



A skimmer boat removes floating trash and debris from the water.

## PROTECTING CLEAN WATER

Water pollution can take many forms, including disease-causing microorganisms, toxic chemicals, excess nutrient levels, and floatable debris. HEP is working to improve water quality, focusing on preventing and reducing this pollution. These efforts will help ensure clean and safe waterways for New York and New Jersey's residents and wildlife, and for safe passage of commercial and recreational vessels. As citizens of the estuary, we all can take small actions as well, like cleaning after our pets and keeping streets litter-free.



Dredging operations are routine in the Ports of New York and New Jersey.

## MANAGING SEDIMENTS

Sediment is an essential and dynamic part of the estuary, directly affecting ecosystem health and the regional economy. Too much sediment input, increased by stormwater, smothers animals and plants living in the bottom of the estuary and increases the need for and cost of dredging. Too little sediment may not be enough to maintain wetlands. Contaminated sediments mean increased dredging costs, contaminated seafood, and the restriction of fisheries. HEP has prepared a Regional Sediment Management Plan to ensure that sediments support and sustain a healthy ecosystem and a robust regional economy.



A student holds a horseshoe crab during a field trip to the estuary.

## STEWARDSHIP AND EDUCATION

The estuary offers countless opportunities for enjoying outdoor family activities, relaxing, learning, and improving our surrounding environment. HEP supports efforts that encourage residents young and old to experience and appreciate the waterfront through activities such as kayaking, swimming, Eco-Caching, hands-on education, stormwater demonstration projects, and litter cleanup, increasing awareness and making good stewards of the harbor.



Boaters gather for the Sebago Canoe Club Invitational.

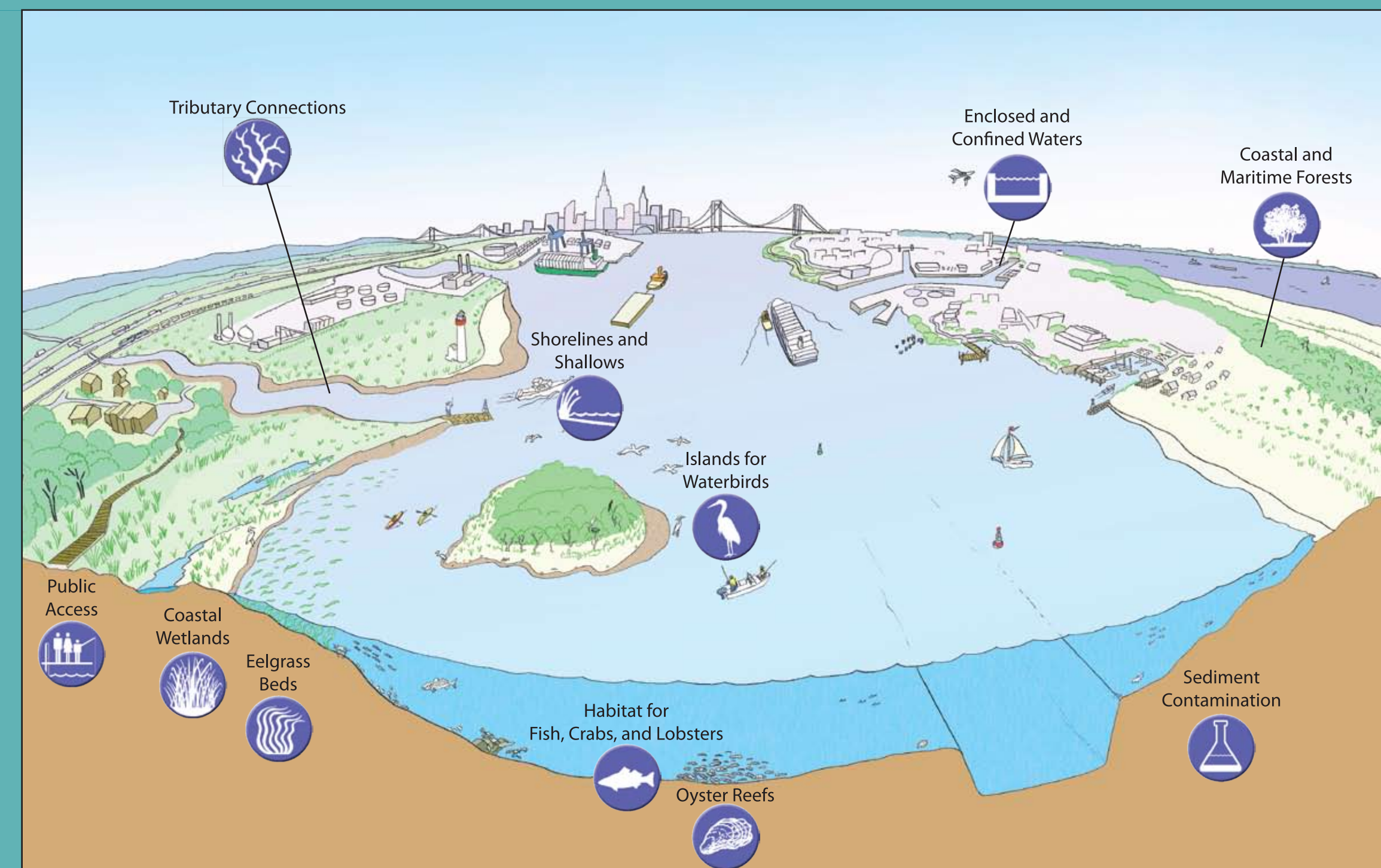
## PUBLIC ACCESS

Providing opportunities for residents to visit and interact with the water and natural benefits of the estuary improves the quality of life and health of our communities. To do this, HEP has supported the construction of small boat access, development of a water trail map, and public events such as the NY-NJ Baykeeper Eco-cruises, among many others that encourage us all to enjoy, use, and appreciate our public outdoor spaces.

## HABITAT PROTECTION AND RESTORATION

### AND RESTORATION

In addition to direct benefits to wildlife, restoration and protection of natural resources have many other benefits such as: revitalizing waterfronts at city centers; increasing opportunities for fishing, swimming, and kayaking; and keeping waterways clear for ship passage. In partnership with the NY-NJ Port Authority and the US Army Corps of Engineers, HEP has recently completed a draft master plan to improve habitat in the entire estuary, benefiting all its residents, including its people, plants, and animals. Some of this work has already begun, through projects such as removing barriers so fish can return to creeks and rivers, installation of experimental oyster reefs, and restoring wetlands. Our plan for future restoration is very ambitious and everyone's support is needed.



Eleven target ecosystem characteristics are focused on for restoration and protection.



Big Duck



Don Berger



Julie Larson/Milliken/WCS

## BACKGROUND

Estuaries are very special places where rivers meet the sea and salty water mixes with fresh water. Their unique characteristics make estuaries rich, productive and diverse ecosystems where many types of plants and animals live. People are drawn to estuaries because of their beauty, productivity, and because they are ideal locations for ship transport. It's no coincidence that Native Americans and early colonists chose estuaries for their settlements, and that these places became some of our oldest and most populated cities. The NY-NJ Harbor Estuary is no different and it is home to one of the most vibrant and economically important metropolitan areas in the country and the world. We use the estuary for fishing, boating, swimming, bird watching, and extract many benefits from these natural resources that bolster our quality of life and economy. This of course takes a toll on the very services that are directly or indirectly supporting our lives.

With increasing population and the coming of the Industrial age, habitat in the estuary began a steady path toward degradation. Significant actions such as the Clean Water Act and other environmental legislation have done much to bring the harbor back from the brink. Many ongoing problems and legacies from this industrial past and present have yet to be addressed. The New York-New Jersey Harbor Estuary Program (HEP) was established in 1988 to restore the resources we all share and depend on within the estuary, so that we can all experience and benefit from all of the resources our estuary has to offer.



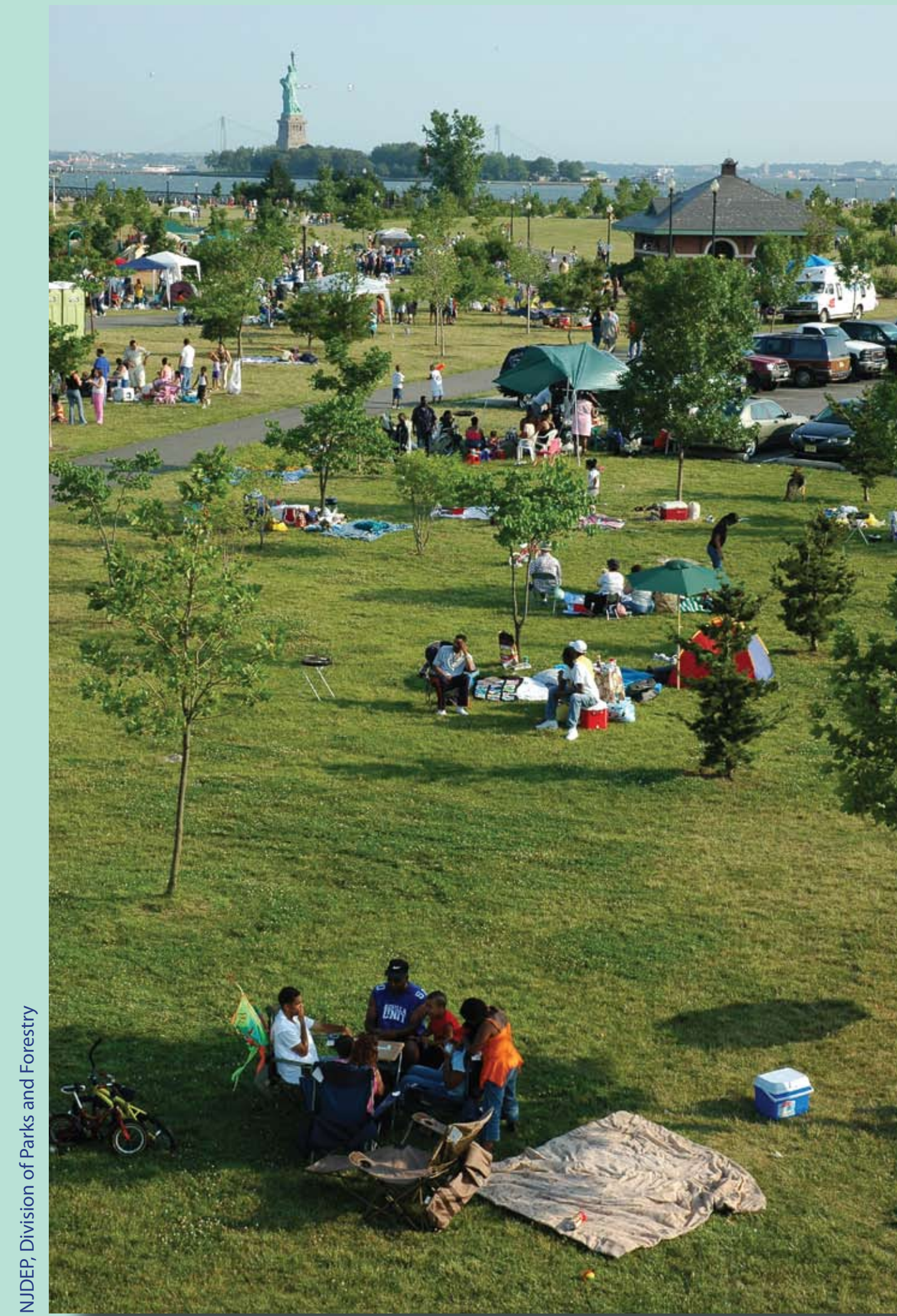
New York - New Jersey Harbor Estuary geographic scope and planning regions. Counties are outlined in blue.

## A WORKING WATERFRONT

Shipping, marine transportation and maritime businesses provide hundreds of thousands of jobs for New York and New Jersey communities. Our goal is to maintain a working harbor that is both ecologically and economically healthy. For example, improving sediment quality will reduce dredge material disposal costs and reducing floatable debris improves passage for vessels while having a positive impact in the environment.



The industrial edge of the harbor estuary provides many jobs.



Weekend picnics at Liberty Park in the sun.

## VIBRANT PUBLIC SPACES AND EDUCATION

Restored and protected areas can also be used as much needed public places for family activities, social interaction, playing sports, connecting with nature, and learning about our estuary. These public places help build healthier, stronger and more vibrant communities, benefitting surrounding families, businesses, and ecosystems with healthy environments for current and future generations.



Swimmers join in the Liberty Island Swim



Students explore healthy native oysters.

## CLEAN AND SAFE WATERWAYS, HEALTHY AND PRODUCTIVE HABITATS

Improving water quality in the harbor not only benefits the health of ecosystems but also creates more opportunities for outdoor recreation activities. In 2010, HEP supported the City of Water Day Festival, a public celebration of the world-class potential of the water that surrounds us and brings us together.

## PARTNERS



And many others, including: local and regional academic and research institutions, NOAA, USEPA, USFWS, NJDEP, NYSDEC, NJDOT, NYDS, NYC Mayor's Office, NYCDPR, NYCDEP, American Littoral Society, Brooklyn Botanical Gardens, Downtown Boathouse, Environmental Defense Fund, Going Coastal, Gowanus Canal Conservancy, Hackensack Riverkeeper, Hoboken Cove Community, Hudson River Park, Metropolitan Waterfront Alliance, National Fish and Wildlife Federation, National Parks Conservation Association, NY/NJ Baykeeper, NYC Audubon, NY State Museum, Passaic River Boat Club, Passaic River Coalition, Red Hook Boaters, Regional Plan Assn., Rockaway Waterfront Alliance, Sebago Canoe Club, The Gaia Institute, The Nature Conservancy, Urban Divers Estuary Conservancy, Wildlife Conservation, Wildlife Trust, and Working Harbor.

