

Comprehensive Conservation and Management Plan Actions Habitat

H-1. Develop a comprehensive regional strategy to protect the Harbor/Bight watershed and to mitigate continuing adverse human-induced impacts.

Key Elements: HEP will develop a regional strategy to protect habitats in the Harbor/Bight watershed. The transfer of information and management tools will enhance and encourage watershed planning and habitat conservation throughout the region.

Description of Activities to Date

The HEP Habitat Workgroup has been working closely with the USACE on the development of the Hudson Raritan Estuary (HRE) restoration efforts, which included the preparation of a Comprehensive Restoration Plan (CRP) for the HRE. The CRP is a master plan guiding ecosystem restoration efforts throughout the Estuary. This Plan has been prepared as a collaborative effort among many agencies and organizations (including the PANYNJ [local sponsor], HRF, and Cornell University) as a part of the USACE HRE Environmental Restoration Feasibility Study. The CRP identifies 11 measurable objectives for restoration, termed Target Ecosystem Characteristics (TECs), each of which defines specific goals for an important ecosystem property or feature that is of ecological and/or societal value (e.g., coastal wetlands, sediment quality, and public access). As part of this effort, hundreds of sites have been identified where restoration and/or public access opportunities exist. These sites have been cataloged and included in HEP's New York City Open Accessible Space Information System (NYC OASIS, www.oasisnyc.net). GIS and other tools are being used to guide planning efforts.

Planned Activities: The CRP is expected to be released to the public shortly in 2009. This living document is meant to be updated as projects are implemented so that lessons learned can be incorporated for the use and understanding of all stakeholders. HEP, USACE, PANYNJ and other partners will focus their efforts in identifying funding sources to implement the CRP. The USACE will continue to participate in the development of HEP regional strategies in concert with other agencies, and in response to new environmental restrictions imposed on USACE construction activities to reduce adverse impacts. In addition, the USACE and the PANYNJ will continue the evaluation of restoration opportunities during the Feasibility Study with expected completion in 2010.

(Needs and Opportunities Report, USACE, 2003, HEP Office 2004, USACE 2004, USACE—Lisa Baron, 2009, PANYNJ 2009)

NYC Department of City Planning's NYC Waterfront Revitalization Program is a comprehensive regional program for the NYC-region waterfront. This program is a coastal zone management tool that establishes the city's policies for development and use of the waterfront. More information can be found at <http://www.nyc.gov/html/dcp/html/wrp/wrp.html>. (NYS DOS & HEP Office 2004, HEP Office 2009)

H-2. Control point and non-point loadings of pollutants

Key Elements: The control of inputs of pollutants will improve conditions by enhancing water quality and fostering the overall health of the regional coastal ecosystem. This objective expands the pollution reduction actions by addressing human-induced increases in turbidity and sedimentation in the Harbor and Bight. This objective also includes an emphasis on utilizing natural drainage features and functions, rather than more expensive sewer infrastructure, to ensure that surface water runoff associated with development is minimized.

Description of Activities to Date

The monitoring and most of the analysis has been completed on the NJ Pilot Project that minimized sediment export from the Whippany River Basin. Project was extended until early 1999 to complete summary report. (NJDEP- obtained from HEP tracking files)

NYS Clean Water Clean/Air Bond Act grant of \$850,000 to support NYC Dept of Parks and Recreation effort (total cost \$1.7 million) to restore freshwater wetlands and stabilize banks along the Bronx River to reduce sediment to the Hudson Estuary. Additional Clean Water/Clean Air Bond grants totaling \$125,000 for two projects that will stabilize stream banks, establish buffer zones and plant vegetation for erosion control along Minisceongo Creek in Rockland Co. (total cost \$1.4 million). In addition, NYCDPR is conducting similar restorations at several sites around the Harbor utilizing \$150,000 of EPA Exxon Valdez settlement funds. These sites include the sites mentioned above, as well as Paerdegat Park, Forest Park, Pelham Bay Lagoon, Dreir-Offerman Park and Inwood Hill Park. (NYSDEC- obtained from HEP tracking files). The NFWF has provided funds for the restoration of tidal salt marsh in Pelham Bay Park. NOAA Restoration Center funded the restoration, protection and planting of river banks along the Bronx River (HEP Office 2008).

Several salt marsh restoration, bio-remediation, and non-point source pollution reduction projects have been designed and implemented collaboratively by NYC Parks, NYCDEP, NJDEP, NYSDOS, in conjunction with several advocacy organizations including Audubon, Trust for Public Land, and NY/NJ Baykeeper. Project locations include: Arthur Kill, Saw Mill / Old Place Creek, and the Rahway River, Jamaica Bay and others. (NYSDEC- obtained from HEP tracking files)

NYCDEP is investing in stream corridor and wetland acquisitions and other watershed protection actions in the Staten Island Bluebelt, in conjunction with limited storm sewer infrastructure. This ongoing action supports the incorporation of natural systems into traditional infrastructure programs and reduces sediment inputs. (NYCDEP 2003)

Through its Stewardship Grants Program, HEP has funded a project to preserve shorelines in The Bronx and Manhattan by planting trees and plants and removing invasive species in several parks and other areas. (HEP Office 2009)

HEP, in partnership with the NJ SeaGrant and the NJMSC funded the installation of 4 rain gardens in NJ (see E-6). (HEP Office, 2009)

Hudson River Park created 3 acres of upland habitat between a highway and the Hudson River in a previously paved area, thereby reducing highway runoff to the river. (Hudson River Park Trust, Kerry Dawson, 2008)

NYC, as part of its PlaNYC sustainability efforts, is working on implementing its Sustainable Stormwater Management Plan to reduce point and non-point source water pollution. This plan aims to rely heavily on source controls. (HEP Office, 2009)

H-3. Manage coastal development

Key Elements: The Coastal Zone Management Program, which is administered by the states, controls development in coastal regions. NY State has established a complementary program, the Coastal Non-point Pollution Control Program. These programs are the basis for better coastal zone management, ecosystem protection, and the achievement of development/redevelopment.

Description of Activities to Date

NY's complementary Coastal Nonpoint Program, approved by NOAA and EPA in December 2006, fulfills the requirements under Section 6217 of the Coastal Zone Act Reauthorization Amendments of 1990. The program sets out an effective approach to the management, public education and outreach regarding nonpoint pollution of coastal waters from stormwater runoff, agriculture, marinas, hydromodification, onsite wastewater treatment systems and other sources. (NYS DOS 2009)

NJ Department of Community Affairs established an Office of Smart Growth (OSG), which coordinates planning throughout New Jersey to protect the environment and guide future growth into compact, mixed-use development and redevelopment. The Office implements the goals of the State Development and Redevelopment Plan to achieve comprehensive, long-term planning; and integrates that planning with programmatic and regulatory land-use decisions at all levels of government and the private sector. A State Development and Redevelopment Plan was produced in 2001, which lays out planning policies for the state and designates areas for growth, limited growth, environmentally sensitive, and for conservation, that share common conditions with regard to development and environmental features. The State Plan Policy Map reflects these planning policies graphically (<http://www.state.nj.us/dca/divisions/osg/>)

NY State created the Quality Communities Initiative, which is designed to promote effective land development, preservation and rehabilitation programs at the local level. <http://www.qualitycommunities.org/index.asp>. This program was replaced in 2007 by the Smart Growth Initiative, which is designed to use smart, sensible planning to create livable communities, protect natural resources and promote economic growth.

(NYS DOS & HEP Office 2004, NYS Smart Growth <http://smartgrowthny.org/index.asp> 2009)

NYSDOS Division of Coastal Resources works towards revitalizing, promoting and protecting New York's communities and waterfronts. Some of the activities that the Division of Coastal Resources is involved in are (see also the Division's website at <http://www.nyswaterfronts.com>):

- Implementing the Federal Coastal Zone Management Act in NYS;
- Implementing New York Coastal Nonpoint Pollution Control Program;
- Developing local waterfront revitalization programs and harbor management plans;
- Protecting and restoring coastal habitats; and
- Preparing and implementing watershed management plans.

(NYSDOS & HEP Office 2004, NYSDOS 2009)

NYC Department of City Planning's NYC Waterfront Revitalization Program is a comprehensive regional program for the NYC-region waterfront. This program is a coastal zone management tool that establishes the city's policies for development and use of the waterfront. More information can be found at <http://www.nyc.gov/html/dcp/html/wrp/wrp.shtml>. (NYSDOS & HEP Office 2004, HEP Office 2009)

NJDEP Green Acres Program provides pass through funds for the purchase and management of land to provide open space, and ensure habitat protection. These funds are passed through to local groups. In 2003 NJDEP has spent over \$8.5 Million to acquire and restore 524 acres. These sites range from the Meadowlands to the Woodbridge Pin Oak Forest. Specifically, acreage in Cheesequake Marsh (A-RB13) (68 acres), and River Vale Township (A-HR7) (18 acres) in New Jersey were acquired through Green Acres funding as well as funding from other partners. (NJDEP 2003, 2004). This program is ongoing (HEP Office 2009)

NYS Open Space Conservation Plan uses the Environmental Protection Fund and the Clean Water/Clean Air Bond Act funds for the conservation of lands in NYS. The use of the Environmental Protection Fund and the Clean Water/Clean Air Bond Act funds are administered through a grant program by NYS agencies, such as NYSDOS and NYSDEC. See NYSDEC's Open Space website (<http://www.dec.ny.gov/lands/317.html>) and NYSDOS grant opportunities (<http://www.nyswaterfronts.com/grantopps.asp>) (NYSDOS & HEP Office 2004, HEP Office 2009)

The Coastal and Estuarine Land Conservation Program (CELCP) is a federal initiative established in 2002 to protect coastal and estuarine areas with significant conservation, recreation, ecological, historical, or aesthetic values. New York State's CELCP plan was prepared and adopted as part of the 2006 New York State Open Space Conservation Plan and approved by NOAA in 2007. New York's CELCP priorities are protecting tidal and freshwater wetlands, coastal floodplains, coastal erosion hazard areas, significant coastal fish and wildlife habitats, wild and scenic rivers, and lands suitable for providing coastal-based recreation and water-related access. The CELCP plan also establishes New York's priority coastal and estuarine waters as the Long Island marine district (Peconic Estuary, Long Island Sound, and the Long Island South Shore/Atlantic Ocean), the Hudson - Raritan Estuary, the Hudson River Estuary, the Great Lakes (Lake Erie and Lake Ontario), and the St. Lawrence River. Through 2008, New York State has received nearly \$11.8 million in federal CELCP funds for land acquisition projects. (NYSDOS 2009)

H-4. Manage shoreline and aquatic habitat modifications.

Key Elements: Human activities are directly responsible for shoreline and aquatic habitat modifications and degradation of important upland habitats. Such activities are regulated by both federal and state legislation as well as by local zoning and codes.

Description of Activities to Date

The USACE Regulatory Program reviews permit applications for dredging, and for construction of structures, placement of fill in wetlands and waters of the U.S. (USACE 2004)

There is an existing MOA between USACE and EPA that outlines each agency's enforcement responsibilities pursuant to Section 404 of the CWA. There is informal coordination with NYSDEC on potential tidal wetlands violations. EPA routinely informs DEC when they receive information about an alleged violation.

Planned Activities: Continued communication regarding potential 404 and State wetlands violations.

(USEPA 2004, USEPA—Daniel Montella 2009)

EPA has oversight authority for NJ's Assumed 404 Program, in which NJDEP was delegated USACE's freshwater wetlands regulatory authority. Most wetlands impacts under this program are authorized under one of NJ's general permits, which are usually limited to much less than 1 acre, with some very minor exceptions. (USEPA 2004, USEPA—Daniel Montella 2009)

In 2004, NYSDEC revised the State Freshwater Wetland Maps for northern Westchester County, which includes portions of the New York City Watershed. This is an amendment to the Freshwater Wetlands Act, Article 24 of the New York State Environmental Conservation Law. This law allows NYSDEC to regulate the State's freshwater wetland resources. The amendment includes the addition of previously overlooked and unmapped wetlands. 3,370 wetland acres were added in within the New York City Watershed portion of Westchester County, and 2,380 acres of wetlands were added right outside of the New York City Watershed. (HEP Office 2009)

NJDEP's Freshwater Wetlands Protection Act regulates upland buffers adjacent to wetlands. No change planned. (USEPA 2009)

NYS Coastal Management Program's consistency determination requires that State agencies comply with the policies for the State's coastal areas and an approved Local Waterfront Revitalization Program. A Coastal Assessment Form should be completed when a State agency decides to conduct an action that may affect the above policies. http://www.nyswaterfronts.com/consistency_state.asp (NYSDOS & HEP Office 2004, HEP Office 2009)

NYS Open Space Conservation Plan uses the Environmental Protection Fund and the Clean Water/Clean Air Bond Act funds for the conservation of lands in NYS. The use of the Environmental Protection Fund and the Clean Water/Clean Air Bond Act funds are administered through a grant program by NYS agencies, such as NYSDOS and NYSDEC. See NYSDEC' Open Space website (<http://www.dec.ny.gov/lands/317.html>) and NYSDOS grant opportunities (<http://www.nyswaterfronts.com/grantopps.asp>) (NYSDOS & HEP Office 2004, HEP Office 2009)

NYSDOS' Local Waterfront Revitalization Program is a locally prepared, land and water use plan and strategy for a community's natural, public, working, or developed waterfront through which critical issues are addressed. http://www.nyswaterfronts.com/aboutus_lwrp.asp (NYSDOS & HEP Office 2004, HEP Office 2009)

New York City Mayor's office, as part of their PlaNYC 2030 sustainability effort for the City, has recently released a report titled *New York City Wetlands: Regulatory Gaps and Other Threats*. The report analyzes threats to the City's wetlands stemming from regulatory gaps and/or current degraded conditions and explores options to protect wetlands. One of the main recommendations is to map currently unprotected wetlands (less than 12.4 acres).

Other ongoing efforts that protect City wetlands include: land acquisition, implementation of the comprehensive Jamaica Bay Watershed Protection Plan, implementation of the Sustainable Stormwater Management Plan, and revision of the City Environmental Quality Review Technical Manual.

An upcoming report will address policies for the adaptation of wetlands and other critical infrastructure to climate change and sea level rise. The City is also exploring alternative funding and other mechanisms for improved restoration and maintenance of wetlands.

(HEP Office, 2009)

H-5. Maintain healthy estuarine conditions by managing freshwater inputs.

Key Elements: Preservation of estuarine habitat requires maintenance of adequate freshwater flows to coastal waters. To protect estuaries, HEP recommends that the states recognize the impacts that upstream freshwater withdrawals, and other hydrologic changes, may have on salinity levels and consider these impacts in the states' water supply and wastewater processes.

Description of Activities to Date

The New York City Water Board offers a reduction of water and wastewater rates for buildings that recycle much of their water and reuse it for toilet flushing, irrigation and make-up water for evaporative cooling towers. See NYCDEP's water saving page http://www.nyc.gov/html/dep/html/ways_to_save_water/index.shtml.

Eastern Queens Alliance and Idlewild Park Preservation Committee, with support from the trustees of the Dissolved Oxygen Environmental Benefit Fund (DOEBF), will prepare a fully engineered plan to restore two acres of high marsh wetlands in a part of Idlewild Park Preserve. This project will restore the natural tidal flush of the area. (HEP Office 2009)

H-6. Minimize human disturbances of natural habitats.

Key Elements: HEP supports efforts to retain sufficient habitat areas free of human disturbance to perpetuate viable populations of coastal species, emphasizing protection for those recognized as threatened, endangered, or of special concern. HEP will promote a balance of competing interests for the overall good of the general public and the natural ecosystem.

Description of Activities to Date

In reviewing applications for regulatory permits, minimizing potential human disturbance is a consideration. This will be a part of the USACE continuing implementation of its Environmental Operating Principles (EOPs). (USACE 2004, USACE—Peter Wepler 2009)

NYSDOS designates some coastal areas as Significant Coastal Fish and Wildlife Habitats. NYSDEC evaluates the significance of coastal fish and wildlife habitat areas. These areas will be protected, preserved, and restored if necessary to maintain their viability as habitats. http://www.nyswaterfronts.com/consistency_habitats.asp (NYSDOS & HEP Office 2009)

Beach nesting and coastal species are protected through the USFWS's Coastal Ecosystems Program. The goal of the programs is to reduce the negative impacts of human activities on the coast. Aspects of the Coastal Ecosystem Program are:

- inventory and assess the status of coastal habitats and their living resources
- identify and assess threats to these habitats and living resources
- develop regional or estuary-wide partnership strategies to protect, restore, and enhance habitats and living resources
- coordinate and facilitate the implementation of these strategies
- promote public awareness of the value of coastal habitats and living resources, the threats they face, and the opportunities available for the public to become involved in finding solutions

<http://www.fws.gov/r5snep/Our%20Work.htm> (HEP Office 2009)

H-7. Preserve and improve fish, wildlife, and plant populations and biodiversity

Key Elements: A number of federal and state agencies have a basic authority to manage species populations and habitat. NY State has established the Biodiversity Research Institute, which is the development of a statewide database for fish and wildlife populations. NY and NJ maintain full compliance with fisheries management plans approved by the Atlantic States Marine Fisheries Commission. There are other programs being conducted by the states, such as the Natural Heritage Programs.

Description of Activities to Date

The Draft HRE CRP outlines targets and goals for restoring a mosaic of Coastal Wetlands, Fish, Crab and Lobster habitat, Oyster Reefs, Eelgrass beds, Waterbirds, Maritime Forests habitats, and Tributary Connections in support of H-7. The CRP outlines restoration opportunities for the improvement of these habitat types, populations and biodiversity. See CRP description in H-1. (USACE—Lisa Baron 2009, PANYNJ, 2009)

Hackensack Riverkeeper is working with their consultant TRC Omni to conduct a Feasibility Study for the fish ladder installation at the Oradell Dam, which is a HEP Priority Restoration site (R-HR4). The Feasibility Study is being funded by American Rivers, a NOAA grant. The water company is also involved because they are conducting a dam safety study. (Hackensack Riverkeeper 2004)

As part of EPA's oversight of NJ's freshwater wetlands protection program, an annual review is conducted to ensure that the state's program is at least as stringent as the federal wetlands program. (USEPA 2004)

The USACE initiated coordination with the States to place rock from federal deepening projects at reef sites. The Atlantic Beach Artificial Reef (NY) and the Sandy Hook Artificial Reef (NJ) have both been enhanced by the placement of the rock portion of suitable dredged material that is used beneficially. The Shark River Reef, NJ and the Axel Carlson Reef, NJ will both be supplied approximately 15,000 cubic yards of dredged material or at a similar permitted ocean artificial reef. (USACE 2004, USACE—Peter Wepler 2009)

H-8. Increase appropriate public access

Key Elements: There is a public demand for open space opportunities along the coastline. Providing public access can meet this need while building a constituency for enhanced protection of natural habitat and species populations. HEP supports maintaining a balance between the needs and opportunities for public access and the requirements for sustaining living resources.

Description of Activities to Date

In 2001, the NY/NJ Baykeeper held a Public Trust Doctrine Conference. The Public Trust Doctrine states that all of us have a right to access and use the waterfront for traditional purposes such as navigation, commerce, and fishing. <http://www.nynjbaykeeper.org/> (HEP Office 2004)

Metropolitan Waterfront Alliance (MWA) has created a series of water access maps for the Harbor. MWA has created a map for the Lower Hudson and the East and Harlem Rivers. 9,410 maps were distributed of the Lower Hudson and there are 92 access points located in that area. 8,475 maps of the East and Harlem Rivers and there are 93 access points on those two rivers. (MWA 2004, HEP Office 2004)

MWA and the NY/NJ Baykeeper received a HEP grant in 2004 to refine the baseline information on waterfront access points throughout the estuary. MWA recently completed this task and worked in collaboration with the Open Accessible Space Information System (OASIS) mapping project to integrate this with the other OASIS datasets. This comprehensive map allows viewing how waterfront access is related to transportation, wetlands, parks and other features and it is publicly available at http://www.oasisnyc.net/OASIS_Waterfront_Access_2006.htm. This information will be used for the HEP Targets and Goals and it will also be used to encourage and track improvements in access in areas that are underserved. This database was also utilized in the HRE CRP to identify existing public access locations and potential restoration opportunities. The overall target and goal for the CRP was that all waters in the HRE are accessible within a short walk or public transit trip. (HEP Office 2009; Roland Lewis, MWA 2009, USACE—Lisa Baron 2009, PANYNJ 2009)

MWA investigated the process for development of estuary signs around the Harbor under a 2003 HEP grant. This also included navigating the permit process. MWA is working with the Port Authority to have signs posted on Port Authority crossings. (HEP Office 2004)

HEP awarded a mini-grant to the New York Restoration Project in 2004 for the construction of a boat launch and boat storage facility on the Harlem River in Roberto Clemente State Park in the South Bronx. A 2008 HEP stewardship grant to the Sebago Canoe Club will fund the replacement of a boat ramp at Paerdegat Basin Park, increasing public access and handicap accessibility to the Brooklyn waterfront (HEP Office 2009)

HEP awarded a mini-grant to the Monmouth County Planning Board in 2003 to mark bridges on county roads with signs that identify the stream that it crosses as well as the watershed and drainage basin in which it is located. These signs will increase public awareness and concern for the waterways in the Metropolitan Region. They will also be distributing the “Stream Corridor Protection” *Eco-Tips* brochure that they published in 2001 and will be reprinting in 2003. It discusses non-point source pollution, preventing erosion, and establishing stream buffers. (HEP Office 2004)

Under the NYSDOS Environmental Protection Fund Local Waterfront Revitalization Program (EPF LWPR), NYC was awarded \$2.2 million in 2003 for waterfront projects, primarily public access and interpretation as well as some habitat restoration and monitoring. The EPF LWPR has continued to fund public access projects, including the Brooklyn Waterfront Greenway and the Waterfront Catalyst Program. (NYSDOS 2009; Nancy Welsh, NYSDOS, 2009)

NJDEP Coastal Management Office oversees the development of the Hudson River Waterfront Walkway in NJ and is currently working to bring attention to its success.

Planned Activities: NJDEP Coastal Management Office plans on helping interested organizations carry out activities along the walkway and is exploring a collaboration with HEP CAC.

(HEP Office 2009)

H-9. Increase public education, stewardship, and involvement on issues related to management of habitat and living resources.

Key Elements: Public education is important to habitat protection because it provides an understanding of the human link to the regional ecosystem and the responsibilities that people have for maintaining that ecosystem. The public has actively promoted wise stewardship of living resources and is seeking constructive opportunities for personal involvement.

Description of Activities to Date

The EPA Region 2 Wetlands has been keeping a website officially since March 2004 (<http://www.epa.gov/region02/water/wetlands/>). (USEPA 2009)

The New York City Environmental Fund was established in 1994 by the NYSDEC and the Hudson River Foundation to foster active community stewardship of waterways, shorelines, parklands and open spaces in and around New York City. Since 1997, the Fund has granted more than \$9 million to around 300 organizations from every borough of New York City and parts of Westchester County. More details and a list of awarded grants can be found at <http://www.hudsonriver.org/nycef/>. (HEP Office 2009)

In addition to the federal, state, and contract workers, the National Park Service in 2003 involved volunteers in the restoration of Big Egg Marsh in Jamaica Bay. (HEP Office 2004)

Under the NYSDOS Environmental Protection Fund Local Waterfront Revitalization Program, NYC was awarded \$2.2 million in 2003 for waterfront projects, primarily public access and interpretation as well as some habitat restoration and monitoring. Projects funded by the EPF LWRP often include community involvement, such as community-based planning and research on alternative shoreline treatments funded through “Designing the Edge” and community visioning through the “Waterfront Catalyst Program” (NYSDOS 2009)

The HEP Habitat Workgroup has formed a listserv that provides meeting announcements and information regarding issues about habitat and living resources. This listserv has become a way for groups to promote stewardship and involvement. (HEP Office 2009)

NYC Audubon and NJ Audubon conduct Harbor Herons Surveys that engage volunteers to monitor wading birds populations, track the location of their colonies, and determine the importance of different foraging areas. This helps create a community of informed stewards that advocate on behalf of wading birds and their nesting and foraging sites. (HEP Office 2009)

H-10. Complete ongoing research and initiate special studies on habitat issues.

Key Elements: The CCMP contains recommendations and commitments to maintain, preserve, and restore habitat and living resources based on our current understanding and knowledge of the regional ecosystem. HEP recognizes that this understanding must be supplemented by additional studies. Continued inventory and monitoring efforts will serve as a critical link to allow for an adaptive management approach to habitat improvement.

Description of Activities to Date

The HRE CRP identifies available data and research needs for restoration opportunities for each of the 11 Target Ecosystem Characteristics. It is the intent of the HRE CRP to highlight and further advance these research studies necessary to improve the successful implementation of restoration opportunities identified in the CRP. See H-1 for CRP description. (USACE—Lisa Baron 2009, PANYNJ 2009)

The USACE completed a fish-tagging study, which is a multi-year ongoing effort to assess the residence time of Winter Flounder and Sea Bass in the NY Bight. The findings will be utilized to update the EPA’s criteria for determining what dredged material from the port is environmentally safe to place in the HARS. (USACE 2004, USACE—Peter Wepler 2009)

HEP funded an intern to develop GIS polygons of the 160+ sites on the habitat acquisition and restoration list. This information was then integrated into the OASIS website. (HEP Office 2009)

In March 2004, the National Park Service held a scientific symposium and public forum, *Jamaica Bay's Disappearing Marshes*. The symposium highlighted ongoing research, local and international perspectives and future restoration plans. (HEP Office 2004)

The Habitat Workgroup put together a white paper titled Draft Recommendations for Improving Compensatory Habitat Mitigation in the NY-NJ Harbor Estuary. <http://harborestuary.org/pdf/DraftMitigation.pdf> (NYS DOS 2004)

H-11. Identify significant coastal habitats warranting enhanced protection and restoration

Key Elements: Identifying significant coastal habitats are important to HEP. The USFWS has produced a report that identifies significant coastal habitats warranting special protection, summarizes their conservation status, and presents recommendations for their preservation and restoration. HEP recognizes the importance of conserving habitats of local significance as well as regional.

Description of Activities to Date

The Draft HRE CRP presents the consolidated list of opportunities identified in OASIS for both acquisition and restoration sites. These sites/restoration opportunities within the HRE will be evaluated further during the feasibility phase of the HRE Restoration Feasibility Study. See H-1 for CRP description. (USACE—Lisa Baron 2009, PANYNJ 2009)

USFWS has prepared a report on regionally significant coastal habitats warranting special protection. The USFWS report is the *Significant Habitats and Habitat Complexes of the New York Bight Watershed*. (HEP Office 2003)

The NJ Division of Fish and Wildlife's Endangered and Nongame Species Program (ENSP) began the NJ Landscape Project in 1994. It is a pro-active, ecosystem-level approach for the long-term protection of imperiled species and their important habitats in New Jersey. The goal of the program is to protect New Jersey's biological diversity by maintaining and enhancing imperiled wildlife populations within healthy, functioning ecosystems. <http://www.nj.gov/dep/fgw/ensp/landscape/> (HEP Office 2009)

HEP Priority Acquisition and Restoration Sites have been mapped and identified on OASIS web-based interactive map (http://www.oasisnyc.net/hep_map.htm). The map is updated as new sites are identified. The database is currently undergoing a major update and redesign as well as consolidation with sites identified by the USACE. The Draft HRE CRP presents the consolidated list of opportunities identified in OASIS for both acquisition and restoration sites. These sites/restoration opportunities within the HRE will be evaluated further during the feasibility phase of the HRE Restoration Feasibility Study. See H-1 for CRP description. (USACE—Lisa Baron 2009, PANYNJ 2009, HEP Office 2009)

NYC Waterfront Revitalization Program recognizes Significant Natural Waterfront Areas and some other special areas. NYS also recognizes Significant Coastal Fish and Wildlife Habitats. (NYSDOS 2004, HEP Office 2009)

H-12. Develop and implement plans to protect and restore significant coastal habitats and impacted resources.

Key Elements: There are a number of geographically targeted efforts underway within the Harbor/Bight region that aim to promote coordinated and comprehensive planning, including the protection, acquisition, and restoration of natural habitats. A number of these efforts are taking place in areas such as Jamaica Bay, Hackensack Meadowlands, and along the Greenways to the Arthur Kill. The new CRP will guide and coordinate restoration efforts throughout the region.

Description of Activities to Date

A Comprehensive Restoration Plan (CRP) for the NY-NJ Harbor Estuary region has been developed and will be released shortly to the public. The CRP will serve as HEP's master plan guiding ecosystem restoration efforts throughout the Estuary and has been prepared by the USACE in close collaboration with many agencies and organizations. USACE is reaching out to the numerous local stewards to encourage using the CRP as the guiding tool for restoration efforts and is working to establish a centralized database to track progress as new sites are proposed and restoration projects are completed. See also CRP description under H-1. (USACE, Lisa Baron, 2009; HEP Office 2009)

USACE, in partnership with PANYNJ, constructed the following projects as part of the NY-NJ Harbor Deepening Project:

- Elders Point East Marsh Island Restoration – Beneficial Use of Dredged Material: Construction completed in 2007. Approximately 50 acres of salt marsh habitat were restored via the placement of approximately 300,000 cubic yards of dredged material.
- KeySpan Corporation in Staten Island, NY: Construction completed in 2007. Approximately nine acres of tidal marsh were restored.
- Joseph P. Medwick Park Restoration Project, NJ: Construction completed in 2007. Approximately 14 acres of tidal wetlands were restored.

(USACE 2004, USACE—Peter Weppler 2009)

The USACE is involved in habitat restoration projects for the following significant coastal habitats:

- Hudson River Habitat Restoration: prepared draft alternatives analysis for 3 sites- North & South Schodak Is., and Mill Creek. **Planned Activities:** Complete FS and negotiate Project Cooperation Agreement (PCA) with NYSDOS and DOS as co-sponsors.
- Jamaica Bay Restoration Plan (Environmental Initiatives): Alternatives analysis completed. **Planned Activities:** Complete FS focused on the restoration of the perimeter wetlands (permanently lost and impacted by extensive filling operations, and hardened and bulk-headed shorelines meant to stabilize and protect existing communities and infrastructure) and develop site plans for design work.
- Jamaica Bay Marsh Islands Ecosystem Restoration Study (Continuing Authorities Program [CAP]): Investigation of the chronic loss of marsh island wetlands and identification of marsh islands that can be restored by using dredged material to re-establish island elevation and replanting salt marsh vegetation. **Planned Activities:** Complete FS for Elders Point West Marsh Island Restoration and develop site plans for design work.
- Gerritsen Creek Ecosystem Restoration Project, NY (CAP): Report completed to improve the aquatic and coastal grassland habitats by improving tidal connectivity and removal of invasive vegetation. **Planned Activities:** Complete design work and initiation of construction anticipated in August 2009.
- Flushing Bay and Creek Restoration Study, NY (CAP): FS is ongoing and is evaluating potential restoration measures, including tidal and freshwater wetland restoration, removal of an earthen dike that restricts tidal flow, stabilizing shoreline, and debris removal. **Planned Activities:** Complete FS and develop site plans for design work.
- Lincoln Park West, NJ Ecosystem Restoration Study (CAP): FS is ongoing and is evaluating potential restoration measures, including the excavation and design of tidal creeks, reconnection of open water bodies to above-ground tidal channels, fill removal to return marsh elevation to inter-tidal range, and replanting with native marsh vegetation. **Planned Activities:** Complete FS and develop site plans for design work.
- Bronx River Restoration, NY: FS is ongoing and is presently a watershed restoration plan for the Bronx River Basin. Findings of the plan will identify potential restoration opportunities and aid in informing the site selection prioritization process. This plan will also identify key non-structural components of environmental restoration and maintenance operations and actions that would complement the proposed restoration actions. **Planned Activities:** Complete FS and develop site plans for design work.
- Soundview Park Ecosystem Restoration Study, NY (CAP): Alternatives analysis to restore aquatic ecosystem resources and adjacent upland habitat is completed. **Planned Activities:** Complete FS and develop site plans for design work.
- HRE Lower Passaic River Restoration Project, NJ: Alternative analysis and FS are ongoing. This joint CERCLA/WRDA Study includes the development of a comprehensive watershed-based plan for the remediation and restoration of the 17-mile river from Dundee Dam to the confluence with Newark Bay. The study will include an evaluation of potential restoration opportunities (pursuant to WRDA) and an analysis of the risk posed by the existing conditions of contamination (as required by CERCLA). A Lower Passaic River Comprehensive Restoration Plan will also be prepared as part of the FS. **Planned Activities:** Complete FS.
- HRE Hackensack Meadowlands Ecosystem Restoration Study, NJ: Develop a Meadowlands Comprehensive Restoration Plan (MCRIP). Identified opportunities to acquire and enhance significant wetland habitat, improve tidal flow and manage connectivity, monitor water quality, and develop a hydrodynamic model to address flood control and water quality improvement. **Planned Activities:** Complete FS and develop site plans for design work.
- HRE Liberty State Park, NJ Ecosystem Restoration Study: First Feasibility Report completed under the USACE HRE Study Authority. **Planned Activities:** Complete design work.

(USACE 2004, USACE—Peter Weppler 2009)

NYCDEP develops and implements appropriate landscape restoration plans for capital infrastructure construction projects that occur in regulated wetlands and NYCDPR parkland. (NYCDEP 2003)

The Blissenbach Marina (R-AK06) parcel (9.5 acres) was purchased through the Port Authority of New York/New Jersey's \$30 million fund to acquire and preserve ecologically valuable tracts of land around the agency's facilities on Staten Island and in other areas of New York. There is an additional \$30 million allocated for tracts in New Jersey. (HEP Office 2003)

Twelve acres of tidal wetlands were acquired at Old Place Creek (R-AK05) by NYSDEC and Trust for Public Land. (HEP Office 2003)

River Vale Township and NJDEP acquired 18 acres of uplands of the River Vale Township project (A-HR-7). (HEP Office 2003)

Through USACE and EPA dredged material management practices, dredged material suitable for ocean placement has been beneficially used for HARS remediation. This program is ongoing and will continue to provide suitable dredged material for placement at the HARS until the site is determined to be fully remediated. (USACE—John Tavolaro 2008)

USACE reviews projects in a regulatory framework for potential significant adverse effects on habitat, including coastal. Mitigation requirements support this goal where practicable. (USACE 2004)

Old Place Creek Tidal Wetlands Restoration, NY – As part of the Estuary Restoration Act of 2000, NYSDEC will reinstate tidal flow to a 25-acre remnant salt marsh that is currently isolated from the creek by a berm and overrun by non-native vegetation (Phragmites) (USACE—Peter Weppeler 2009)

USACE initiated ERRs for Spring Creek (Jamaica Bay) and Rahway River.

Planned Activities: Complete ERRs for both projects.

(USACE—Peter Weppeler 2009)

Under Section 104 of the Estuary Restoration Act of 2000, Congress has appropriated limited funds to the USACE to implement the Estuary Habitat Restoration Program as authorized by Title I of the Estuaries and Clean Waters Act of 2000 (Pub. L. 106-457). On behalf of the Estuary Habitat Restoration Council (Council), the USACE solicited proposals for estuary habitat restoration projects. Recommended projects must provide ecosystem benefits, have scientific merit, be technically feasible, and be cost-effective. Proposals were last solicited in 2007 for which Old Place Creek was selected for Estuary Habitat Restoration Program funding. (Note this is not a grants program). (USACE—Peter Weppeler 2009)

In 2003 NJDEP has spent over \$8.5 Million to acquire and restore 524 acres. These sites range from the Meadowlands to the Woodbridge Pin Oak Forest. NJDEP continues to acquire and restore valuable habitats in partnership with other agencies. (NJDEP 2004; HEP Office 2009)

NYCDEP provides significant wildlife habitat improvements as part of City landfill remediation projects.

Planned Activities: Ongoing project.

(NYCDEP 2003)

HEP started its Habitat Restoration Planning Grants program in 2006. Since then, HEP has awarded \$175,000 to develop conceptual plans for restoration sites that can then be utilized to more effectively seek restoration funds. HEP plans to continue this program. (HEP Office 2009)

Hendrix Creek/ Spring Creek (R-JB19) was awarded additional funding by NYCDEP and NYSDOS in 2002 for rehabilitation. (NYSDOS 2004)

Little Hell Gate Inlet (R-LI15) was awarded funding in 2002 and the conceptual designs were completed for re-establishment. Partners working on this site are NYCDPR NRG, Randall's Island Sports Foundation, and NYSDOS. (NYSDOS 2004)

Pugsley Creek (R-LI08) was awarded funding in 2002 for rehabilitation. Partners are NYCDPR NRG, and NYSDOS. Ongoing; bid documents and construction documents completed 2009. (NYSDOS 2004 and 2009)

Saw Mill Creek Harbor Herons Habitat (R-AK05) was awarded additional funding in 2003 for rehabilitation. Partners are NYCDPR NRG and USFWS NAWCA. Ongoing; restoration schematic completed November 2008. (NYSDOS 2004 and 2009)

Soundview/ Bronx River (R-LI10) was awarded funding in 2002 for rehabilitation. Partners are NYCDPR NRG and NYSDOS. (NYSDOS 2004)