



Empowerment Zone Lab Increasing Energy Efficiency Of City Buildings

Thanks in part to a grant from the Bronx Initiative for Energy & the Environment (BIEE), the Energy Management Training Center in Mott Haven/Port Morris is among the leading training labs in New York for building management professionals learning to increase energy efficiency in their facilities. The Center is a project of the Association for Energy Affordability, Inc. (AEA), a non-profit organization whose mission is to promote affordable and healthy housing for city families through improved energy efficiency.

Nationally recognized instructors at the hands-on Training Center use actual boilers and burners to help students understand how the equipment in their buildings function and how to achieve the highest level of energy efficiency. State-of-the-art video and computer equipment also facilitates presentations.

AEA, a technical services organization established in 1992, trains people in a variety of careers such as boiler contractors, weatherization field inspectors, building owners, property managers, building superintendents and porters to help improve their skills and career advancement opportunities. In addition to training, AEA's professional staff offers technical services to support energy efficiency and cost-effective building management in residential properties across the city, from small homes to large multifamily buildings.

"The key to our success is that our training center is located in the Bronx, at the center point of the entire region, truly citywide. We are in a true transportation hub with easy access to major highways, buses, and the subway," said AEA's Executive Director, David Hepinstall.

"We are located in the Bronx Empowerment Zone and are interested in providing real job development opportunities in the Bronx, where real needs lie, and to train people to fill those jobs," he added.



Association for Energy Affordability, Inc.'s Executive Director David Hepinstall and Chief Trainer Asit Patel in new training lab at the Energy Management Training Center

AEA and the Energy Management Training Center are located at 105 Bruckner Blvd. and can be reached at (718) 292-6733, www.aeanyc.org.

State-Of-The-Art Paint Guns For Bronx Auto Shops



Thanks to a \$15,000 grant secured by the Bronx Initiative for Energy and the Environment (BIEE), the air in the Bronx just got a little cleaner. Funded by the Department of Environmental Protection through its Environmental Economic Development Assistance Unit (EEDAU), this grant provided funding to 14 Bronx auto body shops to purchase "High Volume Low Pressure" spray guns.

Traditional spray paint guns are a significant pollutant, producing volatile organic compounds (VOC) and particulate emissions. The new spray guns use 25% less paint and emit about 50% less particulates than the conventional spray guns they replace. In exchange for turning in their old paint guns, the program fully reimburses auto body shops for new spray paint gun purchases.

Pictured here are several of the local auto body shop owners who took advantage of the Spray Paint Gun Replacement Program

Paper Enterprises Receives Environmental Loan



"Paper Enterprises founder Herbert Sedler, son and CFO Jordan Sedler and BOEDC President Rafael Salaberrios."

A Bronx business is reaping the benefits of being energy savvy. When Paper Enterprises decided to consolidate its operations into the old Everlast Building, it saw an opportunity to make the 175,000 sq. ft. site at East 132nd Street yield energy savings.

With a \$400,000 loan from the Environmental Revolving Loan Fund, a project of the Bronx Initiative for Energy & the Environment (BIEE), Paper Enterprises is installing efficient lighting and electricity upgrades. The ten-year leasehold improvements loan was made at 0% interest.

The Environmental Revolving Loan Fund can be utilized by businesses and not-for-profit organizations to finance incremental costs in implementing new green technologies such as solar panels, hybrid electric transportation, and green roofs. For more information on the Loan Fund, please call Kate Shackford at (718) 590-3498 (kshackford@boedc.org) or Miquela Craytor at (718) 537-6537 (mcraytor@boedc.org).

New Solar Laws Create Business Opportunities

By Wilson Rickerson

Several recent federal and state laws have created new opportunities for installing solar electric and solar hot water heating systems in the Bronx. At the federal level, the Energy Policy Act of 2005 expands the current 10% corporate tax credit for solar systems to 30%, starting in 2006. The Act also creates a new 30% tax credit for residential solar energy installations. At the state level, new laws exempt residential solar systems from sales and compensating use taxes and increase the existing 25% residential tax credit cap to \$5,000.

The Center for Sustainable Energy at Bronx Community College manages the US Department of Energy's Million Solar Roofs Partnership in New York City. As part of this program, the Center is facilitating the installation of solar systems around New York, with a focus on the Bronx. Please contact CSE staff at (718) 289-5458 if you have questions on how to take advantage of these and other incentives for projects in New York.

Green Roofs Sprouting In The Bronx

Twelve In Planning Stages; Three Demonstration Projects Installed



Students in St. Simon Stock's summer Headstart program at ribbon-cutting with Bronx Borough President, Adolfo Carrión, Jr.



The greenroof at Fordham-Bedford Housing Corporation

Over twelve green roofs are at various stages of planning and installation across the Bronx thanks to funds committed to the projects by The Bronx Initiative for Energy and the Environment (BIEE), a program of the Bronx Overall Economic Development Corporation (BOEDC).

One of the most exciting of these projects will come to fruition in June, when the Bronx County Building will become the first municipal building in New York City to have a green roof.

A green roof, or ecoroof, is a roof planted with living vegetation that represents a smart alternative to conventional roofs. While yielding year-round energy savings, a green roof helps counteract pollutants in the environment.

The types of green roofs planned for the borough range from lightweight, low-maintenance vegetated roof systems (extensive green roofs) to heavier, more intensive-maintenance systems (intensive green roofs).

Three green roofs have been fully installed to date. The first was a 322 sq. ft. green roof at St. Simon Stock Parish that served as a test for the larger 3,500 sq. ft. green roof

later installed at St. Simon Stock School. The third roof is on a building renovated by Fordham-Bedford Housing Corporation at 2241 Webster Avenue.

ST. SIMON STOCK

The green roof at St. Simon Stock is a unique project. The use of a wide range of native plants and vegetables in combination with a rather shallow green roof system had not been done before. Another distinctive aspect of this project is the soil composition. While most green roof soils are composed of a blend of minerals, including shale and ceramics, the soil used in this project includes styrofoam, a material often used for disposable coffee cups. This unusual ingredient makes this green roof particularly groundbreaking, as it benefits both the environmental quality of the surrounding area and helps to reduce waste through recycling.

The green roof will be monitored for stormwater retention and air temperature and has been incorporated into the science curriculum at the school.

Partners in the St. Simon Stock project include The Gaia Institute, Barrett Roofing, Bulado Contracting, GreenApple

Corps, Blue Dot Hydrologists, Kingsbridge Fencing, Wildlife Conservation Society – the Bronx Zoo, the NY Archdiocese, the NYC Soil and Water Conservation District, and the Bronx Council for Environmental Quality.

FORDHAM-BEDFORD HOUSING CORP

The green roof installed on the Fordham-Bedford building at 2241 Webster Avenue is the first green roof built on affordable housing in the Bronx. The technology used for this green roof is a thinner system utilizing the Zero Flor system of pre-vegetated mats. This system is easy to install because much less materials are needed, and it can be used where there are problems with transporting materials to the roof, or when there are structural limitations that don't allow for a deeper and heavier green roof system.

This thinner system retains less rainwater, causes less heat island mitigation, provides less plant variety and needs more irrigation, particularly when the greenroof is young. Because the vegetation is pre-cultivated, the Fordham-Bedford Housing Corp immediately began to enjoy the benefits of its green roof.

Clean Air Transport Van Coming To Hunts Point

Hunts Point CAT Van Will Shuttle Employees To And From Area Businesses

Commuting to Hunts Point is about to get much easier for area employees—and be easier on the environment.

A new hybrid electric van service for employees of Hunts Point companies is set to launch early in 2006. Nicknamed the Bronx CAT (for Clean Air Transport), the commuter van is administered by the Bronx Initiative for Energy and the Environment (BIEE), a program of the Bronx Overall Economic Development Corporation (BOEDC). The 20-passenger hybrid electric vehicle is being designed and produced by Azure Dynamics Corporation, a leading developer of hybrid electric and electric powertrains for commercial and military vehicles. The CAT Program is the first hybrid electric bus shuttle initiative in the borough.

"This innovative project demonstrates that hybrid electric technology can be applied to shuttle buses, reducing diesel emissions while providing important transportation in areas severely underserved by public transit," noted Rafael Salaberrios, BOEDC President.

The hybrid buses will operate approximately two to three shifts daily and are expected to drive between 160-240 miles per day, six days per week, year round. Three shuttles will provide service for workers at the Hunts Point Food Distribution Center, and two will replace vans currently used by non-profit organizations throughout the Bronx.

The shuttle service will connect employees with the Hunts Point transportation hub and points throughout the industrial park. Additionally, residents who live in the section of Hunts Point not serviced by the Bx6 bus will also be able to



Bronx Clean Commuter Van

ride the shuttle to the Longwood and Hunts Point Avenue stops of the 6 train.

The initiative for the Bronx Clean Air Transport Program came from the work of the Hunts Point Task Force, formed in 2003 by Bronx Borough President Adolfo Carrión, Jr. and Deputy Mayor Daniel Doctoroff to develop a vision for the Hunts Point Peninsula. Comprised of local businesses, civic groups, government agencies and elected officials, the Task Force identified traffic congestion, pedestrian/truck conflicts, and pollution as key issues impacting the community. The Task Force developed the concept of a hybrid shuttle van as one of the short-term approaches to improving connections

to job opportunities within Hunts Point without increasing harmful car emissions in the neighborhood.

Hunts Point air quality is a major concern. The area currently receives more than 11,000 diesel truck trips a day. This traffic, combined with a heavy concentration of industry and major highways (the Bruckner and Sheridan Expressways) that border the area, have wreaked havoc on the health of area residents and workers. The asthma rate for the children of Hunts Point is seven times the national average, and asthma hospitalizations are among the highest in the city, making the improvement of air quality in Hunts Point imperative for the future health of residents and workers.

Public transportation access is another challenge for the Hunts Point Peninsula. Employees utilizing public transportation are often faced with long waits in harsh weather, overcrowding, and long walks when taking the one bus route that serves the area. Furthermore, the Bronx Bx6 bus only serves the food distribution center and a small part of the industrial park. The majority of the industrial park, referred to as Quarter III and Quarter IV, is not served by public transportation at all. Many of the largest employers in Hunts Point are located in these Quarters, forcing hundreds of employees at these businesses to walk for long distances, pay for taxi service, or design informal pay-as-you-go shuttle systems.

"This program is an important milestone for Azure as we are leveraging our series hybrid powertrain, currently incorporated in several other active programs, into a market that

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Green Buildings Booming In The Bronx And Beyond

By Miquela Craytor

What's the deal with "green" buildings? Does it mean that the building is green? Do these buildings just have more trees and grass? Is it easy being green?

The answers: No; no; and yes, with help from the Bronx Initiative for Energy & the Environment (BIEE).

A green building refers to a structure, either new or rehabilitated, that has green—meaning environmentally-friendly—elements consisting of select materials and/or processes that are non-toxic and energy- and resource-efficient. Green buildings are conceived of and built differently so that employees and residents experience a healthier environment. The materials used have minimally adverse environmental impact and are utilized more effectively, so that water is conserved and energy is used efficiently.

As evidenced by the flurry of green building projects, conferences and activities, like the recent conference Moving Toward Sustainable Energy: The Bronx is Going Green co-sponsored by BIEE and a Green Building Tour of the Bronx hosted by Green Home New York, the green building trend is on the rise.

New York City alone has over 30 green building projects in the works according to a guide "Building Green – New Business Opportunities for NYC Manufacturers" recently released by the Industrial & Technology Assistance Corporation (ITAC) and New York Industrial Retention Network (NYIRN). According to this report, it is estimated that over \$4 billion will be spent on green buildings over the next few years. Some Bronx green building projects, like the Fordham Bedford Housing rehabilitation, Melrose Commons - Palacio Del Sol, Taino Plaza, the new Bronx Hall of Justice and the soon to be built Mt. Hope Community Center, illustrate a substantial investment in creating healthier buildings.

Green buildings offer numerous advantages to building owners, developers and businesses. For example, green buildings enjoy reduced utility costs and improved indoor air quality; by applying strategic water conservation measures, water bills are also reduced. Another benefit is the durability of building materials which extend the use of building components and reduce the costs of maintaining them.

Several financial benefits are available to developers of green buildings as well. The Enterprise Foundation's Green Communities Initiative is an excellent source of funds for developers of affordable housing. The initiative is committing over \$250 million for the development of affordable and low-income green housing in New York City.

Tax credits are also available through New York State's Green Building Tax Credit (GBTC). Both owners and tenants of buildings can take advantage of the credit if they meet energy, indoor air quality, materials, commissioning, water conservation, appliance and size criteria set forth by state regulations. Additional credits apply for fuel cells,



Rendering of Palacio Del Sol



Interior of apartment in Palacio Del Sol

photovoltaics and air-conditioning equipment that uses green refrigerants.

And here's another bit of good news: a 2004 report which compared several certified green buildings (also known as LEED: Leadership in Energy and Environmental Design) against non-certified buildings found that there was no statistical difference in construction costs.

That may be one reason why state and local governments have moved towards green building too. New York State regulations now call for state properties to adhere to green building guidelines. And just recently, Mayor Bloomberg signed into Law a City Council bill which mandates that all municipal building projects which receive more than \$10 million in city funds be built to green build-

Some Easy Ways To Make Your Building Green For Little Or No-Cost

ENERGY:

1. Orient interior design to maximize natural daylight
2. Place windows to provide good natural ventilation
3. Provide overhangs on south-facing windows
4. Install florescent lights with electronic ballasts
5. Install high R-value insulation
6. Select Energy Star appliances

WATER:

1. Design water-efficient landscapes
2. Install water-efficient toilets and fixtures
3. Use permeable paving materials

MATERIALS:

1. Use 30%-50% flyash in concrete
2. Use engineered wood for headers, joists, and sheathing
3. Use recycled-content insulation, drywall and carpet

INDOOR AIR QUALITY:

1. Use low- or no VOC paint
2. Use formaldehyde-free or fully sealed material for cabinets and counters
3. Vent range hood to the outside
4. Install carbon monoxide detector

Source: Global Green USA, www.globalgreen.org

ing standards.

Now is the ideal time for Bronx-based businesses to take advantage of the green building trend. Manufacturers, developers and businesses looking to improve their bottom-line can't go wrong by going green.

To learn how to make your building green, contact Miquela Craytor, Economic & Environmental Planner at BIEE, mcraytor@boedc.org, (718) 537-6537.

For more information:

Green Communities Initiative:
<http://www.enterprisefoundation.org/resources/green/index.asp>

GBTC:

http://www.nyserda.org/Programs/Green_Buildings/Default.asp#TaxCredit

and

<http://www.dec.state.ny.us/website/ppu/grnbldg/index.html>

Additional resources:

<http://www.dsireusa.org/library/includes/map2.cfm?CurrentPageID=1&State=NY>

BRONX Green Buildings

- Fordham Bedford Housing Corporation green rehabilitation: 2241 Webster Avenue
- Taino Plaza: 488 E. 164th Street
- The new Bronx Hall of Justice: 265 E 161st Street
- Mt. Hope Community Center: (to be constructed) bounded by Townsend and Walton Avenues, East 175th Street and East 176th Street
- Melrose Commons – Palacio Del Sol: Bounded by 156th and 157th Streets & Avenues

Energy Technology Seminar Looks To Future Of Green Buildings In The Bronx

Representatives from the borough's leading environmental organizations gathered at Hostos Community College in September of 2005 to discuss and demonstrate the feasibility of creating energy-efficient, environmentally-sound buildings in the Bronx.

Attendees at "Moving Toward Sustainable Energy: The Bronx is Going Green" included building owners and managers, developers, superintendents/facility managers, electrical contractors, plumbers, cooperative and condominium board members, architects and energy engineers. Improved dialogue and long-term planning among these groups is key to accelerating the pace of green development in the borough.

The free seminar, co-hosted by the Bronx Initiative for

Energy and the Environment (BIEE), a program of the Bronx Overall Economic Development Corporation (BOEDC), featured Randolph R. Croxton, President of Croxton Collaborative Architects, as the keynote speaker. A pioneer in green design, Croxton and his firm have designed a community center for the Mount Hope Housing Company in the Bronx that will meet Leadership in Energy & Environmental Design (LEED) standards.

Other speakers addressed energy-efficient lighting, cogeneration (combined energy, heating and cooling), microturbines, ENERGY STAR® housing, financing options, and local green building case studies.

"The Mount Hope Center is an exciting example of what the future of buildings in the Bronx can look like," said Kate Shackford, Director of BIEE. "Bringing all these

interested parties to the table and demonstrating that "green" is good for our community's health as well as for the bottom line, is a powerful step in responsible, progressive planning for our community."

Seminar co-sponsors included the New York Power Authority (NYPA), Hostos Community College of the City University of New York, the South Bronx Overall Economic Development Corporation (SOBRO), Association for Energy Affordability (AEA), the Natural Resources Defense Council (NRDC), the New York State Energy Research and Development Authority (NYSERDA), and the United States Department of Energy's Rebuild America program.

To be included in BIEE's email list for future events, please contact kshackford@boedc.org

Waterbury LaSalle Community Association's Tree Project Takes Root

The Waterbury LaSalle Community Association received a grant of \$15,000 from the Bronx Initiative for Energy and the Environment (BIEE) to plant street trees. The following is an excerpt from their final report:

We exceeded our expectations [and were able to plant more trees than planned]. The goal of this endeavor was twofold. First, we wanted to balance the effects of overdevelopment, so that our community would move closer to being environmentally sound. Our second goal was to inspire and teach the community about the important role trees play in the health of our environment. We want our residents to request trees to be planted in front of their homes, which is one reason we chose mostly flowering trees. Our hope was that their beauty would entice them to not only look, but also see further than just the beauty of a tree. When the dogwoods were being planted, an elderly gentleman asked us to put name tags on the trees so that the community could be educated as to the tree types. We have already made arrangements to do this.

Clean Air Transport Van Coming To Hunts Point

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has considerable importance to many different communities," said Mark Federle, Vice-President of Sales at Azure, the company manufacturing the shuttle. This is the first time that hybrid electric technology has been applied to this class of shuttle vehicle, which is familiar in the area as they are the type of vehicles utilized by Access-a-Ride.

A hybrid vehicle combines the use of a conventional engine and a highly efficient electric motor to provide an extremely clean transportation option. Traditionally vehicles of this size are powered by diesel engines, which have had a negative effect on the air quality in the area. The hybrid vehicle drive train is designed to optimize fuel usage and maximize reduction in emissions. The vehicle saves fuel and reduces maintenance by dramatically reducing engine idling periods; lowering parasitic engine loads; running the engine in more efficient modes of operation by managing engine load; and utilizing regenerative braking.

Time studies of vehicle operation have shown that during urban driving a vehicle idles 50% of the time. Running the engine during idling is not fuel-efficient and results in the most harmful release of particulates and emissions. Many unnecessary parasitic engine devices are operated while the engine is running and the vehicle is at rest. Therefore, it's more efficient to shut the engine down. Engine shutdown is not used on conventional vehicles for several reasons, primarily because the vehicle's starting systems are not designed to be used so frequently. The hybrid system drastically reduces engine idle time, as it is in the all-electric mode whenever the vehicle is stopped. This is where major emissions savings occur.

Funding for the Bronx hybrid electric shuttle van program came in part from the Clean Air Communities ("CAC"), which is a collaborative initiative of NESCCAF — a sister-organization of NESCAUM — Con Edison, the Natural Resources Defense Council, and the New York State Department of Environmental Conservation. BOEDC has committed approximately \$387,000 towards part of the program through its Electric Transportation Grants Program, while the Clean Air Communities has committed \$300,000. Additional funding, in the form of a grant to BOEDC, was raised from the New York State Energy Research Authority (NYSERDA) in the amount of \$339,200.

For more information, please contact Kate Shackford at kshackford@boedc.org.

Three Bronx Brownfield Areas Begin Community Planning Process

Community planning at three Bronx brownfield areas is underway, increasing the likelihood that the sites will eventually be made suitable for development. The brownfields, located in the Harlem River, Port Morris and Hunts Point areas, will share over \$600,000 in funding provided by the Brownfield Opportunity Area (BOA) program, a component of New York State Brownfield legislation.

Each project is led by a coalition of community-based organizations, many of whose work has been hindered by the presence of brownfields, industrial or commercial properties that are undeveloped because of the uncertainty of soil contamination.

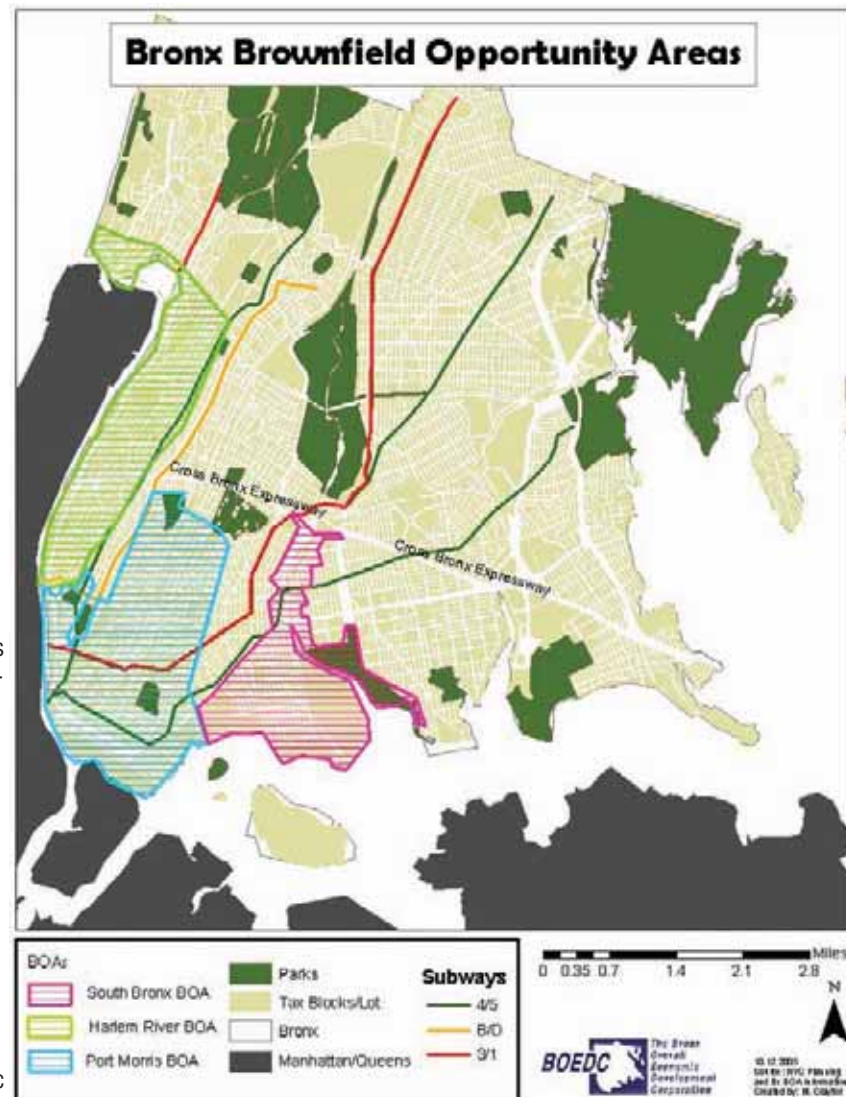
Until recently there had been little incentive for cities or developers to risk the staggering costs and liabilities of brownfield clean-up. However, October 2003 New York State legislation created several programs intended to spur locally-based organizations to deal with problems posed by clusters of brownfields. Grants like the BOA funding received by the Bronx groups were designed to provide a consensus-building process to determine future uses and prioritization of brownfield site development. Additionally, the BOA process is intended to create public and private sector partnerships that will attract investment necessary to revitalize the affected communities.

The current Bronx BOAs are working in two different phases of the BOA grants. The first phase is the Pre Nomination Study. This phase establishes the preliminary description of the proposed BOA. The study must also describe a variety of environmental, economic and demographic data, and the number and size of possible brownfields in the area and the proposed cleanup and use of the sites. The Nomination phase is a more thorough description of all the information contained in the Pre-Nomination Study. This phase includes the use of mapping strategies and detailed assessments of all the brownfield sites and an identification of the strategic sites. The legislative and regulatory actions required to implement the proposed remediation and redevelopment of the sites must also be discussed.

Additionally, each of the Bronx projects will contribute toward creating an economically viable and environmentally healthy borough. Through these Brownfield Opportunity Areas the Bronx stands to have many of its waterfront communities revitalized and experience a renewed balance between economic and environmental vitality. Perhaps one of the greatest aspects of the program will be the opportunity for local organizations, through their outreach within their communities, to determine how these benefits can best serve area residents.

HARLEM RIVER

The Harlem River project received \$98,890 for a pre-nomination study. It focuses on a 1,486-acre area comprised of a corridor in the Bronx along the Harlem River south of Macombs Dam Bridge to Spuyten Duyvil, incorporating adjacent inland areas that include Concourse Village, High Bridge, Morris Heights, Kingsbridge Heights, Marble Hill, and Spuyten Duyvil. The Bronx Council for Environmental Quality leads the project, and will work in partnership with Manhattan College, Riverkeeper, the Bronx



Borough President's Office, the New York City Soil and Water Conservation District, and representatives of Community Board Districts 4, 5, 7 and 8. This team will seek additional community stakeholder involvement and will identify, describe and analyze information regarding brownfields in the proposed BOA as well as identify opportunities and priorities for revitalization of the stressed communities through future remediation and institutional controls.

PORT MORRIS

The Port Morris project received \$208,250 for a pre-nomination study. This effort will focus on a 2,000-acre area with eight potential brownfield sites in the Port Morris, Mott Haven, Melrose and Morrisania sections of the South Bronx. This area will primarily focus on Community Boards 1 and 3, but will also include portions of 4 and 2. The South Bronx Overall Economic Development Corporation (SOBRO) is the lead organization on this project and intends to analyze and determine the extent of contamination at these eight brownfield sites and create a remediation and development plan for industrial, commercial, and residential uses.

SOUTH BRONX WATERFRONT

The third Bronx project, the South Bronx Waterfront BOA, will prepare a nomination study with a \$349,360 grant. This initiative focuses on approximately 800 acres with 150 to 200 potential brownfield sites located on the Hunts Point Peninsula and areas adjacent to the East River and Bronx River. Youth Ministries for Peace and Justice, in partnership with The Point Community Development Corporation, Sustainable South Bronx, Bronx Overall Economic Development Corporation and the Pratt Institute, will develop strategies to: address community needs for open space, affordable housing, and living wage jobs; build a foundation for future growth by enhancing the environmental and economic performance of the area's regionally significant industrial sectors; and reclaim the area's waterfront as a unique environmental and economic asset.