

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 & 805. Breezy Point
- 104. Spring Creek
- 105 & 815. Idlewild Park/ Brookville Marsh
- 148. Bayswater Park
- 149. Dubos Point
- 150. White Island
- 151. Bergen Beach
- 160. Bergen Basin
- 161. Hawtree Point
- 162. Conch Basin
- 163. Healy Avenue
- 164. JFK Shoreline
- 165. Mott Basin
- 166. Shellbank Creek
- 810. Shellbank Basin
- 167& 811. Somerville Basin
- 168. Hendrix Creek
- 171/172. Vernam Barbadoes
- 192. Marine Park
- 193. Gerritsen Inlet Dead Horse Bay
- 198. Canarsie Beach
- 199. Four Sparrow Marsh
- 200. Mill Basin
- 601. Hook Creek
- 602. Doxey Creek
- 603. Plumb Beach
- 604. Sheepshead Bay
- 607. Floyd Bennett Field
- 608. Canarsie Pol
- 609. Pennsylvania Avenue Landfill
- 611. West Pond
- 614. Big Egg Marsh
- 615. Black Wall Marsh
- 616. Goose Pond Marsh
- 617. Yellow Bar Marsh
- 624. Duck Point Marsh
- 625. Elders Point Marsh
- 626. Pumpkin Patch Marsh
- 627. Stony Creek Marsh
- 628. Rockway Peninsula
- 631. Frank Charles Park
- 632. Grassy Bay
- 634. Thurston Basin
- 638. Silver Hole Marsh
- 646. Binnenwater
- 647. Rockaway Reef
- 730. Fresh Creek
- 731. Paerdegat Basin
- 732. Dead Horse Bay

DRAFT

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.

Available Habitat: Salt marsh and upland.

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:

I. Restoration Remediation and Design Plans:

REFERENCES:

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



DRAFT

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: Residential, open space.

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 dune area. *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:

Projected/Estimated Costs:

Project Status: 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:

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.

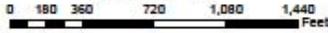


Legend

- Public Access Line
- Coatal & Maritime Forest



Arverne Urban Renewal Area
Jamaica Bay



DRAFT

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.

Watershed: Jamaica Bay

Size: 7 acres

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

Site Description: *The area was assigned to Parks in 1992. An additional parcel of land was acquired by condemnation for the City of New York in 1997 and then transferred to Parks. The area remains undeveloped in order to preserve the natural wildlife habitat and protect Jamaica Bay. A grounded barge offshore has acted as an erosion control device and created high quality benthic habitat behind the structure.*

The site is on a west facing point along the Broad and Grass Haddock channels. 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 and sand flat suggests that the shoreline is actively eroding.

The upland portions of the site near Barbados 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 is located in the southeast portion of the site.

*The high marsh area contains saltmarsh cordgrass 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: *The site consists of vacant, undeveloped land. Wildlife Sanctuary.*

Available Habitat: Wetland

Proposed Project: Marsh and meadow enhancement.

Projected/Estimated Costs: \$6,714,895(USACE, 2010).

Project Status:

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: 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 - Protects the existing 1.2 acres of marsh but also restores approximately 2 acres of low marsh, 0.5 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 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. The rocks will be placed randomly within a trapezoidal shape to create interstitial spaces of various sizes that can be used as refugia by various species. Additionally, approximately 6 acres of existing benthic habitat could be enhanced to increase habitat connectivity.

Sediment Contamination - Presence of contaminants which may require additional data and/or interpretation during the Plans and Specifications phase depending upon final restoration approach.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

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:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

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

REFERENCES:

NYC DPR: <http://www.nycgovparks.org/parks/Q464/>

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 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.



DA

CRP SITE 103 & 805. 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, recreation.*

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:

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.




US Army Corps
of Engineers
New York District

Breezy Point
Jamaica Bay

0 135 270 540 810 1,080
Feet



DK

CRP SITE 104. SPRING CREEK

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

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

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

Watershed: Jamaica Bay

Size: North: 29 acres. South: 301 acres

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

Site Description: Headwaters of Spring Creek flow between the Pennsylvania Avenue and Fountain Avenue landfills. Spring Creek is a mostly city-owned property with a few scattered privately-held inholdings. *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 CSO and storm sewer flows representing its only 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. 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: Active and passive recreation.

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.*

Proposed Project: 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. The proposed project in Spring Creek South 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 37 acres of habitat, 17 acres of inter-tidal salt marsh, and 20 acres of coastal grassland and maritime shrubland combined.

Projected/Estimated Costs: South: \$65,344,028 (USACE 2010).

Project Status: Restoration is being planned. No plans beyond Jamaica Bay Ecosystem Restoration Program.

Partners: NYCDPR, NYSDEC, USACE

Project Contact: Dan Falt, Project Manager, USACE;

Phone: (917) 790-8614

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)

Coastal Wetlands – Maximize salt marsh habitat restoration in the northern portion of the 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 66 acres of low marsh and 3 acres of high marsh.

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

Habitat for Fish, Crab and Lobsters – Addition of complex structure to the mudflats and creeks and clean up of heavily debris laden shoreline along approximately 27 acres will facilitate movement and habitat exchange.

Coastal and Maritime Forests – Where applicable excavated material from the shorelines will be placed onsite, capped 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 – Potential HTRW, the presence of fill material will necessitate a hazardous waste screening for this site. Presence of contaminants which may require additional data and/or interpretation during the Plans and Specs phase depending upon final restoration approach

Public Access – Support improvements to pedestrian access and recreation.

Spring Creek North

Planning is in progress.

Benefits, Cost and Comparative Restoration Ratio:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS: NYC DPR 1988, USACE 1997, 2010

B. Site History and Land Use: Hydroqual

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

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

E. Geotechnical:

F. Hydraulics and Hydrology:

G. Water and Sediment:

H. Historical and Cultural Resources:

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

REFERENCES:

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

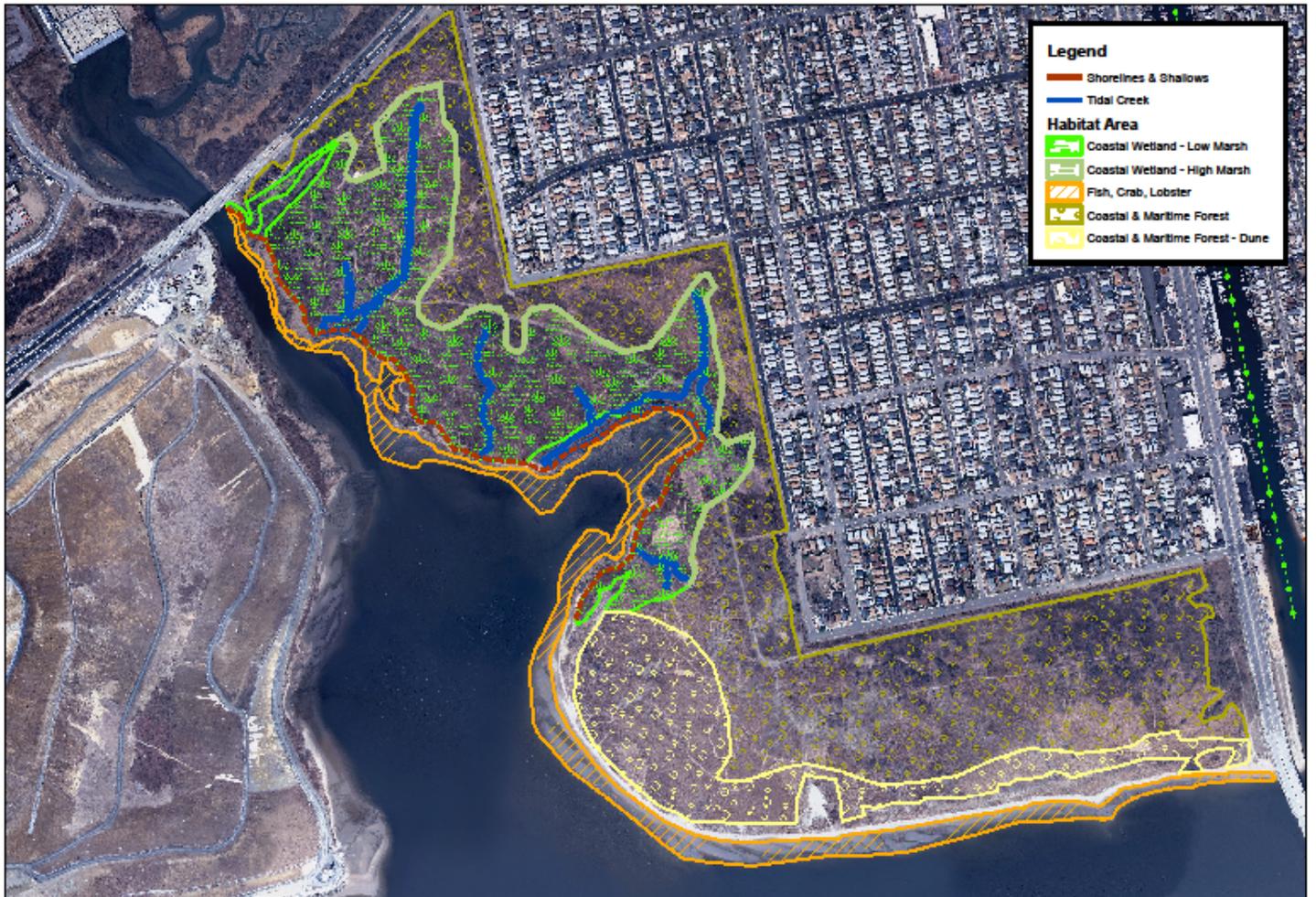
U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.

U.S. Army Corps of Engineers & 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.

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
Jamaica Bay

0 175 350 700 1,050 1,400 Feet

US Army Corps of Engineers
New York District

DA

CRP SITE 105, 815. BROOKVILLE MARSH/ IDLEWILD PARK

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

Category: Candidate Restoration/Preservation Site

Location: Northeast periphery of Jamaica Bay

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.*

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:

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.



Legend

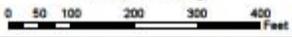
-  Tributary Connections Point
-  Public Access Point
-  Public Access Line
-  Enclosed & Confined Water

Habitat Area

-  Coastal Wetlands
-  Coastal & Maritime Forest


 US Army Corps
 of Engineers
 New York District

Brookville Marsh
 Jamaica Bay



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 Mott Basin on the eastern shore of Jamaica Bay.

Watershed: Jamaica Bay

Size: 17 acres

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

Site Description: *The site of Bayswater State Park was primarily salt marsh as of 1879, with four structures on site. Bayswater Point has a number of special natural features including the last patch of mature native oak forests on Jamaica Bay. Historical documents indicate that 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.

Available Habitat: State Park. The site is mostly beach, wetland, 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.

Projected/Estimated Costs: \$300,000; \$3,704,360 (USACE 2010)

Project Status: No data.

Partners: USACE and NYC DEP Jamaica Bay Feasibility Study Site: to be determined

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: USACE 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 - Remove invasive dominated areas by re-grading and creating a tidal channel and associated salt marsh. Restoration may total 4.2 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 0.6 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 - 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:

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

I. Restoration Remediation and Design Plans:

*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.

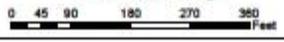
Legend

-  Tidal Creek
- Habitat Area**
-  Coastal Wetland - Low Marsh
-  Coastal Wetland - High Marsh
-  Coastal & Maritime Forest - Dune
-  Coastal Wetland - Hard Structure




 US Army Corps
 of Engineers
 New York District

Bayswater State Park
 Jamaica Bay



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

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 (Rubus) 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.

Available Habitat: Wetland, low marsh, old field, uplands. The interior upland contains woody species mixed with Phragmites and Goldenrods. The old field community is a mix of herbs and grasses. The low marsh is dominated by *Spartina alterniflora*.

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

Projected/Estimated Costs: \$423,900; \$7,724,719 (USACE 2010)

Project Status: Restoration feasibility study in progress.

Partners: NYC DPR

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: USACE 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 - Restore marsh by creating tidal channels in an existing upland common reed stand and re-grading 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 5.2 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 - Presence of contaminants that may need more detailed analysis to interpret the insignificance of specific restoration activities

Oyster Reef- Potential creation of 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:

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

U.S. Army Corps of Engineers & NYC Department of Environmental Protection. 2010. Jamaica Bay, Marine park and P Plumb Beach, New York - Environmental Restoration Study 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.



DRAFT

CRP SITE 150. WHITE ISLAND

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

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

Location: Located within Marine Park, 0.7 miles South of Avenue U, 0.5 miles west of Flatbush Avenue, Kings County NY.

Watershed: Jamaica Bay

Size: 80 acres

Ownership: NYCDPR

Site Description: The Island consists of 17 acres of upland coastal meadow supported by dredged Rockaway sand which sustains warm season grasses. The majority of the island (63 acres) is mostly a monoculture of Phragmites, rooted in household trash. *The shoreline of White Island consists of small patches of low marsh and cut and eroded banks. Trash has been exposed at the more severely eroded areas along the shoreline. According to a report by NYCDEP (1997), seven areas of exposed trash were identified. Two patches of grassland totaling 17 acres are present within the interior of the island. A few trees are present. The shoreline is mostly unvegetated, though patches of low marsh dominated by saltmarsh cordgrass are present along the periphery of the site.*

Current Land Use: Open space, *former landfill.*

Available Habitat: Upland

Proposed Project: Coastal Grassland Restoration by NYC DPR

Projected/Estimated Costs: \$5,000,000

Project Status: Mitigation is being conducted, in design. *Upland placement of approximately 150,000 CY of sand by USACE, at White Island in the Jamaica Bay complex took place as part of the marsh island restoration initiative. Restoration is currently underway by NYC DPR.*

Partners: NYCDPR

Project Contact: Michael Feller, NYC Parks/NRG

Phone: (212) 360-1424

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

Project Funding Source: NYCHPD Mitigation. Public works mitigation; Gateway Estates Developer & HPD, A
HEP Ratification Date: 12/11/1997

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands – Removal of phragmites with placement of sand to deter re-invasion was completed in phase 1. Additional restoration could include planting along approximately 5 acres of marsh habitat.

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

Coastal and Maritime Forests – Creation of grassland habitat along approximately 78 acres of upland. Four types of grassland habitat will be created over the island: tall grass meadow, short grass meadow, maritime grassland, and dune planting.

Shorelines and Shallows - Stabilization of approximately 9,200 feet of the island's shoreline. As part of the Phase 2 construction, the White Island shoreline will be reinforced with three slope treatments; Armor Stone, Articulated Concrete Block, Cellular Confinement Systems

Public Access – Potential for public access after construction is complete.

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: Soil and water testing (May 2009).

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.

Fish and Wildlife Services. 1997. Significant Habitats and Habitat Complexes of the New York Bight Watershed.
http://library.fws.gov/pubs5/web_link/text/jb_form.htm#Jamaica%20Bay%20and%20Breezy%20Point

NYC DPR White Island Fact Sheet-

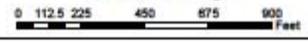


Legend

- Shorelines & Shallows
- Habitat Area**
- Coastal Wetlands
- Coastal & Maritime Forest


US Army Corps
of Engineers
New York District

White Island
Jamaica Bay



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.*

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

Proposed Project: Restoration of marsh habitat.

Projected/Estimated Costs: No data.

Project Status: No data.

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.



Legend

— Shorelines & Shallows

Habitat Area

Coastal Wetlands

Coastal & Maritime Forest


US Army Corps
of Engineers
New York District

Bergen Beach
Jamaica Bay

0 75 150 300 450 600 Feet



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:

Available Habitat: Wetland estuarine- tidal waterway.

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 addition of complex structure along approximately 3 acres of existing mudflats and shallow water will increase movement between habitats.

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.



Legend

- Enclosed & Confined Water
- Habitat Area**
 - Coastal Wetlands
 - Fish, Crab, Lobster
 - Coastal & Maritime Forest


US Army Corps
of Engineers
New York District

Bergen Basin
Jamaica Bay



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, US Department of the Interior, NPS, 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 are; 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, 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.*

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

Proposed Project: Salt marsh restoration.

Projected/Estimated Costs: \$360,000; \$839,480 (USACE, 2010)

Project Status:

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: 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 - 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.

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.

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.



Legend

Habitat Area

- Coastal Wetland - High Marsh
- Coastal & Maritime Forest - Shrub
- Coastal & Maritime Forest - Barrier



Hawtree Point
Jamaica Bay



DRAFT

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.

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.*

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 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:

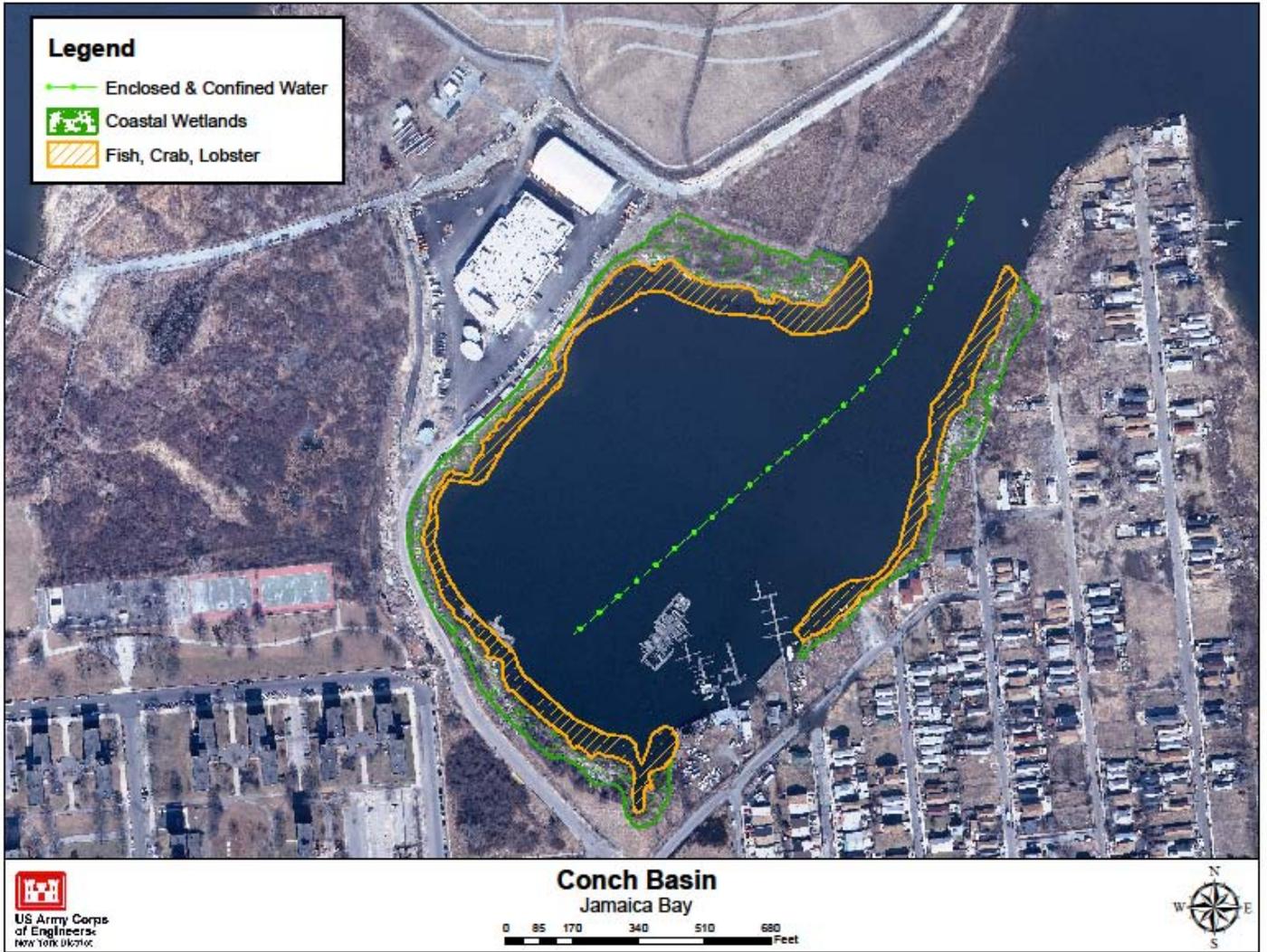
H. Historical and Cultural Resources:

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.



DK

CRP SITE 163. HEALY AVENUE (NORTON BASIN NATURAL RESOURCE AREA)

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

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

Location: 0.1 miles west from the corner of Healy Avenue, Queens NY.

Watershed: Jamaica Bay

Size: 11.5 acres

Ownership: NYSDEC, NYC GSA.

Site Description: *The first project to be completed using JBDA funding was the acquisition and restoration of property along Norton Basin, now managed by DEC as the Norton Basin Natural Resources Area (NBNRA). Today, the eleven acre property is tidal wetland and maritime grassland habitat and includes a network of footpaths. JBDA was the sole funding source for the project. The estimated costs listed in the Reconnaissance Phase Report were \$1.5 million for acquisition and \$200,000 for restoration. Ultimately, \$3 million was spent for acquisition and \$300,000 was spent on habitat restoration at NBNRA.*

Current Land Use: Passive Recreation

Available Habitat: Wetland, maritime shrubland, grassland habitat, fringing intertidal wetlands.

Proposed Project: \$200,000 tidal wetland restoration. In November, 1995 NYSDEC purchased 11 acres of maritime property.

Projected/Estimated Costs: \$350,000

Project Status: Restoration completed in 1999.

Partners: NYSDEC (Jamaica Bay Damages Account)

Project Contact: Steve Zahn, NYSDEC

Phone: (718) 482-6461

Website: www.harborestuary.org

Project Funding Source: Jamaica Bay Damages Jamaica Bay Damages Account (NYSDEC): \$350,000, D

HEP Ratification Date: 12/11/1997

References:

NYS DEC. 2007. Restoration of Natural Resources through the Jamaica Bay Damages Account 2007 Update.

CRP SITE 164. JFK SHORELINE

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

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

Location: 0.5 miles south of the Van Wyck Expressway, Queens NY. *This site consists of the shoreline of JFK International Airport adjoining Grassy Bay from the inlet to Bergen Basin southeast to the extension of Runway 4L.*

Watershed: Jamaica Bay

Size:

Ownership: The airport is operated by the Port Authority of New York and New Jersey.

Site Description: *The entire shoreline consists of rip-rap used to stabilize the adjoining upland fill. The nearshore contains a few small patches of low marsh and a linear, narrow sand flat that is exposed at low tide. The sediments within the flats and low marsh areas are comprised of sand. The few areas of low marsh are dominated by saltmarsh cordgrass. The upland areas at the top of the stabilized shoreline generally contain old field vegetation dominated by mugwort.*

Current Land Use: *Shoreline adjacent to active runway system.*

Available Habitat: Wetland

Proposed Project: Salt Marsh Restoration

Projected/Estimated Costs: \$436,000

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

CONCEPT PLANNING ON HOLD DUE TO AIRPORT PROXIMITY

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.

CRP SITE 165. MOTT BASIN

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

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

Location: Sites are located in the upper reaches of Mott Basin 0.1 miles east from the corner Dunbar Street and at the head of Mott 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:

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:

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 – Addition of complex structure and clean fill to the mudflats will decrease the slope and increase movement between habitats 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:

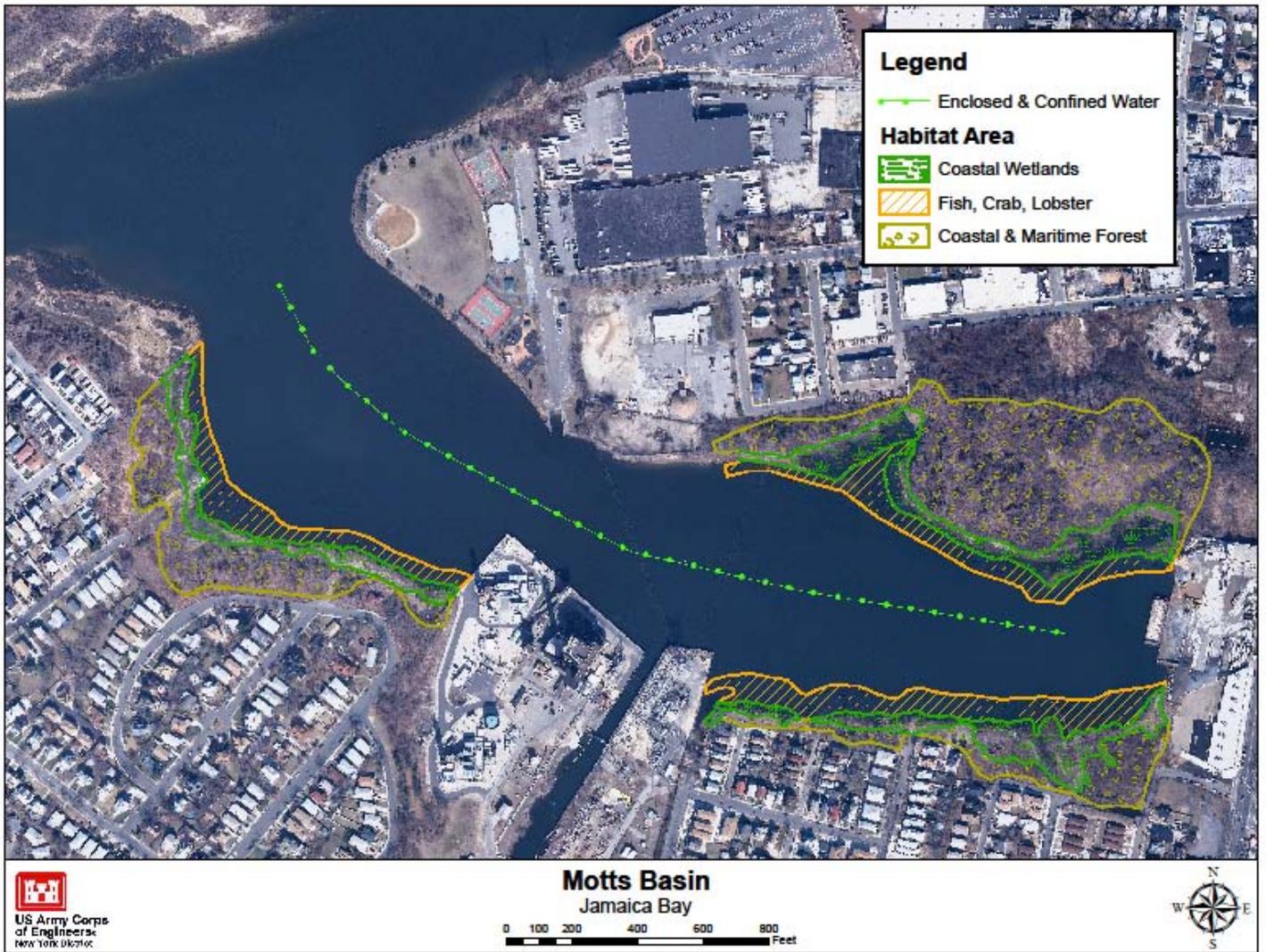
I. Restoration Remediation and Design Plans:

***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.



DRAFT

CRP SITE 810. 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.

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 addition of complex structure to the mudflats and shallow water will 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:

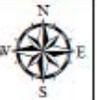
U.S. Army Corps of Engineers. 1997. Jamaica Bay Navigational Channels and Shoreline Environmental Survey.



- Legend**
-  Enclosed & Confined Water
- Habitat Area**
-  Coastal Wetlands
 -  Fish, Crab, Lobster
 -  Coastal & Maritime Forest


 US Army Corps
 of Engineers
 New York District

Shellbank Creek
 Jamaica Bay



DRAFT

CRP SITE 166. SHELLBANK BASIN

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: *Land uses around Shellbank Basin include recreational, commercial and residential uses.*

Available Habitat:

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:

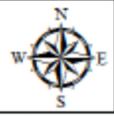


Legend
—→ Enclosed & Confined Water


US Army Corps
of Engineers
New York District

Shellbank Basin Jamaica Bay

0 187.5 375 750 1,125 1,500
Feet



CRP SITE 167 & 811. 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.*

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 – Addition of complex structure to the mudflats will 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.

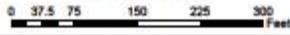


Legend
Habitat Area

- Coastal Wetlands
- Fish, Crab, Lobster
- Coastal & Maritime Forest


US Army Corps
of Engineers
New York District

Somerville Basin
Jamaica Bay



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.*

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 – Addition of complex structure to mudflats and shallow water will 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:

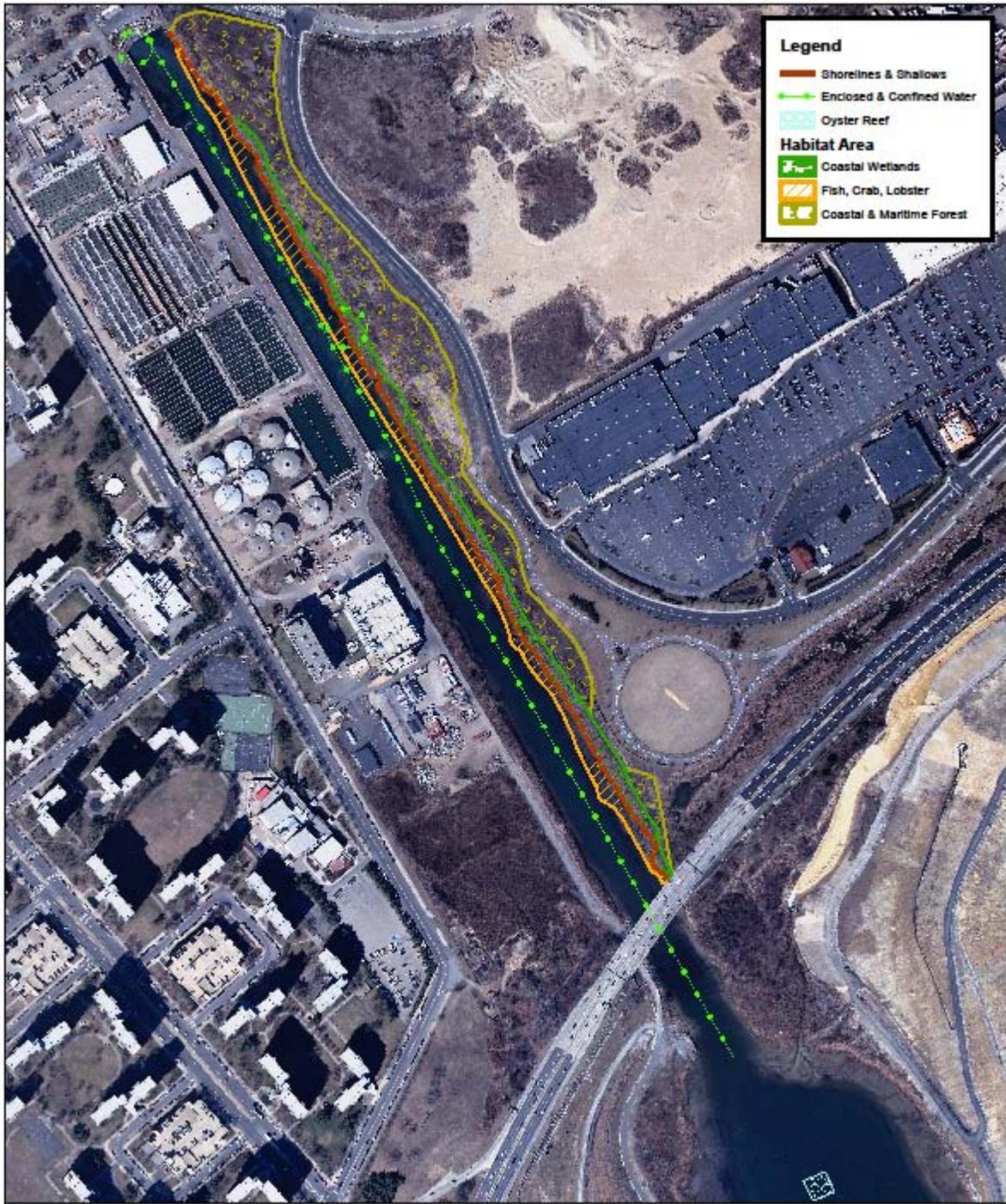
***Work in progress**

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.



Legend

- Shorelines & Shallows
- - - Enclosed & Confined Water
- Oyster Reef

Habitat Area

- Coastal Wetlands
- Fish, Crab, Lobster
- Coastal & Maritime Forest


 US Army Corps
 of Engineers
 New York District

Hendrix Creek
 Jamaica Bay



CRP SITE 171/172. 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: Light recreation, wildlife refuge. *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.*

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 – Addition of complex structure to the mudflats and creeks will create aquatic habitat associated with tidal ditches and facilitate movement and habitat exchange along approximately 5 acres. Removal of concrete, wood debris, and ship wrecks would 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)

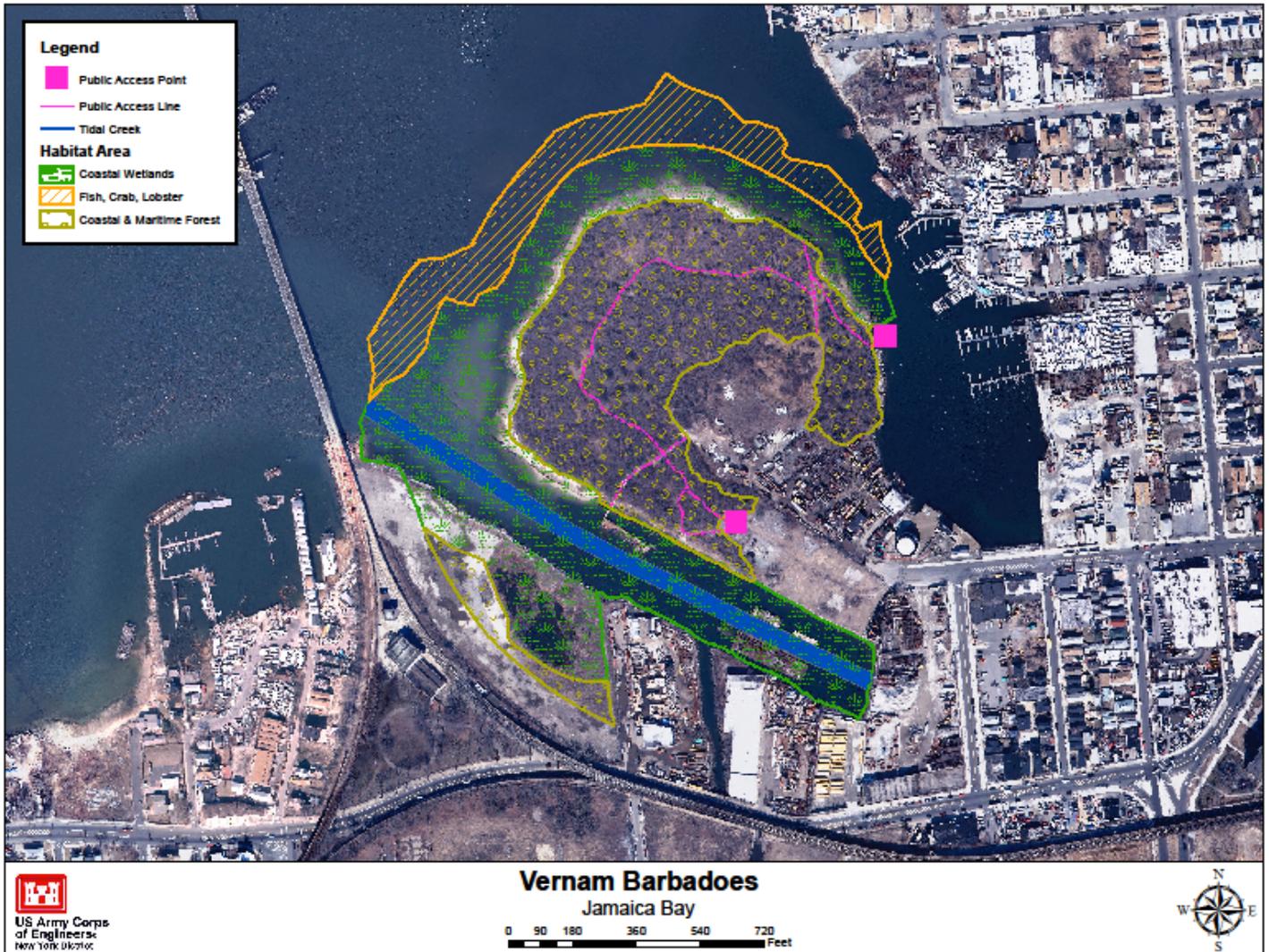
H. Historical and Cultural Resources:

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.



DRAFT

CRP SITE 192. MARINE PARK

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

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

Location: Gerritsen Creek, 0.25 miles northwest from the intersection of Flatbush Avenue and Belt Parkway.

Watershed: Jamaica Bay

Size: 30 Acres

Ownership: NYC Parks

Site Description: *Most of the Marine Park Preserve consists of salt marshes and uplands that flank Gerritsen Creek. Marine Park's sheltered creek attracts a wide variety of marsh birds. From June through August, clapper rails (*Rallus longirostris*) can be heard calling throughout the marsh. In winter, freshwater and marine waterfowl find shelter in the creek. Winter visitors include greater (*Aythya marila*) and lesser (*Aythya affinis*) scaup, ruddy duck (*Oxyura jamaicensis*), mute swan (*Cignus olor*), Canada goose (*Branta canadensis*), and common loon (*Gavia immer*). Marine Park also provides prime habitat for the osprey (*Pandion haliaetus*).*

Current Land Use: Recreation, wildlife preserve.

Available Habitat: Wetland, bird habitat.

Proposed Project: Salt marsh restoration.

Projected/Estimated Costs: \$6,000,000

Project Status: Gerritsen Creek restoration is complete. Construction of White Island is ongoing (see CRP ID# 150).

Partners: USACE, NYC DPR.

Project Contact: Michael Feller, NYC Parks/NRG

Phone: (212) 360-1424

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

Project Funding Source: NYS CW/CA; USACE

HEP Ratification Date: 08/02/2002

B. HUDSON RARITAN ESTUARY ECOSYSTEM RESTORATION STUDY INFORMATION

PROJECTS WITHIN MARINE PARK ARE COVERED ON SEPARATE PROJECT SUMMARY SHEETS.

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:

NYC Parks- http://www.nycgovparks.org/sub_about/parks_divisions/nrg/forever_wild/site.php?FWID=23

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.

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 Project. 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 -

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:

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 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.

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 – Addition of complex structure to the sand flat and mud flats off shore of the site will increase movement and use of the restored marsh 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.



DRAFT

CRP SITE 199. FOUR SPARROW MARSH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

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

Location: Brooklyn section of Jamaica Bay, north of Floyd Bennett Field and Marine Park, south of Mill Basin.

Watershed: Jamaica Bay

Size: 3.4 acres (2.7 acres of tidal wetland and 0.7 acres woodland buffer restoration will connect approximately 65 acres Four Sparrow Marsh preserve.

Ownership: NYC DPR, including Block 8591, Lots 100, 125 and 175.

Site Description: *The extensive, 65-acre tidal marsh system and adjoining upland habitats make this site a valuable resource for wildlife. The shoreline of this site is characterized by bands of low marsh with small patches of open sand beaches. These areas grade gently to a narrow sand flat. Beyond the flat, the channel gradually then steeply drops to between 23 and 54 feet below MLLW. A tidal ditch enters the site at a right angle to Mill Basin Creek and extends into the southern portion of the site where a large high marsh area is present.*

The soils within the site consist of loamy sand above fine sand. The disturbed upland on the western part of the site contains fill material consisting of construction debris, concrete slabs, asphalt and fine sandy loam soils to a depth of 24 inches. This area is approximately 20 feet higher than the adjoining tidal marsh.

*The low marsh consists of bands of saltmarsh cordgrass 15 feet in width along the Mill Basin Creek. The low marsh continues along the tidal ditch at the western end of the site. The low marsh is bordered by high marsh dominated by saltmeadow cordgrass and shrubs including marsh-elder and groundsel-tree. A dense band of shrubs (black cherry marsh elder and bayberry) and common reed is present along the center of the site. Common reed stands, seaside goldenrod and marsh orchid blend into the upper edge of the high marsh zone. The tidal marsh is separated from the disturbed uplands by a stand of black locust. The western half of the upland fill area has an old field dominated by mugwort. A few trees, including princess tree (*Paulownia tomentosa*) and tree-of-heaven are scattered within the degraded field. The eastern portion of the site contains sparsely vegetated ground and debris. According to an ecological assessment performed by NYCDPR (1988), Four Sparrow Marsh represents a highly productive habitat that supports a variety of native plants, fish, shellfish and wildlife.*

Current Land Use: *Open marshland and a vacant, disturbed upland parcel within the western portion of the site.*

Available Habitat: Low marsh, high marsh and maritime shrubland. Native vegetation is threatened by *Artemisia vulgaris* and *Phragmites*, which are flourishing on the fill portion of the site and beginning to encroach on the high marsh.

Proposed Project: Salt marsh restoration, wading bird restoration.

Projected/Estimated Costs: \$800,000

Project Status: *Construction complete: In Spring of 2004, Parks' Natural Resources Group completed a three acre salt marsh restoration project at Four Sparrow Marsh. The restoration project included restoring tidal flow to previously filled areas and planting salt marsh cordgrass (*Spartina alterniflora*). One acre of adjacent woodlands, which serve as an important buffer to the marsh, was also restored.*

Partners: NYCDPR NRG, NYSDEC

Project Contact: Michael Feller, NYC Parks/NRG

Phone: (212) 360-1424

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

Project Funding Source: NYSCWCA

HEP Ratification Date: 08/02/2002

REFERENCES:

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

Forever Wild- http://www.nycgovparks.org/sub_about/parks_divisions/nrg/forever_wild/site.php?FWID=21

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.

DRAFT

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.

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 – Restoration of 1 acre of benthic habitat and addition of complex structure to mud flats.

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:

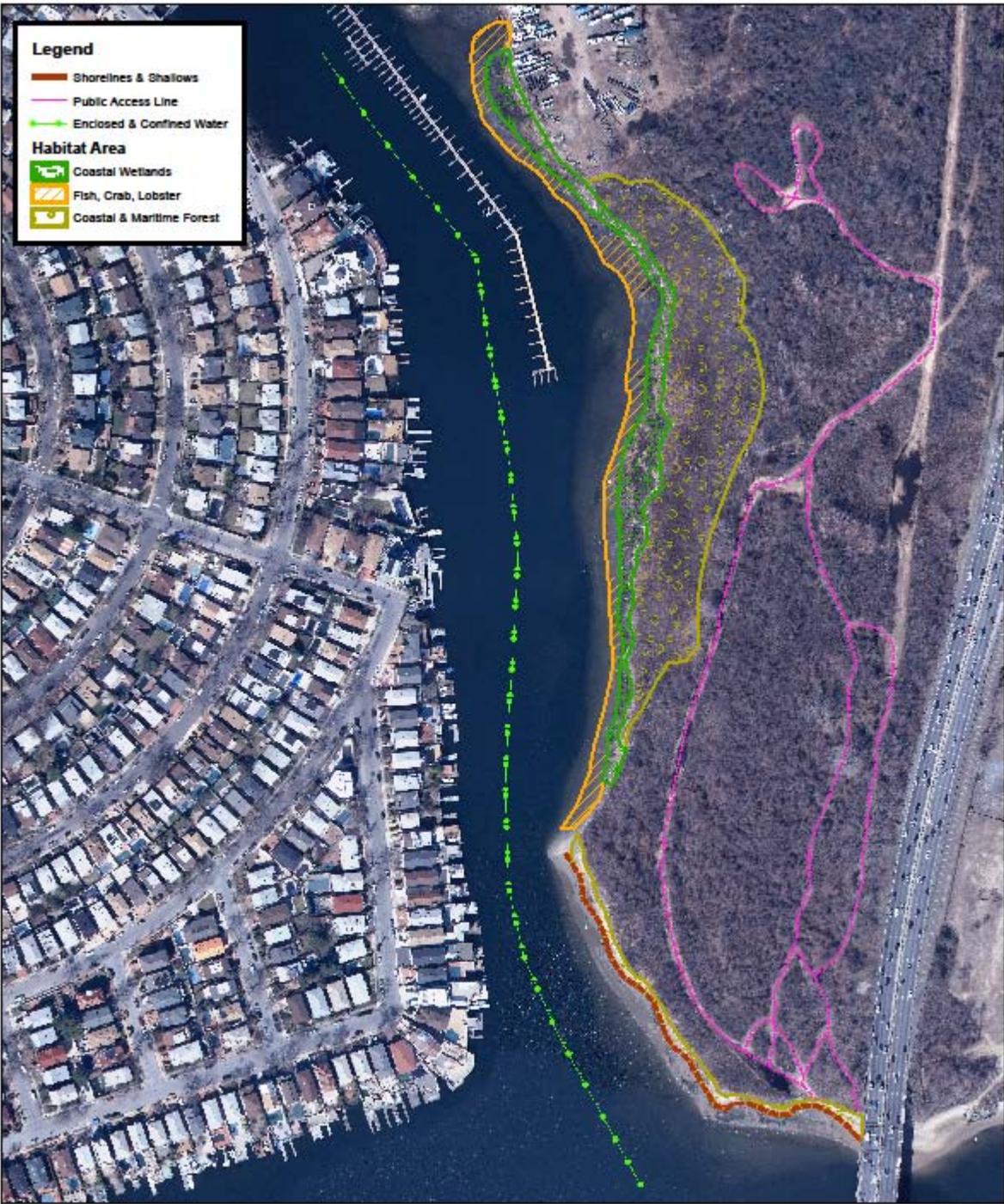
I. Restoration Remediation and Design Plans:

***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.



Legend

- Shorelines & Shallows
- Public Access Line
- Enclosed & Confined Water

Habitat Area

- Coastal Wetlands
- Fish, Crab, Lobster
- Coastal & Maritime Forest


 US Army Corps
 of Engineers
 New York District

**Mill Basin
 Jamaica Bay**

0 55 110 220 330 440 Feet



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.

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:

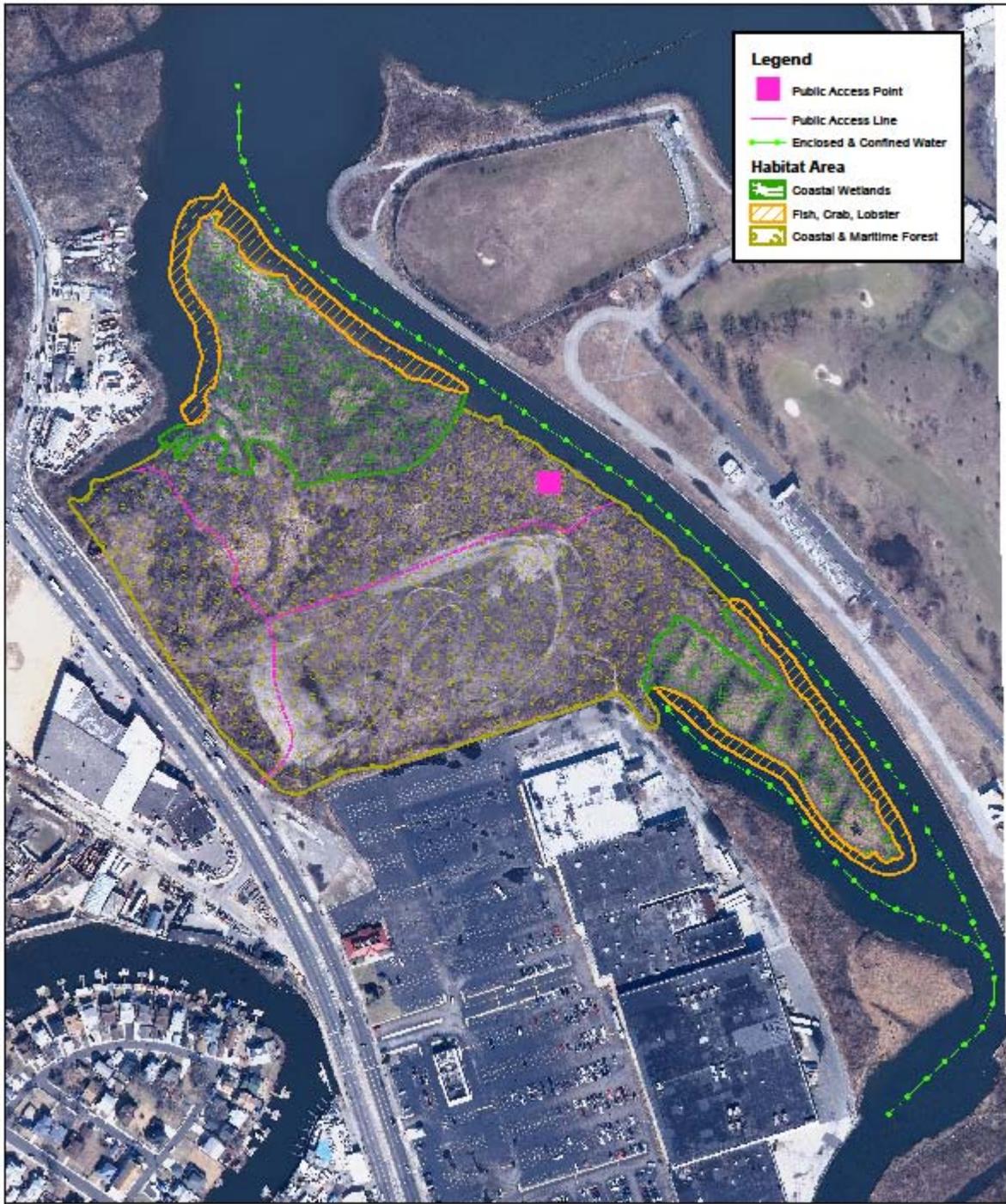
I. Restoration Remediation and Design Plans:

***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.



Legend

- Public Access Point
- Public Access Line
- - - Enclosed & Confined Water

Habitat Area

- Coastal Wetlands
- ▨ Fish, Crab, Lobster
- ▨ Coastal & Maritime Forest


 US Army Corps
 of Engineers
 New York District

Hook Creek
 Jamaica Bay

0 55 110 220 330 440 Feet



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:

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

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:

DRAFT



Doxey Creek
Jamaica Day

0 350 660 1,000 1,500 2,000 Feet



DA

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:

Available Habitat: Site consists of dunes, intertidal marsh, 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/factsh/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: *Recreational, residential, commercial, industrial, parkland, and open space.*

Available Habitat:

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:

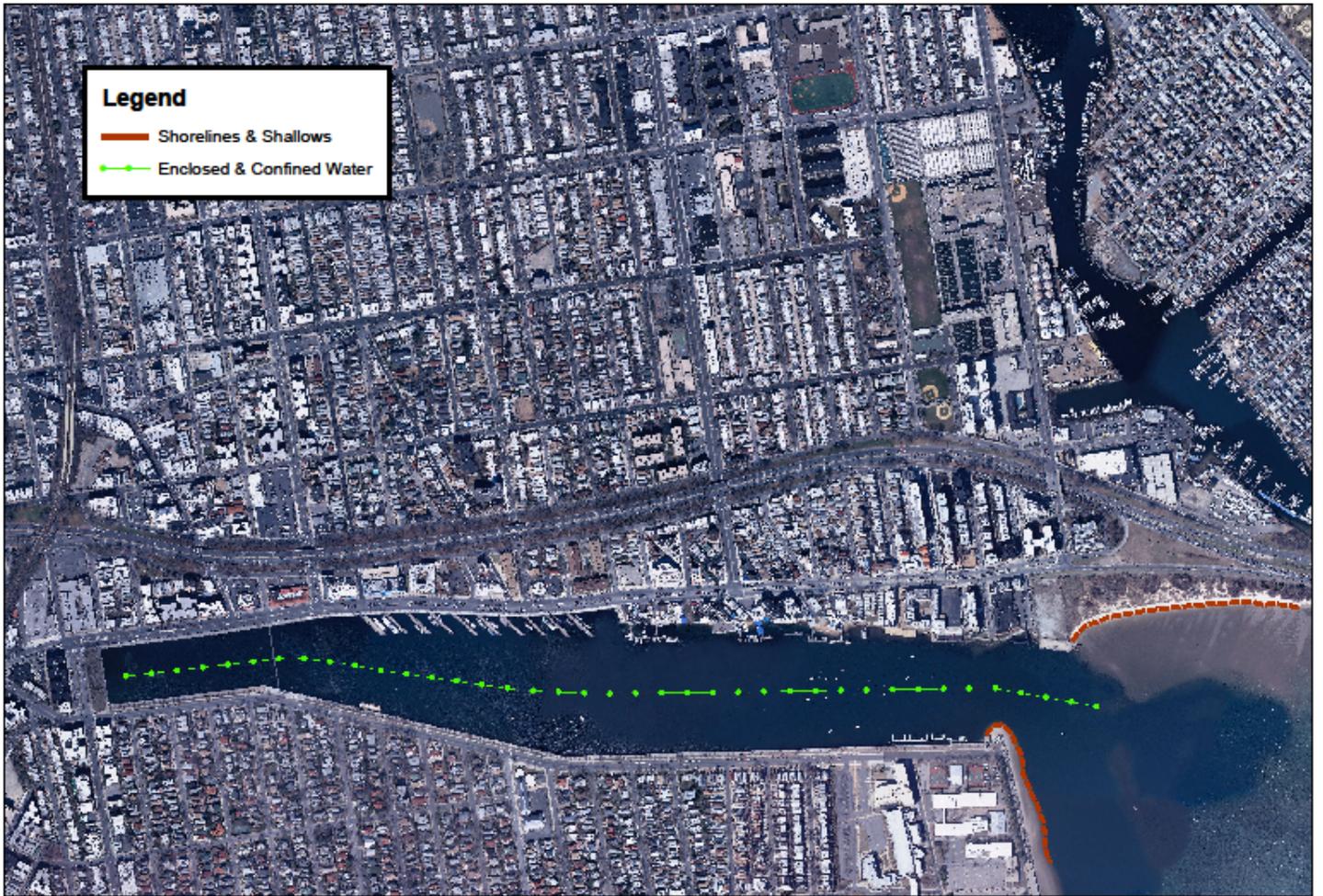
H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

REFERENCES:

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

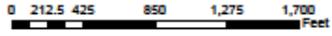


Legend

- Shorelines & Shallows
- Enclosed & Confined Water



Sheepshead Bay
Jamaica Bay



DRAFT

CRP SITE 607. FLOYD BENNETT FIELD

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.*

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.



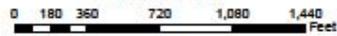
Legend

- Shorelines & Shallows
- Coastal & Maritime Forest



US Army Corps
of Engineers
New York District

**Floyd Bennet Field
Jamaica Bay**



DRAFT

CRP SITE 608. 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*

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.*

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.

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.



DRAFT

CRP SITE 609. PENNSYLVANIA AVENUE LANDFILL

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

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

Location: Set along the edge of Jamaica Bay, 0.3 miles southeast from the intersection of Granville Payne Avenue and the Belt Parkway, Kings County NY.

Watershed: Jamaica Bay

Size: 100 acres

Ownership: NYCDEP, NYSDEC

Site Description: *Pennsylvania Avenue Landfill, has been closed under the New York State Superfund Program and is currently undergoing remediation. The site was operated by the New York City Department of Sanitation as a landfill in the 1950s and 60s. The shoreline along Fresh Creek was saturated with oil contaminated with PCBs and heavy metals. This contamination leached into Jamaica Bay.*

Current Land Use:

Available Habitat:

Proposed Project: *Remedial activities at the sites included capping, leachate and gas collection, and dredging of contaminated sediment. The landfills were capped with an impermeable membrane and covered by millions of tons of sand and topsoil brought in by barge. Once construction of the caps were completed, the New York City Department of Environmental Protection began ecological restoration efforts, planting native tree, shrub and wildflower species. Eventually, seeds of these species will be spread to other habitats in the New York City area.*

Projected/Estimated Costs:

Project Status: *Construction complete: When the ecological restoration project is established, the sites will be ceded to the National Park Service to become part of the Gateway National Park system*

Partners: NYCDEP

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 – NYC DEP began ecological restoration efforts, planting native tree, shrub and wildflower species.

Sediment Contamination - The landfills were capped with an impermeable membrane and covered by millions of tons of sand and topsoil brought in by barge, ensure monitoring is ongoing.

Public Access – Once remediation is complete, site could be incorporated into parkland.

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:

NYS DEC- <http://www.dec.ny.gov/chemical/53590.html>

NY Times Article - <http://www.nytimes.com/2009/09/07/science/earth/07landfill.html>

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

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.*

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 – Addition complex structure to the mudflats and wetlands 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:

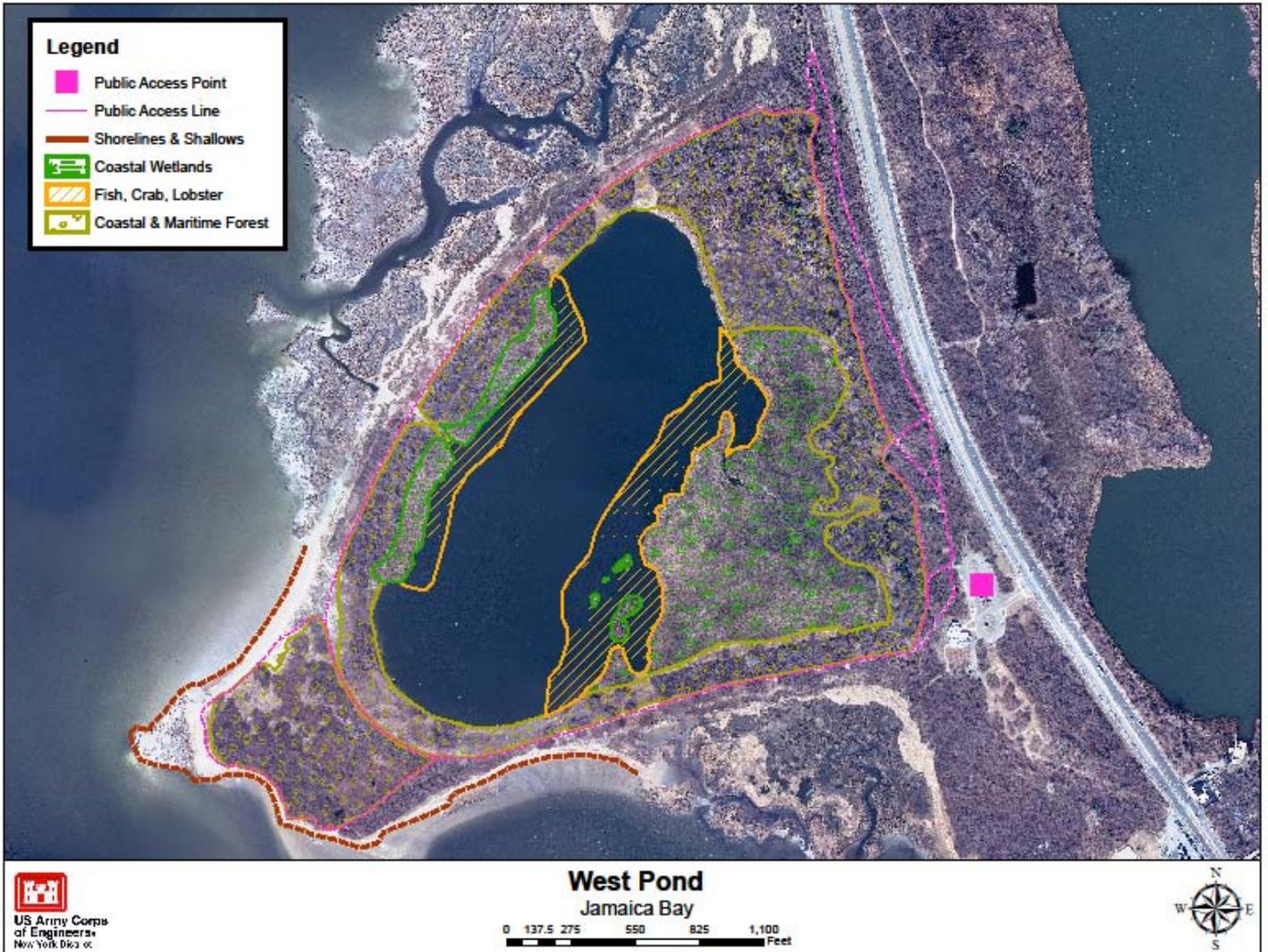
H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

References:

Birding Wiki- [http://www.nycbirds.com/wiki/index.php?title=Jamaica Bay Wildlife Refuge](http://www.nycbirds.com/wiki/index.php?title=Jamaica_Bay_Wildlife_Refuge)



DRAFT

CRP SITE 614. BIG EGG MARSH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

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

Location: Located in Jamaica Bay Queens NY. West of Broad Channel Village.

Watershed: Jamaica Bay

Size:

Ownership: NPS

Site Description: Adjacent to Broad Channel village. Deteriorating *Spartina* marsh, elevations have undergone subsidence. *Site contains relatively large areas of intact salt marsh in addition to a smaller salt marsh recently restored by NPS (total salt marsh area is approximately 2.8 ha).*

Current Land Use: GNRA.

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.*

Projected/Estimated Costs:

Project Status: *Construction completed in 2004: GNRA completed the Big Egg Marsh experimental restoration in 2004. This restoration project utilized the technique of "thin layering", where dredge slurry is sprayed onto tidal marshes to raise their elevation and reestablish salt marsh vegetation, followed by hand planting of *Spartina alterniflora*. The project area comprises approximately 1 ha. of restored saltmarsh and an adjacent 1 ha of control (or reference) marsh in the southern side of Jamaica Bay. Monitoring is on-going.*

Partners: NPS

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 -

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:

C. EXISTING SITE SPECIFIC DATA INVENTORY

A. Survey, Maps and GIS:

B. Site History and Land Use:

C. Biological Studies/ Fauna:

Ecological monitoring 2002-present (NPS, AREAC).

D. Biological Studies/ General Environment:

Ecological monitoring 2002-present (NPS, AREAC).

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:

HEP- <http://www.harborestuary.org/TEsummer03.htm#1>

Frame George W., M. Kathryn Mellander, Douglas A. Adamo. DNR GNRA. 2005. Big Egg Marsh Experimental Restoration in Jamaica Bay, New York.

Ekernas, L. Stefan, Katerine J. Mertes. Wild Metro. 2006. The influence of urbanization, patch size and habitat type on small mammal communities in the New York metropolitan region.

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

CRP SITE 615. 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

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:

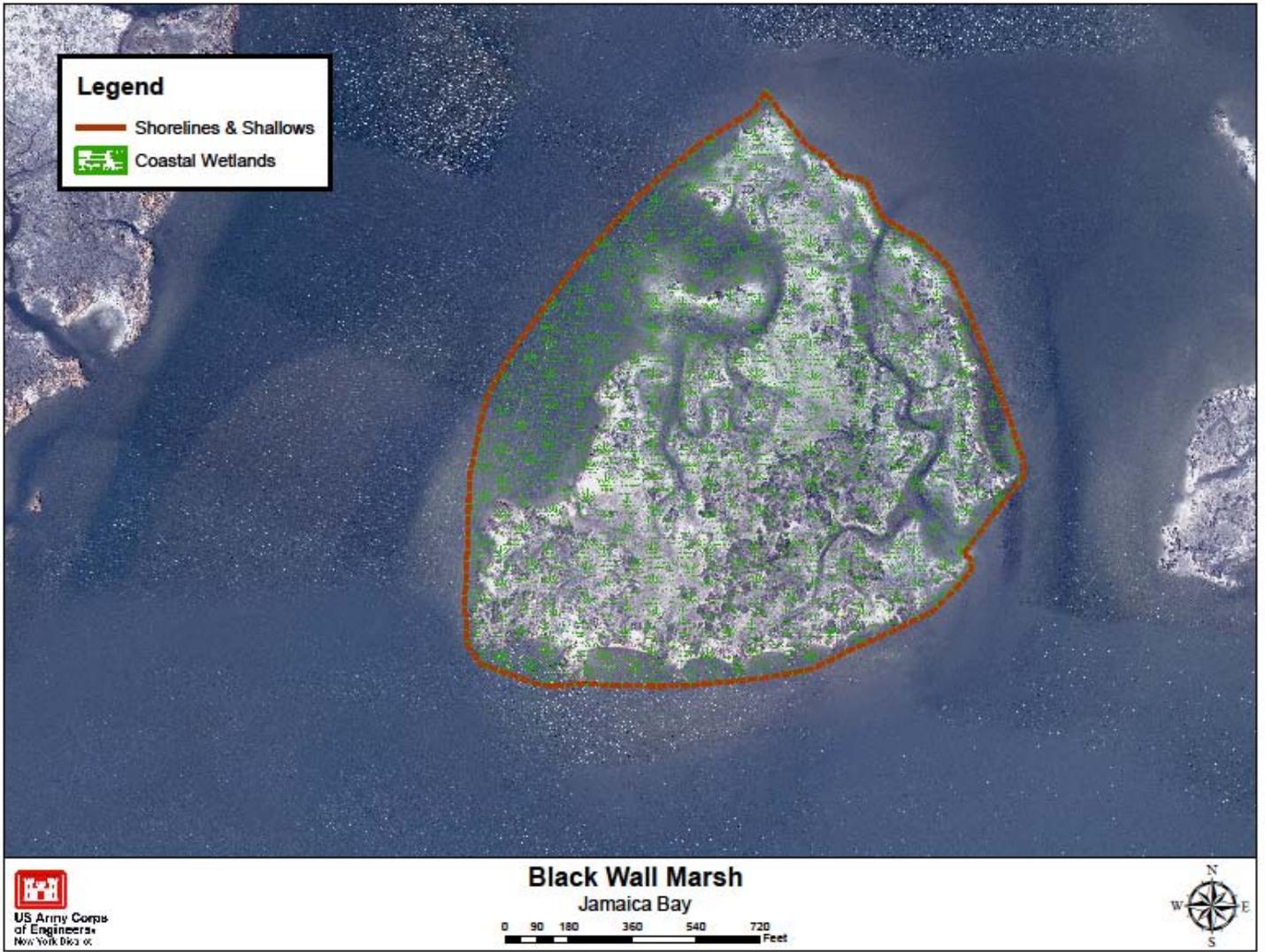
H. Historical and Cultural Resources:

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 616. 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.

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.

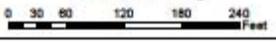


Legend

-  Shorelines & Shallows
-  Coastal Wetlands


US Army Corps
of Engineers
New York District

Goose Pond Marsh
Jamaica Bay



CRP SITE 617. YELLOW BAR HASSOCK MARSH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

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

Location: An island in central Jamaica Bay, 0.25 miles west of Cross Bay Boulevard, Kings County NY. *Yellow Bar is located about 1.5 miles south-southeast of Elders Point. The islands are separated from each other by Pumpkin Patch, Duck Point, and Stony Creek marsh islands.*

Watershed: Jamaica Bay

Size: 77.5 acres

Ownership: NPS

Site Description: *Limited surveys indicate a low range in variability across the island, with elevations of the vegetated and unvegetated areas primarily ranging from 0 ft to +2.4 ft NAVD. There is a large overlap in the vegetative communities, relative to elevation. Since there is a consistency in elevation, and vegetative communities, this information has been used for estimating the volumetric needs for restoration. The only documented activity (habitation, commercial, industrial) on these islands is several historic fishing shacks on the south side of Yellow Bar. Historically the Island was 235 acres in size. This site has been severely impacted by marsh loss, and would benefit from additional sediment.*

Current Land Use: GNRA.

Available Habitat: *The project sites are comprised of intertidal salt marsh and mudflats. Low marsh vegetated by smooth cordgrass (*Spartina alterniflora*) is the dominant wetland type. With exception for small portions, the island is almost completely inundated twice daily during high tide, is transected by tidal creeks, and is surrounded entirely by the tidal waters of Jamaica Bay.*

Proposed Project: *Up to 31 acres of salt marsh habitat is proposed for restoration at Yellow Bar Hassock via placement of dredged material. Existing salt marsh plant hummocks will be re-planted within the new, elevated substrate. The material being used for construction comes from the Jamaica Bay Navigation Channel and the Ambrose Channel.*

Projected/Estimated Costs: \$ 9,212,000

Project Status: *Construction scheduled to begin in Fall 2011.*

Partners:

Project Contact:

Phone:

Website:

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 in Partnership with The Port Authority of New York and New Jersey. 2011. New York & New Jersey Harbor Deepening Project Beneficial Use of Dredged Material to Restore Yellow Bar Hassock Jamaica Bay Marsh Islands Jamaica Bay, Brooklyn, New York Engineering Documentation Report.

Restoration Recommendations (Applicable Target Ecosystem Characteristics):

Coastal Wetlands - Placement of fill to areas that were previously salt marsh, re-grading the site to appropriate elevations for the target community, and planting with native plant species. 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.

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:

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

NYD USACE & PAN NY/NJ. 2008. New York & New Jersey Harbor Deepening Project Beneficial Use of Dredged Material to Restore Elders Point West Marsh Jamaica Bay Marsh Islands Jamaica Bay, Brooklyn, New York Engineering Documentation Report.

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

CRP SITE 624. 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.

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**

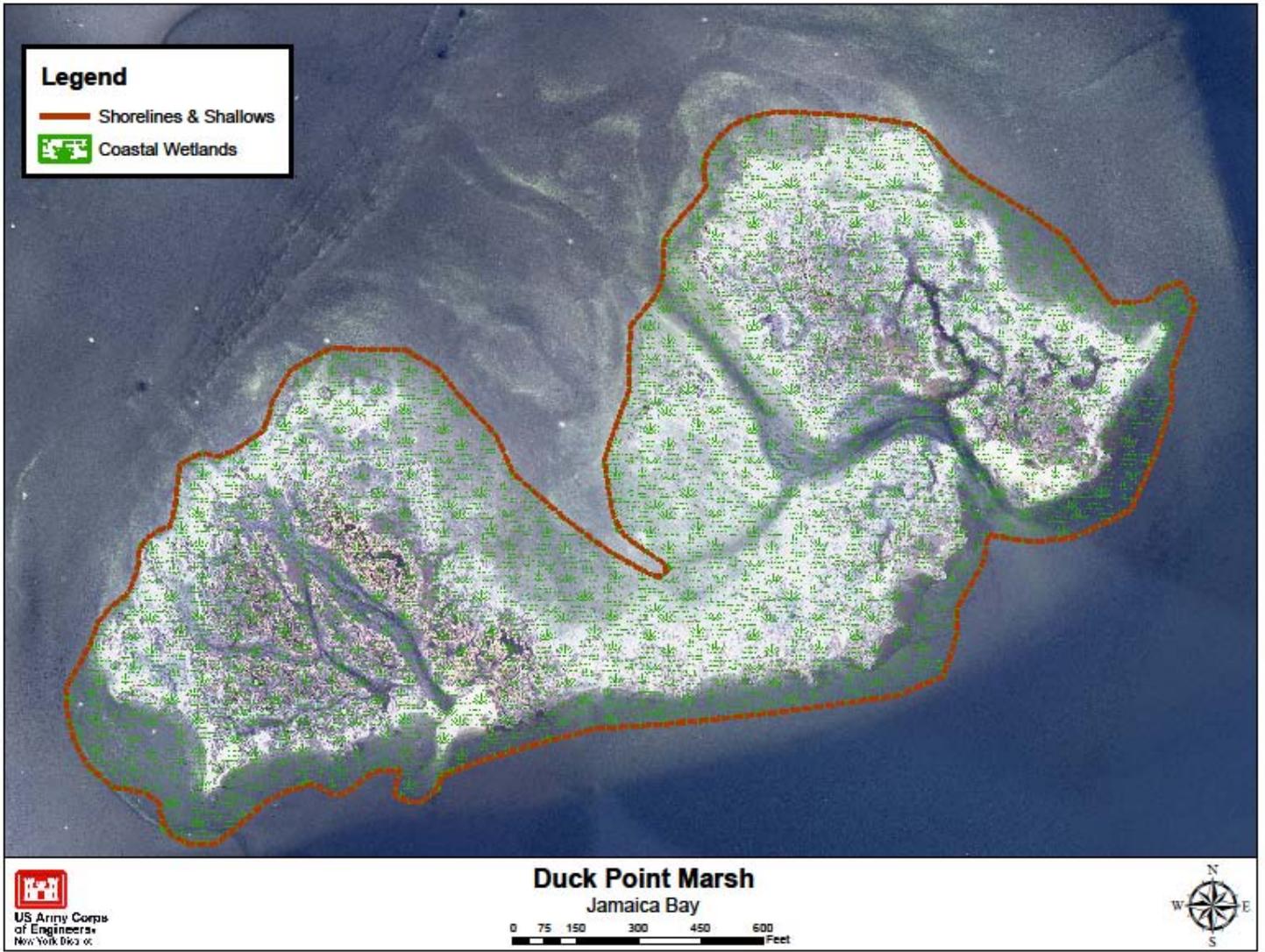
REFERENCES:

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

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

U.S. Army Corpss 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.



DRAFT

CRP SITE 625. ELDERS POINT MARSH

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

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

Location: In northern Jamaica Bay, 0.5 miles west of Cross Bay Boulevard, Kings County NY.

Watershed: Jamaica Bay

Size: 21 acres

Ownership: NPS

Site Description: Vegetated tidal wetlands dominated by *Spartina alterniflora* which has undergone significant loss of tidal marsh. *Elders Point* is comprised of two separate islands (*Elders Point East* and *Elders Point West*) that total approximately 21 vegetated acres. Originally one island comprised approximately 132 acres, the loss of marsh in the center portion severed the two ends, resulting in two separate islands connected by mudflats. The restoration plan for *Elders East* and *Elders West* includes restoring the existing vegetated areas and sheltering the exposed mudflats by placing fill material up to an elevation that is suitable for low marsh growth. This includes hand planting over 700,000 plants on *Elders East* and replanting more than 200,000 plants on *Elders West*. On *Elders East*, saltmarsh codgrass will be planted throughout the low marsh zone of the site. A mixture of saltmarsh codgrass, salt hay, and spike grass will be planted in the elevation zones between the low marsh and upland. Fill material will be placed between the existing vegetation in such a manner as to avoid damage to the existing vegetation. A no-planting area covering approximately five acres on the southeast side of *Elders West* will be established to evaluate project progress. Saltmarsh codgrass will be planted throughout the remainder of the site. In 2006, seed for the replanting was collected, processed and stored in facilities operated by the NRCS. The seed was germinated and grown and planting has begun at *Elders Point East*. To facilitate planting at *Elders Point West*, additional seed is currently being collected, processed and stored for planting next spring. The NRCS is overseeing the growing at their Plant Materials Centers in Cape May, New Jersey; Beltsville, Maryland; Lansing, Michigan; and Alderson West Virginia. In March 2006, the U.S. Army Corps of Engineers awarded a \$13 million contract for the *Elders Point East Island Restoration* in Jamaica Bay, N.Y., to Galvin Brothers of Great Neck, N.Y. To re-countour *Elders Island*, the U.S. Army Corps of Engineers is pumping more than 300,000 cubic yards of sand that was dredged from various channels in the harbor. Once tidal flow to the areas has been reestablished, water and sediment quality will be improved, promoting the return of native fish and wildlife.

Current Land Use: GNRA.

Available Habitat:

Proposed Project:

Projected/Estimated Costs: *Elders West Salt Marsh:* It is expected to cost \$11.5 million, with 65 percent of the cost borne by the federal government and 35 percent divided between the State of New York and the City of New York. Included in the federal cost share are about \$3.9 million in federal stimulus funds.

Project Status: *Construction complete:* In September 2009 the U.S. Army Corps signed an interagency project partnership agreement to restore the *Elders West* salt marsh. Partner agencies are The Port Authority of New York and New Jersey; U.S. National Park Service, the State of New York Department of Environmental Conservation, and the New York City Department of Environmental Protection. Construction began in November 2009. The project beneficially utilized about 200,000 cubic yards of clean sand from the ongoing New York-New Jersey Harbor 50 ft. deepening project to restore about 35 acres of low and high marsh habitat in Jamaica Bay

Partners: USACE, PANYNJ, NPS (*Gateway*), NYCDEP, NYSDEC, NRCS, HEP.

Project Contact: Mark Lulka, Project Manager, Harbor Programs Branch, Programs and Project Management Division

Phone: (917) 790–8205

Website: mark.f.lulka@usace.army.mil

Project Funding Source:

HEP Ratification Date:

REFERENCES:

USACE fact sheet- www.nan.usace.army.mil/project/newyork/factsh/pdf/elders.pdf

DRAFT

CRP SITE 626. 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.

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:

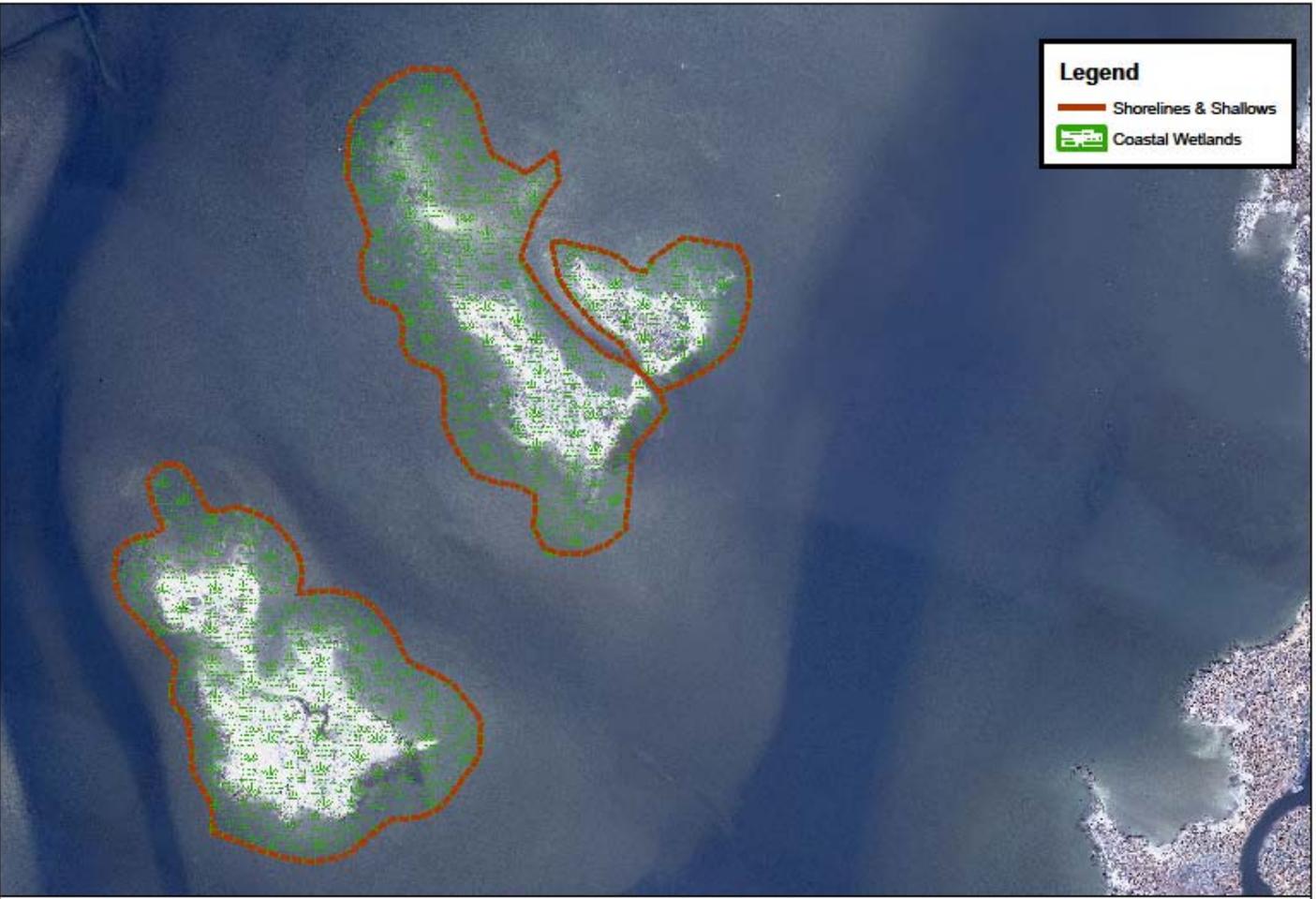
I. Restoration Remediation and Design Plans:

***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.

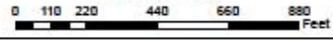


Legend

- Shorelines & Shallows
- Coastal Wetlands


US Army Corps
of Engineers
New York District

Pumpkin Patch Marsh
Jamaica Bay



DRAFT

CRP SITE 627. 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.

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.

Legend

-  Shorelines & Shallows
-  Coastal Wetlands



Stony Creek Marsh
Jamaica Bay



DA

CRP SITE 628. ROCKWAY 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

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.

CRP SITE 631. FRANK CHARLES PARK

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

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 – Addition of complex structure to 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



Legend

- Public Access Line
- Enclosed & Confined Water
- Shorelines & Shallows

Habitat Area

- Coastal Wetlands
- Fish, Crab, Lobster
- Coastal & Maritime Forest



Frank Charles Park
Jamaica Bay



DRAFT

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:

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.

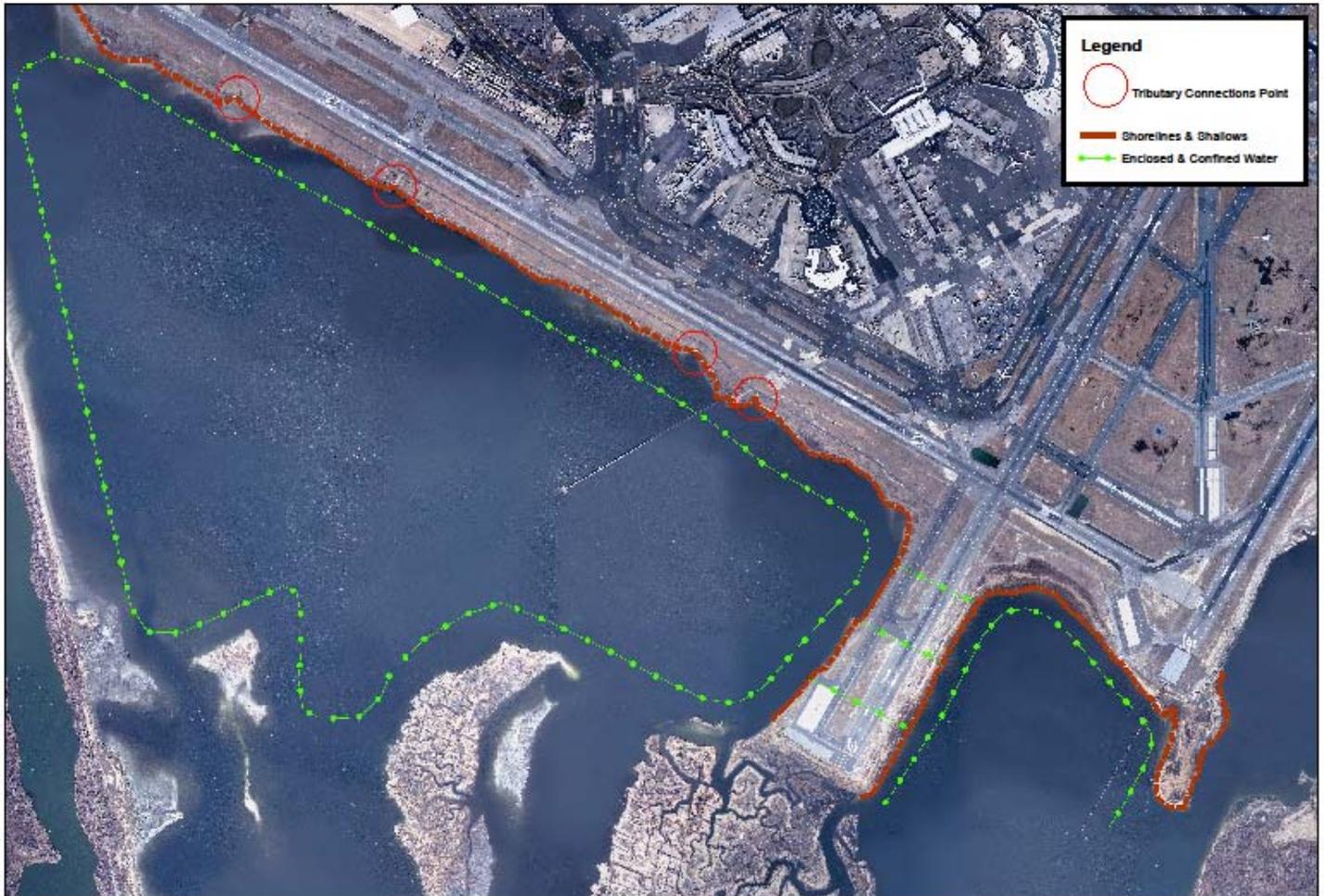
H. Historical and Cultural Resources:

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.

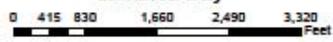


Legend

-  Tributary Connections Point
-  Shorelines & Shallows
-  Enclosed & Confined Water


US Army Corps
of Engineers
New York District

Grassy Bay
Jamaica Bay



DK

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.*

Available Habitat:

Proposed Project:

Projected/Estimated Costs:

Project Status:

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 – Addition of complex structures to approximately 1 acre of existing mudflats to increase habitat connectivity.

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:

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:

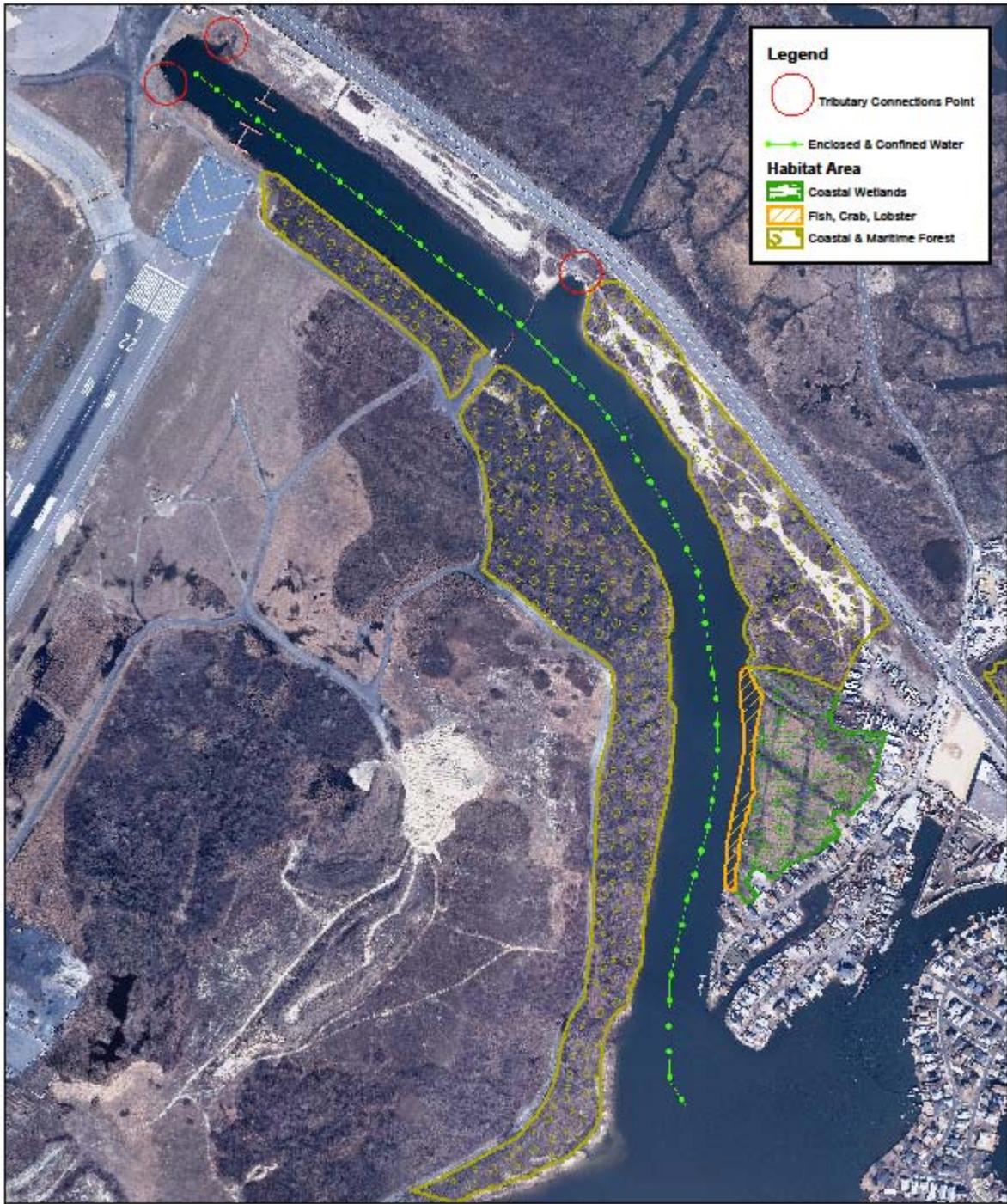
H. Historical and Cultural Resources:

I. Restoration Remediation and Design Plans:

***Work in progress**

References:

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



Legend

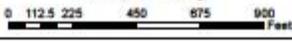
-  Tributary Connections Point
-  Enclosed & Confined Water

Habitat Area

-  Coastal Wetlands
-  Fish, Crab, Lobster
-  Coastal & Maritime Forest


 US Army Corps
 of Engineers
 New York, United States

Thurston Basin
 Jamaica Bay



CRP SITE 638. 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.*

Available Habitat:

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.

Legend

- Shorelines & Shallows
- Coastal Wetlands



Silver Hole Marsh
Jamaica Bay



DA

CRP SITE 646. BINNENWATER

A. HARBOR ESTUARY PROGRAM SITE INFORMATION

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

Location: 0.25 miles west northwest from the corner of Parkside Avenue and Ocean Avenue Brooklyn, NY.

Watershed: Jamaica Bay

Size:

Ownership: NYC DPR

Site Description: *Binnenwater is a section of the waterway in Prospect Park, adjacent to the Ravine district that borders the Nethermead. Originally designed as an open-air reflective pool just downstream from the Ravine, the Binnenwater had become a slow-moving swampy channel overgrown with dense thickets.*

The restoration of the Ravine, Binnenwater, and surrounding woodlands, as part of the Prospect Park Alliance 25-year restoration plan, began in 2000. Restoration included soil stabilization and replanting techniques to prevent further destruction. In total, the Alliance planted approximately 10,000 trees, 10,000 shrubs, 200,000 herbaceous plants, and 30,000 aquatic plants.

Erosion-fighting methods include cribbing (pegged logs placed along slopes to prevent the soil from moving) and the installation of coarse erosion blankets called "coirs" that hold the soil in place and allow new plantings to take root. Also, portions of the waterway have been dredged to remove the excess sediment that blocks the flow of water and restore the shape of the stream bed to its original design. The Ravine's shrunken pools were excavated to remove invasive phragmites (giant reeds that crowd out a range of ecologically important aquatic species) and replanted with a range of flora that supports the area's wildlife. In 2002, the Ravine I section was permanently reopened.

Current Land Use:

Available Habitat:

Proposed Project:

Projected/Estimated Costs:

Project Status: Construction completed in 2004.

Partners:

Project Contact:

Phone:

Website:

Project Funding Source:

HEP Ratification Date:

REFERENCES:

http://www.prospectpark.org/visit/history/historic_places/h_ravine

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:

Available Habitat:

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
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>

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. The only freshwater flow is from a CSO located at the head of the creek and from storm water discharges. The ecological problems at Fresh Creek are; poor benthic habitat, fills deposited on historic wetlands, presence of extensive areas of nonnative, invasive plant species, presence of a combined sewer overflow at the head of the basin, poor water quality at the head of Fresh Creek, straightened and deepened creek with no finger tributaries. The invasive plants common reed (*Phragmites australis*), mugwort (*Artemisia vulgaris*), and (*Ailanthus altissima*) cover 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*

Available Habitat: *Salt marsh*

Proposed Project:

Projected/Estimated Costs: \$31,243,922

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 - The head of the basin could be filled to create tidal marshes and creeks. This could include approximately 15 acres of low marsh with 2 acres (2,339 feet) of creeks and pools and 2 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 - Recontouring 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. CSO abatement.

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

Public Access – Support 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 (See hydroqual for data)

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_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 Recommendation



Legend

- Shorelines & Shallows
- Tidal Creek
- Enclosed & Confined Water

Habitat Area

- Coastal Wetland - Low Marsh
- Coastal Wetland - High Marsh
- Coastal & Maritime Forest
- Coastal & Maritime Forest - Shrub


 US Army Corps
 of Engineers
 New York District

Fresh Creek
 Jamaica Bay

0 125 250 500 750 1,000 Feet



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: *Commercial; Recreational; Municipal; Parkland and Open Space.*

Available Habitat:

Proposed Project:

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

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 - 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 - Addition of complex habitat to the approximately 10 acres of existing mudflats will increase habitat connectivity.

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:

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 (*Hydroqual has several data reports on this site*).

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.

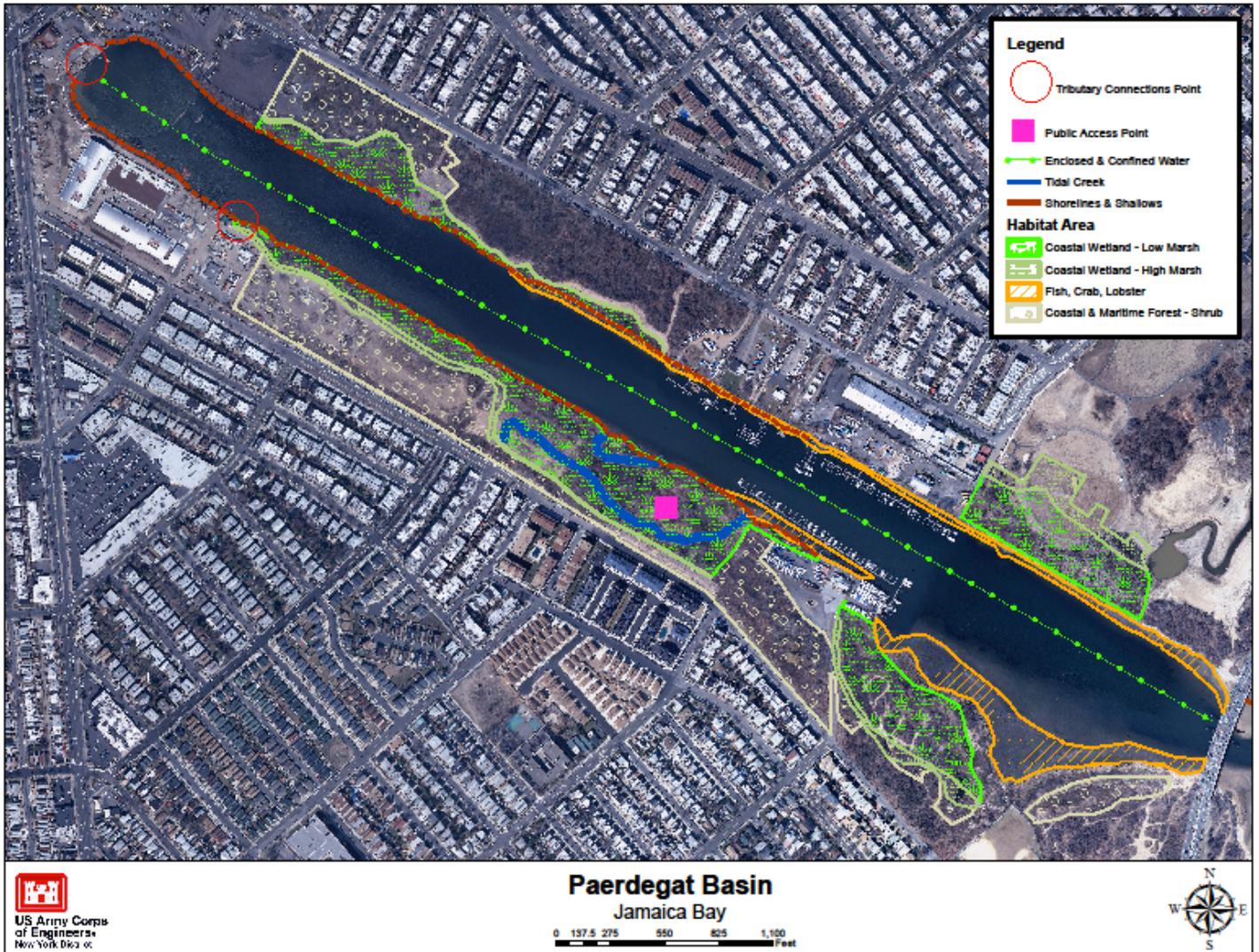
NYC Parks- http://www.nycgovparks.org/sub_your_park/historical_signs/hs_historical_sign.php?id=12478

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



DRAFT

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

Ownership: US Department of the Interior, NPS, 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 fills, 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, invasive plant species.

Current Land Use:

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.*

Proposed Project:

Projected/Estimated Costs: \$66,718,398

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 – 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 29 acres of low marsh, 4 acres of creeks (4,122 feet), and 3 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 22 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, complex structure can be added to up to 19 acres of existing mudflats and shallow water habitat to increase connectivity.

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:

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. 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_about/parks_divisions/nrg/forever_wild/site.php?FWID=24

