



**US Army Corps
of Engineers®**
New York District

Hudson-Raritan Estuary



**THE PORT AUTHORITY
OF NY & NJ**

Ecosystem Restoration Study

May 2006

BUILDING A WORLD-CLASS ESTUARY

The Hudson-Raritan Estuary of New York and New Jersey is more than 42,000 square kilometers, making it one of the largest estuaries on the East coast. With more than 20 million residents living nearby, it is also one of the most urbanized, and home to the Port of New York and New Jersey, a major hub of commerce vital to the regional economy.

An estuary is defined as an area where fresh water from rivers mixes with the salt water of the sea. Fresh water is supplied to the Hudson-Raritan Estuary from its major tributaries: the Hudson, Hackensack, Passaic and Raritan Rivers, which drain major watersheds of New York and New Jersey. For almost 400 years, the estuary and its watershed have been transformed by industrialization and residential growth, resulting in adverse physical, chemical and biological impacts on both the waters of the estuary and its surrounding land. In 1999, Congress directed the U.S. Army Corps of Engineers (Corps) to conduct an



The Hudson-Raritan Estuary Study Area

Did you know?

The U.S. Fish & Wildlife Service estimates that 80 percent of the Hudson-Raritan Estuary's tidal salt marshes have been lost and an even greater percentage of its former vast expanse of 224,000 acres of freshwater wetlands is gone as well.

estuary-wide environmental restoration study throughout the New York and New Jersey estuary. This study, known as the Hudson-Raritan Estuary Ecosystem Restoration Study,

or simply the HRE Study, is co-sponsored by the Corps and the Port Authority of New York and New Jersey. The goal of the study is to develop a long-term Comprehensive Restoration Plan — or CRP — of environmental improvements that would help restore the ecological value and richness of this nationally important resource.

The term “world-class estuary” represents the collective vision by stakeholders of what should be the future of the Hudson-Raritan Estuary. It is the vision of the HRE Study that a fully functioning ecosystem can flourish along with a strong vibrant port, together providing a multitude of benefits to everyone who lives, works and visits the area.





Environmental Challenge

Comprehensive Restoration Plan

In 1987 the Harbor Estuary Program was formed as a result of the Environmental Protection Agency's designation of the Hudson-Raritan Estuary as an estuary of national significance. Under the National Estuary Act, the U.S. Congress mandated the preparation of a Comprehensive Conservation and Management Plan (CCMP) that describes the values and resources of such estuaries, documents the problems each face, and proposes corrective measures to address those problems in the watershed. Under the auspices of the

Did you know?

The Corps' Environmental Program reflects the lessons the nation has learned about the importance of re-establishing the natural functions of our nation's rivers, lakes, wetlands, and coasts. For more information visit:

<http://www.corpsresults.us/environment/default.htm>

Harbor Estuary Program, the CCMP was completed in 1996 and signed by the governors of NY and NJ, as well as by regional heads of the Federal agencies in the area. For more information on the Harbor Estuary Program and the CCMP, visit <http://www.seagrant.sunysb.edu/hep/>.

The HRE Study provides a vehicle to implement many of the CCMP recommendations. As part of the study, the Harbor Estuary Program Management Committee has agreed to adopt the HRE's Comprehensive Restoration Plan to map out the restoration opportunities that can contribute toward revitalizing the estuary and its ecological connectivity. This plan will essentially be a "master plan" that any group or organization can use to advance selected restoration initiatives.

The restoration of a system as large and complex as the Hudson-Raritan Estuary and its watershed is an undertaking that will depend on a multitude of agencies and groups working together. Partnerships need to be developed among government agencies, communities and environmental groups, and local governments that have a stake in the health of the estuary and seek to support its revitalization.

Balancing Port and Environmental Needs

Because the New York and New Jersey Harbor is a major shipping port and center of commerce, key navigation channels must be dredged to meet the Port's growing demands. As the nation's third largest container port, it indirectly and directly supports more than 230,000 jobs in the region. The challenge is to meet the navigational needs while maintaining the ecological integrity of the estuary.

Since 2004, two environmental roundtables were held to discuss efforts made toward restoring the estuary. Spearheaded by the Port Authority of New York and New Jersey and the Environmental Defense Fund, the roundtable consisted of many representatives of agencies and environmental stakeholder groups who gathered to share their thoughts and opinions on the status of ecological improvements in the estuary. The participants concluded that environmental improvements in the estuary have not kept pace with port and navigation improvements. To correct this imbalance and achieve the vision of a world-class estuary, the participants determined a need for common ground among all stakeholders on environmental restoration goals, objectives and commitments. To accomplish this, they would need to identify specific future restoration actions that all stakeholders would collectively support.

As a result of these meetings the Harbor roundtable chose to recognize the HRE Study and its ensuing products as the single, unifying plan for habitat restoration in the estuary. Having endorsed the HRE Study, Harbor Estuary Program committees and the round-

table members will be working closely with Corps and Port Authority to ensure the technical viability of the Plan through a joint coordination group.

Opportunities and Benefits

There is no question that the Hudson-Raritan Estuary is not as healthy as it once was. Everyone knows that natural habitats, wildlife richness, and water and sediment quality are inferior to what they once were. Fortunately the health of the estuary has improved in recent years through better management of pollution and land resources. But there is still much more that is needed. The HRE Study can help accelerate improvements to the overall health of the harbor by:

- ★ Identifying sites that can be improved immediately, like the Gowanus Canal and Bay, and the Lower Passaic River;
- ★ Reclaiming lost wetlands to increase vital habitat and species richness;
- ★ Restoring tidal flows to enhance fish and wildlife ecology;
- ★ Identifying opportunities for beneficial use of dredged material from harbor deepening, such as capping landfills, creating fish reefs, replenishing beaches, and restoring lost marshland and other shallow water habitats;
- ★ Identifying and managing contaminated sediments to improve sediment and water quality, and the habitats of sediment dwelling creatures; and



Environmental Potential



US Army Corps of Engineers®
New York District

What is a Stakeholder?

Stakeholders include the members of any organization or governmental entity, and individuals that have a stake in or may be affected by a given project. Stakeholders help to steer project development and execution with advice, information, and sometimes funding.

Who are the Stakeholders for the HRE Study?

We believe that everyone living within the watershed of the Hudson-Raritan Estuary shares a stake in its environmental health. We invite anyone interested in the HRE Study to find out more about the project and to become involved.

Who is involved in the HRE Study?

The Port Authority of New York and New Jersey is the non-Federal sponsor, sharing equally in the cost of the HRE study with the Corps. In addition, there are a number of agencies and organizations that are involved including:

The New York/New Jersey Harbor Estuary Program; New York City Department of Environmental Protection; New York City Department of Parks and Recreation; New Jersey Department of Environmental Protection; New York State Department of Environmental Conservation; U.S. Fish and Wildlife Service; NOAA Fisheries; National Park Service; and the Hudson River Foundation.



THE PORT AUTHORITY OF NY & NJ



- ★ Improving land and water use to enhance recreational opportunities and ecotourism, such as river walks, bike paths, nature trails, parks, boat launches, etc.

Currently, the Corps is working in collaboration with technical experts to determine the process of development and implementation of the Comprehensive Restoration Plan. The details of how the Comprehensive Restoration Plan will be developed and implemented will be presented in a publication that will be completed in the coming months. This publication will discuss the goals of the plan, the tasks to be performed to develop a technically viable plan, the necessary steps towards the plan's implementation, and how we'll measure and monitor success.

Getting Involved and Moving Forward

For this project to flourish, various agencies and community groups must work together. The following critical factors for project success are already in place:

- Strong public demand and an engaged environmental community;
- Supportive environmental laws and regulations;
- Congressional authority to implement restoration projects (although implementation funding is not in place);
- Established restoration objectives and strategies from the CCMP to guide the development of the Comprehensive Restoration Plan; and
- A Dredged Material Management Plan that emphasizes the beneficial use of dredged material, which includes habitat restoration, creation, and enhancement.

Getting Involved

Close coordination with stakeholders is essential for the HRE Study to move forward. Ways in which stakeholders can get involved include:

- ✓ Serve as non-Federal sponsors to co-fund a recommended site.
- ✓ Identify and secure appropriate resources on Federal, State and local levels.
- ✓ Raise support for the overall plan or individual components.
- ✓ Provide specific site recommendations for inclusion in the plan.
- ✓ Stay abreast of various interim studies.

The Hudson-Raritan Estuary is an exceptional resource that belongs to the people who live within the boundaries of its watershed. And through direct involvement in assembling key plan components, agencies, organizations and individuals may more favorably view a Comprehensive Restoration Plan as a guide. A firm commitment by stakeholders and organizations to collectively support restoration objectives can help move this study forward. The Corps is committed to working with its partners and stakeholders to develop a Comprehensive Restoration Plan designed to meet the restoration objectives of the Harbor Estuary Program's CCMP. Plan implementation will move the Hudson-Raritan Estuary toward the world-class estuary we all hope to achieve.

For more information about the HRE Study and the Comprehensive Restoration Plan and how you can become involved in the process, please contact Paul Sabalis from the New York District of the Corps at:
Paul.Sabalis@usace.army.mil.
You can also visit our project website at:
<http://www.nan.usace.army.mil/harbor/hre.htm>



View of Liberty State Park with Hudson-Raritan Estuary in the background