

CITY OF NEW ROCHELLE
ENVIRONMENTAL ADVISORY COMMITTEE

TOWARD A SUSTAINABLE NEW ROCHELLE
Creating a greener, healthier and
more sustainable city

RECOMMENDATIONS

JULY 2007

City of New Rochelle
Department of Development

MEMORANDUM

TO: HONORABLE MAYOR AND CITY COUNCIL

THRU: Charles B. Strome, III, CITY MANAGER

FROM: Craig King, COMMISSIONER OF DEVELOPMENT

DATE: July 10, 2007

SUBJECT: Environmental Advisory Committee (EAC)
Policy Recommendations

On behalf of the New Rochelle Environmental Advisory Committee and its Chair, Dr. Herbert Fox, please find the committee's policy recommendations attached for discussion with a cover letter describing the committee's mandate, deliberations to date and how it arrived at its recommendations.

ENVIRONMENTAL ADVISORY COMMITTEE BACKGROUND

This report is a summary of the activities of the Environmental Advisory Committee from its inception. We worked alongside staff liaisons, Jeremy Schulman and Lynn Brooks from Development and Joe Cotroneo from Public Works who provided invaluable structure and technical assistance.

We first provide an introduction here to the work of EAC. This is followed by review of the contents of our report

- The committee was established by a City Council resolution on June 13, 2006 with a mandate to “advise the city and other committees on matters affecting the preservation, development and use of the natural and man-made features and conditions of the City insofar as quality, biologic integrity and other environmental factors are concerned and in the case of man’s activities and developments, with regard to any major threats posed to environmental quality, so as to enhance the long-range value of the environment to the residents of the City.”
- We met 7 times from November 2006 to June of 2007, examining the city’s current legislation and practices involving environmental issues and focusing on potential initiatives, which would yield environmental, economic and social benefits to the City.
- We deliberated on the environmental issues of greatest import to the city today, many of which also affect the region and are part of ongoing national and international discussions.
- The Committee narrowed down these issues into 11 groupings and further into 4 priorities—Green Building, Open/Green Space, Vehicle Fleet/Energy Consumption and Education and Awareness.
- We researched other communities for good models of environmental practices and hosted three guest speakers—Joyce Kent, New Rochelle High School Science Coordinator, Michael Deane, Operations Manager, Sustainable Construction, Turner Construction, Sustainable Division and U.S. Green Building Council, and Noel Shaw, Deputy Commissioner of Development/Building Official.
- We received a copy of the County’s Global Warming Task Force survey completed by staff for purposes of coordination moving forward.

- EAC considered cost, scale of impact and feasibility in formulating its policy recommendations and divided its recommendations into short, medium and long-term actions and strategies.
- The Committee delivered two interim progress report memos to the administration.
- Based on data received from the City on energy performance of City-owned buildings we developed a preliminary chart showing the energy consumption of municipal facilities vs. national building standards. We recognize this is a rough overview and needs detailed work before definitive action can be taken on the results.

We acknowledge that these issues cross departments, property lines and municipal and regional borders and that one of the major challenges ahead will be securing the resources necessary to carry out our mission, produce tangible results and effect positive change. In doing so the Committee is currently contemplating what its role should be going forward in terms of projects, timelines and key partnerships in order to maximize its impact.

The remainder of this report contains the following:

- Details of our recommendations in the four areas we focused on: Green Buildings, Open/Green Space, Vehicle Fleet/Energy Consumption and Education and Awareness.
- We also performed a preliminary look at energy consumption in city-owned buildings. Our recommendations for going forward in this area are included.
- Finally a recommendation has been developed for the City to engage a Sustainability Coordinator. Suggestions for potential tasks for this individual are also presented.
- Copies of the slides we will present to Council.

GREEN BUILDING STANDARDS
for
NEW CONSTRUCTION WITHIN
THE CITY OF NEW ROCHELLE

Rationale¹: Probably no urban activity has greater impact on human health and the environment than building construction and use. Enormous quantities of resources are used during building construction, renovation and operation, and the production of these resources has substantial environmental impacts. It is estimated that 40% of raw materials consumed globally are used for buildings. In addition, in the United States, commercial and residential buildings are responsible for approximately 65% of electricity consumption, 30% of greenhouse gas emissions, 12% of potable water use and 136 million tons of construction and demolition waste annually. Also, many indoor building materials release hazardous toxins, impairing indoor air quality and reducing occupant health and productivity.

Modern architects and engineers can reduce the health and environmental impacts of buildings by designing "high-performance buildings" or "green buildings." The United States Green Building Council, the nation's foremost coalition of real estate and environmental organizations working to promote green buildings, has developed a green building rating system known as LEED (Leadership in Energy and Environmental Design). Buildings receive LEED certification if their designs score sufficient "points" in five general design areas including siting, water efficiency, energy and atmosphere, materials and resources and indoor environmental quality. Thousands of residential and commercial buildings, ranging from single-family homes to large corporate headquarters, have been designed and constructed throughout the United States use green building principles. A recent study conducted for the State of California concluded that, on average, green buildings show a ten times return on the investment in green building design. This comprehensive analysis of 33 green buildings revealed an average green cost premium of less than 2%, with only a 0.66% premium for buildings that achieved the most basic level of LEED certification.

Numerous municipalities, including Atlanta, Austin, Boston, Boulder, Chicago, Dallas, Los Angeles, Portland (Oregon), San Diego, San Francisco, San José, and Seattle, have adopted LEED or have otherwise required that city-owned buildings be built according to green building criteria. Some localities have created incentive programs for privately-owned green building construction, including the use of direct subsidies, density bonuses and expedited permitting. Indeed, Boston will soon require private sector buildings of

¹ Much of this section is derived from Local Law No. 86 of the City of New York.

over 50,000 square feet to be LEED-certifiable.

Likewise, many states, such as California, Connecticut, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, and Rhode Island, have begun use LEED for state-owned buildings. The State of New York provides tax credits for buildings that meet defined green building criteria and, under Executive Order 111, state agencies are directed to reduce energy use and carbon dioxide emissions and to use green building principles.

Scope: The City of New Rochelle is experiencing major new growth and a concomitant building boom. It is the recommendation of the New Rochelle Environmental Advisory Committee that the City of New Rochelle adopt “Green Building Standards” for all new construction, private and public, commercial and residential. This will assure that such construction adheres to best practices and best techniques for conserving energy and addressing environmental needs.

We understand that this should be a two step process:

The first should be the adoption of legislation by the City Council that all new construction in the city should be LEED certified, at least at the silver level.

The second is the development of a new building code for the city. It is beyond the scope and the expertise of committee members to draft this but it is strongly recommended that the City engage consultants to help create these codes and associated incentives so that new construction can meet forthcoming needs of the City, the County and the State. In doing so the City and its consultants should track the progress of American Society of Heating Refrigeration and Air-conditioning Engineers (ASHRAE), the United States Green Building Council (USGBC), New York State and the International Building Code. These all will be recommending new standards for cities within the state and can assist the City for creation of appropriate language.

Enforcement will ultimately be a difficult issue. City staff will need to be trained; the City will need to help provide this. In addition we will need to encourage all the major constituencies to avail themselves of similar training to successfully implement green standards.

Finally the EAC recommends that the City implement these codes in some sort of priority order. They should first be applied to large building construction, then medium-sized and finally to private buildings.

LAND USE AND OPEN SPACE PLANNING

Objective: To identify opportunities and develop a process to protect important open space in the City of New Rochelle, balancing the varied needs of local residents for active and passive recreation and economic growth.

Rationale: With the increase in downtown development in New Rochelle, it is even more important to maintain a sense of openness within the rest of the City. The sense of space and greenery, along with access to Long Island Sound, are attractive attributes that draw people to the Queen City of the Sound.

Scope: To protect open space for passive and active recreation, to preserve critical environmental resources, to provide buffering between public and private spaces, and to ensure that cumulative impacts and City-wide open space priorities are considered when reviewing development proposals.

Recommended Goals: (reference: Scarsdale Open Space Report)

A. Preserve and increase dedicated open space

Preservation of open space is essential to maintaining the character of New Rochelle. This is particularly important in light of the increased development of the downtown area, where population density is high. Open space in the surrounding areas of the City should be protected to balance this intense growth and maintain a sense of openness.

B. Maintain or increase active recreation space

Playing fields in New Rochelle are in high demand, but this should be balanced with the need for areas for passive recreation for local residents who do not participate in sports activities. Fields should be maintained with consideration for environmental impacts such as stormwater, drainage and erosion.

C. Maintain or increase passive recreation open space

This type of space is basically left in its natural condition, to allow for less-formal activities such as walking or bird-watching. Trails should be maintained for access and safety.

D. Protect environmentally significant areas such as wetlands and streams

Wetlands perform many valuable ecosystem functions essential to the community, such as filtering pollutants to help maintain water quality, absorption of excess water to aid in flood control, and controlling erosion and sedimentation. In addition, they provide critical habitat for wildlife as well as aesthetic benefits. Local wetlands are part of the larger watershed, so intermunicipal planning and protection are the best approach.

Development can impact the health of streams, which require vegetated buffers to protect them. Homeowners should be educated about proper stewardship of local

streams, to reduce excess fertilizer use and encourage vegetated buffers rather than mowing to the water's edge.

E. Promote buffers between public and private spaces

Buffer zones between development, such as roads and other municipal facilities, and open space, can help link these areas. They can support wildlife diversity and provide a screen from the noise and pollution from cars.

F. Monitor development proposals

Attention should be paid to all proposed development, including changes to existing structures, to make sure that environmental concerns have been addressed.

Additionally, the cumulative impact of additional development should be considered as each project is reviewed.

Specific Actions: As a first step, establish baseline information required for the development of an open space policy by:

- Developing open space map to include publicly owned properties, adding layers to identify lots that are under-developed as compared to what their zoning would allow (to clearly illustrate remaining potential development within the City)
- Reviewing zoning ordinances to determine whether natural resources are adequately protected, with particular attention to ways to strengthen these laws and eliminate loopholes (e.g. Tree Ordinance)
- Educating the zoning board about the importance of open space and minimizing impervious surface, to reduce the impacts of polluted runoff – check with Land Use Institute at Pace University (John and Sean Nolon)

Respond to Emerging Issues:

- Identifying and monitoring any new emerging/issues and opportunities for open space protection, such as the potential sale of the Oaks property on Davenport Neck.

HYBRID ELECTRIC SANITATION VEHICLE

Objective: The City of New Rochelle currently operates a fleet of refuse collection vehicles and is seeking to reduce airborne emissions and dependence on fossil fuels. The Department of Public Works is considering the retrofit of some of their refuse trucks for a hybrid-electric conversion. The Hybrid Refuse Truck will be used for New Rochelle sanitation bureau collection operations City wide. This project represents initial step towards cleaning up this City of New Rochelle fleet. This proposed project would also have national visibility for the conversion of other similar refuse trucks.

Rationale: Many fleet operators are currently considering or actively converting their vehicles to hybrid operation. Examples include: New York City Transit Buses, the New York City taxicab fleet, FedEx delivery trucks among others.

Such conversion allows for reduced emissions, improved fuel economy and easier maintenance for the fleet. The City of New Rochelle's commitment to the demonstration and use of Hybrid Electric Refuse Collection Vehicles city wide will provide benefits such as:

- Supporting AFV advancement
- Demonstrate an alternative to diesel powered trucks
- Decrease airborne emissions by 50%
- Lay the foundation for future for national hybrid refuse vehicle deployment.

Scope: The Hybrid Refuse Trucks will allow The City of New Rochelle to increase environmental awareness, reduce operating costs and air-borne emissions, compared to conventional diesel trucks. The Hybrid Refuse Trucks will be operated for their useful life (approximately 10 years) within New Rochelle's refuse truck fleet. The proposed Hybrid Refuse Trucks will displace up to half of the fuel normally used during its operational life and eliminate many of tons of harmful particulates and hydrocarbons.

PROMOTING SUSTAINABILITY THROUGH EDUCATION AND AWARENESS

Objective: To use education and awareness tactics to drive implementation of a strategic commitment to sustainability for New Rochelle. Sustainability is an approach to using resources today in a way that preserves them for the future.

Rationale: There is a “sustainability advantage” to becoming a healthy, vibrant and more environmentally sound city. A commitment to the environment will create economic opportunity, reduced operating costs and promote community health. Education and Awareness tactics form a key part of a holistic approach to promoting sustainability. They complement and support efforts made through environmental legislation and city efforts to lead by example in their own operations.

Education efforts can address the misperception that environmental efforts are too costly.

To share this vision of the “sustainability advantage” we need to address the perception that environmentally beneficial behavior costs too much. We need to pay special attention to sharing information on the financial benefits of these efforts. One way to do this is to measure and report economic benefits including the growth in business opportunities for the city, and the costs savings (e.g. \$ saved through LED traffic lights). In addition, we can research and share the economic value of the ecosystem services provided by the resources we conserve. (For example, street trees save the city money by helping with stormwater management. In NYC research found that for every \$1.00 invested in street trees, they created \$5.00 worth of economic benefits in ecosystem services.) Use social marketing to drive recognition of importance and benefit of being green. The City should promote sustainability education to keep us on the edge of the fastest growing sectors of the economy (tourism, lawn care, food, building industry).

Education efforts can be used to promote green business / economic development opportunities...

Provide education – including free classes for the public -- that promote and build the new green economic opportunities for business. There is a green wave in business that New Rochelle should take advantage of while we can. This will bring addition new jobs and opportunities for green economic growth to our community. In Chicago, free classes are offered at their city-owned Green Tech Center on green building technologies and materials, organic lawn care, renewable energy for businesses, etc.

Scope: There are five key constituencies who will need to be addressed differently:

- Municipal employees including city officials, planning/zoning boards, schools
- Commercial businesses;
- Educational institutions (colleges, schools, private schools)
- Community groups (faith groups; non-profits like scouts, Boys clubs, etc)
- Public including homeowners, students

Approach: Communicate general environmental awareness and provide information related to committee recommendations to all constituents. The vehicles we will use are communication, events and partnerships.

- Focus on finding a way to share sustainability resources with stakeholders so they can identify and address their own sustainability / environmental opportunities;
- Use incentives and rewards. Recognize community efforts with certificates for green efforts awarded by the mayor.
- Expand and build on current environmental initiatives, laws and programs to make them more effective and far-reaching (e.g. Cities for Climate Protection programs; recycling ordinances; no idling laws; tree protecting ordinances. These are first steps that the city has made which have success stories to tell and build on.)

The vehicles we will use are communication, events and partnerships.

Potential communication media include:

- Website
- Signage
- Newsletters
- TV (note – perhaps we can use money received through from Cable.

Events would be focused differently by constituency and include:

- Workshops
- Films
- Community outreach
- Coordination with special dates and relevant partners: Earth Day (April 22nd); Arbor Day (April), Bike to Work Day (May) ; World Environment Day (June 5th); Coastal Clean Up Day (September); Energy Start Change-a-Light Day (October 3rd), Walk to School Day (October); America Recycles Day (November) New Rochelle Volunteers Day

Partnerships will allow us to reach a wider array of stakeholders and connect us to outside expertise and experience. These partnerships should be both internal (w/ New Rochelle organizations) and external.

For example:

- Municipal/ government partnerships between agencies (e.g. Global Warming taskforce of Westchester; NYSERDA; Energy Smart)
- Business partnerships within the city (i.e. Home Depot Foundation effort to plant trees through Neighborhoods)

- Linkage with community interest groups (Garden Club, New Rochelle Beautification Committee, Neighborhood Associations, Scouts, faith groups)

Success Stories are an important way to communicate the sustainability advantage. Again these could be tailored to be relevant to each different group. Some examples include describing other cities, like Chicago, that are using sustainability to their advantage. We could describe the New Rochelle student that used a biodiesel car and makes his own fuel, neighborhood cleanup activities and the homeowner who has enhanced his property using permeable surfaces to the public constituency. And, we can highlight green businesses in New Rochelle for the commercial businesses.

Specific Recommendations for Education and Awareness:

- 1) Communicate sustainability vision throughout city and gain commitment from stakeholders.
- 2) Develop an education awareness center in New Rochelle - “Green Tech Center” – The Oaks Environmental Center is one possible venue
- 3) Create communication channels
 - Green Streets (Residence Park Neighborhood Association) website
 - Free classes / workshops
 - Newsletters / deliverables
 - Use New Rochelle TV station
- 4) Facilitate partnerships for ongoing education
- 5) Develop incentives for recognition of green efforts
- 6) Use environmental interns for development and distribution of material.
- 7) Hold city official training to develop awareness of sustainability advantage that can be communicated throughout the city. (videotape this event and play on TV)
- 8) Create action lists focusing on environmentally aware actions to do right now by constituency (ex. Power mgmt, recycling in schools)

ENERGY CONSERVATION IN CITY BUILDINGS

In July 2006, the Office of the Mayor presented a report to the City Manager and the Department of Public Works detailing energy use in various City-owned buildings. The report looked at both electric and thermal consumption in these facilities.

The EAC recognized that this was a first step in an analysis that is important to complete. Working with staff to the EAC and students at New York Institute of Technology, and using building size as a key parameter, we computed energy consumption per square foot per year, the standard measure of building performance. We compared these results to standards for green-performing buildings suggested by the United States Department of Energy. Results for the largest of the City buildings are shown below; the complete array of results is presented in the Power Point presentation.

<i>Building</i>	<i>Area</i> (ft ²)	<i>Annual energy use</i> <i>per square foot</i> <i>per year</i> (Btu/ft ² -yr)	<i>USDOE</i> <i>standards</i> (Btu/ft ² -yr)
New Roc Garage	135, 847	419,539	45,000
City Hall	142, 705	210,347	93,000
Library (main branch)	74,833	306,926	93,000
Community Center	36,669	295,017	94,000

Several observations should be made:

- These are very preliminary results and need to be verified before any useful action can be taken.
- Energy consumption needs to be reviewed for accuracy; building sizes need to be verified.
- The Transportation Center garage has not been included; data are just coming available therefor and should be used to complete the picture for the City.

However if these preliminary results are any guide, then there are clear opportunities for energy conservation in the city. The city is currently undergoing an assessment of the HVAC and windows with a plan to replace with a more efficient system. Professional consultants should be engaged to carry out the details and develop recommendations for implementation.

ENGAGE A SUSTAINABILITY COORDINATOR

Objective: Create a new position, Sustainability Coordinator or Director of Sustainability to lead environmental efforts and to drive implementation of a Strategic Sustainability Initiative for the city of New Rochelle—a program that promotes the “Sustainability Advantage”.

Rationale: A Sustainability Coordinator or Director can help the city take advantage of the multiple benefits generated by adopting more environmentally sound practices. These include new economic opportunities for business, reduced operating costs for the city, schools and businesses; a healthier, safer, more livable community; and natural resource conservation and restoration, including climate action. In particular, the person in this position can do the necessary cross-departmental work that will be key to the success of our programs.

Several cities in the United States have already hired such an individual. While it is beyond the scope of the EAC to develop a complete job description, some of the tasks that might be undertaken could include, but not be limited to:

- Provide vision and leadership in the development of a sustainability plan for the City.
- Serve as a catalyst to produce a culture change within the City that integrates sustainability and environmental values into how the City conducts business.
- Act as a team leader working with City staff and to develop sustainability initiatives and assess their cost effectiveness, technical feasibility and implementation methods.
- Help implement the county and city climate action goals in coordination with Cities for Climate Protection
- Represent the City within the community; increase awareness of sustainability initiatives through participation in civic, neighborhood or professional group activities.
- Develop criteria, policies and procedures for sustainability programs.
- Establish annual performance targets and report on the City’s progress in meeting these goals.
- Apply for and manage grants to support the implementation of sustainability programs.
- Provide research, support and advice to Mayor, City Manager, staff and Council.

NEXT STEPS FOR THE ENVIRONMENTAL ADVISORY COMMITTEE

With this preliminary report concluded, the EAC recommends that it continue its tasks as set out in the original charge to the committee. We believe that we can fulfill a useful function for the City of New Rochelle by:

- Continuing to evaluate, assess and identify environmental and energy opportunities for the City;
- Assisting the Mayor, City Manager and City Council in implementing and tracking recommendations;
- Helping a Sustainability Coordinator to fulfill his/her tasks for the City, should such an individual be engaged;
- Providing a continuing series of reports on our activities.

ENVIRONMENTAL ADVISORY COMMITTEE

The following are the members of the New Rochelle Environmental Advisory Committee:

Dr. Herbert Fox, Chair

Lisa Davis

Paula DeCaro

Elyssa Hammond

Robin Kriesberg

David Schlecker

Fred Treffeisen

We were supported by the following members from the staff of the City:

Lynn Brooks Avni

Joseph Cotoneo

Jeremy Schulman

POWER POINT PRESENTATION

The following pages provide the slides presented to City Council on July 10, 2007.