cost placement for the approximately 669,000 cubic yards that must be excavated to create the northern marsh. To stabilize the tidal creek and protect the existing beach habitat, training structures will be created on the banks at the mouth of the creek.

Coastal and Maritime Forests – Excavated sand will be used to create 27.7 acres of dunes along the edge of the water and to restore the 62 acres of existing maritime forest in the southern portion of the site.

Habitat for Fish, Crab and Lobsters – Training structure will be made of rock with an overall trapezoidal shape. The rocks will be placed randomly within the shape to create various size interstitial spaces that can be used as refuges by various species. Additionally, Assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure to mudflats and shallow water to facilitate movement between habitats along approximately 19 acres of existing habitat.

Sediment Contamination – Risks can be reduced and overall improvement can occur as a result of restoration action through use of cleaner areas for capping and grading at the surface.

Benefits, Cost and Comparative Restoration Ratio: TBD

C. EXISTING SITE SPECIFIC DATA INVENTORY (USACE Pre-Draft FS Report, Undated + Supplemental citations if available listed below)

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

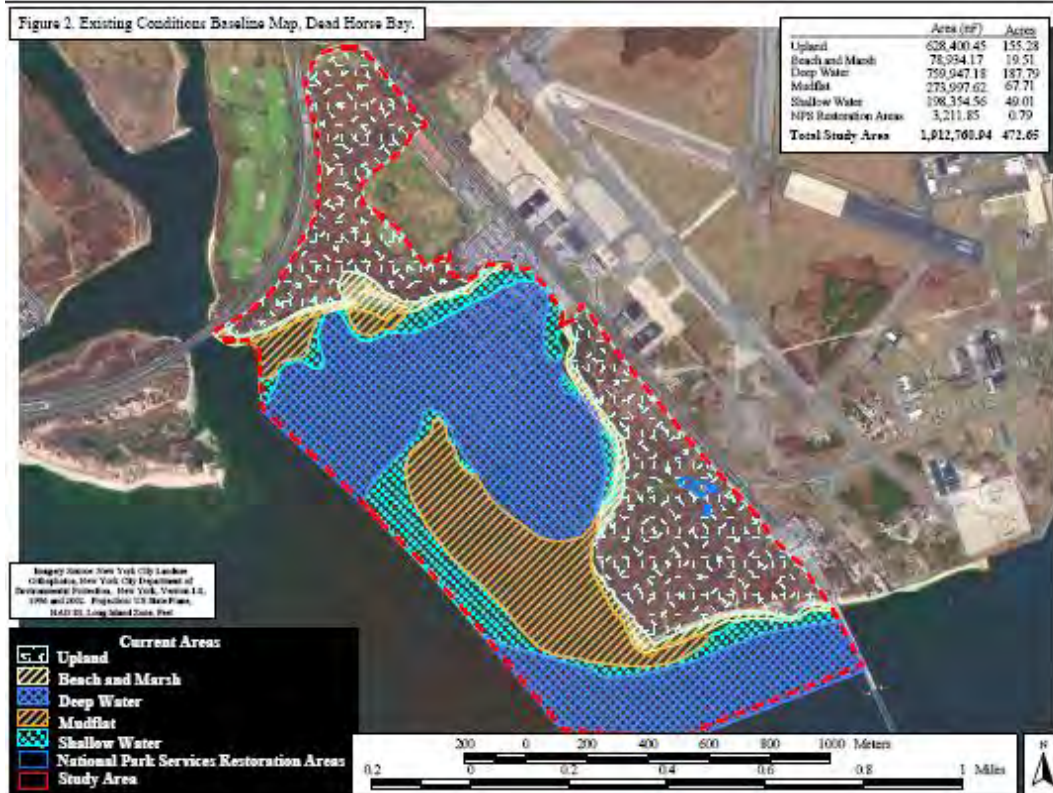
REFERENCES:

U.S. Army Corps of Engineers & NYC Department of Environmental Protection. undated. Jamaica Bay, Marine Park and Plumb Beach, New York - Environmental Restoration Study PRE-Draft Interim Feasibility Report Kings and Queens Counties, New York.

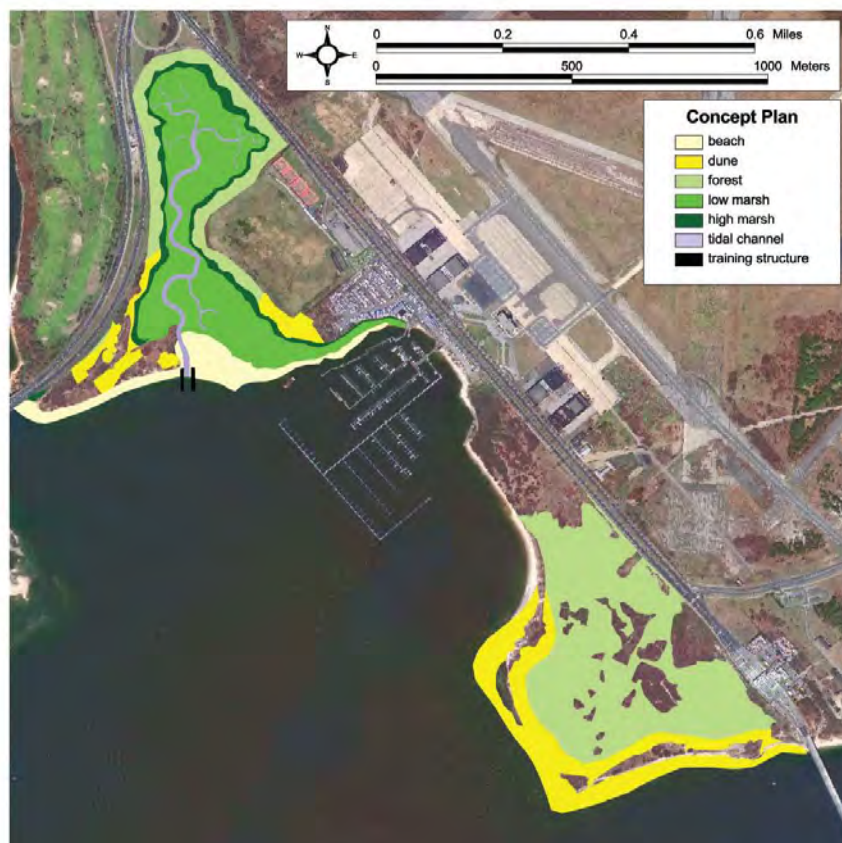
NYC Parks- http://www.nycgovparks.org/sub_about/parks_divisions/nrg/forever_wild/site.php?FWID=24



DEAD HORSE BAY EXISTING CONDITIONS (from Pre-Draft Interim Feasibility Study Report)



DEAD HORSE BAY RECOMMENDED ALTERNATIVE (from Pre-Draft Interim Feasibility Study Report)



CRP SITE 198. CANARSIE BEACH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.2 miles southeast from the corner of East 91st Street and Schenk Street, Kings County NY.

Watershed: Jamaica Bay

Size:

Ownership: NYCDPR, managed by the NPS as part of Canarsie Beach Park within the GNRA

Site Description: Northern portion consists of low marsh dominated by *Spartina alterniflora*, with some *Phragmites* and some shrubs. The southern portion is an upland scrub community.

The shoreline at the Canarsie Beach site extends from the Belt Parkway bridge northeast for approximately 3,000 feet. The shoreline consists of a narrow sandy foreshore beach. This beach feature is absent along the remaining shoreline, where it is replaced with a band of low marsh approximately 50 to 150 feet wide. A large, sand flat is present offshore along the entire site. This flat narrows near the Paerdegat Basin inlet.

The majority of the northern portion of the site consists of a low marsh dominated by saltmarsh cordgrass bordered by a narrow upland edge containing common reed and a few shrubs of bayberry and sumac. Within the higher elevations of the site in the southern third of the site, an upland scrub shrub community is present. The predominant shrubs are bayberry, blackberry, cottonwood and sumac, intermixed with common reed, mugwort and seaside goldenwood.

Current Land Use: This site is mostly undeveloped parkland. The land is zoned open/recreational site with federal land. The surrounding land is zoned commercial, 1 & 2 and multi-family residential, mixed used, and open/recreational site.

Available Habitat: Low marsh, high marsh, upland shrub community.

Proposed Project: \$26,320 tidal wetland restoration.

Projected/Estimated Costs: \$26,320

Project Status:

Partners:

Project Contact: Harbor Estuary Program

Phone: (212) 637-3816

Website: www.harborestuary.org

Project Funding Source:

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Preservation and restoration of approximately 10 acres of existing eroding marsh habitat. Removal of debris and Phragmites, planting of *Spartina* spp. Potential re-grading.

Coastal and Maritime Forests – Preservation and restoration of approximately 19 acres of upland forested and scrub shrub buffer zone.

Shorelines and Shallows – Re-grade to create intertidal complex along approximately 800 feet of the shoreline section near the Belt Parkway bridge.

Habitat for Fish, Crab and Lobsters – Assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure to mudflats and shallow water sandy areas to facilitate movement between habitats along approximately 14 acres.

Sediment Contamination – Potential capping based on sediment contamination testing. Close proximity to Pennsylvania and Fountain Avenue landfills.

Public Access – Potential for to create and restore up 3,228 feet of paths and public access sites with connections to Canarsie Pier.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

New York City Department of City Planning. 2010. New York City Comprehensive Waterfront Plan Draft Recommendations.



CRP SITE 200. MILL BASIN

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Between Paerdegat Basin and Mill Creek.

Watershed: Jamaica Bay

Size: 620 acres

Ownership: NYCDPR, NPS, private ownership.

Site Description: *The Mill Basin study area is comprised of Mill Basin and East Mill Basin. Site is a dredged basin surrounded by highly urbanized commercial and residential areas. The mouths of Mill Basin and adjoining East Mill Basin contain sediment berms which may inhibit tidal flow. Decreased tidal flow decreases water and sediment quality. Mill Basin is approximately 13,500 feet long and ranges in width from 150 to 2,000 feet. The mean low water depths in Mill Basin range from 3 to 33 feet. East Mill Basin is approximately 4,700 feet long and averages approximately 500 feet in width. The mean low water depths in East Mill Basin range from 40 to 45 feet. It is a saline waterbody, with the only freshwater flows being from storm sewer discharges. Much of the shoreline consists of parks and natural areas, and residential and commercial uses. It is listed on the New York State 303(d) TMDL list with pathogens identified as the parameter of concern and CSOs as the primary pollutant or cause.*

Current Land Use: Developed waterfront community. *The land is zoned open/recreational. The surrounding land is zoned 1 & 2 family residential and open/recreational.*

Available Habitat: Wetland

Proposed Project: Salt marsh restoration, *bathymetric re-contouring to increase tidal flow.*

Projected/Estimated Costs:

Project Status:

Partners: USACE

Project Contact: Harbor Estuary Program

Phone: (212) 637-3816

Website: www.harborestuary.org

Project Funding Source: No data.

HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Restoration of approximately 1 acre of fringe marsh and mud flats along East Mill Basin will compliment the wetland restoration already completed at Four Sparrows Marsh.

Shorelines and Shallows – Softening approximately 957 feet of the shoreline and restoration to intertidal area in East Mill Basin.

Habitat for Fish, Crab and Lobsters – Assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure along approximately 1 acre of existing habitat.

Coastal and Maritime Forests – Restoration of approximately 4 acres of maritime shrubs and dunes along East Mill Basin.

Enclosed and Confined Waters – Bathymetric re-contouring of 2,500 feet of the channel is proposed by removing silt from the mouth of Mill Basin and placing it in the deeper areas of the basin.

Sediment Contamination - Presence of contaminants may need more detail to interpret the significance of specific restoration activities.

Public Access- Improvements and additions to 5,930 feet of existing trails and public access points.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress (See Hydroqual for data)**

REFERENCES:

Hydroqual- <http://www.hydroqual.com/Projects/usa/projectAreaFrameset.html>

New York City Department of City Planning. 2010. New York City Comprehensive Waterfront Plan Draft Recommendations.



CRP SITE 601. HOOK CREEK

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.1 miles northwest from the corner of Hungry Harbor Road and Branch Boulevard. The site lies between Rockaway Turnpike on the west and North Woodmere Park on the east.

Watershed: Jamaica Bay

Size: 200 acres

Ownership: NYCDPR, NYS, Nassau County, Chase Manhattan Bank, Olympicorp Inc.

Site Description: *A straight, channelized segment of Hook Creek forms the eastern boundary of the site. The channel has steep banks lined with a narrow fringe of saltmarsh cordgrass. The eastern side of the creek has a steel bulkhead along the entire segment.*

The interior of the site contains a dense stand of common reed. A few small patches of grassland containing switchgrass and seaside goldenrod are present within the dense stand of common reed. At the edge of the channel a five-foot-wide band of saltmarsh cordgrass is present. Adjoining the northern and southern limits of the site, small areas of high marsh dominated by saltmeadow cordgrass are present.

Current Land Use: Recreation, wildlife refuge. *The land is zoned as an industrial and vacant site. The surrounding land is zoned as a vacant, industrial, and commercial site.*

Available Habitat: Degraded salt marsh.

Proposed Project: Salt Marsh and upland restoration. *NYS DEC proposes transfer of parcels to NYC Park, purchase of in-holding private land, install guardrail.*

Projected/Estimated Costs:

Project Status: No plans. *Restoration or land transfer not completed as of 2007 NYS DEC status report.*

Partners: USACE

Project Contact: No data.

Phone: No data.

Website: No data.

Project Funding Source: No data.

HEP Ratification Date: N/A

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Approximately 6 acres of salt marsh restoration could occur through, excavation of *Phragmites* stands, fill removal, re-grading, and restoration of tidal hydrodynamics.

Coastal and Maritime Forests – Restoration of approximately 14 acre upland scrub shrub and woodland area.

Habitat for Fish, Crab and Lobsters - Removal of debris would complement other work and allow impacted areas to re-vegetate on their own.

Enclosed and Confined Waters – Re-contour the up to 3,729 feet of creek and channels to improve tidal hydrodynamics.

Sediment Contamination – Potential removal and capping based on further sediment testing.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

The Trust for Public Land & New York City Audubon Society. 1992. Buffer the Bay Revisited An Updated Report on Jamaica Bay's Open Shorelines and Uplands.



CRP SITE 602. DOXEY CREEK

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.1 miles east of Branch Boulevard and 0.5 miles north of Peninsula Boulevard, Nassau NY.

Watershed: Jamaica Bay

Size: 1 acre

Ownership: NYS

Site Description: Urban creek running through out western Nassau County into Jamaica Bay, east of Head of Bay. Creek has been highly altered by channelization and dams.

Current Land Use:

Available Habitat:

Proposed Project: Fish Passage

Projected/Estimated Costs:

Project Status:

Partners: HRF

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION- TBD

NO RESTORATION RECOMMENDATIONS AT THIS TIME

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands -

Islands for Waterbirds -

Coastal and Maritime Forests -

Oyster Reefs -

Eelgrass Beds -

Shorelines and Shallows -

Habitat for Fish, Crab and Lobsters -

Tributary Connections -

Enclosed and Confined Waters -

Sediment Contamination -

Public Access -

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:



*TBD

CRP SITE 603. PLUMB BEACH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: *Located on the Plumb Beach peninsula in Brooklyn, NY. The site lies along the north shore of the bay just east of Knapp Street. The site is parkland within the GNRA.*

Watershed: Jamaica Bay

Size: 130 acres

Ownership: NPS, NYCDPR, NYCDEP, GNRA.

Site Description: Sandy beach subject to strong erosion forces. *The study site is a low-lying, crescent-shaped, undeveloped barrier beach which extends approximately 5,000 feet from Knapp Street at the entrance of Sheepshead Bay channel east to the tip of tidal flat. The beach width varied from 100 to 200 ft after a beach nourishment done in 1992, using dredged material from the Rockaway Inlet channel. Based on recent site inspections, the dune and beaches in the critical erosion area located to the west of the comfort station are completely eroded. The Beach is bordered landward by a public bikeway and the Belt Parkway. A narrow vegetated area, approximately 20 ft wide, runs between the bikeway and the parkway. A paved parking lot with a comfort station is located near the center of the site. Salt water wetlands occupy the landform east of the paved parking areas. Sand dune exists between the bikeway and the beach and the beach is fronted seaward with a tidal flat that extends up to 1,000 feet offshore. As a result of the combined effects of the November 2009 and March 2010 northeasters, storm wave damage has encroached upon the bike path and may be endangering the Belt Parkway.*

Current Land Use: *Site is zoned transportation/utilities and open/recreational site with federal lands. The surrounding land is zoned as a commercial, multi-family residential, institutional, and open/recreational site.*

Available Habitat: Site consists of dunes, intertidal marsh, estuaries/marines, and beach.

Proposed Project: *Restoration of coastal fringe/dune habitat, potential off-shore reef.*

Projected/Estimated Costs:

Project Status: Restoration scheduled to begin in 2012. An interagency team, including New York State Department of Environmental Conservation and Department of State, the National Park Service, the City of New York Department of Parks and Recreation, the New York City Department of Environmental Protection and the New York City Department of Transportation have created a comprehensive solution that will afford long-term protection to this vital area and its adjacent infrastructure, while balancing the environmental and recreational impacts to Plumb Beach and the vicinity.

The Army Corps of Engineers, New York District, received funding to initiate a Feasibility study for this project in 2010.

Partners: USACE, NPS.

Project Contact: Daniel T. Falt, Project Manager, USACE

Phone: (917)790-8614

Website: <http://www.nan.usace.army.mil/project/newyork/factsh/pdf/jamaica.pdf>

Project Funding Source:
HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

For concept plan see:

New York District U.S. Army Corps of Engineers. 2011. Plumb Beach, New York Section 204 Beneficial Use of Dredged Material Study for Shoreline Protection Final Detailed Project Report.

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal and Maritime Forests - Beachfill will restore vegetated dune and sand berm, forming a protective buffer for the roadway and infrastructure during storm wave attack. The restored dune will be approximately 1,000 feet in length, with crest elevation at +12 ft NGVD, matching the historic dune elevation. The restored dune width varies, from a maximum of approximately 100 feet at the critical erosion area, gradually tapering to meet the existing widths at both ends. The restored dune will be stabilized with vegetation and sand fence. The restored berm length will be approximately 2,000 feet in length with crest elevation at +9.0 ft NGVD. The width of the berm varies, from 100 ft at the critical erosion area and tapering to meet the existing berm at both ends. Two terminal groins will be constructed at the east and west limits of the beachfill. Both groins will extend from the base of the dune to mean low water. Potential exists for the addition of an off shore reef.

Habitat for Fish, Crab and Lobsters – The terminal groins will be rubblemound structures. The east groin will be 200 feet long and the west groin will be 150 feet long. Groin and potential off shore reefs will create various size interstitial spaces that can be used as refuges by various species.

Sediment Contamination - Presence of contaminants that may need more detail to interpret the significance of specific restoration activities.

Public Access – Restoration efforts will benefit public access.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

U.S Army Corps of Engineers. 2010. Plumb Beach NY, Draft Feasibility Study Engineering Appendix.

USACE- <http://www.nan.usace.army.mil/project/newyork/factsheet/pdf/plumbch.pdf>

CRP SITE 604. SHEEPSHEAD BAY

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.1 mile north from the corner of Shore Boulevard and Decatur Avenue, Kings County NY.

Watershed: Jamaica Bay

Size: 160 acres

Ownership: NYS

Site Description: Shallow hydrologically restricted tributary of Jamaica Bay, near Rockaway Inlet. The entire shoreline of the bay is bulk headed. *Sheepshead Bay is a straight channel approximately 1.15 miles long, with a width of approximately 400 to 800 feet and depths ranging from two to 44 feet.* Classified by NYSDEC as a Class I saline surface water with uses identified as secondary contact recreation and fishing.

Current Land Use: *The land is zoned park/public land and federal land. The surrounding land is zoned as a vacant, 1 & 2 and multi-family residential, mixed used, commercial, institutional, transportation/utilities, and open/recreational site.*

Available Habitat: *Estuaries/marines*

Proposed Project: *Bathymetric re-contouring to increase tidal flow.*

Projected/Estimated Costs:

Project Status:

Partners: USACE

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Shorelines and Shallows – Softening along 2,637 feet of shoreline and removal of bulkhead and rip rap where possible. Potential to restore shallow littoral habitat.

Enclosed and Confined Waters - Recontour 6,324 feet of the channel to improve hydrodynamics and water quality.

Sediment Contamination - Presence of contaminants may need more detailed analysis to interpret the significance to specific restoration activities.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

Hydroqual- <http://www.hydroqual.com/Projects/usa/projectAreaFrameset.html>



CRP SITE 607. FLOYD BENNETT FIELD (NEED TO UPDATE BASED ON NPS PLANS)

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Between Bergen Beach in Brooklyn and Rockaway, Kings County NY.

Watershed: Jamaica Bay

Size: 440 acres (*entire site*)

Ownership: NPS

Site Description: *Abandoned airfield, owned by NPS. Site contains construction debris and has undergone shoreline erosion of former salt marsh and dune habitat along Rockaway Inlet and North Channel. The upland area of this site has become a haven for grassland and open country birds.*

USACE is currently undergoing efforts to investigate and remediate any possible contamination at the site as a result of its military past.

Site #1 is located along the southeastern shoreline of Floyd Bennett Field within the GNRA. The site consists of a portion of an extensive bulkhead and a former seaplane ramp. The adjoining upland areas are vacant, consisting of mostly paved and disturbed areas. The shoreline is characterized by a relatively narrow sand flat at the base of the seawall. The central portion of the seawall is in disrepair, and the metal pile has corroded and is missing at multiple locations. This has allowed sections of fill material behind the wall to erode out into the Bay, creating a five to ten foot wide fissure behind the seawall.

Site #2 is located along the eastern shoreline of Floyd Bennett Field within the GNRA. The upland area contains mostly disturbed areas associated with the active Coast Guard facility, including an open area of mowed turf, utility buildings, a refueling platform, and pavement. The shoreline contains a narrow beach/sand flat zone that has formed and appears to be inundated at high tide. This zone is littered with pieces of driftwood from old piles. Below the elevation of the beach, a narrow sand flat is present.

These sites exclude the 100 acres already set aside for the grasslands project.

Current Land Use: *The majority of this site is disturbed ground that contains pavement. Vegetated areas consist of old fields containing stands of mugwort, seaside goldenrod, knapweed, camphor weed, and aster. Some patches also contain little bluestem and open sand. The land is zoned as institutional and open/recreational site with federal land. The surrounding land is zoned as an institutional and open/recreational site.*

Available Habitat:

Proposed Project: *Rehabilitate bulkhead and restore upland to grassland. The goal is to stabilize the existing shoreline to prevent erosion and to increase habitat diversity through the establishment of a warm seasonal grassland.*

Projected/Estimated Costs:

Project Status: NPS preliminary plans

Partners: Audubon, NPS, USACE

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal and Maritime Forests - Cover abandoned concrete runways with clean sand and/or silty dredged material and plant with appropriate native upland grass and scrub shrub species to create approximately 37 acres of mixed upland meadows primarily for bird and butterfly habitat.

Shorelines and Shallows- Approximately 1,436 feet of shoreline softening and restoration of shallow littoral habitat could occur through remove large, habitat suppressing debris. USAC is currently removing some debris as part of the DERP-FUDS program.

Sediment Contamination – The upland fill material beneath the asphalt areas may need to be examined for potential contamination. USACE is currently conducting soil sampling as part of the DERP-FUDS program.

Public Access – Support NPS improvements to pedestrian access and recreation.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

Energy and Environmental Analysis, For NYS DEC. 1994. Habitat Evaluation and Mitigation for Gateway Estates.

USACE- <http://www.nan.usace.army.mil/business/buslinks/bennett/index.php>

New York City Department of City Planning. 2010. New York City Comprehensive Waterfront Plan Draft Recommendations.



CRP SITE 915.1. CANARSIE POL

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Located in northwest Jamaica Bay, 2 miles west of Cross Bay Boulevard Kings County, NY.

Watershed: Jamaica Bay

Size: 20, 283 acres.

Ownership: NPS

Site Description: Dredged material island, possible low-value forested uplands; extensive Phragmites stands. This site provides a breeding area for several resident waterbird species. *As shown by maps dating from 1910, the island was originally quite small, however sand and soil was taken out from other nearby waterways to expand them, and then put onto the Canarsie Pol.*

Current Land Use: Open space, federal land.

Available Habitat: Canarsie Pol is surrounded by sandy beach, peat bank, and salt marsh. Trees include black cherry, cottonwood, and gray birch. Poison ivy, greenbrier, Japanese bittersweet, and other vines form an impenetrable understory across most of the island. This site has intertidal marshes, estuaries/marines, and emergent and forested/shrub freshwaters.

Proposed Project: Salt marsh restoration, dunes/uplands restoration, restore tidal hydrology, debris removal.

Projected/Estimated Costs:

Project Status:

Partners: USACE

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Approximately 54 acres of salt marsh restoration could take place through removal of *Phragmites* and restoration of tidal hydrology to former salt marsh areas.

Shorelines and Shallows – Soften up to 10,136 feet shorelines to create and enhance intertidal and shallow littoral habitat.

Islands for Waterbirds – Provide more nesting and feeding area for target species.

Coastal and Maritime Forests – Approximately 213 acres of dune and upland restoration could occur through debris removal, invasive removal, and plantings.

Habitat for Fish, Crab and Lobsters - Remove large, habitat suppressing debris from approximately 50 acres of intertidal and upland habitats would support connectivity. Additionally, assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity.

Sediment Contamination- Potential removal of contaminated sediment, further testing required.

Oysters Reefs- Potential creation of a 10x5 meter experimental reef.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

References:

New York City Audubon. 2007. Harbor Herons Nesting Survey. (bird and veg surveys).

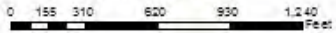
The Harbor Herons Subcommittee Habitat Workgroup New York/New Jersey Harbor Estuary Program. May 2010. The Harbor Herons Conservation Plan New York/New Jersey Harbor Region.

Energy and Environmental Analysis, For NYS DEC. 1994. Habitat Evaluation and Mitigation for Gateway Estates.

- Shorelines & Shallows
- Oyster Reef
- Wetlands
- Fish, Crab, Lobster
- Coastal & Maritime Forest
- Project Boundary



CRP 915.1 Canarsie Pol Jamaica Bay



CRP SITE 611. WEST POND

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: In central Jamaica Bay, 0.1 mile west of Cross Bay Boulevard, Queens NY.

Watershed: Jamaica Bay

Size: 2 acres

Ownership: NPS

Site Description: *A large round pond to the west of Cross Bay Boulevard, circumnavigated by a trail. The east side of the pond is dominated by phragmites. A small trail looping off from the west side of the West Pond is the Terrapin Trail. Terrapins nest along the south and west sides of the West Pond. The Terrapin Trail is rather eroded and partially closed but its southern section offers overlooks into the saltmarsh to the south of the West Pond. This site is heavily used by coastal shorebirds and waterfowl.*

Current Land Use: *National park, public access. Site is zoned vacant, open/recreational site with federal land. The surrounding land is zoned as a vacant and open/recreational site.*

Available Habitat: *Low marsh, high marsh, intertidal mudflats, openwater, bird habitat.*

Proposed Project:

Projected/Estimated Costs:

Project Status:

Partners: Community Board +10 (Broad Channel), USACE.

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Fill removal and restoration of 24 acres of salt marsh on the east side of the pond which is currently dominated by phragmites.

Shorelines and Shallows – Shoreline stabilization and restoration of approximately 3,736 feet of the shallow water habitat along 'Terripan trail'.

Habitat for Fish, Crab and Lobsters – Assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure to mudflats will facilitate movement between habitats along approximately 13 acres.

Coastal and Maritime Forests- Preservation and restoration to approximately 46 acres of forest and scrub shrub buffer along the wetland.

Sediment Contamination - Potential removal of contaminated sediment, further testing required.

Public Access – Several public access sites already exist at this site including; approximately 14,337 feet of trails, benches, a visitor center, and signage.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

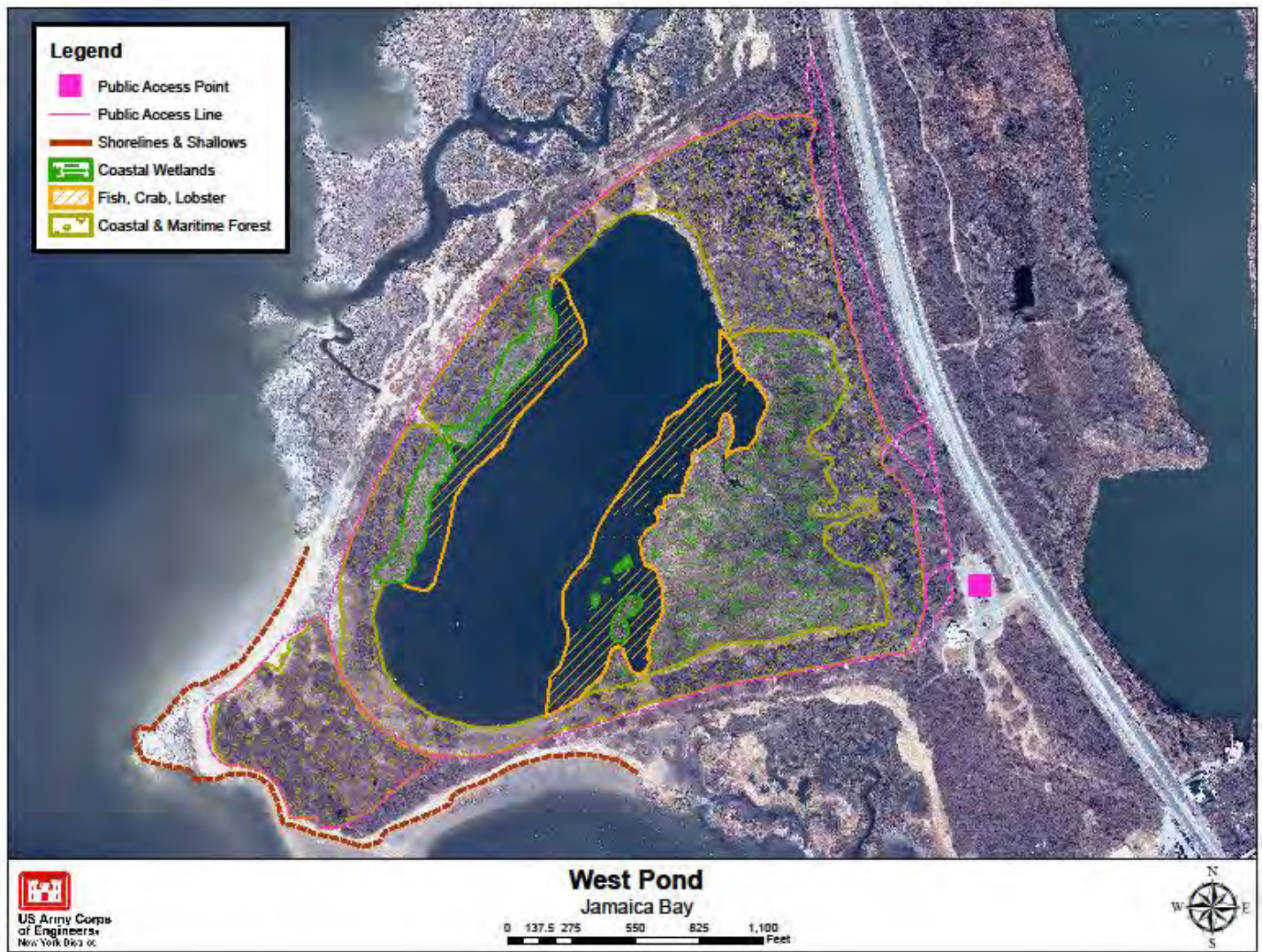
H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

References:

Birding Wiki- http://www.nycbirds.com/wiki/index.php?title=Jamaica_Bay_Wildlife_Refuge



CRP SITE 915.2. BLACK WALL MARSH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: On an island in south central Jamaica Bay, 0.5 miles west of Cross Bay Boulevard, Queens NY.

Watershed: Jamaica Bay

Size: 21 acres

Ownership: NPS

Site Description: Vegetated tidal wetland dominated by *Spartina alterniflora*, area has undergone significant loss of tidal marsh *and would benefit from additional sediment*. Observations of the interior parts of the islands conclude conditions of lowered elevation and water inundation.

Current Land Use: GNRA. *The land is zoned an open/recreational site with federal land.*

Available Habitat: *Low marsh, high marsh, intertidal mudflats, openwater.*

Proposed Project: *Restore degraded wetland ecosystem structure, function, and dynamic processes to less degraded, more natural conditions. Conduct feasibility studies for restoration using lessons learned from the Elders Point and Yellow Bar restorations.*

Projected/Estimated Costs:

Project Status:

Partners: NYSDEC

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - Placement of fill to areas that were previously salt marsh (1974 extent), re-grading the site to appropriate elevations for the target community, and planting with native plant species to create approximately 42 acres of marsh habitat. Design to include a sediment trap and tidal creeks.

Shorelines and Shallows – Grading of fill material to create an estuarine sub-tidal habitat and intertidal mudflat along approximately 5,148 feet of shoreline

Sediment Contamination – Potential removal of contaminated sediment, further testing required.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

NYC DEP. 2006. Planning for Jamaica Bay's Future: Preliminary Recommendations on the Jamaica Bay Watershed Protection Plan.



CRP SITE 915.3. GOOSE POND MARSH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.1 miles north from the corner of Church Road and East 6th Road, Queens NY.

Watershed: Jamaica Bay

Size:

Ownership: NPS

Site Description: *This site has been severely impacted by marsh loss, and would benefit from additional sediment.*

Current Land Use: GNRA. *The land is zoned an open/recreational and completely degraded vacant site with park/public land and federal land. The surrounding land is zoned as a vacant, 1 & 2 family residential, and open/recreational site.*

Available Habitat: *Low marsh, high marsh, intertidal mudflats, openwater.*

Proposed Project: *Restore degraded wetland ecosystem structure, function, and dynamic processes to less degraded and more natural conditions. Conduct feasibility studies for restoration using lessons learned from the Elders Point and Yellow Bar restorations.*

Projected/Estimated Costs:

Project Status:

Partners:

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - Placement of fill to areas that were previously salt marsh (1974 extent), re-grading the site to appropriate elevations for the target community, and planting with native plant species to create approximately 10 acres of marsh habitat. Design to include a sediment trap and tidal creeks.

Shorelines and Shallows – Grading of fill material to create an estuarine sub-tidal habitat and intertidal mudflat along approximately 2,711 feet of shoreline.

Sediment Contamination – Potential removal of contaminated sediment, further testing required.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

NYC DEP. 2006. Planning for Jamaica Bay's Future: Preliminary Recommendations on the Jamaica Bay Watershed Protection Plan.



US Army Corps
of Engineers
New York District

CRP 915.3 Goose Pond Marsh

Jamaica Bay

0 35 70 140 210 280 Feet



CRP SITE 915.4. DUCK POINT MARSH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: On an island in northwestern Jamaica Bay, 1.5 miles west of Cross Bay Boulevard, Kings County NY.

Watershed: Jamaica Bay

Size: 2 acres

Ownership: NPS

Site Description: Vegetated tidal wetlands dominated by *Spartina alterniflora* which has undergone significant loss of tidal marsh and would benefit from additional sediment. *Sixty-five acres of tidal wetlands were lost on Duck Point Marsh in Jamaica Bay between 1974 and 1999, decreasing from 103 to 38 acres.*

Current Land Use: GNRA. *The land is zoned an open/recreational site with federal land.*

Available Habitat: *Low marsh, high marsh, intertidal mudflats, openwater.*

Proposed Project: *Restore degraded wetland ecosystem structure, function, and dynamic processes to less degraded, more natural conditions. Conduct feasibility studies for restoration using lessons learned from the Elders Point and Yellow Bar restorations.*

Projected/Estimated Costs:

Project Status:

Partners:

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - Placement of fill to areas that were previously salt marsh (75% 1974 extent), re-grading the site to appropriate elevations for the target community, and planting with native plant species to create approximately 57 acres of marsh habitat. Design to include a sediment trap and tidal creeks.

Shorelines and Shallows – Grading of fill material to create an estuarine sub-tidal habitat and intertidal mudflat along approximately 8,534 feet of shoreline.

Sediment Contamination – Potential removal of contaminated sediment, further testing required.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

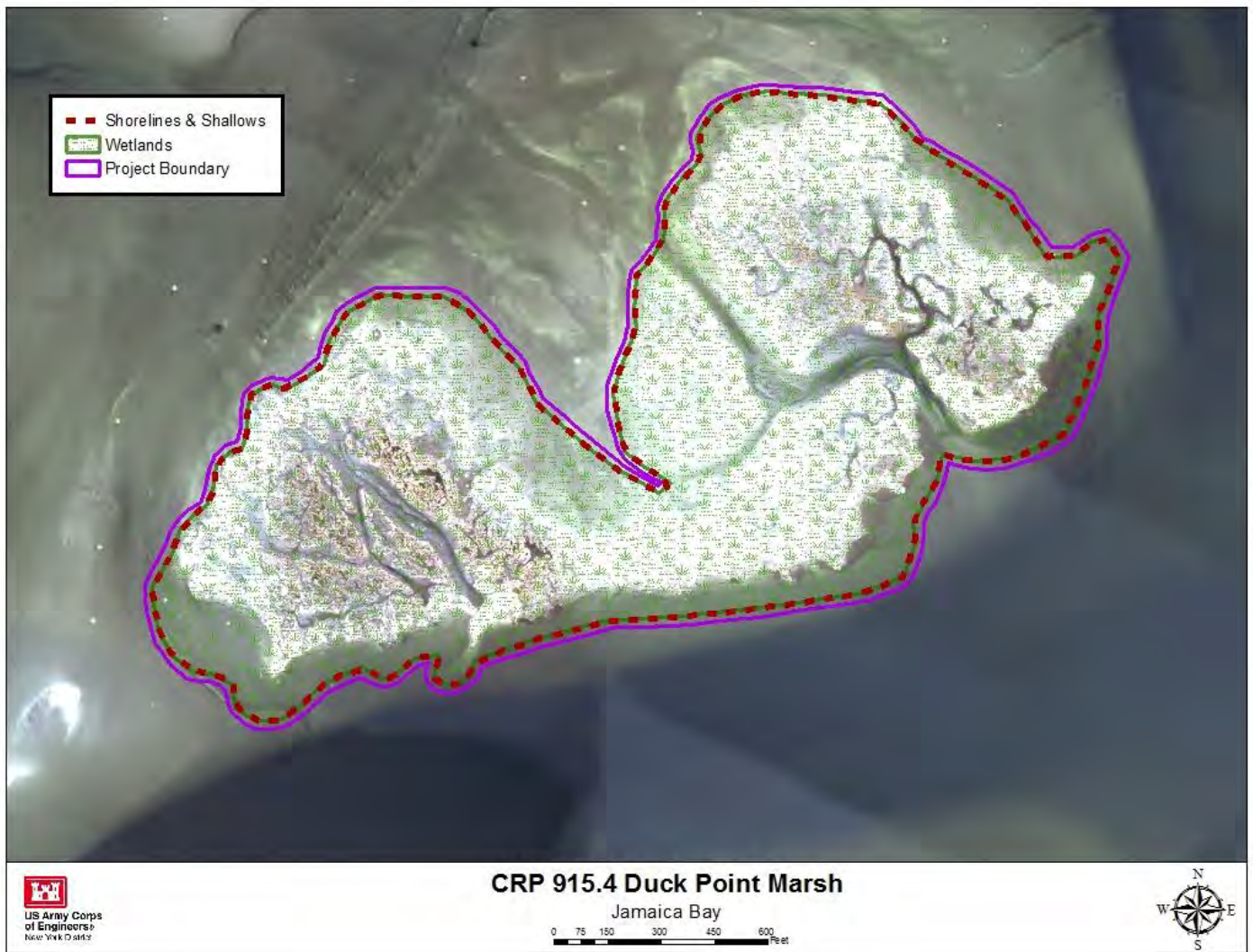
REFERENCES:

NYC DEC- <http://www.dec.ny.gov/lands/5489.html>

<http://www.nps.gov/gate/naturescience/upload/JBAYResearch%20Opportunities.pdf>

U.S. Army Corps of Engineers. December 2005. Jamaica Bay Marsh Islands, Jamaica Bay, New York- Environmental Assessment and Finding of No Significant Impact.

NYC DEP. 2006. Planning for Jamaica Bay's Future: Preliminary Recommendations on the Jamaica Bay Watershed Protection Plan.



CRP SITE 915.5. PUMPKIN PATCH MARSH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: An island in north central Jamaica Bay, 0.5 miles west of Cross Bay Boulevard, Queens NY.

Watershed: Jamaica Bay

Size:

Ownership: NPS

Site Description: *This site has been severely impacted by marsh loss, and would benefit from additional sediment.*

Current Land Use: GNRA. *The land is zoned an open/recreational site with federal land.*

Available Habitat: *Low marsh, high marsh, intertidal mudflats, openwater.*

Proposed Project: *Restore degraded wetland ecosystem structure, function, and dynamic processes to less degraded, more natural conditions. Conduct feasibility studies for restoration using lessons learned from the Elders Point and Yellow Bar restorations.*

Projected/Estimated Costs:

Project Status:

Partners:

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - Placement of fill to areas that were previously salt marsh (75% 1974 extent), re-grading the site to appropriate elevations for the target community and planting with native plant species to create approximately 44 acres of marsh habitat. Design to include a sediment trap and tidal creeks.

Shorelines and Shallows – Grading of fill material to create an estuarine sub-tidal habitat and intertidal mudflat along approximately 10,606 feet of shoreline.

Sediment Contamination – Potential removal of contaminated sediment, further testing required.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

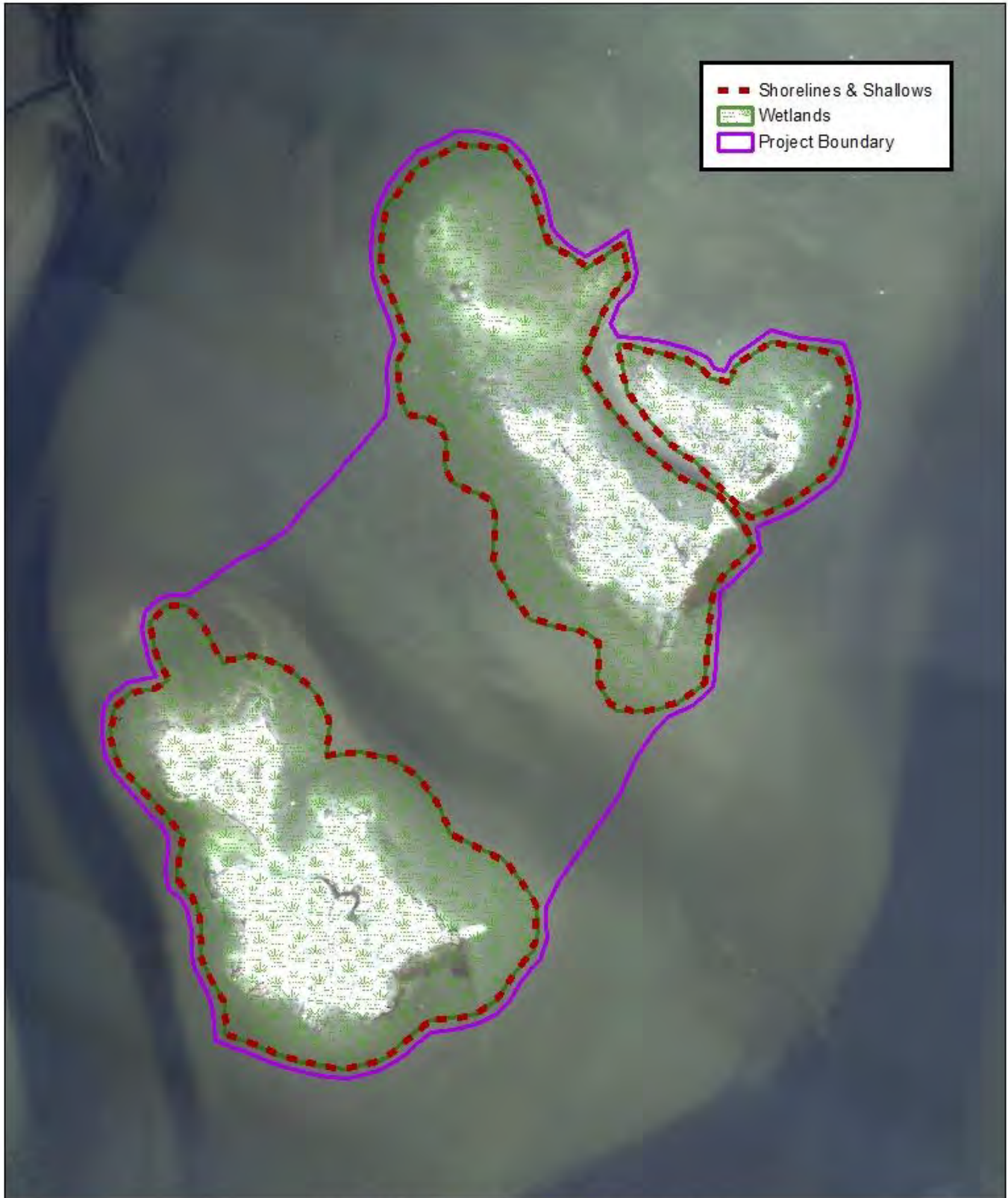
I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. December 2005. Jamaica Bay Marsh Islands, Jamaica Bay, New York- Environmental Assessment and Finding of No Significant Impact.

National Park Service, U.S. Department of the Interior Jamaica Bay Watershed Protection Plan Advisory Committee. 2007. An Update on the Disappearing Salt Marshes of Jamaica Bay, New York Gateway National Recreation Area.

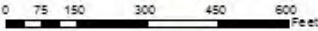


- Shorelines & Shallows
- Wetlands
- Project Boundary



US Army Corps
of Engineers
New York District

CRP 915.5 Punpkin Patch Marsh
Jamaica Bay



CRP SITE 915.6. STONY CREEK MARSH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: An island in west central Jamaica Bay, 1.8 miles west of Cross Bay Boulevard, Kings County NY.

Watershed: Jamaica Bay

Size:

Ownership: NPS

Site Description: *This site has been severely impacted by marsh loss, and would benefit from additional sediment.*

Current Land Use: GNRA. *The land is zoned an open/recreational site with federal land.*

Available Habitat: *Low marsh, high marsh, intertidal mudflats, openwater.*

Proposed Project: *Restore degraded wetland ecosystem structure, function, and dynamic processes to less degraded, more natural conditions. Conduct feasibility studies for restoration using lessons learned from the Elders Point and Yellow Bar restorations.*

Projected/Estimated Costs:

Project Status:

Partners:

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - Placement of fill to areas that were previously salt marsh (1974 extent), re-grading the site to appropriate elevations for the target community, and planting with native plant species to create approximately 73 acres of marsh habitat. Design to include a sediment trap and tidal creeks.

Shorelines and Shallows – Grading of fill material to create an estuarine sub-tidal habitat and intertidal mudflat along approximately 9,910 feet of shoreline.

Sediment Contamination – Potential removal of contaminated sediment, further testing required.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. December 2005. Jamaica Bay Marsh Islands, Jamaica Bay, New York- Environmental Assessment and Finding of No Significant Impact.

NYC DEP. 2006. Planning for Jamaica Bay's Future: Preliminary Recommendations on the Jamaica Bay Watershed Protection Plan.

- Shorelines & Shallows
- Wetlands
- Project Boundary



CRP 915.6 Stony Creek Marsh

Jamaica Bay

0 75 150 300 450 600 Feet



CRP SITE 628. ROCKAWAY PENINSULA

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Southern extreme Norton Basin to Rockaway Ocean Beach, Queens NY.

Watershed: Jamaica Bay

Size:

Ownership: NYCDEP

Site Description: *Rockaway Peninsula is a low relief barrier peninsula between Jamaica Bay and the Atlantic Ocean. It is composed of tidal sediments and upper glacial sands, which have accreted from the eastern end of Long Island. The peninsula is a highly populated residential area with several dead end basins located on the north east, bay side of the peninsula.*

Current Land Use: *Highly populated residential area with limited open space.*

Available Habitat: *None (road). Limited open space and fringe habitat.*

Proposed Project:

Projected/Estimated Costs:

Project Status:

Partners: USACE

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION- TBD

NO RESTORATION RECOMMENDATIONS AT THIS TIME

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands -

Islands for Waterbirds -

Coastal and Maritime Forests -

Oyster Reefs -

Eelgrass Beds -

Shorelines and Shallows -

Habitat for Fish, Crab and Lobsters -

Tributary Connections -

Enclosed and Confined Waters -

Sediment Contamination -

Public Access -

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

www.dec.ny.gov/docs/regions_pdf/vittor01.pdf

New York City Department of City Planning. 2010. New York City Comprehensive Waterfront Plan Draft Recommendations.

***TBD**

CRP SITE 631. FRANK CHARLES PARK (NEED TO UPDATE/COORDINATE WITH NY RISING, 2014)

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.2 miles southeast of the intersection of 98th Street and 165th Avenue, Queens NY.

Watershed: Jamaica Bay

Size: 4 acres

Ownership: NPS, NYCDPR.

Site Description: *Located within the Gateway National Park, the park lies at the southern point of Old Howard Beach between Hawtree and Shellbank Basins. Frank Charles Park serves as the only recreation area in this section of Howard Beach and is widely used by the residents. The area and its amenities which include tennis and basketball courts are severely dilapidated and in disrepair.*

The area south of the park contains some open space including a fringe marsh, beach system and upland buffer area. All available habitat is suppressed by debris, fill, and a dead end basins.

Current Land Use: National park. *The land is zoned an open/recreational site with federal land. The surrounding land is zoned as a vacant, 1 & 2 and multi-family residential, and open/recreational site.*

Available Habitat: Fringe marsh, mudflats, beach.

Proposed Project: *July 2010, NYCDPR National Parks Service officials announced an appropriation of \$200,000 that would be spent on park repairs.*

Projected/Estimated Costs:

Project Status:

Partners: NPS, NRDC

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Salt marsh restoration to approximately 0.70 acres to include removal of fill and large, habitat suppressing debris.

Shorelines and Shallows - Shoreline softening and removal of debris on up to 1,468 feet of shoreline.

Habitat for Fish, Crab and Lobsters – Assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure to mudflats to facilitate movement between habitats along approximately 2 acres of existing mudflats will facilitate movement between habitats.

Coastal and Maritime Forests- Restoration of approximately 3 acres of upland scrub shrub habitat and dune area.

Enclosed and Confined Waters – Re-contour up to 1,010 feet of Hawtree Creek to improve hydrodynamics and water quality.

Sediment Contamination - Presence of contaminants that may need more detailed analysis to interpret the significance to specific restoration activities.

Public Access – NYCDPR National Parks Service officials announced an appropriation of \$200,000 that would be spent immediately on park repairs. Potential exists to restore up to 900 feet of linear paths connecting the park to the waterfront.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

References:

Queens Chronicle

http://www.zwire.com/site/news.cfm?newsid=20415634&BRD=2731&PAG=461&dept_id=574908&rft=8



CRP SITE 632. GRASSY BAY

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 0.8 miles south of the Van Wyck Expressway, Queens NY. *This site consists of the open water area known as Grassy Bay, which lies due south of John F. Kennedy International Airport and is bound by Runway 4L to the east, the islands of Broad Creek Marsh, East High Meadow and JoCo Marsh to the south, and the New York City transit line to the west.*

Watershed: Jamaica Bay

Size: 800 acres

Ownership: NPS, NYS, Port Authority.

Site Description: *Site is a large rectangular borrow pit located directly south of JFK Airport and sectioned by the extension of a runway into Jo-Co Marsh. The pit was created post WWII when the area was mined for fill to construct the airport. Deepening of this area negatively affected water quality and aquatic habitat. The pit is steep sided, with low tidal flow rates, and experiences periodic hypoxia. Grassy Bay is characterized by poor sediment quality and a depauperate benthic fauna. Historically this area was a well-flushed tidal marsh/open water system. Grassy Bay may be concentrating contaminants associated with fine organic particulate matter which settles into the basin. The majority of this site consists of a deepwater estuarine environment. Sand flats and tidal marsh are present along the periphery of the site.*

Current Land Use: *The land is federal land. The surrounding land is zoned as a vacant, transportation/utilities, and open/recreational site.*

Available Habitat: *The majority of this site consists of a degraded deepwater estuarine environment. Sand flats and tidal marshes are present along the periphery of the site.*

Proposed Project:

Projected/Estimated Costs:

Project Status:

Partners:

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION
CONCEPT PLAN ON HOLD DUE TO AIRPORT PROXIMITY

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Enclosed and Confined Waters – Fill with sand and/or other appropriate dredged material over approximately 1,264 acres. This would isolate the sediment sink from the rest of Jamaica Bay and help to increase bay wide flushing rates. Potential to install up to 3,723 feet of culverts along the JFK Airport runway extension to increase hydrologic connection.

Shorelines and Shallows – Restoration to approximately 27,423 feet of intertidal, shallow littoral zone and manmade shoreline following the restoration to the bathymetric depression.

Tributary Connections – Re-assess culverts and other hydrologic impediments.

Sediment Contamination – Presence of contaminants that may need more detailed analysis to interpret the significance to specific restoration activities.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: 1997 descriptions etc.

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment: 1997 descriptions etc.

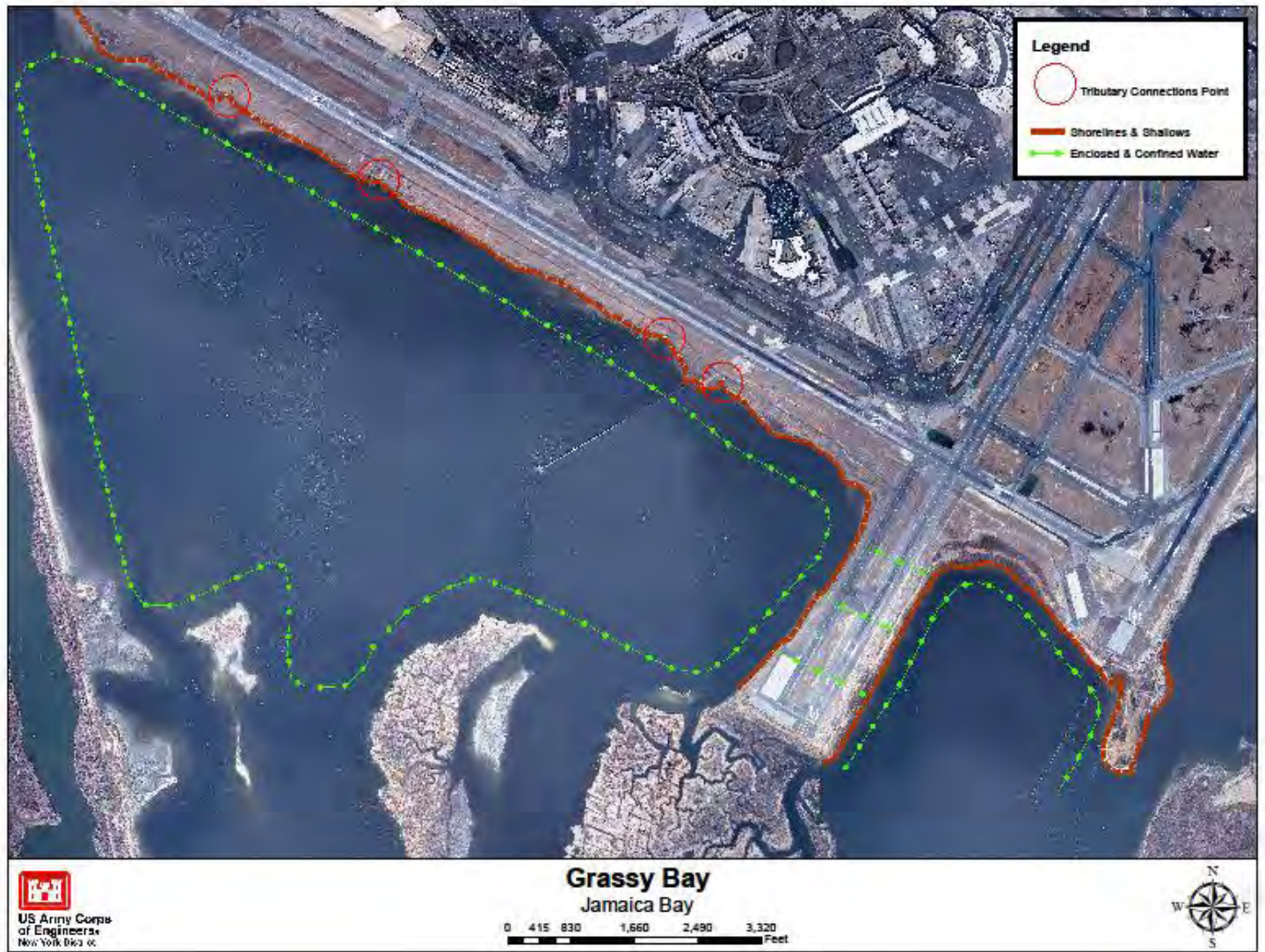
H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.



CRP SITE 634. Thurston Basin

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Located on the eastern edge of JFK airport, near the Queens/Nassau border. Northeast Jamaica Bay Queens, NY.

Watershed: Jamaica Bay

Size: 60 acres

Ownership: PANYNJ

Site Description: *Long dead-end canal, upper reach appears un-used. Shoreline has been straightened and bulkheaded. Area suffers from poor water and sediment quality and is currently used by fuel barges for JFK airport. Upper reach appears disused/abandoned. The basin is approximately 5,000 feet long, 250 feet wide, and ranges in depth between three feet at its head and 20 feet near its mouth at mean low water. There is a CSO at head of basin. Classified by NYSDEC as Class I waterbody for secondary contact recreation, fish propagation and survival. It is listed on the New York State 303(d) TMDL list with pathogens identified as the parameter of concern and CSOs as the primary pollutant or cause.*

Current Land Use: *Predominantly industrial with some residential uses to the east. Site is zoned transportation/utilities site. The surrounding land is zoned as a vacant, 1 & 2 family residential, and transportation/utilities site.*

Available Habitat: *This site has high and intertidal marshes, forested/shrub freshwaters, and estuaries/marines.*

Proposed Project:

Projected/Estimated Costs:

Project Status: *The Thurston Basin Security Barrier, a 1 acre saltwater wetland mitigation, was implemented by PANYNJ. Further information should be obtained before additional restoration is implemented.*

Partners: USACE, NYCDPR Friends of Rockaway, NYSDEC.

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Restoration and creation of approximately 7 acres of tidal wetlands (on the east side of the creek).

Coastal and Maritime Forests – Preservation and restoration of approximately 44 acres of forest, scrub shrub, and lawn/parkland adjacent to the wetland area on the east side of the basin and on west side of the basin to buffer the airport.

Habitat for Fish, Crab and Lobsters – Assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure to mudflats to facilitate movement between habitats along approximately 1 acre of existing mudflats.

Tributary Connections – Re-assessment of culverts could open approximately 12,567 feet of waterway. CSO abatement at the head of the basin and JFK.

Enclosed and Confined Waters – Re-contouring up to 5,184 feet of channel bottom will improve local hydrodynamics and contribute to increased flushing in the bay.

Sediment Contamination - Presence of contaminants may need more detailed analysis to interpret the significance to specific restoration activities.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: Alderson & Bowers, 2012.

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:
Alderson & Bowers, 2012.

***Work in progress**

References:

Hydroqual- <http://www.hydroqual.com/Projects/usa/projectAreaFrameset.html>

Alderson, Carl and Justin Bowers. 2012. Reaching for the Past in Pursuit of the future: how can our present and past efforts inform the Hudson-Raritan Estuary Comprehensive Restoration Plan and the direction of habitat restoration going forward. A project for the New York-New Jersey Harbor & Estuary Program and New England Interstate Water Pollution Control Commission.



CRP SITE 915.7. SILVER HOLE MARSH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: An island in southeast Jamaica Bay, 1 mile east of Cross Bay Boulevard, Queens NY.

Watershed: Jamaica Bay

Size:

Ownership: *US National Park Service*

Site Description:

Current Land Use: *Since the study area and project sites are part of a National Recreation Area and Wildlife Refuge, they are undeveloped and have no permanent residents. Site is zoned vacant and completely degraded open/recreational site with federal land.*

Available Habitat: *This site has intertidal marshes and estuaries/marines.*

Proposed Project: *Restore degraded ecosystem structure, function, and dynamic processes to less degraded and more natural conditions, before the islands are completely lost.*

Projected/Estimated Costs:

Project Status:

Partners:

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - Placement of fill to areas that were previously salt marsh (1974 extent), re-grading the site to appropriate elevations for the target community, and planting with native plant species to create approximately 118 acres of marsh habitat. Design to include a sediment trap and tidal creeks.

Shorelines and Shallows – Grading of fill material to create an estuarine sub-tidal habitat and intertidal mudflat along approximately 9,332 feet of shoreline.

Sediment Contamination – Potential removal of contaminated sediment, further testing required.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers. December 2005. Jamaica Bay Marsh Islands, Jamaica Bay, New York- Environmental Assessment and Finding of No Significant Impact.



CRP SITE 647. ROCKAWAY REEF

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: 1.6 nautical miles south of Rockaway Beach, in the Atlantic Ocean, Queens NY.

Watershed: Jamaica Bay

Size: 413 acres

Ownership: NYC DEC- Artificial Reef Program

Site Description: This artificial reef is located at a depth of 32-40 feet and contains 6,000 tires in 3-tire units; 60 steel buoys; rock; concrete slabs, pipes, culvert, decking and rubble. One tire unit is configured into a 15-tire pyramid. Unconfirmed report of 16 auto bodies (debris).

Current Land Use: *Site is zoned vacant and open/recreational site with parks/public lands. The surrounding land is zoned as an institutional, 1 & 2 and multi-family residential, and commercial site.*

Available Habitat: *Estuaries/marines.*

Proposed Project:

Projected/Estimated Costs:

Project Status:

Partners:

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION- TBD

NO RESTORATION RECOMMENDATIONS AT THIS TIME

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands -

Islands for Waterbirds -

Coastal and Maritime Forests -

Oyster Reefs -

Eelgrass Beds -

Shorelines and Shallows -

Habitat for Fish, Crab and Lobsters -

Tributary Connections -

Enclosed and Confined Waters -

Sediment Contamination -

Public Access -

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

NYSDEC Artificial Reefs: <http://www.dec.ny.gov/outdoor/7896.html>

***TBD**

CRP SITE 730. FRESH CREEK

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: *An inlet on the south shore of Brooklyn from Jamaica Bay. Bounded by Flatlands Avenue, Louisiana Avenue, and East 108th Street.*

Watershed: Jamaica Bay

Size: 97 acres

Ownership: NYCDPR, NYCDEP.

Site Description: *Fresh Creek flows into and is a tributary to Jamaica Bay which is located to the south at the mouth of the creek. It ranges in width from approximately 650 feet at its widest point to approximately 125 feet at its narrowest point. The creek is approximately 6,300 feet long and has depths at mean low water which range from three to 19 feet. The creek is shallower at its northern end and deepens as it approaches Jamaica Bay. Areas of marshland continue to be shown bordering the creek south of Flatlands Avenue. A large percentage of the freshwater flow is from a CSO located at the head of the creek and from storm water discharges. The ecological problems at Fresh Creek include: poor benthic habitat, fill deposited on historic wetlands, presence of extensive areas of nonnative invasive plant species, poor water quality at the head of Fresh Creek and straightened/deepened creek with no finger tributaries. The invasive plants common reed (*Phragmites australis*), mugwort (*Artemisia vulgaris*), and (*Ailanthus altissima*) are common in the uplands in Fresh Creek Park, though noteworthy plants such as rock sandwort (*Arenaura stricta*), Faber's foxtail (*Setaria faberi*), and velvetleaf (*Abutilon theophrasti*) are interspersed throughout.*

Current Land Use: *Wildlife preserve. Site is zoned vacant, open/recreational site with parks/public lands. The surrounding land is zoned as a vacant, 1 & 2 and multi-family residential, commercial, institutional, transportation/ utilities, and open/recreational site.*

Available Habitat: *This site has high and intertidal marshes and estuary/marine habitat and some valuable upland habitat.*

Proposed Project: Recommended plan includes basin re-contouring to proper elevation and restoration of 33 acre tidal marsh system with protective buffers, which includes 13 acres of low marsh, 2.4 acres of high marsh, 2.1 acres of creek/pool, 4.5 acres of maritime forest and 11 acres of coastal shrub, as well as 60 acres of shallow water habitat.

Partners: NYCDPR, NYSDEC, NYCDEP, USACE, NPS

Project Contact: Lisa Baron, Project Manager, USACE

Phone: (917)790-8306

Website: <http://www.nan.usace.army.mil/project/newyork/factsh/pdf/jamaica.pdf>

Project Funding Source: USACE and NYCDEP funded the Jamaica Bay Feasibility Study

Projected/Estimated Costs: approximately \$31 million (USACE, undated)

Project Status: Draft Jamaica Bay, Marine Park and Plumb Beach, NY Ecosystem Restoration Interim Feasibility Study to be reformulated per Second Interim Disaster Relief Appropriations Act, 2013. Site will be reevaluated in the East Rockaway to Rockaway Inlet – Jamaica Bay Reformulation Study for Coastal Storm Risk Management (CSRM). If site does not provide adequate CSRM benefits, Brant Point will be included in the Hudson Raritan Estuary Restoration Feasibility Study.

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - The head of the basin could be filled to create tidal marshes and creeks. This could include approximately 13 acres of low marsh with 2 acres (2,339 feet) of creeks and pools and 2.4 acres of high marsh.

Coastal and Maritime Forests – Creation of 4.5 acres of maritime forest and 11 acres of coastal shrub.

Shorelines and Shallows – Shallow water habitat will be restored along approximately 10,817 feet of shoreline.

Tributary Connections - Potential stream daylighting of Fresh Creek.

Enclosed and Confined Waters - Re-contouring up to 4,805 feet of the basin to the mouth of Fresh Creek, ending at approximately 10' below MLW, will decrease residence time of water and improve the dissolved oxygen levels and water quality throughout the basin. This includes the recontouring of an approximately 17" deep hypoxic borrow pit in the southern portion of the creek.

Sediment Contamination- Restoration action will likely improve the conditions for aquatic receptors following restoration. Capping of upland soils with 12 inches of growing medium will further reduce exposure to receptors.

Public Access – Support improvements to pedestrian access and recreation.

Benefits, Cost and Comparative Restoration Ratio: TBD

C. EXISTING SITE SPECIFIC DATA INVENTORY (USACE Pre-Draft FS Report, Undated + Supplemental citations if available listed below)

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment:

E. Geotechnical:

***Work in progress (See Hydroqual for data)**

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

REFERENCES:

U.S. Army Corps of Engineers & NYC Department of Environmental Protection. undated. Jamaica Bay, Marine Park and Plumb Beach, New York - Environmental Restoration Study PRE-Draft Interim Feasibility Report Kings and Queens Counties, New York.

NYC Parks- http://www.nycgovparks.org/sub_about/parks_divisions/nrg/forever_wild/site.php?FWID=22

Hydroqual- <http://www.hydroqual.com/Projects/usa/projectAreaFrameset.html>

The Trust for Public Land & New York City Audubon Society. 1992. Buffer the Bay Revisited An Updated Report on Jamaica Bay's Open Shorelines and Uplands.

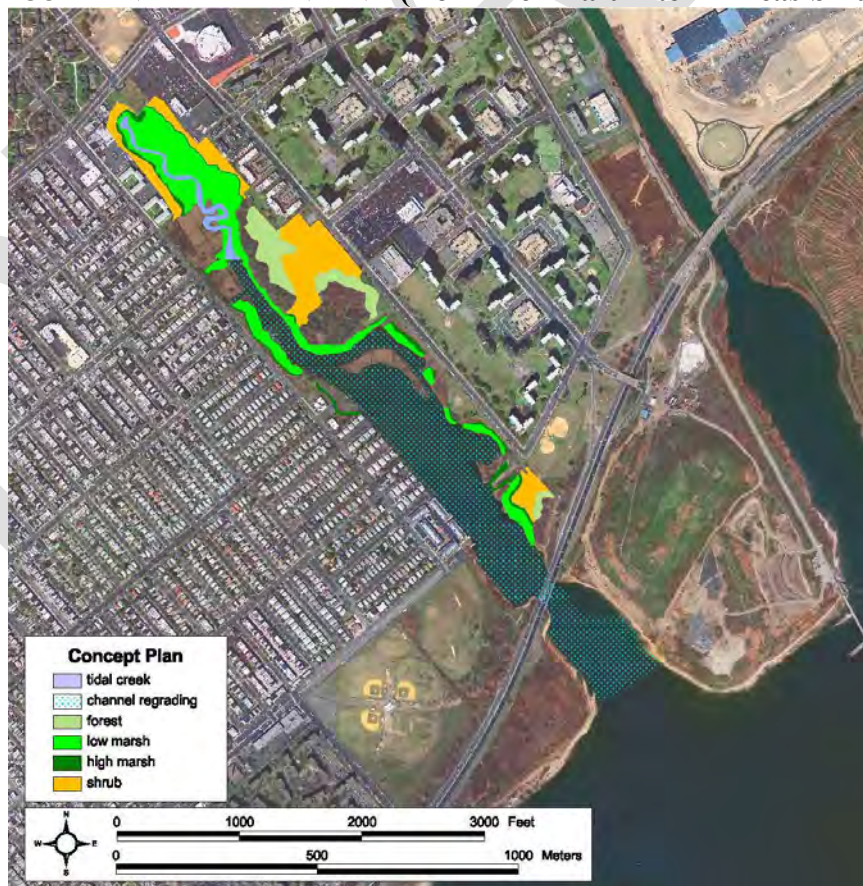
New York City Department of City Planning. 2010. New York City Comprehensive Waterfront Plan Draft Recommendations



FRESH CREEK EXISTING CONDITIONS (from Pre-Draft Interim Feasibility Study Report)



FRESH CREEK RECOMMENDED ALTERNATIVE (from Pre-Draft Interim Feasibility Study Report)



CRP SITE 731. PAERDEGAT BASIN

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: Bounded by Paerdegat Avenue North, Bergen Avenue, Ralph Avenue, and Flatlands Avenue.

Watershed: Jamaica Bay

Size: 160 acres

Ownership: NYCDPR, NYCDEP.

Site Description: *Paerdegat Basin is a saltwater wetland area with a 1.25-mile channel that empties into Jamaica Bay in nearby Bergen Beach. Prior to being dredged between 1912 and the 1930's, the basin was a freshwater-fed tidal creek known as Paerdegat Creek (or Bedford Creek) and was surrounded by wetlands. Now, channelized and bulkheaded, it is bounded by filled uplands. Paerdegat Basin is a straight channel approximately one mile long, with a width of approximately 450 feet and a depth ranging from 12 to 16 feet, except at the head end of the basin where a combined sewer overflow (CSO) sediment mound has formed and decreased depths to less than one foot in some spots. Acquired by Parks from the Department of Citywide Administrative Services in 1998, and it serves as home to many species of birds and smaller water creatures. The Department of Environmental Protection monitors the park to ensure that it remains a stable environment to support the wildlife in the area. Groves of trees such as the ailanthus (*Ailanthus altissima*), honeylocust (*Gleditsia triacanthos*) and Smooth sumac (*Rhus glabra*) in the basin's upland region provide a welcome habitat for many species of birds and animals whose numbers have dwindled in recent years.*

The ecological problems at Paerdegat Basin are; presence of fill to the water edge with steep bank slopes and hardened structures along the shoreline, presence of extensive areas of nonnative, invasive plants, poor water quality as reflected in the macroinvertebrate study, absence of salt marsh in the upper reaches of the basin, poor tidal flushing of the basin, altered bathymetry, filled in wetlands, straightened and deepened creek with no finger tributaries. It is listed on the New York State 303(d) TMDL list with pathogens identified as the parameter of concern and CSOs as the primary pollutant or cause.

Current Land Use: *Site is zoned vacant, open/recreational site with parks/public lands. The surrounding land is zoned as a vacant, 1 & 2 and multi-family residential, mixed used, and open/recreational site.*

Available Habitat: *This site has high and intertidal marshes and estuaries/marines.*

Proposed Project:

Projected/Estimated Costs: \$70,009,945

Project Status: *Several saltwater wetland restoration projects were constructed in Paerdegat Basin by NYC DEP between 2007-2010. These projects served as mitigation for DEP sewer treat plant at Newton Creek Mitigation and a DEP sewer CSO Facility at Paerdegat. The primary treatment was fill removal, followed by plantings.*

Partners:

Project Contact: NYC DEP- John McLaughlin

Phone: 718-595-4458

Website:

Project Funding Source:

HEP Ratification Date:

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - Existing invasive dominated areas will be restored by grubbing, re-grading, and plantings to approximately 30 acres of low marsh, 2 acres (2,066 feet) of creeks and pools, and 8 acres of high marsh.

Coastal and Maritime Forests - Existing invasive dominated areas will be restored by grubbing, re-grading, and planting associated saltmarsh buffers to create approximately 27 acres of shrub.

Shorelines and Shallows – Creation of approximately 82.3 acres of shallow water habitat along 8,825 feet of shoreline.

Habitat for Fish, Crab and Lobsters - Assessment of flats for composition, level of degradation and potential enhancements to increase habitat connectivity- such as addition of complex structure to mudflats to facilitate movement between habitats along approximately 10 acres of existing mudflats .

Tributary Connections - Potential stream daylighting of Paerdegat Creek.

Enclosed and Confined Waters – Design maximizes water quality improvements by improving the tidal circulation throughout the basin. By regrading approximately 6,492 feet along the bottom of the basin, tides will be able to flush the water and contaminated bottom sediments will be removed in shallow areas and capped. The bottom will be regraded to slope from approximately 3.2' below MLW at the head to 8' below MLW at the mouth. This will require approximately 480,000 cubic yards of clean sand. Water quality is expected to improve somewhat due to the Combined Sewer Overflow (CSO) improvements planned for 2012.

Public Access - The local sponsor has developed a plan to create an ecology park at the site separate from this proposed action.

Sediment Contamination - Presence of contaminants may need more detail to interpret the significance of specific restoration activities.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: Hydroqual (see references), USACE & NYC DEP 2013.

B. Site History and Land Use:

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment: Hydroqual (see references)

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans: USACE & NYC DEP 2013.

***Work in progress**

REFERENCES:

U.S. Army Corps of Engineers & NYC Department of Environmental Protection. 2010. Jamaica Bay, marine park and plumb beach, New York environmental Restoration Study Draft Interim Feasibility Report Kings and Queens Counties, New York.

NYC Parks- http://www.nycgovparks.org/sub_your_park/historical_signs/hs_historical_sign.php?id=12478

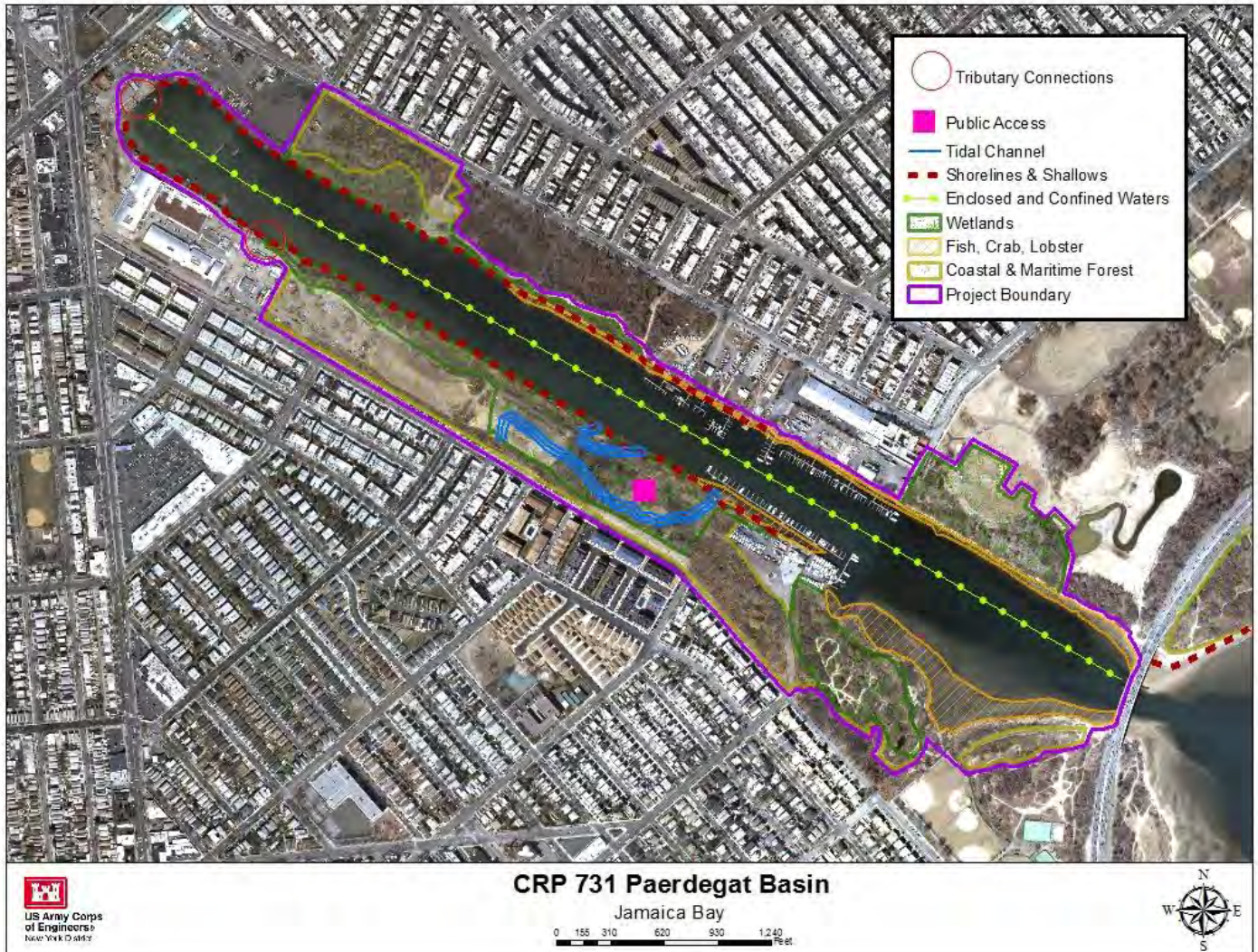
Hydroqual- <http://www.hydroqual.com/Projects/usa/projectAreaFrameset.html>

Energy and Environmental Analysis, For NYS DEC. 1994. Habitat Evaluation and Mitigation for Gateway Estates.

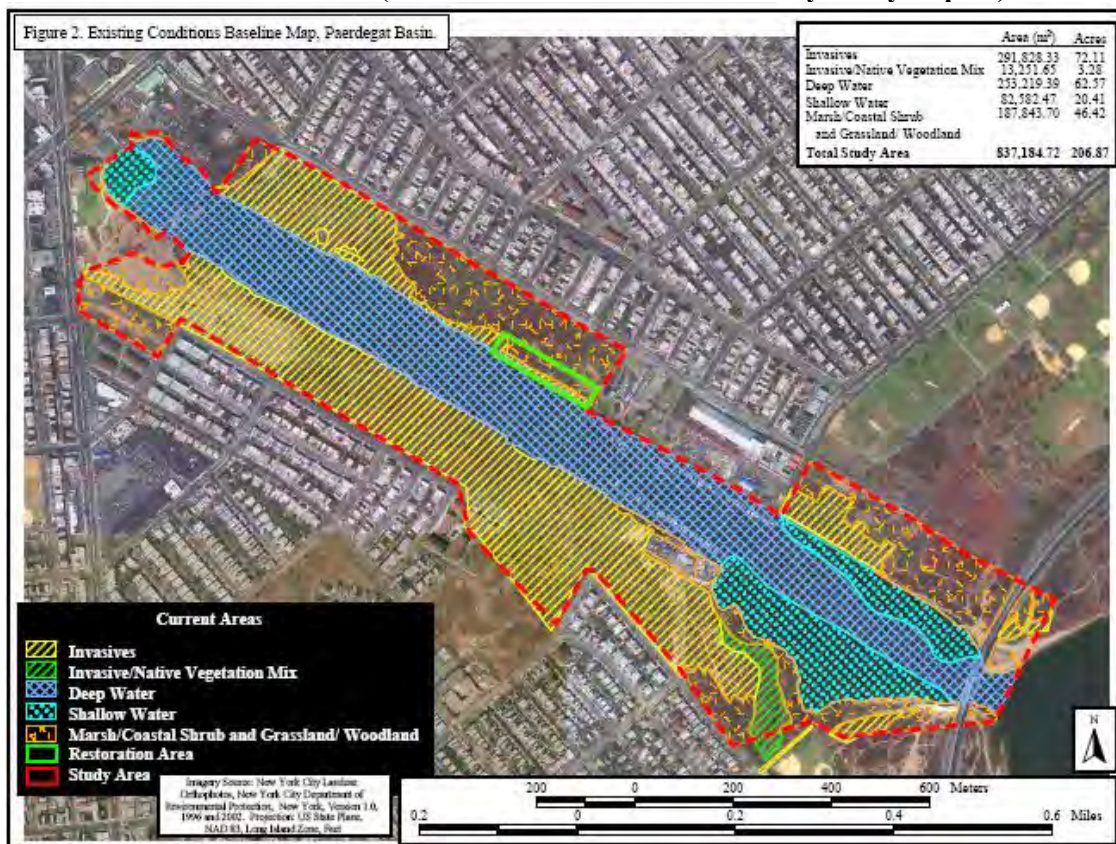
The Trust for Public Land & New York City Audubon Society. 1992. Buffer the Bay Revisited An Updated Report on Jamaica Bay's Open Shorelines and Uplands.

NYC- http://www.nyc.gov/html/dep/html/dep_projects/cp_paerdegat_basin_project.shtml

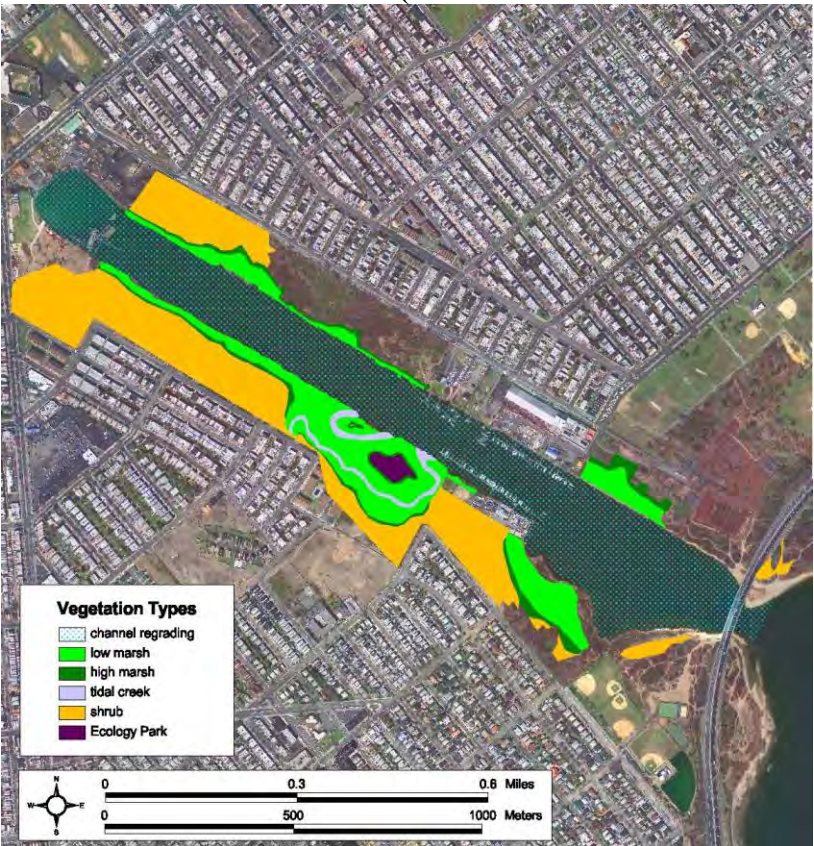
Alderson, Carl and Justin Bowers. 2012. Reaching for the Past in Pursuit of the future: how can our present and past efforts inform the Hudson-Raritan Estuary Comprehensive Restoration Plan and the direction of habitat restoration going forward. A project for the New York-New Jersey Harbor & Estuary Program and New England Interstate Water Pollution Control Commission.



PAERDEGAT BASIN EXISTING CONDITIONS (from Pre-Draft Interim Feasibility Study Report)



PAERDEGAT BASIN RECOMMENDED ALTERNATIVE (from Pre-Draft Interim Feasibility Study Report)



*Construction Complete

CRP SITE 914. SUNSET COVE PARK

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Existing restoration, preservation, and/or mitigation site.

Location: South of West 19th Road, west of Cross Bay Blvd; Broad Channel, NY 11693

Watershed: Jamaica Bay

Size: 12 acres

Ownership: NYC Parks and NPS.

Site Description: Sunset Cove is an undeveloped parcel on a Jamaica Bay inlet in Broad Channel. A former marina, the area was acquired by the New York City Department of Parks and Recreation in 2009 following multiple violations from the New York State Department of Environmental Conservation for illegal dumping and fill. The area is adjacent to a large wetland complex at Big Egg Marsh, which is owned and managed by the National Parks Service. As of fall 2013, the site consists largely of fill, remains inaccessible, and provides limited ecological and coastal protection functions.

Current Land Use: NYC Parks property consists of open space, wetland, and upland areas. Adjacent NPS property is part of the GNRA (Big Egg Marsh). Current land use characteristics include vacant lot, paved surfaces, park, and public access to water.

Available Habitat: Shorelines and shallows, coastal wetland (tidal, intertidal, and sub-tidal zones), and upland habitat. Possible opportunities for restoration oyster reefs and habitat for fish, crab, and lobster.

Proposed Project: The project will incorporate salt marsh and coastal forest restoration, as well as the installation of amenities for public waterfront access, such as potential land- and water-based trails, canoe/kayak launches, and educational signage. Proposed restoration would establish a sustainable salt marsh and restore connection to an existing wetland complex. Upland areas would be planted with maritime forest vegetation. In addition, the project will include the placement of berms in the upland perimeter to provide shoreline protection, ensuring greater resiliency to climate change and laying a foundation for regional economic growth. Public access amenities will expand nearby recreational opportunities, which consist of active playing fields and an associated parking lot, providing significant revitalization to underutilized waterfront and parkland.

Projected/Estimated Costs: \$7-8 million.

Project Status: Property was acquired by NYC Parks in November 2009. Topographic survey and soils sampling conducted in summer and fall of 2013 through a HEP/NEIWPCC Habitat Restoration Grant.

Partners: National Park Service, NY-NJ Harbor and Estuary Program (HEP), New England Interstate Water Pollution Control Commission (NEIWPCC), Jamaica Bay Eco Watchers, Broad Channel Civic Association, American Littoral Society

Project Contact: Marit Larson

Phone: (212) 360-1415

Website:

<http://www.nycgovparks.org/greening/natural-resources-group>

<http://www.harborestuary.org/grants.htm#013b>

Project Funding Source: HEP/NEIWPCC 2013 Habitat Restoration Grant for topographic survey and soils sampling.

HEP Ratification Date: 7/23/2013

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Restoration and preservation of approximately 5-6 acres of low marsh and 1 acre of high marsh through debris removal and planting of native vegetation. Wetland restoration would involve removal of the existing bulkhead and excavation of existing fill to restore tidal hydrology to the site.

Sediment Contamination - Several feet of fill will be excavated at the site. Soil test pits and borings with comprehensive testing for contaminants will be conducted at a New York State certified lab prior to excavation to determine measures needed for appropriate land-based disposal.

Coastal and Maritime Forests – Approximate 4-5 acres of upland habitat is available for restoration. This portion of the site would be planted with coastal and maritime woodland species. A vegetated berm could also be placed to provide shoreline protection benefits.

Public Access - At least one accessible pedestrian trail will be provided. As the site was previously a marina, access for human powered boats (canoes, kayaks, etc.) will be incorporated into plan.

Habitat for Fish, Crab & Lobster - The restored marsh will contribute nursery and spawning habitat contiguous with Big Egg Marsh to the west, part of Jamaica Bay Wildlife Refuge.

Shorelines and Shallows - The project will restore approximately 500 feet of shoreline and provide shallows in the HRE region.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: NYC Parks

B. Site History and Land Use: NYC Parks

C. Biological Studies/ Fauna:

D. Biological Studies/ General Environment: NYC Parks

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans: NYC Parks

REFERENCES:

HEP/NEIWPPC Stewardship Grants Proposal for Sunset Cove (2011)

http://www.harborestuary.org/grants/2011/GroupC/NYCParks_Rockaway_GroupC.pdf

Sunset Cove Park Habitat Restoration

Preliminary Conceptual Plan*

- NYC Parks Property
- NPS Property
- Low Marsh
- High Marsh
- Coastal Forest

* Indicates potential areas for habitat restoration, which are subject to revision during the design process.



City of New York Parks & Recreation
Michael R. Bloomberg, Mayor
Veronica M. White, Commissioner
Forestry, Horticulture & Natural Resources



Created by Jamie Ong, Natural Resources Group
NYC Department of Parks & Recreation, September 24, 2013