



2009 Clean Water, Clean Air & Green Jobs Bond Act

Making the Case for Green Investment

**Building New York's Green Economy through
Natural Resource Protection and Investment
in Green Innovation and Job Creation.**

Building New York's Green Economy through Natural Resource Protection and Investment in Green Innovation.

WORKING TITLE: Clean Water, Clean Air and Green Jobs Bond Act of 2009.

A CALL TO ACTION:

New York State and New Yorkers need a bold new initiative to accelerate the pace of the State's critical environmental protection programs, invest in good green jobs that moves New York toward energy security; and makes New York State the leader in the Green Economy.

When President Obama signed the \$787 billion economic stimulus package (aka: the American Recovery and Reinvestment Act of 2009 - ARRA) into law on Tuesday, February 9th, it marked the end of one phase of this historic government measure.

The concept of significant, voter approved, capital investment and "Main Street" stimulus projects is not foreign to the residents of New York State. In the past, New York State leaders have asked the voters of this state to directly approve significant investment in the environment, transportation, school construction and other major capital needs that could not otherwise be addressed through the state's general fund and budget appropriation process. New Yorkers have traditionally approached these initiatives with the serious review that they require. Some have been widely successful, while others failed to garner the prerequisite electorate support. On the whole, New Yorkers have recognized that about once a decade, that the environmental needs facing the state warrant an extraordinary effort, and have facilitated major capital investment in clean water, clean air capital projects and subsequently and the creation of new jobs and sustainable economic impacts.

The most recent Clean Water / Clean Air Bond Act, approved by voters in 1996, (\$1.75 Billion – Inflation adjusted, that's equal to \$2.85 Billion in 2008 dollars) helped change the NY State conservation landscape for the better. But we have exhausted that source of funding and now must recommit to our healthy environmental future and transform our economic base with a visionary 2009 Green Economy: Investment, Innovation and Protection Act that will leverage \$5 Billion for clean water, green infrastructure; energy efficiency and development; urban health and pollution prevention; public transit and energy security investment.

Voter-approved bond proceeds would be utilized for long-term improvements to our environmental infrastructure and natural resources, energy efficiency, public health protection, community revitalization, and economic development, above and beyond those paid for by the Environmental Protection Fund, Systems Benefit Charges, Regional Greenhouse Gas Initiative proceeds or other sources of state funding.

Creating a "Green Economy for New York" requires investments that build a sustainable economy, enhance our communities, and protect New York's irreplaceable natural assets – our lands, lakes,

rivers and streams. As the driving economic forces of the past yield to new kinds of industry and new ways of living and working sustainably, New Yorkers should benefit from an intentional strategy to create and nurture local “clean and green” industries. The Bond Act will provide funding incentives to promote and nourish new transportation systems and energy efficiency technologies. This initiative will create new green jobs in New York by funding innovative waste management and disposal technologies. Finally, this initiative envisions and funds comprehensive efforts to help our cities, towns, and villages by cleaning up and restore damaged areas in our landscape and investing in waterfront revitalization. All of these projects will provide immediate employment *and* incentives for the development of new information and technologies that will position New York State as a leader in the Green revolution.

Clean Water, Clean Air and Green Jobs Bond Act of 2009:

Ensure adequately funded comprehensive environmental protection, stewardship and preservation efforts in New York State and improve the health of our communities, residents and natural assets, expand energy efficiency and create new jobs in the green sector through the approval of a \$5 billion investment measure by the general electorate in New York State in 2009.

The bond proceeds will be divided as follows:

✓ Clean Water through Natural Resource Protection	\$1 Billion
✓ Clean Water Infrastructure	\$1 Billion
✓ Green Jobs through Energy Efficiency	\$1 Billion
✓ Clean Air and Green Transit	\$1 Billion
✓ Urban Health and Community Restoration	\$1 Billion

New York State’s Environmental Legacy

An irreplaceable natural legacy characterizes New York State - landscapes like the Hudson River Valley, the Catskill and the Adirondack Parks, Long Island’s beaches, bays and pine barrens, the Finger Lakes, the Allegheny Forests, the Tug Hill Plateau, and the Great Lakes – and support unique and precious ecosystems, diverse plants and wildlife. These special places also safeguard our drinking water, provide recreational opportunities and serve as a reservoir of resources for future generations. Generations past have laid a solid foundation for protecting these invaluable assets, but there remains much more to do.

At the same time, neighborhoods across the State continue to be burdened by the legacy of New York’s industrial past – the presence of polluting toxic contamination which has created thousands of brownfield sites. These contaminated and abandoned parcels of land pose serious environmental and economic development challenges. Moreover, many brownfields are located in or near low- and moderate-income communities that have witnessed a long history of disinvestment, and environmental degradation. People living in these neighborhoods suffer from an unhealthy accumulation of environmental and economic insults, which are exacerbated by the environmental justice circumstances of the clustering of brownfields and other noxious uses, illegal dumping, dilapidated public facilities and infrastructure, along with an eroding cultural and social infrastructure.

Unremediated soil and groundwater contamination is a serious restraint on private investment, private business development, job creation, community development, and the quality of life for thousands of New York residents and workers. Residents, property owners, and community-based organizations want to see these properties redeveloped, improved, and put to productive use. These sites are viewed as opportunities to meet real and pressing community needs -- affordable housing, good jobs, educational and community facilities, waterfront access and open space. Brownfields redevelopment offer a chance not only to increase the local tax base by putting property back on the tax rolls, but also to meet real needs facing New York's communities.

Revitalization of these communities also requires resources dedicated to open space and waterfront enhancement, lead abatement, transit improvements and reduction of local sources of air pollution. Investing in New York's existing cities, towns, and villages can create jobs and housing where they will benefit people most, while helping protect our green open space and clean watersheds.

Current Water, Air and Natural Areas Needs in New York State

Responsible stewardship of our natural resources does more than protect our environment. Safeguarding our clean drinking water, sustaining a productive and healthy system of natural areas, and improving air quality will help grow our economy, and protect the health our families and the character of our communities. The environmental challenges facing New York and our nation as a whole have taken on an exponentially higher order of urgency and complexity in the past decade. Meeting these challenges and protecting our health and environment will require greater creativity, innovation, leadership, unity of government focus and funding. But the rewards for will be felt for generations to come

Water is an economic driver for expanding energy production, creating new industrial applications, improving recreation and commercial fishing, as well as meeting drinking and agriculture irrigation needs. Providing for an abundant and safe water supply remains a central task for governments in New York at every level. Watershed protection, sewer infrastructure improvements, and investments in water efficiency can keep our water supplies healthy well into the 21st Century.

Natural areas determine the character of our communities. They provide valuable tourist dollars to local economies and offer healthy recreational opportunities for residents and visitors alike. New York State's premier natural landscapes face threats from over-use as well as neglect, from development and fragmentation, from invasive species and more. Adding critical lands to our parks and open space systems and providing for better land stewardship can ensure that future generations enjoy the same beautiful places that we grew up with.

Clean air impacts our health every day, every time we take a breath. With asthma rates soaring in and around our urban areas, we must continue and expand programs that help improve air quality to protect our health. Changes in our transportation and energy infrastructure can reduce and mitigate air pollution from dirty industrial and energy smokestacks and from automobile emissions. Global climate change, fueled by the introduction of the pollutant CO₂ into our atmosphere has become the leading environmental concern of the 21st Century. By reducing CO₂ emissions across New York, we can make a meaningful contribution to control of global warming.

Bond Act Ballot Language

“To set New York State on a new economic path based on the creation and retention of green jobs, renewable energy and a cleaner environment, shall chapter shall chapter (here insert the number of the chapter) of the laws of 2009 known as the **clean water, clean air and green jobs act of 2009**, authorizing the creation of state debt to provide moneys for the preservation, enhancement, restoration and improvement of the quality of water, environment and natural resources; promote energy efficiency and energy security; and invest in the creation of clean and green jobs; in the amount of five billion \$5,000,000,000 dollars, with all funds subject to annual independent audit, be approved?”

Opportunities for Impact

- General Fund relief
- Local property tax stabilization
- Public health benefits (disease prevention)
- Ecological stewardship
- Reduction of municipal debt load
- Leveraging greater Federal support of our State needs for sewer infrastructure upgrades
- New Jobs and new sustainable technologies
- Reducing Carbon Emissions and facilitate adaptation of ecosystems to climate change impacts

Potential Projects

The bond proceeds could be roughly divided as follows:

Clean Water / Watershed Protection	<ul style="list-style-type: none"> • Open Space and Working Farmland Protection • Purchase land to protect drinking water quality • Improve the water quality in our lakes, rivers, streams, harbors and bays • Protection of our natural areas - land around lakes, streams and rivers • Flood protection • Protection of New York’s working farmlands • Coastal resilience/shoreline restoration • Parks projects • Climate Change Adaptation • Habitat Restoration 	\$1 Billion
Green Infrastructure	<ul style="list-style-type: none"> • Update Aging Drinking and Waste Water Infrastructure • Restoration and Protection Water Quality • Municipal Wastewater Treatment Upgrades 	\$1 Billion
Green Jobs in the New Economy /	<ul style="list-style-type: none"> • Residential and municipal building weatherization. 	\$ 1 Billion

Energy Investment	<ul style="list-style-type: none"> • Projects linked to improved efficiency of public power generation; power grid and implementation of net-metering 	
Clean Air / Green Transit	<ul style="list-style-type: none"> • Air pollution prevention and mitigation • Fuel efficient transit fleet programs • Upstate Rail Improvements • Local Waterfront Revitalization • Green transit oriented development 	\$1 Billion
Urban Health / Community Restoration	<ul style="list-style-type: none"> • Air pollution prevention and mitigation • Urban center parks/community gardens projects • Environmental Remediation Projects / Brownfield Opportunity Area program projects • Municipal recycling programs • Development site restoration / Inner-city economic development opportunity expansion 	\$1 Billion

The Case For Clean Water through Natural Resource Protection

New York State's magnificent landscapes – encompassing Long Island's beaches, the dramatic Palisades and Highlands of the Hudson River Valley, rugged peaks in the Catskills and Adirondacks, the Finger Lakes, Allegheny Forests, Tug Hill Plateau and thundering Niagara Falls – have long been cherished for their natural splendor. These unique geological and ecological features also have sustained residents, who have relied on New York's forests, fields, waterways and wildlife for food, habitation and transportation for well over a millennium. New York's landscapes helped secure America's freedom, inspired the nation's first generation of artists and writers, furnished routes for westward migration and provided much of the power and raw materials for the Industrial Revolution. In short, they have forged our identity – and they continue to define the character of our communities.

Today, New York's landscapes are falling prey to sprawling development at an alarming rate. Halting this scourge and protecting the state's remaining great open spaces would help to solve many of the most urgent problems we face – bolstering our economy, combating climate change, increasing the quality of our air and water, and improving public health.

Open Space Attracts New Business While Keeping Taxes Stable Natural beauty is cited as a major determining factor by many CEOs interested in relocating their businesses. As such it offer a “leg up” in the fiercely competitive market for attracting companies in the burgeoning high-tech and renewable-energy fields. A 2008 nationwide survey of 2,000 corporate executives, site-selection consultants and real estate brokers conducted by the Hudson Valley Economic Development Corporation indicated that the words most associated with the Hudson Valley were “scenic beauty” and “nature.” Respondents also regarded the valley's quality of life as one of the region's greatest strengths.

Open spaces keep a lid on local taxes. More than a dozen studies in towns across New York have demonstrated that, on average, farms and forested lands require \$.29 in municipal services (snowplowing, education, etc.) for every \$1 contributed in tax revenue. Conversely, new residential development requires \$1.27 in services for each \$1 in additional taxes collected (American Farmland Trust, www.farmland.org). At the same time, proximity to open space boosts property values and tax revenues. For example, about 20 percent of increased property values in the two blocks adjoining the Hudson River in Manhattan's Greenwich Village are directly attributable to Hudson River Park (The Impact of Hudson River Park on Property Values, Friends of Hudson River Park). Open spaces also help keep communities vibrant and attractive to residents and businesses. A 2007 study by the National Association of Homebuilders revealed that nearby trails are the number-one amenity homeowners seek when buying a home. Many business owners also cited the proximity of greenways or trails as the prime reason they chose a particular location to set up shop.

Farmland and forests generate revenue and combat climate change New York farmland is responsible for cultivating \$3.5 billion in produce annually and is part of a broader food sector that contributes \$23 billion to New York's economy. It is estimated that the state's Farmland Protection Program (FPP) has injected as much as \$108 million into local economies, the result of farmers using these funds to buy new farm equipment, build new facilities and enhance their businesses. The FPP also has generated more than \$50 million in local investment in farm-conservation efforts, stimulating further economic activity in New York's rural communities. Forest-based manufacturing and forest-related recreation and tourism contribute over \$8.8 billion annually to New York's

economy and employ nearly 72,000 people (The Economic Importance and Wood Flows from New York's Forests, North East State Foresters Association, 2007).

Farms and forests play major roles in combating climate change and improving air and water quality. By providing local sources for fruits, vegetables and other produce, New York's farms lower the 1,500 "food miles" it takes for the average meal to reach our tables. They also conserve local aquifers, while reducing the run-off flowing into streams, rivers and reservoirs. Forested lands sequester carbon – approximately 2.6 tons per acre per year, equal to the amount produced by driving a car 26,000 miles. Unspoiled wetlands filter pollution and sediment from the water and provide natural flood control, of increasing importance due to sea-level rises projected under climate-change scenarios. Just as important, New York's open spaces are among the most biologically diverse in America; their continued loss threatens the delicate ecological balance on which all life depends.

Protecting Open Space is an Investment in Our Health and Quality of Life Studies have shown that regular contact with nature is good for us, especially the elderly (one of the fastest growing segments of America's population) and children. Engaging the elderly in regular outdoor experiences improves their physical and emotional well-being, while children who play in nature are sick less often, have more acute cognitive skills and score higher on tests of concentration and self-discipline.

A recent article in the medical journal *The Lancet* highlights the importance of open space in improving public health. It stated: "Populations that are exposed to the greenest environments also have the lowest levels of health inequality related to income deprivation." In addition to providing places for physical exercise, New York's magnificent landscapes provide a sense of wonder to all who witness them. They renew us, sustain us and inspire us – reason enough to protect them.

State and local parks generate and sustain tourism, a prime economic engine in most regions of New York. According to testimony (Oct. 2008) by OPRHP Commissioner Carol Ash, 80 percent of the 55 million annual visitors to state parks spend money in restaurants and shops in nearby communities. She further testified that ongoing improvement and expansion projects in state parks support over 1,000 construction jobs and deliver more than \$20 million to struggling upstate counties. Open space also supports bird- and other wildlife-watching activities, as well as the habitats of creatures at the heart of these activities. Participants in bird-watching (one of America's fastest-growing outdoor pursuits) and related activities contribute an estimated \$1.6 billion to local economies and \$250 million in state tax revenue (National Survey of Fishing, Hunting and Wildlife-Associated Recreation, U.S. Fish & Wildlife Service, 2006).

The need to create more places for families to enjoy nature close to home is illustrated by park-attendance statistics compiled by the environmental organization Scenic Hudson, which owns 28 parks throughout the Hudson River Valley. Attendance at its parks rose 44 percent in fiscal year 2008 over the previous year, while participation in park events increased by 160 percent.

The Case for Clean Water Infrastructure

New York State is blessed with an abundance of water resources, including National Treasures like Long Island Sound, New York City's massive water supply, the Hudson River, and the Great Lakes, and these vast resources are vital to 18 million New Yorkers for drinking, swimming, fishing, farming, recreation and industrial production, and contribute billions annually to the state and regional economies. Over recent history, these resources have undergone unprecedented pollution, habitat loss and ecosystem disruption, and these threats are now being compounded by our aging wastewater infrastructure.

New York is served by some of the nation's oldest water infrastructure, and many of these treatment systems are now exceeding their designed life. One-quarter of the state's 610 wastewater treatment facilities are operating beyond their useful life expectancy, and many others are using outmoded, inadequate technology. These outdated facilities are discharging billions of gallons of raw, untreated sewage into New York's waterways, threatening public health, closing beaches, harming commercial and recreational fishing opportunities, causing wide ranging ecological degradation, and most importantly threatening the economic vitality of the State. New York State's own water quality monitoring data indicates that 68% of the waters sampled do not meet or are at risk of not meeting the fishable and swimmable goals of the federal Clean Water Act, often due to sewage, combined sewer overflows and/or urban and stormwater runoff

Our wastewater and drinking water facilities are in desperate need of increased funding to provide for enhancements to meet federal standards; and to be upgraded in order to control stormwater, combined sewer and/or sanitary overflows. The New York state Department of Environmental Conservation estimates that at least \$36.2 billion is needed to fund New York State's wastewater infrastructure over the next 20 years, and the New York State Department of Health estimates that at least \$38 billion is needed to fund New York State's drinking water infrastructure needs over the same period.

Even with this growing demand, since 2004 the federal government has reduced funding for New York State's vital wastewater infrastructure by 50%, while funding for drinking water infrastructure has been cut by 40%, shifting the burden of paying for this infrastructure onto local governments. The recently passed American Recovery and Reinvestment Act did make a significant reinvestment in the Clean Water and Drinking Water State Revolving Funds, but much more is still needed.

As the protection of our waters, the health of our communities, and the prospects for future economic growth are all linked to modern, reliable and efficient wastewater treatment systems, New York state must now step up and make the needed investments in our water infrastructure to protect the quality of life of all New Yorkers, and keep New Yorkers working. It is estimated that between 30,000 and 47,500 jobs are created for every \$1 billion invested in water infrastructure projects, providing an unparalleled opportunity for economic recovery and long-term growth in New York State communities. New York State has 310 wastewater projects and 497 drinking water projects that serve over 11 million citizens that have been reviewed, ranked and are ready-to-go as soon as funding is available

Yet the longer the state waits to make these investments, the problems only get worse and more costly to correct. It is estimated that the cost of emergency repairs to wastewater and drinking water infrastructure is three to five times more than properly planned capital improvements. This is why New York State cannot wait to invest in these important water quality projects. Numerous economic analyses by the Brookings Institution have proven that the health of the environment will determine the health and prosperity of our communities and the state, and investments in the protection and restoration of our water resources can yield significant returns on the state's investment, not just through job creation, but by making our communities more attractive to businesses and people.

The Case For Green Jobs / Energy Security

Retrofitting New York's building infrastructure for energy efficiency is a crucial strategy for green job creation, lowering energy costs and combating climate change.

Energy use in buildings accounts for 51% of New York's net energy consumption. More than half of that (53%) is in residential structures¹ -- more than housing in almost all other states.² A full 40% of our greenhouse gas emissions are also created by home energy use: 21% just from generating electric power for our homes, and 19% from using energy within our homes.³

"Building greener," while important, is not sufficient to address the enormous waste of energy and energy dollars that takes place in existing buildings. In spite of the better efficiency of new equipment, heating and cooling systems and other efficiency technologies, the state's overall energy use continues to climb. Achieving reductions in energy use, and environmental and economic burdens requires improving the efficiency of existing users [and reducing the impacts of power generation.]⁴

¹ "NYS Energy Fast Facts, 2006." NYSERDA. 2007 Retrieved at:
www.nyserdera.org/Energy_Information/FastFacts06.pdf

² New York ranks fourth in the US for total residential energy consumption. "Energy Consumption by Sector, Ranked by State, 2005." US Energy Information Administration State Energy Data System (SEDS).

www.eia.doe.gov/emeu/states/sep_sum/plain_html/rank_use.html

"Energy Consumption by Source and Total Consumption per Capita, Ranked by State, 2005." US Energy Information Administration State Energy Data System (SEDS).

www.eia.doe.gov/emeu/states/sep_sum/plain_html/rank_use_per_cap.html

"New York State Energy Profile." US Energy Information Administration State Energy Data System (SEDS).

³ "State CO2 Emissions from fossil fuel combustion, 1990-2005." US Dept. of Environmental Protection. Retrieved at:
http://www.epa.gov/climatechange/emissions/downloads/CO2FFC_2005.pdf and "New York Household Electricity Use by End Use." US Energy Information Administration. Retrieved at:

http://www.eia.doe.gov/emeu/rep/rep/enduse/er01_ny_tab1.html

and emails/data from David Gardner, Project Engineer, NYS Dept. of Environmental Conservation, Office of Climate Change 2/9/09

⁴ In fact, by 2022 the state will need 21% more electricity than in 2003, and __% more gas. New York's Energy Research and Development Authority (NYSERDA) estimates that 28% of this need can be met through residential efficiency at a cost lower than the cost of that electricity, and that over 12% of gas supply needs for 2016 can be met through efficiency projects at the same cost as supplying the gas.

In total 84% of electric demand can be met through efficiency and renewable generation. ENERGY EFFICIENCY AND RENEWABLE ENERGY RESOURCE DEVELOPMENT POTENTIAL IN NEW YORK STATE, August 2003.

Optimal Energy for NYSERDA. <http://www.nyserdera.org/sep/EE&ERpotentialVolume1.pdf>

Gas projects would return \$2.48 to the New York economy for every dollar invested, provide net benefits to the state of around \$1.1b, and achieve permanent reductions of 16m metric tons of CO2, 2,000 metric tons of SO2, and 1,800 metric tons of NOx. NATURAL GAS ENERGY EFFICIENCY RESOURCE DEVELOPMENT POTENTIAL IN NEW YORK, Oct. 21, 2006. Optimal Energy for NYSERDA.

<http://www.nyserdera.org/publications/Final%20Executive%20Summary%20of%20NYS%20Gas%20Efficiency%20Potential.pdf>

The economic burden of inefficiency is also severe. As of 2006, New York paid more for retail electricity than any state but Hawaii and Massachusetts⁵; and more for energy overall than all but seven states.⁶ At the household level, the average price of electricity has increased almost 18% since January 2007⁷, particularly squeezing household budgets – and producing a 19% spike in shut-offs.⁸ Recession and job loss in New York State have added enormously to these burdens. In the first half of 2008, the real median wage dropped 1.5%, and unemployment has reached 20% in some metro areas;⁹ Comptroller DiNapoli has predicted that over 200,000 jobs will be lost by October 2009.¹⁰

To date, state programs have helped property owners and tenants pay for efficiency measures with grants and incentives; but retrofitting our housing stock alone will cost nearly \$45 billion – a cost that neither homeowners nor existing state funding streams will bear. Instead, New York must harness the economic power of energy savings, and use public dollars to leverage private investment in mass-scale efficiency programs.

The Green Jobs/Green Homes NY initiative, for example, allows New York massively to scale up retrofits by paying the up-front cost of retrofits to privately-owned housing, and allowing owners to repay costs as they save on energy. This model allows retrofit investment dollars to be used over and over; and allows the state to perform mass scale retrofits immediately – rather than delaying until catastrophic environmental damage is done – by using public dollars to leverage much larger amounts of private investment.

Bond funding used to administer Green Jobs/Green Homes NY will draw private dollars at a rate of about 10:1.¹¹ Credit enhancements (a loan loss reserve or guarantee fund) for investment pools to fund efficiency work should leverage private dollars at a rate of about 5:1 initially (and will likely perform even better as investment models prove themselves) – and can be returned to the state for other environmental uses in the likely event that the loan loss reserve is not exhausted after a period of a few years.¹² Direct funding for retrofits that buys down the cost of individual projects will allow the program to reach more users, ensure access for lower-income property owners, and support fair wages on projects. Creating these structures will further allow municipalities to use their own monies to participate in financing vehicles, extending the buying power of the programs and providing additional income to local government.

A program like Green Jobs/Green Homes, enabled through Bond Act funding, can deliver one million residential retrofits to New Yorkers in five years, covering 13% of the housing stock – and will create a funding mechanism that can continue indefinitely to support mass-scale retrofits and good jobs. Standard retrofit projects include initial audits, air-sealing, low-cost water mitigation measures (faucet aerators), insulation, and/or HVAC upgrades or replacement. Where truly cost effective, projects will include additional energy efficiency improvements. In multifamily rental buildings, some

5 http://www.eia.doe.gov/emeu/states/sep_sum/html/pdf/rank_pr_cl_es.pdf

6 http://www.eia.doe.gov/emeu/states/sep_sum/html/pdf/rank_pr.pdf

7 Average Retail Price of Electricity to Ultimate Customers: Total by End-Use Sector. Energy Information Administration. http://www.eia.doe.gov/cneaf/electricity/epm/table5_3.html

8 “Utility cutoffs in NY jumped 19% in 2008” Associated Press, 2/25/09

9 “New York’s Rising Unemployment – The Other Crisis in Albany” Fiscal Policy Institute. 28 Aug 2008. Retrieved at: http://fiscalpolicy.org/FPI_Release_JobLossesRise_August2008.pdf

10 The Security Industry in New York City, Office of the State Comptroller, <http://osc.state.ny.us/osdc/rpt7-2009.pdf>

11 Based on administrative costs of 11% for energy efficiency programs, established by NYSERDA and utilities in EEPS filings.

12 Derived from research by the Center for Working Families, Conservation Services Group and Forsyth Street Advisors for the Green Jobs/Green Homes NY Residential Retrofit Investment Fund Credit Structure.

retrofits may be included that provide environmental or community benefits rather than savings for owners: green roofs, tenant appliance upgrades, etc.

The economic benefit to the state of efficiency is substantial. Dollars *not* spent in the electricity sector produce 250% more jobs than dollars spent in electricity, and dollars *not* spent in the gas and petroleum sector produce 137% more jobs than in that sector. The project of *making* New York efficient will also support economic recovery: spending on retrofits (construction) and government programs produce 8% and 22% more jobs, respectively, than dollars spent in other sectors.

Using the Green Homes/Green Jobs initiative as a guide for ramping up the state's residential energy efficiency will help ensure that these benefits are realized as we invest in the green economy, shaping efficiency projects to yield cost-effective results and quality jobs. The Green Jobs/Green Homes NY initiative will create an estimated 120,000 jobs – half in retrofit work, and half in communities that manufacture and supply retrofit materials, provide goods and services that homeowners can now buy. About 37% of retrofit jobs are entry level, and another 32% are highly-credentialed positions. Green jobs must be good jobs. Again, the Green Jobs/Green Homes NY model is useful; it would establish career paths for retrofit workers, ensure access to jobs (as well as retrofits) for distressed communities, create good jobs for displaced workers from construction and other skilled trades, support the development of local manufacturing of green materials, and organize the scattered landscape of retrofit contracting so that contractors and the workforce can grow to meet demand

The Case For Clean Air / Green Transit

Clean air protects public health for our kids today and lowers the risk of a changing climate tomorrow. New York State can help clean air by investing in alternative modes of travel – rail, busses, ferries, and safe bicycle and pedestrian routes - and in the cities, towns and villages that benefit from accessible and affordable transit.

In the face of unprecedented energy prices and a deeply troubled economy, now more than ever New York State needs to invest in expanding affordable public transportation services throughout our great state. No other infrastructure investment can match the results that public transportation delivers in economic growth and productivity, energy conservation, environmental improvement, public health, and the economic well-being of all New Yorkers, young and old, rich and poor. Bond Act funding, in tandem with other capital initiatives, for alternative fuel buses and green facilities will cut pollution and lower the carbon footprint of New York State communities. In short, added investments in public transportation are crucial if we are to develop and sustain dynamic and livable communities.

Public transportation is critical to the economic vitality of the State. Public transportation gets people to work and opens the job market to every New Yorker. Public transportation takes cars off the road, relieving the highway congestion that saps productivity through wasted time and delayed deliveries. A single subway line can carry 30,000 passengers in one hour - ten additional highway lanes would be needed if these riders drove instead. A bus full of passengers removes 40 cars from traffic. In the New York City region alone, traffic congestion costs businesses an estimated 350,000 work hours every day. Public transportation creates jobs in the hundreds of New York businesses that supply the equipment and services we need to provide public mobility. For example, New York's MTA-LIRR East Side Access project is expected to generate 375,000 jobs and \$26 billion in wages. Buses are manufactured and assembled in Oriskany and Schenectady; Subway and rail cars are built and rebuilt in Plattsburgh, Hornell and Yonkers; Paratransit vehicles are outfitted, sold and serviced in Dansville and Penn Yan; Transit system software is developed in Huntington Station and Johnson City; Vehicle air conditioning is built in Syracuse.

Public transportation is a lower cost mobility alternative that keeps our economy moving despite mounting gasoline prices. Public transportation reduces our consumption of fossil fuels as well as our national dependence upon foreign oil. Public transportation cuts fuel consumption in the New York region by 1.33 billion gallons annually, which is one reason why New York State uses the least energy per capita for transportation purposes than any other state.

By taking cars off the road, public transportation reduces tailpipe emissions that contribute to poor air quality. Clean air can have a major positive impact on public health, particularly for individuals at risk for lung and heart disorders. According to the MTA, New York's public

transportation keeps millions of pounds of pollutants out of the air - and our lungs - each year: 94 million pounds of carbon monoxide; 14 million pounds of hydrocarbons; 1.5 million pounds of soot and particulate matter. Public transportation's ongoing conversion to clean propulsion will greatly magnify these environmental and health benefits.

Public transportation is a force for social equity. By offering mobility options for all New Yorkers, public transportation can bring everyone into the economic life of their community by affording them access to jobs, health care and recreational opportunities. In upstate New York, transit systems serving large urban areas like Syracuse and small urban areas like Glens Falls both report that commuting to work accounts for well over half of their daily trips.

New York State's transit systems, associations, and advocacy groups represent the public transportation systems that are delivering these important public benefits and the riders that depend on transit every day. Even taking one bus off the road due to funding limitations can only make it more difficult to achieve the important economic, environmental and social goals embraced by the State of New York. Therefore, the Clean Water, Clean Air and Green Jobs Bond of 2009 to provide for the increased transit capital is essential for the state to expand services to our communities, improve air quality and overall public health. Quite simply, we as a state need more public transportation if we are to surmount the challenges we face.

Clean air protects public health for our kids today and lowers the risk of a changing climate tomorrow. New York State can help clean air by investing in alternative modes of travel – rail, busses, ferries, and safe bicycle and pedestrian routes - and in the cities, towns and villages that benefit from accessible and affordable transit.

Rail to help get upstate moving again. With its existing tracks and right-of-ways, freight trains, distressed cities and strategic location, New York State would gain greatly by pursuing an ambitious railroad improvement program. With committed federal and state resources, 110 mile per hour service between Albany and Buffalo is achievable within 5-10 years. Shrinking the distance between New York State's far flung cities would stimulate growth and development in upstate communities from Newburgh to Niagara Falls. Improving the links between Albany, Schenectady, Utica, Syracuse, Rochester and Buffalo and the new Pennsylvania (Moynihan) Station would facilitate commerce and accelerate economic revitalization. Rail provides shippers with a freight option other than the truck, which will lower costs to the consumer. That's good for the quality of the air we breathe, clearing our congested roadways, and minimizing the maintenance bill for older bridges and roads. Finally rail produces jobs. We can build and assemble rail cars and many other transit components right here in New York State. Upgraded rail station amenities, local transit connectivity, and other facility improvements will make this new high speed link work for cities all along the line.

Greenways and other pedestrian improvements to provide New Yorkers with safe and healthy choices for traveling to work, school and play. Transportation enhancements like bicycle and pedestrian facilities, protection of scenic corridors and historic sites, and

renovated streetscapes provide quality of life for existing centers and tourist destinations and contribute to local and regional economies. From Brooklyn to Plattsburg, Buffalo to Montauk, many New York communities are already enjoying the economic and other benefits of greenways and community trails. More than 65 such community trails, totaling 700 miles statewide, currently exist. These trails have been so successful that dozens more communities are planning another 1200 miles of trail (*Greenways & Trails Bringing economic benefits to New York*, PTNY and New York State Business Council). Of particular note is the redevelopment of the Erie Canal and the villages along it, a major initiative to revitalize this rich historic corridor and its villages for recreation and tourism.

Revitalized waterfront communities that bring New York back to its rivers and harbors. New York was born on the water. More than ninety percent of the State's population and much of its economy are still concentrated in the villages, towns, and cities along its waterfronts. These communities are capitalizing on their waterfronts by redeveloping historic and abandoned structures and improving waterfront recreation and protecting natural resources. They are establishing ferry service that use the waterways to connect, rather than divide our State. They are creating new economic activity and improving their quality of life in New York's most historic centers. New York State's Local Waterfront Revitalization Program has given communities the planning tools and techniques to move projects to the starting line; Capital investment in our waterfronts can help ensure that these projects move forward.

The Case For Urban Health / Community Restoration

With New York State's economic problems creating tremendous pressure to cut government spending, coupled with the climate change crisis, there is an urgent and growing need to ensure that resources are maximized to create jobs, leverage private investment, increase tax revenue and strengthen communities facing unprecedented stress.

Targeting resources to cleanup and rebuild downtown brownfield sites offers significant economic benefits and environmental efficiencies. Studies show that every dollar of public investment spent on brownfields development leverages up to \$8 in total investment through wages, job creation and taxes¹³; property values increase up to 15 percent¹⁴ and public investments are recouped within three years¹⁵. There are also tremendous savings in infrastructure costs associated with brownfields redevelopment (\$5,000 to \$10,000 per unit for a brownfield as compared to \$50,000 to \$60,000 per unit for greenfield sites¹⁶). And, there are environmental benefits that go beyond the value of removing toxic eyesores and improving public health: compact urban developments use, on average, 4.5 fewer acres than greenfield developments¹⁷, they reduce greenhouse gas emissions due to an average 20 percent reduction of vehicle miles traveled¹⁸, and improve water quality by reducing stormwater runoff¹⁹.

Smart Growth Brownfields Environmental Insurance Pool

In November 2008 Governor Paterson and Secretary of State Cortes-Vazquez announced the Spotlight Communities Initiative and effectively established the nation's first urban smart growth strategy rooted in the Brownfield Opportunity Area (BOA) program. Over one hundred communities across the state – from Buffalo to Long Island - are currently participating in the BOA program's consultative, area-wide approach to neighborhood value creation. Nevertheless, the costs, liabilities and uncertainties associated with advancing brownfield property cleanup and redevelopment requires additional tools. Over the last decade, environmental insurance has grown to become an important risk transfer mechanism allowing for private real estate transactions, but it is nearly impossible to secure cost-efficient environmental insurance for public purpose projects where there are narrow profit margins, such as affordable housing projects.

The most significant risk in a brownfield cleanup - cost overruns in performing the cleanup and environmental liabilities – can be addressed by environmental insurance policies known as cleanup cost cap (“CCC”) insurance and pollution liability (“PL”) policies. However, the minimum cleanup for which insurance carriers will provide cost-effective CCC coverage is between \$2

¹³ NorthEast-MidWest Institute Digest Report, *Brownfields Policy Research*, Volume 1, Number 3, August 15, 2008

¹⁴ De Sousa, C. and C. Wu. “Assessing the Impact of Publicly Supported Brownfields Redevelopment on Surrounding Property Values.” (In Progress)

¹⁵ De Sousa, C. 2006. “Unearthing the benefits of brownfield to green space projects: An examination of project use and quality of life impacts.” *Local Environment* 11(5): 577-600.

¹⁶ Environmental and Energy Studies Institute and the Funders Network, “Energy and Smart Growth and Energy, it’s about What and Where We Build.”

¹⁷ George Washington University, see <http://www.gwu.edu/~eem/Brownfields/>

¹⁸ Urban Land Institute, Smart Growth America, the Center for Clean Air Policy, and the National Center for Smart Growth, “Growing Cooler, Evidence on Urban Development and Climate Change,” <http://www.smartgrowthamerica.org/gcindex.html>

¹⁹ Lynn Richards, “Water and the Density Debate,” *Planning Magazine*, June 2006, APA
http://www.epa.gov/smartgrowth/water_density.htm

million and \$5 million. PL policies provide broader coverage than CCC policies including: third party claims for bodily injury, property damage, natural resource damages and legal defense costs. PL policies also provide coverage for cleanup costs arising from unknown conditions. And, as policy thresholds have increased, policy terms have decreased and insurance premiums have increased. ***This combination of high premiums and reluctance to insure smaller cleanups has made environmental insurance virtually unavailable for many brownfield sites that could be redeveloped for public purpose uses, such as affordable housing.***

A Smart Growth Brownfields Environmental Insurance Pool will fill this gap and allow the private environmental insurance market to function in many low- and moderate-income communities. Funds in the pool would be set-aside on a site-specific basis to create a buffer for insurance policies on eligible projects. The set-aside would serve as a buffer before an insurance policy is accessed. This innovative structure would both reduce the premiums charged and increase the insurance coverage available. From the perspective of the private insurance carrier, by increasing the cleanup costs that will be paid for by others, the buffer is valuable because it will reduce the likelihood that their policy will be accessed. As a result, because the buffer reduces the private insurance carrier's risk, the carrier would both make a policy available where there is currently little or no appetite to do so, and also potentially reduce the premium. Another advantage of the Pool is that it will maximize government funds by allowing these dollars to revolve. While the buffer set-aside dollars would need to be committed upfront to specific projects, they will not necessarily be spent. Therefore, once the policy period is over, the money will be available to advance other projects.

In the first five years, \$60 million in a Smart Growth Environmental Insurance Pool that is used for site-specific buffer set-asides will result in the cleanup and redevelopment of approximately 60 sites, covering an estimated 180 acres, across the state's poorest and most needy communities²⁰. In addition, an estimated \$40 million is needed to subsidize environmental insurance premiums. A brownfield insurance grant subsidy program would foster the redevelopment of brownfield sites, particularly in urban and downtown areas. Small and moderately sized brownfield cleanups offer the opportunity to meet the needs of affordable housing, community facilities and job generating enterprises, particularly in low- and moderate-income communities. The inability to control the cleanup costs and liability through insurance makes it difficult, if not impossible to attract the private sector financing to develop in urban areas, particularly in a tight credit market. Subsidies to help cover the costs of environmental insurance premiums will help narrow-profit-margin projects take advantage of cleanup cost cap policies and environmental liability policies and allow these important projects to advance.

To ensure that these funds support the State's smart growth objectives, eligibility for this Pool would be projects built consistent with a designated Brownfield Opportunity Area (BOA).

Environmental Restoration Program (ERP) (\$500 Million)

As part of the 1996 Clean Water/Clean Air Bond Act, \$200 million was dedicated for the Environmental Restoration Program (ERP). Under the ERP, the State provides grants to municipalities for reimbursement of up to 90% of eligible costs for brownfield on-site investigation and remediation activities, 100% for off-site remediation if required by NYSDEC,

²⁰ Assumptions: Average size cleanup \$3 million; Average 3 acres per site; Average insurance policy coverage of \$3 million; Average buffer set aside Amount of 33% or \$1 m; Average policy term is 5 years, including approximately 3yrs active remediation plus a monitoring period.

and 50% for demolition costs. This program has been used extensively by municipalities across the State to investigate and cleanup former manufacturing facilities and other contaminated properties for which there are no potentially responsible parties. According to a 2007 report, funding had been committed for 241 investigation and cleanup projects, which included more than \$76.4 million for 199 investigation projects and \$79.4 million for 42 remediation projects.²¹ Those funds are now fully committed and a new source of funding must be found for that program to continue.

It is estimated that at least \$100 million is needed to accommodate the sites that are currently in the ERP; and that an additional \$400 million is needed to cover new sites over the next 3 – 5 years. And, although the 2003 Brownfields Law created a preference and priority for sites built consistent with a BOA plan, delays in getting State funds committed to the BOA communities have meant that there are no funds targeted to advance the smart growth objectives embedded in the BOA program. In replenishing the funding for the Environmental Restoration Program, \$150 million of the \$500 million should be set aside for ERP projects built consistent with a BOA plan.

Urban Health and Community Restoration

Strong, healthy cities are the economic and cultural lifeblood of New York State. Yet in a time of state budget cuts and fiscal crisis, low- and moderate-income communities and communities of color face even greater threats to the fabric of family and neighborhood. Layoffs, lack of enforcement, lowering property values and declining investments threaten to destroy progress that has been made to bring equality and equity to New York's urban neighborhoods. Funding through the 2009 Clean Water, Clean Air and Green Jobs Bond Act can help protect urban neighborhoods and the health of our families, while serving as the foundation of a revitalized economy.

Protecting New York's environment is the purpose of this bond act proposal. But we are determined not to repeat past mistakes. The 2009 Clean Water, Clean Air and Green Jobs Bond Act will protect public health and revitalize communities across the state. Designed to move quickly to help stimulate the economy, bond act resources will be targeted to existing programs that are working, but need extra funds to keep moving forward.

Air Pollution and Hazardous Sites

New York's urban areas, especially the New York City metropolitan area, have some of the highest asthma rates in the nation. Unfortunately, asthma is at its worst in urban neighborhoods with significant environmental hazards such as diesel bus depots, polluting power plants, and waste transfer stations. Because so many victims of the asthma epidemic are treated in hospital emergency rooms, health care costs soar. Asthma is the leading cause of school absenteeism in New York, threatening learning and impacting children who must prepare for high stakes tests in order to progress.

With funds from a previous bond act, New York was able to eliminate the last coal-fired boilers from public schools around the state. Funds are needed now to reduce local sources of air pollution and toxics.

²¹ DEC Announces Brownfield Grant for Jefferson County at: <http://www.dec.ny.gov/press/37245.html>

Green Fleet Investment Program

New York is home to the nation's largest fleet of school buses—more than 54,000 school buses, including nearly 5,600 buses in New York City. School buses pose an avoidable health threat to the health of the children who ride them—partially because of the high diesel emissions they are exposed to and partially because children are more susceptible to air pollution's health impacts due to their faster breathing and less developed lungs and immune systems.

In 2000 and 2001, researchers from the U.C. Berkeley School of Public Health, the California Coalition for Clean Air and NRDC found that children in a diesel school bus may be exposed to up to four times more toxic diesel exhaust than someone traveling in a car directly in front of it. In a series of emissions tests inside and outside typical school buses,²² we measured exhaust levels in the buses that were 23 to 46 times higher than levels considered to be a significant cancer risk according to the U.S EPA and federal guidelines.

To solve this problem, cleaner alternatives to diesel buses (e.g., natural gas, propane, hybrid-electric and battery-electric), are the best approach for New York's new school bus purchases. Despite an incremental cost of at least 10-20 percent,²³ they are being used by an increasing number of school districts across the country. These buses virtually eliminate the PM emissions associated with diesel buses, and are much lower in NOx and toxic emissions.

The Green Fleet Subsidy Program would provide grants to local vehicle fleets that either buy clean-fuel vehicles, install clean-fuel or that retrofit their diesel vehicles with advanced emission controls. This program would cover school buses, transit buses, sanitation trucks, airport vehicles, and other public fleet vehicles based on a competitive process for directing state investments to fleets that would provide the greatest environmental benefits with a focus on reducing NOx, particulate and toxic emissions. Grants would cover the incremental costs of purchasing vehicles or their fueling infrastructure. This would provide funding for the purchase of targeted fleets to purchase only the cleanest available alternative fuel vehicles (e.g., natural gas, hybrid-electrics and battery-electrics). This would not only result in the benefit of purchasing cleanest vehicles, but also create enough economy of scale to support a growing green industry that builds, sells and supports alternative fuel vehicles.

The Green Fleet Investment Program also would provide for a subsidy to pay for the incremental cost of a clean green school bus used to help public and private school fleet operators cover the incremental costs and retrofit existing buses for low-sulfur diesel fuel and retrofits with advanced PM traps or other comparable emission control equipment. Retrofits are an extremely cost-effective way to reduce emissions from existing diesel vehicles. The combination of low-sulfur diesel and particulate traps can reduce PM

²³ 10-20% is the incremental cost for natural gas or propane school buses; hybrid-electric and battery-electric buses have even higher incremental costs.

emissions by more than 85 percent from their baseline emissions (i.e., when they were new). According to EPA, prices are quite variable, due to the great variety of diesel engines, vehicles, and usage patterns. However, even the worst case scenario places the cost at \$10,000 per vehicle,²⁴ and California regulations currently provide up to \$8,000 per vehicle for these retrofits. (New diesel transit buses can cost more than \$300,000, and 18-wheel, tractor-trailers can cost \$200,000). These investments will be more than offset by savings in childrens' health care costs and increased quality of life.

Small Business Green Conversion Program

Some of greatest reduction in green house gases and toxic emissions can occur through retrofitting small businesses in to green technologies. For example, dry cleaners can readily convert to wet cleaning methods, and auto body shops and printers can install add on equipment to capture VOCs or convert to lower VOC emitting materials. The Small Business Green Conversation Program would provide grants to evaluate, redesign and install green technologies in small businesses.

Lead Poisoning Prevention Investment Program

It is clear that in order to really improve education in the 21st century we must address lead poisoning caused by exposure of children to the side-effects of our 20th century economics. Since lead contaminated paint has been determined by CDC to be by-far the primary cause of lead poisoning, our 21st century educational goals demand that we combat the leavings of this 20th century problem by repainting homes to encapsulate old lead paint and limit exposure to children. Since abandoning old homes is simply not possible, this re-painting and basic cleaning are by far the most cost effective way to deal with this problem.

Lead poisoning directly impacts the education of children. Lead poisoning blood tests of children show that the lower-income and people of color communities are disproportionately impacted by lead poisoning already by the age of two. Lead statistics clearly show that it is impossible to give a child stripped of IQ point by the age of two a true Head Start with programs which began even just before kindergarten.

The investment in lead poisoning prevention will result in the direct measurable and easy to achieve reduction in health costs. The example of Rochester, NY reversed lead poisoning numbers through their concerted effort that led to a 50% reduction in blood lead poisoning. This led directly to lower costs for spending to protect the health of children, lower costs in the demand for special education, and lower costs with a dropping crime rate as juvenile delinquency and young adult criminality can be linked to a drop in blood lead levels.

The investment in lead poison prevention directly creates jobs in the poorest communities. The Community Action Organization of Erie County (CAO administers Head Start in Erie County) through its Environmental Justice program initiated a program to perform lead remediation and create jobs. The seed program is intended to train workers to make 100

homes in Erie County lead-safe over the upcoming year. The program would train and gain federal certification in addressing lead issues for 50 workers per month. This 100 homes goal can simply be expanded while this effort hits the ground running.

The Lead Poisoning Prevention and Jobs Program would provide grants to perform training programs and the conduct of lead abatement.

Community Gardens and Urban Greenways

In the past decade, New York has added a million acres of preserved land to state parks and the Forest Preserve. But for tens of thousands of New Yorkers, nature is closest to home in community gardens and urban greenways that provide places for neighbors to gather, educators to work with children, restoring places for migrating birds, and even the opportunity to grow their own food. In New York City, thousands of urban gardeners tend plots and strengthen their communities on reclaimed land. Money from the state's Environmental Protection Fund has already been used to strengthen community land trusts in New York City and other urban areas. With additional money, more gardens can be acquired and their benefits spread to additional urban communities.

Bond Act Coalition

A coalition of supporters have signed on to this case statement in anticipation of the introduction of legislation *authorizing the creation of a state debt in relation to creating the clean water, clean air and green jobs bond act of 2009 and providing for the submission to the people of a proposition or question therefore to be voted upon at the general election in November 2009.*

- Environmental
- Labor
- Public Health
- Religious Organizations
- Transit / Transportation
- Economic Development
- Agriculture / Working Farmers
- Business Community

An Economic Case for Investment in Clean Water, Clean Air Conservation

Environmental capital funding represents a fairly small portion of the state budget, yet has huge economic implications for New York State. The Environmental Protection Fund and other environmental investment programs contribute billions of dollars to the State economy in jobs, taxes, tourism, and other revenues. A comprehensive survey of environmental programs would likely reveal returns to the state in economic impact well in excess of the State's investment, especially when considering opportunity costs. We know this from extrapolating economic impact data from a subset of EPF programs and other environmental initiatives.

Environmental Protection Fund – Over the past ten years, the Environmental Protection Fund has been increased to reflect a greater investment by the state in its environmental priorities. Under the EPF Enhancement Act of 2007, the EPF was scheduled to be increased to \$300 million annually in State Fiscal Year 2009-2010. However, the Executive Budget Proposal reverses this upward trend by reducing the 09-10 appropriation to \$205 million. Proponents are strongly advocating that the EPF be fully funded at the levels included in the Enhancement Act in FY09-10 in order to begin to meet the billions in environmental funding needs that exist for EPF programs. If the EPF funding stream followed its funding trajectory preceding the 09-10 Executive Budget proposal, an additional \$370 million (or \$37 million annually) would be required to sustain growth of the fund. The Bond Act could provide additional funding for many of the EPF priorities over that same time frame.

Job Creation - No economic impact can be outlined without delineating the job creation/retention component of a proposal. Clean Water, Clean Air and Green Jobs Bond Act proponents are currently evaluating job creation / retention associated with the scope of this investment and the types of projects included therein that would leverage additional federal and private investment and jobs impact.

Property Tax Benefit

State support for water infrastructure, energy, water quality and other capital projects reduces local burdens.

Investing in green infrastructure can often be more cost effective than conventional public works projects. For example, in the 1990s New York City avoided the need to spend \$6–\$8 billion on new water filtration and treatment plants by instead purchasing and protecting watershed land in the Catskill Mountains for about \$1.5 billion.

The market values of residential properties located near natural areas and parks are typically higher than those of comparable properties more distant from such public lands. Property owners benefit from higher property values and local governments benefit from an increased tax base. For example, about 20 percent of the value of properties in the tow blocks adjoining the Hudson River in Greenwich Village can be attributed to the Hudson River Park. It is estimated that \$200 million in value was added to these properties, suggestion a substantial contribution to New York City's tax revenues (source: "The Impact of Hudson River Park on Property Values," Friends of Hudson River Park).

Community gardens can also increase the value of neighboring properties and generate additional tax revenues. In New York city community gard4nts increase neighboring property values by \$1.3 billion, or \$2 million per garden, generating \$503 million in additional tax revenues of a 20-year period. (source: The Effect of Community gardens on Neighboring Property Values, Voicu and Been, 20008)

Water Quality/Wastewater

Restoring federal investment in our nation's water infrastructure is a priority, however New York's identified \$36.2 billion clean water infrastructure gap cannot wait for uncertain federal action. Current economic challenges present a unique opportunity for New York to invest in its infrastructure, ensure treatment of wastewater to protect water quality, and create local jobs. Implementing water conservation strategies is a low-cost solution to ease burdens on local wastewater treatment plants and reducing polluted run-off. Investing in green infrastructure protects water quality while growing the economy. For example, PlanNYC green infrastructure investments to reduce stormwater and sewage, while protecting drinking water supplies, is estimated to create 4,449 water infrastructure jobs of all types per year (source: Louis Berger Group March 2008).

Wildlife Recreation

A 2001 nationally-funded survey revealed that 4.6 million New York residents and nonresidents 16 years old and older fished, hunted, or wildlife watched in New York. State residents and nonresidents spent \$3.5 billion on wildlife recreation in New York. Of that total, trip-related expenditures were \$808 million and equipment purchases totaled \$1.9 billion. The remaining \$807 million was spent on licenses, contributions, land ownership and leasing, and other items and services. (source: *2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*, U.S. Department of the Interior, Fish and Wildlife Service and U.S. Department of Commerce, U.S. Census Bureau.)

Bird watching is one of the fastest growing outdoor recreational activities in America, and one that can be enjoyed by all ages and experiences. An estimated 2.5 million people participated in bird watching in New York State in 2006. Birders, along with 1.2 million other "wildlife watchers" in New York, contributed an estimated \$1.6 billion (and \$250 million in State Sales Tax revenue) to the state economy in 2006, supporting thousands of jobs across the state. This economic impact is calculated by assessing trip-related expenditures on food, lodging and transportation, as well as factoring in sales of necessary equipment, such as binoculars, bird books, and other such items. It clearly illustrates the important role that bird watching and "ecotourism" play in supporting the state

economy. (source: *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation – New York*, United States Fish and Wildlife Service.)

Open Space, Farmland and Watershed Protection:

Examples of positive economic impact provided by the Open Space portion of EPF and similar programs:

- New York's Farmland Protection Program has injected as much as \$108 million into strengthening farm viability and the health of New York's farm economy. (source: David Haight, New York Director, American Farmland Trust, www.farmland.org)
- The Farmland Protection Program has leveraged more than \$50 million in private, town, county and federal funds as a match to state funds. (source: David Haight, New York Director, American Farmland Trust, www.farmland.org)
- Farm and forestland generates significantly more local tax revenue than they require in public services. (source: David Haight, New York Director, American Farmland Trust, www.farmland.org)
- PlanNYC green infrastructure investments to reduce stormwater and sewage, while protecting drinking water supplies, is estimated to create 4,449 water infrastructure jobs of all types per year (source: Louis Berger Group March 2008).
- Forest-based manufacturing and forest-related recreation and tourism contribute over \$8.8 billion annually to NYS's economy, with employment for more than 71.8 thousand people. (source: *The Economic Importance and Wood Flows from New York's Forests*, North East State Foresters Association, 2007)

Farmland Protection Program

Provides an economic stimulus to Upstate New York and rural communities.

New York farmers annually sell more than \$3.5 billion in farm products and are part of a broader farm and food sector that annually contributes \$23 billion to New York's economy. Studies from Vermont and Massachusetts have demonstrated that roughly 75% of farmers participating in state Farmland Protection Programs reinvest project proceeds back into their farms. These projects act as a form of equity financing for farmers that use the funds to buy new farm equipment, build new facilities and enhance their businesses. By this measure, New York's Farmland Protection Program has injected as much as \$108 million into strengthening farm viability and the health of New York's farm economy.

Leverages funding from private, local and federal sources.

The Farmland Protection Program has leveraged more than \$50 million in private, town, county and federal funds as a match to state funds and has stimulated the growth of locally funded farmland protection programs in towns like Warwick, Red Hook and Pittsford. These funds are invested in local farms and stimulate further economic activity in New York's rural communities.

Maintains lower demand for expensive public services.

Development imposes costs on communities in the form of increased demand for schools, roads, water, sewer and other community services. Over 15 Cost of Community Services Studies in towns across New York have consistently demonstrated that farm and forestland generates significantly more local tax revenue than they require in public services. On average, these studies found that farm and forestland require \$0.29 in services for every \$1 paid in local taxes. By comparison, poorly planned residential development typically fails to make up for local costs with property tax revenue.

These COCS studies have found that an average home frequently requires \$1.27 in services for every \$1 paid in local taxes.

Sustainable Forestry

The trees and forests of New York State not only provide measurable economic and recreational benefits, but also “ecological services,” such as clean air and water, biological diversity, temperature moderation and natural carbon sequestration.

Additionally, forest-based manufacturing and forest-related recreation and tourism contribute over \$8.8 billion annually to NYS’s economy, with employment for more than 71.8 thousand people.

(source: *The Economic Importance and Wood Flows from New York’s Forests*, North East State Foresters Association, 2007, <http://www.nefainfo.org/publications/2007%20Publications/NEFAEconomicImportNY.pdf>)

The trees in New York City provide total annual benefits of \$121.9 million in reduced stormwater runoff, energy savings, air pollution reduction, aesthetics, and increased property value. (source: New York City, New York Municipal Forest Resource Analysis, U.S. Forest Service, 2007)

Solid Waste Programs

Examples of positive economic impact provided by Solid Waste programs:

- \$10 billion of NYS recycling related industry revenues (source: *Recycling Economic Information Study Update*, DSM Environmental Services, Inc. Oct. 2008)
- 30,000 jobs created in NYS recycling related industries with a payroll of \$1.3 billion. (source: *Recycling Economic Information Study Update*, DSM Environmental Services, Inc. Oct. 2008)

Parks and Recreation

Examples of positive economic impact provided by Parks and Other Recreational Services in NYS:

- \$20 million revenue to struggling counties (source: Budget Testimony, Commissioner Ash, OPRHP, Oct.2008)
- 1,000 construction and engineering jobs (source: Budget Testimony, Commissioner Ash, OPRHP, Oct.2008)
- State residents and nonresidents spent \$3.5 billion on wildlife recreation in New York. (source: U.S. Department of the Interior, Fish and Wildlife Service and U.S. Department of Commerce, U.S. Census Bureau. *2001 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*.)
- 2.5 million birders, along with 1.2 million other “wildlife watchers” in New York, contributed an estimated \$1.6 billion (and \$250 million in State Sales Tax revenue) to the state economy in 2006, supporting thousands of jobs across the state. (source: *2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation – New York*, United States Fish and Wildlife Service.)
- Boating has a \$1.8 billion economic impact and creates 18,700 jobs in New York State. (source: New York Sea Grant’s recent boater survey, www.seagrant.sunysb.edu)
- The Wildlife Conservation Society generates more than \$550 million in economic activity, more than half of which is spent in New York City. WCS also employs more than 2,300 people during peak season. (source: *Gateways to Conservation*, Wildlife Conservation Society)

- About 20% of the value of properties in the two blocks adjoining the Hudson River in Greenwich Village can be attributed to the Hudson River Park. (source: "The Impact of Hudson River Park on Property Values," Friends of Hudson River Park)

State parks and recreational facilities directly support recreational tourism, which is one of New York's largest industries. According to the Office of Parks Recreation and Historic Preservation, a recent survey that indicated that nearly 80% of park visitors participate in dining, shopping and recreational activities outside the park during a park visit. According to OPRHP, 55 million visitors go to State parks each year.

According to Scenic Hudson, Park Attendance is up 44% in FY08 from FY07, with a significant rise in the rural parks. Park Events increased 160% in FY08 from FY07.

A report just released by Friends of Hudson River Park, "The Impact of Hudson River Park on Property Values", demonstrated how about twenty percent of the value of properties in the two blocks adjoining the Hudson in Greenwich Village can be attributed to the Hudson River Park. Spread across all the properties in the study area, including those that did not change hands, the value attributable to the park is about \$200 million. The cost of building this section of the Park: \$75 million. The Regional Plan Association conducted the data analysis in the report and was a member of the steering committee that directed the Report's conclusions. Friends are now assessing if a "Park Improvement District" might be used to assess the property owners to help pay for the Park's upkeep. (source: <http://www.fohrp.org/images/resources/pdf/ExecutiveSummary.pdf>)

Zoos, Botanic Gardens and Aquaria

Institutions that receive ZBGA funding span 44 counties and represent a diverse cross-section of New York State zoos, botanical gardens, aquariums, arboretums and nature centers. Like other cultural centers, living museums aim to educate and inspire the public. Even in times of economic hardship native and exotic wildlife and plants require constant intensive care. Living collections help breed endangered species, address the impacts of global climate change, educate and inspire thousands of teachers and millions of children, and cultivate new generations of conservation stewards.

ZBGA-funded institutions attract more than 12 million tourists a year, helping local merchants with their sales and bottom line. Living museums are core to stabilizing local economies by providing good paying jobs and supporting local businesses. A 2008 national public opinion survey revealed that 79 percent of Americans believe that zoos and aquariums are good for their local economy, and an impressive 80 percent believe that zoos and aquariums are important enough to local communities to be supported by government funding.

The 114-year-old Bronx Zoo and 113-year-old New York Aquarium are part of the rich history and fabric in New York State and are located in some of the most underserved areas in New York. The Wildlife Conservation Society, which manages these facilities, educates millions of students and future conservationists, employs more than 4,000 staff worldwide, and pumps more than \$400 million into our state's economy. More than 4 million tourists visit WCS facilities each year, buying from the local merchants in Brooklyn, the Bronx, and across New York. The Bronx Zoo and New York Aquarium employ approximately 1,200 seasonal workers in the summer, many of whom are retirees, citizens on public assistance, and students.

Storm Protection

Protected barrier islands and coastal wetlands can provide a buffer from hurricanes and other storm events. Coastal wetlands in New York provide \$271 million in storm protection services each year. (Source: Costanza, Robert et al. 2008. The value of Coastal Wetlands for Hurricane Protection. *Ambio*, 37(4):241-248.)

Estimated Annual Debt Service for \$5 Billion Bond Act

On a \$5 Billion general revenue bond the estimated annual debt service would be \$333.33 Million for 30 years at currently available government rates. With 7.056 million households in New York State, the cost per household would be \$41.45 per year.²⁵ This annual cost per household will actually be reduced when accounting for the actual population increase since 2000, plus this calculation assumes that the full value of the bond is spent on the first day of authorization. There is always a lag time of several years between bonding authorization and full liquidation of that authorization, meaning the real debt servicing costs are slightly lower than this model predicts.

Recent Conservation Bond Successes

On November 4, 2008, voters backed 62 of 87 (71%) state and local conservation finance ballot measures nationwide, which will generate a single-day record of \$7.3 billion in new funding for water and natural resource protection and conservation initiatives. Overall, in 2008, voters approved 90 measures totaling \$8.4 billion in new public funding for conservation, a single year record. The 71% approval rate in 2008 exceed the 66% approval rate for 2007.

Statewide Measures:

Minnesota
\$5.5 billion sales tax dedication to conservation
PASSED -- 56%

Ohio
\$400 million bond for open space and brownfield reclamation
PASSED -- 69%

Rhode Island
\$2.5 million open space bond
PASSED -- 68%

Florida
Constitutional amendment for property tax exemption on conservation easements
PASSED -- 68%

Georgia
Constitutional amendment for property tax exemption on forest preservation
PASSED -- 68%

County Measures

Hillsborough County, FL

²⁵ 2000 U.S. Census Bureau data - <http://quickfacts.census.gov/qfd/states/36000.html>

\$200 million bond
PASSED – 78%

East Bay Regional Park District, CA
\$500 million bond
PASSED - -71%

Lake County, IL
\$185 million open space bond
PASSED -- 66%

Alachua County, FL
\$17 million sales tax increase dedicated to conservation
PASSED -- 52%

Adams County, PA
\$10 million open space bond
PASSED -- 75%

Lewis and Clark County, MT
\$10 million open space bond
PASSED -- 51%

Blaine County, ID
\$3.5 million Property Tax Levy
PASSED - 53%

APPENDIX 1

II. Historical Perspective of Bond Acts in New York State

As stated in the state constitution (see below), only one general-obligation debt question may appear on the ballot each year.

§ 11. Except the debts or refunding debts specified in sections 9, 10 and 13 of this article, no debt shall be hereafter contracted by or in behalf of the state, unless such debt shall be authorized by law, for some single work or purpose, to be distinctly specified therein. No such law shall take effect until it shall, at a general election, have been submitted to the people, and have received a majority of all the votes cast for and against it at such election nor shall it be submitted to be voted on within three months after its passage nor at any general election when any other law or any bill shall be submitted to be voted for or against. The legislature may, at any time after the approval of such law by the people, if no debt shall have been contracted in pursuance thereof, repeal the same; and may at any time, by law, forbid the contracting of any further debt or liability under such law.

Historically, New Yorkers have been fairly skeptical of bond acts and between 1974 and 2005 have only approved seven out of fourteen with the \$2.9 billion Rebuild and Renew Transportation Bond Act (2005) being approved most recently after the defeat of the 1997 \$2.4 billion School Bond Act and the 2000 Transportation Bond Act.

However in the case of environmental bond acts, there is a long history of success in New York State. As early as 1910, New Yorkers voted in favor of a \$2.5 million bond act to expand the Palisades Interstate Park. Of the ten environmental bond acts over the more than eighty years since, only one was defeated- a \$1.975 billion proposition in 1990.

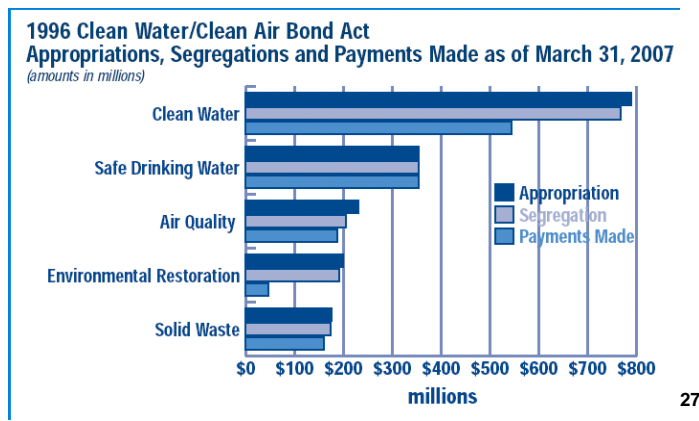
Successful Environmental Bond Acts in New York State 1910 – 1996

1910	\$2.5 million	To Expand Palisades Interstate Park
1916	\$10 million	To Expand State Parks
1924	\$15 million	To Expand State Parks \$5 million: Forest Preserve \$3.5 million: Palisades Interstate Park \$2 million: Allegany State Park \$1 million: Niagara Reservation \$.5 million: Letchworth State Park \$.5 million: State Parks in the Finger Lakes \$1 million: Westchester Parkways \$1 million: To Establish a Long Island State Park System
1960	\$75 million	Park and Recreation Land Acquisition Bond Act \$20 million: To Purchase Lands for State Parks \$15 million: To Purchase Lands for other than State of Municipal Parks \$12 million: To State Aid for City Parkland Purchases other than NYC \$12 million: To State Aid for NYC Land Purchases \$16 million: To State Aid for County, Town, Village Parkland Purchases
1962	\$25 million	Supplementary to 1960 Bond Act: Purposes not separately broken out. Special mention made of “open or natural lands in developing areas for conservation and outdoor recreation.” This was referred to as the “Next Step” bond issue.
1965	\$1 billion	Pure Waters Bond Act for Municipal Sewage Treatment Facility construction
1966	\$200 million	Outdoor Recreation Development Bond Act \$60 million: Marine \$55 million: State Parks \$15 million: Forest Recreation \$20 million: Municipal Parks (NYC) \$30 million: Municipal Parks (other than NYC) \$20 million: Historic Sites
1972	\$1.15 billion	Environmental Quality Bond Act \$650 million: Water Quality \$150 million: Air Quality \$350 million: Land Protection \$175 million: Land Acquisition in (9) categories by DEC and OPRHP \$175 million: Solid Waste Management
1986	\$1.45 billion	Environmental Quality Bond Act \$1.2 billion: Hazardous Waste Remediation \$250 million: Land Acquisition & Municipal Park, Recreation, Historic Preservation projects
1996	\$1.75 billion	Clean Water/Clean Air Bond Act \$790 million: Clean Water; including \$150M for Land Acquisition \$355 million: Safe Drinking Water \$230 million: Air Quality \$200 million: Environmental Restoration \$175 million: Solid Waste

The most recent environmental bond act to pass in New York was in 1996 with \$1.75 billion appropriated for the Clean Water/ Clean Air Bond Act. Not inconsequential, 1996 also was the year of a major presidential election with the re-election of President Clinton. Clearly in 1996, when the Clean Water/ Clean Air Bond Act was on the ballot, there was strong voter turnout in New York particularly among New York City residents.

Bonds issued under the Act provided funding for five specific programs: Clean Water, Safe Drinking Water, Solid Waste, Environmental Restoration and Air Quality. As of March 31, 2007 nearly \$1.7 billion of the 1996 Act had been committed; \$1.3 billion had been disbursed.

All \$355 million allocated for Safe Drinking Water under the Bond Act has been spent, while only 23% of the \$200 million allocated for Environmental Restoration has been disbursed. Changes made to the program in 2003 are anticipated to accelerate this spending pace. Less than \$4.2 million or 28% of the \$15 million allocated for Dam Safety has been disbursed.²⁶



²⁶ Office of the State Comptroller, 2007 Financial Condition Report

²⁷ Office of the State Comptroller, 2007 Financial Condition Report

APPENDIX 2

NYS Environmental Protection Fiscal Commitment

Environmental Protection Fund

In 1993, the State Legislature approved and the Governor signed, the Environmental Protection Act. This legislation dedicates a portion of the proceeds of a tax on real estate transfers and several other smaller revenue sources into the Environmental Protection Fund (EPF). The EPF is New York State's primary source of funding for the purchase of land for conservation and recreational purposes; assistance to local governments for recycling, parks and waterfront programs; and non-point source pollution control programs. The funding level in the EPF has increased from \$31 million in fiscal year ending 1995 to \$255 million in fiscal year ending 2009. This appropriation was cut under the Deficit Reduction Plan of 2008, to \$205 million for SFY 2008-2009.

The Environmental Protection Fund Enhancement Act of 2007 set forth a statutory schedule for increased appropriation to the EPF. Under the Act, the EPF is scheduled to be increased to \$300 million annually beginning with the SFY 2009-2010 budget. The Executive Budget proposal for SFY 2009-2010, however, would void the EPF Act of 2007, and reduce the annual appropriation to \$205 million, a 31% reduction.

This bond act will supplement the existing state Environmental Protection Fund appropriations and commitments made from the general fund. Bond Act proceeds will not be used as a substitute for general fund or environmental protection fund commitments.

1996 Clean Water/Clean Air Bond Act

As indicated previously, the revenues from the 1996 Bond Act have essentially been exhausted. According to the State Comptroller, nearly \$1.7 billion of the 1996 Act had been committed; \$1.3 billion had been disbursed as of March 31, 2007.

Rebuild and Renew Transportation Bond Act of 2005

The New York State "Rebuild and Renew Transportation Bond Act" was approved by New York State voters in the November 8, 2005.

General Obligation Debt

The State itself issues only General Obligation debt, authorized by the voters at a general election. These bonds carry the full faith and credit of the State, and may be paid without legislative action. General Obligation Debt has declined from nearly 35 percent of total State-Funded debt in 1990 to 7.2 percent in 2006. Since 1990, State voters have been asked to approve six different bond act proposals totaling nearly \$13.6 billion. Only two of these proposals were approved by voters, totaling \$4.65 billion.²⁸

²⁸ Office of the State Comptroller - <http://osc.state.ny.us/press/debtfaq.htm#go>

Current New York State General Obligation Debt Load

As of March 31, 2006 New York State had approximately \$48.5 billion of total State-Funded debt. This includes \$3.5 billion in General Obligation bonds and notes outstanding and an additional \$45.0 billion issued and outstanding by State public authorities. In addition to this State-Funded debt, public authorities had over \$80.0 billion in other debt outstanding as of December 31, 2005.²⁹

Justification for Bonding

Opponents to this initiative will propose that the standard system of borrowing engaged by the state is devoid of public review and in need of reform. Many good-government organizations have called for state leaders to address “back-door” borrowing, where the state’s public authorities take on substantial state debt, outside of the state budget process, without the engagement of elected officials or the citizens at large.

This Bond Act does not follow that path. This Bond Act authorizes the citizens of the State of New York to declare their support for this vital investment. It gives the citizens of the State of New York a voice in determining how \$5 billion should be borrowed and expended. Long-term borrowing for clean water, clean air capital investments and job creating sustainable green jobs are appropriate.

The expansive list of environmental, agriculture, energy, tourism and environmental public health needs are urgent and important, and deserve the opportunity to be considered by the electorate.

²⁹ Office of the State Comptroller - <http://osc.state.ny.us/press/debtfqa.htm#howmuch>

**For Additional Information regarding the Clean Water, Clean Air & Green Jobs Bond Act
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