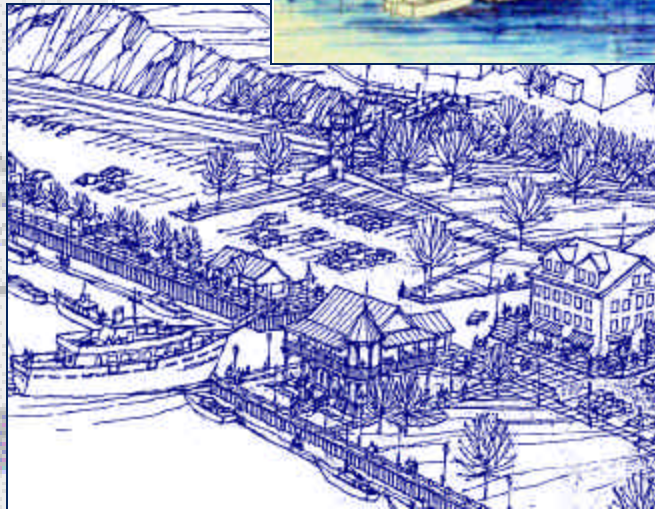
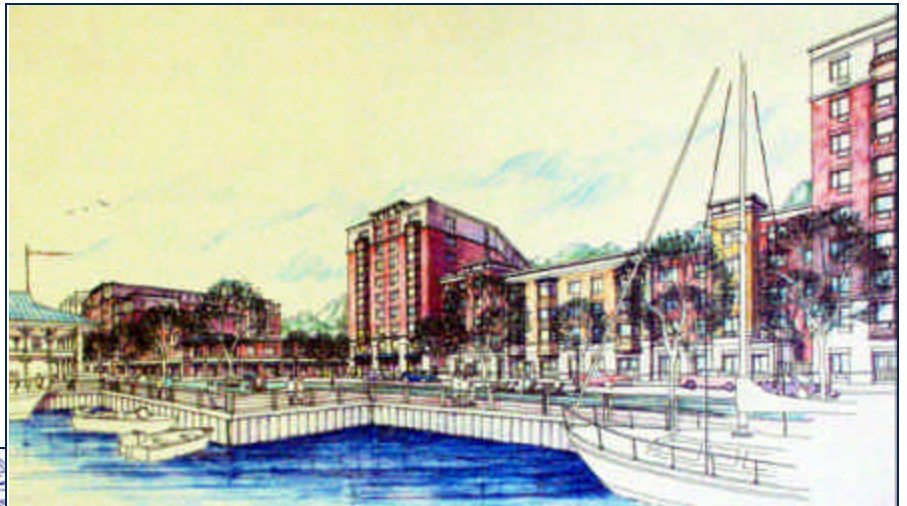


Cleaning the River

RECLAIMING THE WATERFRONT

The Hudson Valley economy is growing and changing. A key element in the region's growth is the revitalization of riverfront communities both as tourist destinations and as vibrant places to live and work. Responsible riverfront growth takes environmental conservation into account.

Some waterfront properties have been used for industrial purposes, polluted and then abandoned. These areas are known as "brownfields." One of the Estuary Plan goals is to assist municipalities in cleaning up abandoned, polluted properties. Funding is available through the 1996 Clean Water/Clean Air Bond Act. Many of these sites are now being redeveloped as park land where the public can enjoy the river.



This drawing of proposed revitalization of the Yonkers downtown waterfront shows how waterfront areas can become attractive destinations once again. State funding from the Clean Water/Clean Air Bond Act has provided for brownfield studies and cleanups. A waterfront trail will become part of the restored riverfront in Yonkers. This is an example of the cooperation between the state and local government to increase the public's enjoyment of the waterfront.

The city of Hudson has received grant money to reclaim a portion of its waterfront that is a brownfield site. Once a petroleum storage area, the site contained abandoned oil tanks which have now been removed. This drawing of what the restored waterfront will look like shows parkland on the properties now being cleaned up.



Estuary Action Plan Report Card: Waterfront Revitalization and Brownfields

- ✓ Established interagency coordination on grant programs for economic development, parks, historic preservation, waterfront revitalization brownfields cleanup, and water quality improvement. Along the Hudson Estuary, this process supports revitalization efforts of riverfront communities and is coordinated with the Estuary Action Plan.
- ✓ Completed the investigation of five brownfield sites and continued the investigation of eight brownfield sites. Additional sites will be investigated this year.
- ✓ Began or completed brownfield cleanups at the following locations:
 - * City of Troy, South River Street Site, proposed location for new office facilities and truck garage
 - * Irvington Waterfront Park. The site will be transformed into a public park.
 - * Town of Cortland, Steamboat River Front Park. Property will be developed as part of a larger public park and recreation area.
 - * The former Hudson Petroleum site on the city of Hudson's waterfront scheduled for reclamation this year. (DOS provided grants for survey of the tank farm, tank removal and preliminary site remediation.) The area will be turned into a combined public park/commercial site.
 - * Two sites in the City of Poughkeepsie:
 - The Former Hamilton Reproduction Site, which the city plans to sell to an adjacent manufacturing facility for use as a parking lot
 - The Qual Krom Site, which the city plans to redevelop for residential use
 - * City of Beacon, Brunetto Cheese property. The city plans to use the property for transitional housing for older homeless adults.
 - * The Yonkers Downtown Waterfront. Four contaminated properties totaling 8.4 acres are involved. Phase I has been approved for reclamation. The area will be developed into a mixed-use site including a public trail.
 - * Three sites in Albany County:
 - Albany - Former Railroad Operations site. The County plans to market the site for redevelopment.
 - Albany - Gansevoort/Franklin St. The County plans to market the site for redevelopment.
 - City of Albany IDA - Former Jared Holt manufacturing site. The City plans to use the site for residential or commercial development
 - * Two sites in the City of Newburgh, Orange County:
 - Provan/Ford site - The City plans to sell the property for commercial or industrial purposes.
 - Jonas Automotive - The City plans to redevelop and market the site.
- ✓ Explored permit issues for removal of abandoned structures and identified model project opportunities underway.
- ✓ Supported 78 local projects totaling \$7,442,048 for waterfront revitalization through EPF grants awarded by NYS DOS coastal program.
- ✓ Provided grant assistance for local Soil and Water Conservation Districts to offer technical and project management assistance to communities seeking to undertake waterfront revitalization efforts.

IMPROVING WATER QUALITY

Significant progress has been made in cleaning up sewage pollution in the Hudson, yet problems remain which must be addressed. These include accidental sewage discharges and sewer overflows during power outages and wet weather events. Overflows occur in many places that have combined sewer and storm drains which flood during periods of heavy rainfall. In addition, increased population along the Hudson in recent years has pushed existing sewage treatment plants to their maximum capacity, and many along the river need to be upgraded. Water pollution comes from other sources in the watershed as well. Sediment from construction sites, oil and gasoline from parking lots, and fertilizers from lawns and farms end up in the tributaries and the estuary.

Chemical contaminants are another factor in water quality. Contaminants are chemicals and metals that don't break down or break down slowly. Most contaminants in the Hudson are left over from industrial practices which continued until the 1970s. Contaminants may injure plants, animals, fish and humans. Some of the contaminants in the Hudson are polychlorinated biphenyls (PCBs), heavy metals, furans, dioxin, pesticides, and polycyclic aromatic hydrocarbons (PAHs).

PCBs are the most significant pollutants in the Hudson. They were used in the manufacturing process at two sites on the upper Hudson and were released into the river, where they have accumulated in sediments and in the bodies of fish, mammals, amphibians, and reptiles. PCB use was banned in 1977 but the chemical still persists in the river. Governor Pataki has supported active remediation of PCBs in the Hudson

Like towns and cities, boats are a source of human waste discharges to the river. The state's petition to the federal government to create "Vessel No Discharge Zones" (prohibiting boats from dumping waste into the river), combined with funding to provide more pump-out facilities where boat waste can be processed properly, has helped to improve water quality.

Some contaminants can be tracked to an old industrial site. Sometimes the contaminant source is harder to locate because the chemical enters the river with runoff water or rain. By analyzing contaminant levels in sediments from the Hudson, Estuary Plan scientists can determine when a particular contaminant entered the river.

The estuary program is examining contaminant levels in insects, reptiles, amphibians, mink, muskrat, and other species. It has made a long-term commitment to reducing contaminants in the river by tracking them and determining which contaminants are found in the river, where they are located and where they are coming from.



The Clean Water/Clean Air Bond Act has helped improve water quality by funding upgrades to municipal sewage treatment plants.



Estuary Action Plan Report Card: Water Quality

- ✓ Funded 67 projects totaling \$39.2 million with the Clean Water/Clean Air Bond Act (Hudson River Estuary and New York Harbor water quality categories) in order to:
 - reduce sewer overflows from rainfall;
 - prevent untreated sewage discharges during power outages;
 - control pollution from runoff;
 - restore aquatic habitat;
 - provide water quality improvements at waterfront revitalization sites.
- ✓ Petitioned the EPA to expand the Hudson River no-discharge zone to include the entire estuary.
- ✓ Took 210 sediment samples from 62 sites as part of a program to track down the sources of contaminants in the river.
- ✓ Developed a computerized database for the identification and location of contaminated sediments.
- ✓ Continued to assess the impact of sediment contamination on Hudson River ecosystems.
- ✓ Department of Agriculture and Markets provided \$3,225,684 from Bond Act and EPF funding for agricultural non-point source abatement in counties bordering the Hudson.
- ✓ Began development of a comprehensive monitoring plan to track river health and to establish a data management system to assure effective storage, retrieval and use of the data by all users. The goal is to systematically and efficiently collect the water quality contaminant and biological data needed to monitor progress in meeting the goals of this estuary management plan.



ENSURING THE RIVER'S FUTURE

The Hudson River Estuary is a unique landscape with abundant and diverse natural resources. Through the Estuary Action Plan New York State is cataloging the rich tapestry of life that gives the Hudson Valley one of the highest biodiversity rankings in the state.

Scientists are conducting intensive studies of key estuarine fish including striped bass, sturgeon and shad. As a result of the plan, public access to the Hudson has improved through land acquisition, fishing access and boat launch improvements. Through the Estuary Action Plan, New York State is committed to restoring the Hudson to its full potential for generations to come.



Enjoying sunset at Senasqua at Croton-on-Hudson.



Estuary Action Plan Report Card: Research and Monitoring

- ✓ Created two positions to hire technicians to support the Hudson River Fisheries Unit.
- ✓ Provided administrative assistance to support the Hudson River National Estuarine Research Reserve.
- ✓ Provided administrative assistance to support the implementation of the Estuary Action Plan.
- ✓ Initiated the development of biological indicators to measure water quality and ecosystem health. The goal is to establish guidelines for defining normal river bottom species (benthos). It then will be possible to compare actual benthos to the criteria for normal benthos (to be completed 2001).
- ✓ Funded \$65 million in monitoring projects aimed at understanding water quality, fish and wildlife and toxic chemicals in the ecosystem.
- ✓ Foster better understanding of ecosystem processes through development of the Rivers and Estuaries Center on the Hudson initiated by Governor Pataki in 2000.
- ✓ Continue the Estuary Program's progress protecting the river, enjoying the river and cleaning up the river into the future with Action Plan 2001.

