

REPORT OF THE NATURAL RESOURCES COMMISSION
July 1, 2011 – June 30, 2012

It is the mission of the Natural Resources Commission to provide stewardship, education and advocacy of the Town of Wellesley's park, conservation, outdoor recreation and open space resources so that the full value of the Town's natural assets can be passed on to future generations.

The Natural Resources Commission's goals are to provide the Town with the highest quality of environmental leadership, planning and management, establish sound environmental policy and protect and improve the Town's natural and outdoor recreational resources. To achieve these goals, the NRC is charged with the statutory responsibilities of *Park Commissions, Conservation Commissions, Tree Wardens, Shade Tree and Pest Control Officers, and Town Forest Committees* under Massachusetts General Laws Chapters 40, 45, 87, 131 and 132. The Commission appoints the Wetlands Protection Committee, the Trails Committee, the Public Shade Tree Subcommittee and oversees special committees such as the Morses Pond Management Committee, Pesticide Awareness Committee, and the Integrated Pest Management Advisory Committee. Representatives from the Commission serve on the Community Preservation Committee ("CPC"), Fuller Brook Park Coordinating Committee, Town-wide Encroachment Corrections Committee, St. James/900 Worcester St. Planning Committee, Playing Fields Task Force, High School Parking Subcommittee, and the Wellesley Green Schools Council. In addition, the NRC works closely with the Wellesley Cancer Prevention Project, the Wellesley Conservation Council, Sustainable Energy Committee, Charles River Watershed Association, Sustainable Wellesley, and the Metropolitan Area Planning Council.

The NRC continues to implement an ambitious and well-planned agenda. In FY12, the NRC held 42 public meetings, 4 Public Shade Tree Removal Hearings and attended 28 additional public meetings with the School Committee, Community Preservation Committee, School Building Committee, Advisory Committee, Board of Selectman, Fuller brook Park Coordinating Committee and other Town boards to discuss the NRC's environmental protection and improvement efforts and related Town business. In FY12, the NRC issued 24 Permits for Use of Park or Conservation Land.

The NRC's website contains the agendas, meeting minutes, goals, priorities and projects of the NRC, the Wetlands Protection Committee, and the Trails Committee. The NRC website also contains extensive information about the NRC's parks, playgrounds, recreational resources and natural resources including the Town-wide trail system, as well as pesticide use reduction information, climate change prevention, watershed protection and provides links to related fields. This year the NRC began distributing an email newsletter that includes environmental updates and information on NRC projects, programs and issues of concern to the community. For more information about the NRC, Trails Committee and the Wetlands Protection Committee please visit our website at www.wellesleyma.gov/nrc.

In FY12, the NRC was successful in securing funding from Town Meeting for its initiatives that included continued funding for the Fuller Brook Park Preservation Project, implementation of the Morses Pond Comprehensive Management Plan including the dredging of the pond's northern basin, the NRC's Public Tree Replacement Program, Town-wide trail network improvements and playground and

parkland improvements. The NRC successfully secured several conservation restrictions protecting extensive open space and wildlife habitat. In partnership with the Department of Public Works (DPW), the NRC continued to implement its Pond Restoration Master Plan, and this year the NRC focused on the fifth year of implementing the Morses Pond Comprehensive Management Plan. The NRC's program to reduce the use of pesticides continues to be recognized by the State as the leading municipal pesticide use reduction and education effort in Massachusetts. The NRC also implemented a program to begin restoration of Rocky Ledges in the Boulder Brook Reservation. In addition, the NRC and DPW were awarded the first in the state to have earned a 29th Year Tree City USA designation in recognition of the Town's tree management and replacement program.

NRC'S OPEN SPACE AND NATURAL RESOURCES PROTECTION EFFORTS

Implementation of the Town's Open Space and Recreation Plan

As part of the NRC's efforts to ensure that Wellesley's natural resources and recreational areas are preserved and protected, the NRC continued its efforts to implement and update the NRC's *Comprehensive Open Space and Recreation Plan*. An Open Space and Recreation Plan is required for a town to apply for state funds for open space acquisition. This plan makes an inventory of existing resources; evaluates the interests of the community; and attempts to prioritize open space and recreational needs. In turn, the plan assists town officials in making land acquisition decisions. In a developed suburban community such as Wellesley, issues concerning the acquisition and management of our remaining open space have become important and controversial. This year, the NRC has focused on supporting the following Open Space and Recreation Plan goals and projects: Fuller Brook Park Preservation Project, pond restoration with emphasis on Morses Pond; open space acquisition; trail network improvements; playgrounds and playing fields improvements; enforcement of the State and Town Wetlands Protection Bylaw; protection of the Town's trees; pesticide education and reduction efforts; and the NRC's "Green Wellesley" sustainability education efforts.

Educating the Public Regarding the Need to Preserve and Acquire Open Space

The Commission continues to focus on educating the public regarding the benefits of open space preservation and acquisition. For Wellesley, there are many advantages to open space preservation and acquisition, all of which culminate in making our community more livable. The trend towards larger and newer housing has resulted in more conversion of open spaces into development. Consequently, the Town is faced with both a challenge and an opportunity; indeed, the challenge is to preserve existing open spaces and avidly look for opportunities to acquire much-needed open space. Justification for preserving open space at a time of high-profile development fall into three interdependent benefits -- social, environmental and economic.

Social: From a societal point of view, open space affords passive recreation, density control, environmental education, and the ability to enjoy healthful walks, beautiful views, and opportunities for quiet relaxation and closeness to nature. Most importantly, balanced open spaces become part of a community's character and identity.

Environmental: The environmental richness of conserved open space, i.e., the wetlands and floodplains, insures the continued operation of vital natural functions that prevent altering or damaging Wellesley's water supply, aquifer zones and watershed districts. Open space preserves and protects the wide diversity of plant and wildlife species and the continued operation of those natural processes necessary for survival, i.e., air and water purification, flood control, water storage and climate control.

Economic: Open space preservation is most often a less expensive alternative to development. The case for open space protection, based on a cost vs. revenue concept, indicates that development of land does not usually pay its own way and property tax revenues levied do not cover the costs a community incurs in providing essential services -- schools, water, sewer, utilities (i.e., annual property tax revenues for the median priced home in Wellesley are \$4,660 , whereas the annual school expenditure per student is \$9,241. In addition, open space increases the value of all property while saving public funds by preventing development of areas of critical concern.

Although Wellesley is generally considered a "built-out" town, a Community Preservation Build-Out Analysis of the Town by the Metropolitan Area Planning Council concluded that an additional **851 acres (out of a total land acreage of 6,338) of privately owned open space could be developed under existing zoning regulations, which could result in an additional 2,229 dwelling units with 8,094 additional residents.** This increased development would irreparably alter the Town's open space and would dramatically increase demands on the town's infrastructure, including its school system, water supply, and solid waste capacity (see "Metropolitan Area Planning Council Build-Out Analysis of the Town of Wellesley," Nov. 2000).

Many residents continue to be concerned about the "mansionization" of Wellesley. Wellesley is currently faced with an increasing loss of open space, and the Commission will continue to make the preservation and acquisition of open space a priority for the benefit of all residents.

NRC Jurisdictional Lands and Water Bodies

The NRC is charged with stewardship and jurisdiction of over 1,000 acres of open space, parkland, recreational resources and water bodies including:

- Morses Pond (over 100 acres including the beach area)
- 7 additional ponds throughout Town
- 18 parks ranging from small pocket parks to the 23-acre Fuller Brook Park
- 5 playgrounds at Warren, Perrin Park, Phillips Park, Ouellet Park, Hunnewell Tot Lot
- 9 playing fields, including the Hunnewell Athletic Fields adjacent to the High School
- Over 6,000 inventoried public shade trees along Town roadways
- Over 30,000 public trees in NRC parks and conservation land
- 6 Conservation Reservations and the Wellesley Town Forest
- Over 60 miles of brooks and streams, including extensive flood plain areas

- 15 Conservation Restrictions protecting over 360 acres of open space.

NRC Participates in MetroWest Regional Collaborative Open Space Connectivity Plan

In FY12, the NRC continued to participate in the Metrowest Regional Collaborative Open Space Connectivity Program and public hearing process aimed at improving regional opportunities for open space connections in the MetroWest area. The MetroWest Plan included references to the NRC's Open Space and Recreation Plan's goals as they relate to specific open space acquisition and protection efforts.

NRC Secures a Conservation Restriction Protecting Open Space at 27 Washington Street

The NRC was recently granted a Conservation Restriction (CR) at 27 Washington St. by the owners of the property, National Development Corporation that will permanently protect significant open space and natural resources, including wetland and wildlife habitat, along the back portion of the property that abuts the Charles River.

National Development, Inc. purchased 27 Washington Street, the former Grossman's site, and recently completed a senior residential facility on the property. The redevelopment of the site has resulted in a significant reduction in the amount of the impervious area on the site, which will create a total increase in open space on the site from 16.8 percent to 37.5 percent. In FY12, National Development, Inc., completed construction of a redevelopment project at this location that includes a two-story office and retail building at 27 Washington Street and 2 four-story residential apartment buildings, which provides 150-units of senior housing, 30 of which are affordable units under Wellesley's Inclusionary Zoning Bylaw.

The NRC had been working with National Development for over a year to place .58 acres of the Charles River riverfront portion of the property in question under permanent conservation restriction protection. Property protected by this CR designation contains ecologically significant and sensitive open space. The protections offered by the CR will secure the scenic and natural character of the land that is visible to the public along the Charles River, help protect the water quality and wildlife habitat of the area within the CR jurisdiction, safeguard the area's fragile ecological resources, allow public access to enjoy passive recreational pursuits, and provide trail links to established trails and open space parcels on public land owned by the Massachusetts Department of Conservation and Recreation. Additionally, the CR designation will permanently protect the area as an open space resource, which is consistent with and will advance the objectives outlined in the NRC's Open Space and Recreation Plan. The NRC is deeply grateful to the National Development Corporation for its generosity and foresight in permanently protecting this land as open space.

Creation of New Linear Park and Charles River Pedestrian Bridge Renovation

In spring 2012, the Massachusetts Department of Conservation and Recreation (DCR) completed an \$800,000 renovation of the Lower Falls Bridge, which is located on the Newton-Wellesley town line. The bridge replaces a former railroad

bridge built in 1910, which was abandoned for railroad use in 1970. To celebrate, there was a ribbon cutting and dedication ceremony in May, with opening remarks by Lieutenant Governor Tim Murray. DCR worked in partnership with Neal Seaborn of the NRC and the Department of Transportation (DOT), with the goal of converting the former railroad bridge to a pedestrian bridge with a 10 foot-wide path between railings. This project also improves public safety by providing a safe passage over the 100+ year old bridge. The bridge repair and other access improvements were designed to enhance the visitor experience in the area. The \$800,000 project was funded through the Patrick-Murray Administration's Accelerated Bridge Program (ABP). The Lower Falls Bridge Preservation Project, including bridge and approaches elements received \$240,000 from the DCR in 2009 Partnership Matching Fund monies, with a match of \$12,000 provided by the Lower Falls DCR Bridge Preservation Coalition. The development and construction of the Newton-Wellesley Lower Falls Bridge improves public safety for bridge users and grants access across the Charles River with connections to existing trail segments for recreational and commuter use.

NRC Provides Recommendations on Natural Resources Protection Zoning

In FY12, the NRC provided detailed recommendations to the Planning Board regarding natural resource protection zoning for the Town of Wellesley, which will provide additional protection of the Town's open space, wildlife habitat and wetland resources should there be additional subdivisions in areas of critical natural resources. The NRC provided recommendations and attended a hearing by the Planning Board which has hired a consultant to evaluate subdivision design zoning options and assess cluster development options. The NRC encouraged the Planning Board to proceed with mandatory natural resource protection zoning provisions in order to adequately protect the Town's natural resources.

NRC Collaborations with Regional Organizations

Throughout FY12, the NRC actively collaborated with a number of regional organizations to protect the Town's and the region's natural resources, including work with the Metropolitan Area Planning Commission, the MetroWest Collaborative Open Space Connectivity Committee, the Charles River Watershed Association, the Massachusetts Association of Conservation Commissions, the Massachusetts Association of Tree Wardens, the Massachusetts Executive Office of Energy and Environmental Affairs, the Massachusetts Water Resources Authority, the Massachusetts Watershed Coalition, the Massachusetts Land Trust, Mass. Audubon, and the Massachusetts Sierra Club.

NRC Participation on Town Development Review Team

The Town Development Review Team (TDRT) includes the NRC and meets periodically to discuss major developments proposed in Town, both public and private. These meetings allow all departments and boards involved in the permitting, review or approval of such projects to share information and to coordinate permitting with the applicant.

NRC Organizes Twelfth Annual Earth Day Clean-Up, April 21, 2012

The NRC's twelfth annual Earth Day clean-up along the Charles River was held on Saturday, April 21, 2012, and was co-sponsored by the Charles River Watershed Association. This annual event is a rite of spring for many volunteers from Town Boards, community organizations and the Town's colleges and scout troops. This year, over 40 volunteers helped clean-up along the banks of the Charles River, which is one of our most precious water resources. This year marked the 42nd anniversary of Earth Day and the NRC thanks all those who participated.

NRC Initiative to Place Fuller Brook Park on National Registry of Historic Places

In FY12, the NRC continued its efforts with Ms. Shary Berg, the NRC's Landscape Historian on the Fuller Brook Park, to place the Park on the National Historic Registry. The Massachusetts Historical Commission has confirmed that the Fuller Brook Park is eligible for listing on the Registry. This project was funded by the Community Preservation Committee and is being spearheaded by the NRC in cooperation with the Wellesley Historical Commission. The application received approval and support by the Massachusetts Historical Commission and it has been submitted to the National Park Service of the U.S. Department of the Interior for final approval.

Fuller Brook Park Preservation and Improvement Project

Fuller Brook Park is a 23-acre linear park that encompasses Wellesley's most popular open space and runs from Dover Road, across from Wellesley College's Nehoiden Golf Course, and follows the Fuller Brook for two miles to Hunnewell Field near the Wellesley High School. A second nearby portion of the Park, called the Caroline Brook Path, runs from the middle of the southern end of Hunnewell Field to Maugus Avenue. Heavy use and minimal maintenance has left Fuller Brook Park in a deteriorated and vulnerable state. This park preservation project will address the park's many uses, which often sees walkers and families guiding baby strollers, making way for runners and bicyclists of all ages, and will also develop a plan to maintain trees, develop a cohesive planting system that includes management of invasive plants that have taken over areas of the park. Much of the Park's stream course and path system have also suffered from years of erosion and needs repair. Fuller Brook serves as the stormwater drainage system for more than half of Wellesley before flowing into the Charles River. In the early 1900's, Wellesley began acquiring land around the brook, seeking a pedestrian and horse path that avoided the then heavy traffic of horse drawn vehicles on Washington Street. The formal 23-acre Fuller Brook Park, with its footbridges, stone bridges for vehicles and the linear path system, was completed during the Great Depression.

In FY12, the NRC continued its efforts to preserve and improve the park. The park's Preservation Master Plan was completed in November 2009 by the NRC's consultant, Halvorson Design Partnership, and it has assisted the NRC in planning ways to preserve and improve this valuable resource, and, most significantly, ensure its historical integrity. A public hearing on the Master Plan was held in December 2009 and based on input from residents and the Community Preservation Committee, it was determined that additional design alternatives needed to be evaluated. At the Annual Town Meeting in April 2010, \$250,000 in Community Preservation Funds were approved for hiring consultants for: development of conceptual design plans and alternatives to build upon the Master Plan; an arborist treatment plan; a boundary,

topographical and utility survey; and selection and cost estimates for a preferred alternative design. This phase of the project was completed by the landscape architect firm of Pressley Associates in January 2011 and included extensive public meetings and public input on proposed improvements to the park's path system, stream course and vegetation. At the April 2011 Annual Town Meeting, \$21,500 in CPA funding was approved to construct a demonstration path in the park in order for the Town to evaluate different surface materials and widths. In 2010, a Fuller Brook Park Coordinating Committee with representatives from several town boards was created to assist the NRC with the conceptual design phase. In FY12, the Community Preservation Committee and Town Meeting approved funding for the project's third phase, which includes final design, permitting and the development of construction documents for the project. Phase 3 is anticipated to be completed in the Spring of 2014 and funding will be requested for the final construction phase. In FY12, the DPW installed two 50-ft demonstration paths in Fuller Brook Park, just west of State Street, in order to evaluate surface material options as part of the project.

Creation of the Friends of Fuller Brook Park

In FY12, the Friends of Fuller Brook Park was created to work with the NRC to help keep the park clean and ecologically healthy. In cooperation with the NRC and DPW, the Friends organized a successful Earth Day clean-up in the park and received training on invasive vegetation identification and removal techniques. The NRC thanks Kendra Chencus and Kurt Somerville for initiating this effort and the NRC looks forward to working with them in the future.

NRC Efforts to Preserve Open Space at MassBay Community College

In FY12, the NRC continued its efforts to preserve and explore the possibility of acquiring open space that is State-owned and under the control of MassBay Community College. The College owns approximately 43-acres of environmentally significant open space, which encompasses extensive wetlands, forest land, and is located in the Town's Water Supply Protection District. This state-owned land includes extensive wildlife habitat and a public trail system that is maintained by the Town of Wellesley. Based on the Town's past partnership with MassBay Community College as stewards of this important conservation land, the NRC has made a concerted effort to protect this land as open space in perpetuity. The NRC has held several meetings with MassBay leaders in an effort to unite the college community and the Town in protecting this open space for future generations and allowing Town residents to continue to take walks through this important natural resource to discover the beauty of this land.

The NRC was granted funding by the Community Preservation Committee to develop an acquisition feasibility study that is the first step towards protecting this open space. The potential for the Town to acquire this land as open space was identified in the "Wellesley Community Preservation 2008 Plan."

NRC Director Testifies at State House on Environmental Legislation

Legislative advocacy plays a key role in the NRC's mission to protect the Town's natural resources, conserve habitats and address climate change. In FY12, the

NRC Director attended hearings and/or provided testimony on the following environmental legislation:

- An Act Protecting the Natural Resources of the Commonwealth (Also known as the Public Lands Protection Act or PLPA): In 1972, the Massachusetts voters approved an amendment to the state Constitution, Article 97, granting the people of the state the right to clean air and water, and other “environmental” benefits. However, the pressure to convert public land protected by Article 97 is growing as development pressures increase, as vacant land becomes more expensive, and as the demand for land to be used for schools, easements, parking lots, utilities, and other services grows. This bill provides protection for our public lands by requiring other sites be evaluated before Article 97 land is developed and requiring that if Article 97 land is taken for development, open land is acquired to replace it. This bill codifies the existing “ad hoc” system legislators and the Administration currently relies on to conduct their “due diligence.”
- An Act Making Corrective Changes in Certain Laws Regarding the Taxation of Forest, Farm, and Recreation Land: This bill makes several technical or conforming amendments to the classified land statutes, Chapter 61 (forest), Chapter 61A (agricultural and horticultural) and Chapter 61B (recreational). In 2008, these three statutes were amended in order to clarify and standardize basic features of the programs, such as penalty taxes, right of first refusal, and application and appeal procedures. However, there were some inadvertent omissions or non-conformities that will be remedied with this bill, including alignment of billing and appeal provisions, consistency across the three chapters, and correction of drafting errors on rollback taxes and abatement applications.
- Safer Alternatives to Toxic Chemicals Act: this bill will curb the use and proliferation of toxic chemicals by mandating when there is a safer alternative it must be used. Entrepreneurs who develop safer chemical alternatives are assured of sales in Massachusetts.
- An Act to Reinstate the Clean Environment Fund (The Expanded Bottle Bill). The Expanded Bottle Bill will extend the state’s bottle bill beyond a refundable nickel deposit on carbonated beverage bottles to include containers that hold water, ice tea and other non-carbonated beverages, and to benefit bottle redemption businesses. This bill creates a Clean Environment Fund into which all unredeemed bottle bill deposits collected pursuant to Chapter 94, Sec. 323D are deposited. These revenues would be used for two main purposes: to create and support waste reduction, recycling and composting programs, as set forth in the DEP’S Solid Waste Management Plan; and to create a revenue stream to help pay for DEP’s administration of the Federal Safe Drinking Water Act in the State. Currently the sole source of funding for the latter purpose is a Safe Drinking Water Assessment Fee which is paid by municipal and district water systems and their rate payers – over \$200 million annually.
- Natural Heritage and Endangered Species Program: the mission of this important state program is to protect the rare species of Massachusetts, their habitats, and the full range of natural community species to conserve the biodiversity of the Commonwealth. It addresses community concerns about

managing development in a sustainable way to protect state listed species as well as places special to people.

- The Old Growth Forest Permanent Protection Bill: this legislation will protect old-growth forests for the purpose of protecting exemplary forest habitats, maintaining biodiversity and establishing ecological benchmarks for assessing the health of forests statewide that includes a system of permanent old-growth forest reserves.
- The Dam Safety Removal and Repair Bill: will increase opportunities to remove unneeded dams and help restore rivers to a more resilient, natural condition reducing the risks of flooding and enabling aquatic animals to survive.
- The Sustainable Water Resources Bill: establishes a process to develop science-based stream flow standards to document groundwater input and to ensure that fisheries and other fresh water species are sustained while meeting water supply needs for public health and safety.
- An Act Relative to Reduction of Plastic Bags: The widespread use of plastic bags has serious consequences for the environment, such as littering our coastlines, using up billions of gallons of petroleum a year, leaching toxic chemicals into our soil and water, and killing millions of animals each year. This bill will reduce the number of plastic bags used in Massachusetts each year by directing certain retailers to cease providing non-compostable plastic checkout bags to their customers. If a retailer still chooses to provide plastic checkout bags, they must conform to the ASTM standard for compostable plastic. This legislation would only apply to large stores, as defined as greater than 4,000 square feet.
- An Act to Sustain Community Preservation: this legislation will amend MGL Chapter 44 B in order to, among other provisions, allow for capital improvements for existing open space, housing, parks and recreational facilities not purchased with Community Preservation Act (CPA) funds.
- An Act Relative to the Effective Enforcement of Municipal Ordinances and Bylaws: Local municipal boards, including conservation commissions, are vested with the authority to administer a variety of important land use and other bylaws, ordinances and regulations, and need adequate enforcement tools. The current tools are lacking. For example, when faced with a violator who refuses to pay a “non-criminal disposition” fine, a municipality’s only recourse is to pursue a criminal complaint in District Court, which costs the town in legal fees. The payment of those fees is in effect, optional, leading to willful violations of local laws. For example, when someone fails to comply with an enforcement order under a town’s wetlands bylaw (that requires them to cease and desist or restore damage to wetlands resources) then a non-criminal disposition fine would be issued, but rarely collected. This legislation gives municipalities and the courts two important enforcement tools: It raises the maximum penalty for violations of ordinances and bylaws from \$300 to \$1,000; and it grants the Superior Court the authority to impose civil penalties sought by a municipality, in conjunction with equitable relief, such as an injunction. The bill would give the court judge specific guidance on calculating a penalty. The legislation does not grant municipalities the right to impose penalties unilaterally but they do retain the right under other, existing statutes to impose non-criminal fines. Judges gain the right to enforce payment and dispose injunctive relief.

NRC Climate Protection Actions and Legislative Efforts

Rapid climate change is a serious long-term threat to Wellesley's natural resources and our planet. Climate change primarily results from tropical deforestation, animal agriculture, and the burning of fossil fuels to generate electricity and power our vehicles, planes and trains. The burning of fossil fuels and its effect on climate change also raise public health and safety concerns. To reduce these impacts, our use of fossil fuels must be dramatically reduced. At the same time, we must increase energy derived from more efficient technologies and renewable, energy sources.

The NRC's "Green Wellesley" Campaign focuses on educating residents about the actions they can take in their daily lives to address climate change. Towards this end, the NRC has actively supported the following state legislation:

- **Global Warming Solutions Act**: the NRC strongly supported the State Global Warming Solutions Act, making Massachusetts a leader in the fight against climate change. The NRC supported passage of this law which requires a reduction of greenhouse gas emissions by 80 percent by 2050 with an interim reduction of 10-15 percent below 1990 levels by 2020.
- **Climate Change Adaptation Committee**: the NRC has been active in advocating to ensure that this new law included a provision for development of measures to help people and nature adapt to climate change impacts that are inevitable, even if emissions are stopped immediately.

NRC Participates in "Sustainable Wellesley" Climate Protection Event

NRC Director Janet Bowser, NRC Chairman Neal Seaborn and Vice Chair Ursula King worked with the Sustainable Energy Committee, Sustainable Wellesley Organization and the Municipal Light Plant on this October 2012 event that focused on educating residents about climate protection and simple energy conservation measures that they can make at home. At the event, the NRC encouraged residents to join the NRC's Green Wellesley Campaign by pledging to live a more sustainable lifestyle and distributed information on sustainability. A network of organizations interested in climate protection evolved from this event and it is the NRC's goal to further develop its Green Wellesley Campaign by collaborating with these other organizations. This event was one of thousands held across the world as a part of the international climate campaign 350.org founded by Bill McKibben in recognition of the 350 parts-per-million carbon dioxide limit that is recommended for the health of the planet.

NRC Supports Town-Wide Sustainable Energy Plan

The NRC continues to support the Town's Sustainable Energy Plan through implementation of the NRC's Green Wellesley Campaign. Recognizing the importance of developing and adopting local sustainable practices to reduce energy use and the impacts of greenhouse gas emissions, the 2008 Annual Town Meeting commissioned the Green Ribbon Study Committee to develop a sustainable energy plan for the Town that identifies policies and actions that will increase energy conservation and efficiency, reduce reliance on fossil fuels, and reduce greenhouse

gas emissions at both the public and private levels. Based on the Committee's preliminary work, the 2009 Town Meeting set a goal to reduce emissions to 10% below 2007 levels by 2013. In order to reach this target at least 440,500 tons of CO₂ must be eliminated from the Town's emissions over the next four years. While this goal may appear to be relatively modest, in the context of increasing energy usage and emissions, it will require the concerted efforts of the Town's residents, businesses, institutions and municipal government to attain. The Town's Sustainable Energy Plan outlines measures that the Town has already undertaken and outlines actions that the Town is encouraged to take in order to reach the Greenhouse Gas Reduction Target by 2013. While the overall goal is 10%, the Plan established a target reduction in overall municipal energy use of 20% by 2010. The recommended actions in the plan include increasing energy efficiency and conservation in buildings and in infrastructure, reducing vehicle miles traveled and increasing vehicle fuel efficiency, improving management of solid waste, and purchasing electricity from renewable resources. The next step, as approved by Town Meeting in April 2010, included prioritization and evaluation of the measures proposed in the plan and the creation of a Town Sustainable Energy Committee to work together with Town Departments and Boards, including the NRC. One of the key components of the plan is an education and outreach campaign that will strive to build general awareness and sustain program support, as well as using traditional media tools and creating a committee to promote awareness. The NRC looks forward to continuing to work with this Committee to promote educational awareness on natural resource protection and sustainable programs and practices, including sustainable ecological practices and land management practices to adapt to and reduce CO₂ emissions, to protect bio-diversity, to adopt green practices and operations that will reduce the Town's carbon footprint and to look at water consumption and water quality issues as they impact sustainable practices.

The NRC's "Green Wellesley Campaign" Promotes Town-Wide Sustainable Practices and Green Building Design and LEED Standards

The NRC is committed to working with all Town Officials, departments and residents to create a sustainable community. In FY12, the NRC continued to educate residents about what they can do to make their homes and lifestyles more environmentally friendly and advocated for the construction of "Green" municipal buildings in collaboration with the "SMART" environmental citizen's organization. NRC Members and the NRC Director were active in advocating for maximizing green building design elements in the new High School Project.

The NRC adopted the following statement urging the Town to support Green Building and "Leadership in Energy and Environmental Design" (LEED) Standards for the design and construction of the new High School:

"The Natural Resources Commission strongly recommends that the Town of Wellesley take action to seriously address the very real threats posed to our Town and our world by global warming. Towards this end, the NRC urges Town officials to take all steps available to improve our energy efficiency and reduce our carbon emissions including the adoption of Green Building LEED Standards in the design of the renovation and expansion of the High School. Taking action now will improve our quality of life, save money, and make our Town a healthier, cleaner place to live and set a good example for future

generations.”

NRC Endorses Mass. Climate Change Policy Position Statement

The NRC has endorsed the Position Statement on the Massachusetts Climate Change Policy encouraging the State to reduce green house gas emissions through conservation, increased efficiencies, and renewable energy sources. The NRC, along with other major Massachusetts environmental organizations, have endorsed the position statement in order to urge Massachusetts State policy makers to support a goal of 80 percent mandatory emission reductions from current levels by 2050.

NRC Participation on the Community Preservation Committee

In FY12, NRC member Joan Gaughan continued to serve as the Commission's representative on the Community Preservation Committee (CPC). The Committee is charged with making recommendations for the use of CPA funds. The NRC worked with the CPC in writing and updating the open space section of the CPC's 2008 "Community Preservation Plan," which outlines the need for open space acquisition to help the Town protect its drinking water supply, wetlands, floodplains, wildlife habitat and scenic vistas, as well as expand recreational resources. This Plan also identifies goals and current and projected capital projects that may be eligible for CPA funding, including restoration of Morses Pond, Longfellow Pond, State Street Pond, and Abbotts Pond, the restoration of the historic Fuller Brook Park and the Town Hall Park, as well as park, playground and recreational improvements. To read the full text of the CPC's Community Preservation Plan, visit the CPC website: www.wellesleyma.gov/cpc.

Town-Wide Encroachment Correction Policy Committee

In FY12, a Town-Wide Encroachment Correction Policy Committee, chaired by NRC Member Ursula King, continued its work to develop a single policy to correct encroachments on all Town land. This Committee was comprised of representatives of all boards with jurisdiction over Town land. The Committee studied issues relating to encroachments and relied heavily on the work undertaken by the Natural Resources Commission with its adoption in 2006 of a NRC Encroachment Correction Policy that included detailed correction procedures. As recommended by the Committee, each board with land under its jurisdiction adopted the final Policy Statement along with a set of correction procedures. In addition, the Committee recommended that the Board of Selectmen be granted the authority to impose a municipal lien on a property where the owner declines or is unable to correct an encroachment, which was approved at a Special Town Meeting in June 2012.

NRC'S RECREATIONAL LAND USE, PLANNING AND MANAGEMENT

NRC Park and Playground Master Plan Improvements

The NRC continues to work with the DPW to implement an ambitious and successful Park and Playground Master Plan for improvements at the parks, playgrounds and playing fields under NRC jurisdiction. In FY12, the NRC approved and the DPW implemented the following improvements at NRC parks and

playgrounds: the NRC's 15 parkland playgrounds had safety fiber added and were renovated as needed to meet required ADA and safety standards including bi-annual safety inspections; 3 new basketball backboards and rims were installed at the Perrin Park basketball court; improvements to the Hunnewell Field and tennis court complex included sealing cracked court surfaces. Improvements to park amenities throughout Town including replacement of trash receptacles, benches, picnic tables, and trees and shrubs at Longfellow Pond, Rockridge Pond, Reeds Pond, Town Hall Duck Pond, and Morses Pond. Recently, new playgrounds and playing fields were recently installed at Ouellet Park, Warren Park, Phillips Park, Hunnewell Field Tot Lot.

Playing Fields Task Force and Improvements to Athletic Fields

The Task Force, comprised of representatives from the NRC, DPW, Recreation Commission, School Department, Wellesley Little League, Wellesley Lacrosse, and the Wellesley Soccer Club, continues to focus on identifying the most urgently needed improvements and developing a long-term plan for improvements to the Town's athletic playing fields. The NRC continues to work with the Playing Fields Task Force to improve the Town's playing fields and to obtain the maximum space with minimum wear.

In FY12, the NRC approved and the DPW implemented the following playing field capital improvements: at the Hunnewell athletic field complex, over 30 feet of outdated barbed wire fencing was removed along the football field; grading of the southeast corner of the Perrin Park soccer field increased the field size by 10% and 3 new dry wells were installed to increase drainage and the entire playing field at Perrin Park was aerated and seeded and new sod was installed where disturbed.

NRC Adopts Permanent Off-leash Dog Hours and Regulations at Perrin Park

Pursuant to the NRC's authority as Town Park Commissions under MGL Chapter 40, the NRC issued its fourth year of off-leash dog control regulations at Perrin Park in response to dog owners and residents concerns about the use of Perrin Park by large numbers of dogs off-leash. The NRC continues to make a concerted effort to hear from all interested parties to set limited off-leash hours and regulations in order to ensure that the park will be used by a wide range of residents and users, as well as protecting the existing playing fields at Perrin Park and ensure protection to park users from off-leash dogs. While the Town does not have a leash law, per say, the current Bylaw requires that off-leash dogs be under the immediate control of their owners. The NRC continues to monitor the situation at Perrin Park in order to ensure that all park users are able to use the park without interference.

NRC Serves on 900 Worcester Street/St. James Planning Committee

In the summer of 2010, NRC Member Joan Gaughan and NRC Director Janet Bowser began serving on the St. James Ad Hoc Committee, whose goal was to evaluate the possible acquisition and potential uses for this property. Since that time the St. James Committee has evaluated using this land to construct a Town recreational facility that may include a synthetic turf playing field, ice rink, and swimming pool facility. In June of 2012 Town Meeting Members voted to purchase the St. James property located at 900 Worcester Street for \$3.8 million from the

Archdiocese of Boston during a Special Town Meeting. A purchase and sale agreement was executed to acquire the property, and since that time the NRC has been working closely with the St. James Committee to further evaluate the site. The acquisition is pending environmental assessments, further due diligence and the resolution of vigiler appeals to the Vatican. The June Special Town Meeting also approved the creation of a committee to further develop the proposed recreation plan for the site that includes representatives from the Natural Resources Commission. Community Preservation Act Funds will provide \$2.6 million toward the total purchase of the property with these funds coming from the Open Space Fund and the Recreational Fund. The application of CPA funds also requires the placement of a Conservation Restriction on the open space portion of the property. The NRC supports the use of this land for recreational purposes and will continue to work with the 900 Worcester Street Planning Committee on this project. The NRC has formally requested that the Board of Selectmen designate all open space on this parcel as conservation land under the care, custody and control of the NRC. The NRC has noted that this open space encompasses a fragile ecosystem with extensive wetlands resources, wildlife habitat and floodplain, and as a result, this open space should be designated as conservation land under the NRC's jurisdiction in order to be consistent with the Town Bylaws and State law designating the NRC as the steward of the Town's open space and to protect this land appropriately.

NRC's Trails Committee

During FY12, the NRC's Trails Committee maintained, improved and expanded Wellesley's trail network, and continued its community outreach programs with the support of many organizations within Wellesley and the surrounding area.

Trail Maintenance

Throughout the year, the Committee repaired or replaced posts, directional arrows, medallions and map houses. Members regularly monitored and maintained assigned sections of the trails network. The Department of Public Works provided assistance for larger projects such as removing major blowdowns. The DPW also kept paths mowed in the summer. The Committee sponsored a cleanup in the Town Forest with help from the Kiwanis Club. The Committee also supported the NRC's Earth Day cleanup along the Charles River. The Committee worked with the Police Department to address the graffiti problem. Graffiti clean-up was carried out where necessary.

Trail Improvement

The following projects were completed improving trail access (as reported to the NRC by the Trails Committee):

- a) The Committee participated in the Fuller Brook Park Coordinating Committee. This major program will make significant improvements to the Brook Path.
- b) Initiated by our Committee, a Town-wide Encroachment Policy and resolution procedure was approved by all boards with land jurisdiction. It will facilitate addressing abutters' actions on Town land, including those on which trails exist.
- c) Graffiti painting has seen increased activity. Work with the School Committee and the Wellesley Police is ongoing to address this difficult problem to resolve. "No Spray Painting" signs have been put up.
- d) "No Dumping" signs were added at various locations.
- e) Four dog refuse bag stations are maintained by the Committee. The Committee has changed these to a lower cost alternative.
- f) Approaches to a footbridge on the Boulder Brook Reservation Trail were filled.

- g) A lawn encroachment at Rockridge Pond was corrected.
- h) Steep trails sections were rerouted on the Esker Trail and the Rocky Ledges section of the Boulder Brook Reservation Trail as an Eagle Scout project to improve trail safety.
- i) A repair of the driveway to the Centennial Reservation parking area was funded with Trails monies.
- j) The Committee approved and supervised the installation by Gravestar Inc. of an additional trail map house on their property leased to the new Whole Foods market on State St. and Washington St.
- k) Trails markings and monitoring was provided when the Cedar St. bridge over Rt. 9 was replaced.
- l) Two trail car parking spots were set up on the west end of Boulevard Rd.

Trail Network Expansion

- a) The Committee worked with the NRC and the DCR as the DCR rebuilt and opened the Lower Falls Railroad Bridge.
- b) The Committee extended the Charles River Path through the new Waterstone Complex (27 Washington St). The trail connects to the extension on DCR land to and along Boulevard Rd which was completed last year. A new trails map house was installed at its Washington St. access.
- c) The Crosstown Trail was extended and now connects with Natick along the Cochituate Aqueduct.
- d) We participate in the MAPC MetroWest Regional Collaborative Open Space Connectivity Project.
- e) A "Future Trails Development and Improvement Projects Plan" document was completed and distributed to appropriate Town departments.

There are now 26 miles of marked trails throughout the Town.

Trails Community Outreach

The Trails Committee was selected to receive a Special Recognition Award at the Forty-Fourth Annual Wellesley Veterans' Parade "in recognition of their outstanding service in developing new trails and enhancing the trails network in our community". The Committee led three walks in the fall and four walks in the spring. There were 20 participants in the fall and 54 in the spring. Our fifth Kids' Trails Day took place at the Town Forest in the fall, with 130 kids and adults looking for treasure boxes using written clues (similar to Letterboxing). These events are promoted in printed and electronic media, in Recreation Department's activities' publications, on our twenty trail map houses and via sandwich boards. The website continues to provide on-line access to information about the trails network and Trail Committee sponsored events. The web site is updated on a regular basis and improvements are made to keep the site relevant and user friendly. A Facebook page has photo postings and attracted additional followers. In celebration of the new green-design high school, the Wellesley Trails Committee co-sponsored GoSmart week May 14-18, geared to encourage all Wellesley High School students to reduce carbon emissions by walking, biking, or taking the bus to school. A donation was made by the Trails Committee for prizes.

Trail Mapping

The Town's Network and Information Systems Department has been very cooperative in providing trail maps for our publications, website and special events. This year we completed the task of collecting GPS data for all the trails in Wellesley to produce updated maps next year.

Trails Support

The Trails Committee appreciates the cooperation it receives from MassBay Community College, Babson College, Wellesley College, Olin College, the Town of Needham and the MWRA to allow the trails network to cross their properties. The Committee is grateful for the help received from the Selectmen, the Police Department, Department of Public Works, Municipal Light Plant, Natural Resource Commission, Wetlands Protection Committee, Planning Board, Water Department, the Boy and Girl Scout Troops in Wellesley, Haynes Management Inc., Nelson Properties, National Development LLC and the Beard Way Homeowners Association.

NRC'S TREE PROTECTION AND ENHANCEMENT PROGRAMS

Public Shade Tree Replacement Program

The NRC, which acts as the Town's Tree Wardens, in conjunction with the Department of Public Works, manages a proactive and ambitious public shade tree management program that preserves and protects over 6,000 inventoried Public Shade Trees for the enjoyment of the public and the enhancement of Wellesley's environment. Routine maintenance is conducted on a four-year cycle to provide adequate safety pruning to all of these trees. The care includes: vandalism repairs as needed; storm damage repairs; shade and park tree planting; management of new trees for one or two years; tree and stump removals as necessary; and other tree care according to need.

Trees are essential to Wellesley's character as a green, shady, residential town. Tree planting maintains Wellesley's property values and quality of life, reduces sound and glare, improves air quality, helps prevent climate change through carbon absorption, replenishes groundwater, reduces erosion, buffers weather changes, adds beauty, inspires tranquility, screens unsightly areas, and separates incompatible uses. This year, the purchase of 118 new trees was funded by the NRC and planted by the DPW. At Town Meeting this year, \$30,000 was appropriated for new tree plantings throughout Town and for shade tree replacement of trees lost due to age, disease, storms and road reconstruction projects.

Public Shade Tree Removal Hearings and Appeals

Only when a public shade tree is severely diseased, is in substantial decline, or threatens public safety does the NRC and the DPW propose to remove a tree, and then only after a Public Hearing that gives residents an opportunity to voice their concerns and opinions about the proposed tree removal. In FY12, the NRC held four Public Shade Tree Removal Hearings. There were no appeals of an NRC decision to remove a public shade tree.

Massachusetts Honors Wellesley with 29th-Year Tree City USA Award

In May 2012, Wellesley was awarded the Tree City USA "Annual Award" for excellence in the management and nurturing of public shade trees for the 29th consecutive year. Only 80 of the 351 towns and cities in Massachusetts have ever received this award, and Wellesley has received it longer than any other. The NRC serves as the Town's Park Commission and Tree Warden and, together with the Department of Public Works, the NRC promotes a "Shade Trees Make the Difference" campaign to encourage support for shade trees throughout the Town.

To be eligible for the Tree City Award, Wellesley had to spend at least \$2 per capita on urban forestry, enforce laws that protect public trees and hold an Arbor Day celebration and meet other standards.

This award is a testament to the Town's long tradition of valuing trees and open spaces. Wellesley founded a Park Commission in 1888 to landscape avenues and parks, and it was one of the first boards established in the Town.

Urban and community forests are visible signs that our community has a sense of pride and that it has been highly valued by residents for a long time. The environmental benefits of urban and community forests are many but they can be summarized as follows:

- Our forested streets and parks help define the character of our community and offer the functional human benefits of noise reduction, cooling shade, visual screening, enhanced property values, economic growth, community pride, reduction of crime and more rapid recovery from illnesses;
- Our forests reduce levels of pollutants such as solid particles, ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide and others that seriously impact human physical, mental and emotional health negatively;
- Trees are the Town's most important natural infrastructure; and
- Our forests reduce heating and cooling needs for residential buildings thereby reducing costs, reduce the "urban heat island effect" (localized heating due to the preponderance of black topped surfaces) to provide a more human friendly living environment, reduce rainfall runoff and erosion thereby improving water quality and quicker re-charge of local aquifers, function as habitat for wildlife to enrich human enjoyment and reduce global warming for the long term security of the Earth.

Winter Moth Caterpillar Control Town Tree Protection Program

In FY12, in response to a significant increase in damage to Town trees by the invasive insect known as the "winter moth caterpillar," the NRC worked with the DPW to implement its fifth year of a proactive program to address this problem and protect the Town's trees. This year, the DPW proposed, and the NRC approved, a program to spray 1096 public trees in the spring of 2012 with an environmentally safe spinosad product called "Conserve" to control damage from the winter moth caterpillar. The NRC and DPW also provided educational information to residents that outlined the measures they could take to protect their own trees from Winter Moth damage.

Winter Moth State Biological Control Project at Centennial Reservation

Over the past three years, a team of scientists from the State Department of Conservation and Recreation released approximately 1,000 parasitic flies in Centennial Reservation in an effort to test whether they can be used to control the invasion of the winter moth, which is stripping trees of their foliage throughout the

State, especially in Eastern Massachusetts. In FY12, the NRC approved the continuation of this project with additional fly releases in Centennial Reservation, which is the largest release of the flies in the State. Other releases were also made in Hingham, Falmouth and Wenham. Professor Joseph Elkinton, a professor of entomology at UMASS Amherst, organized this joint project between UMASS, the Federal government, and the State Department of Conservation and Recreation. The specie of fly released, which is the "cyzenis albicans," is a natural enemy of the winter moth and has been released in other areas to help eradicate the winter moth invasions. The scientists believe that the fly will only attack the winter moth and not other species, and that it will likely take years for the flies to have a significant impact on the large number of winter moths.

Scenic Roads Tree Protection Enforcement

Pursuant to its authority as Town Tree Warden and under M.G.L. Chapter 40, sec. 15c, the NRC protects all public shade trees along the seven scenic roads in Wellesley that have been designated by vote of Town Meeting as scenic roads: Brookside Road, Benvenue Street, Cartwright Road, Cheney Drive, Pond Road, Squirrel Road, and the Waterway/Brookway. Under the statutory requirements of this law, the NRC is required to hold a public hearing to review proposed removal of trees along any designated scenic road. In FY12, the NRC received one application for the removal of public shade trees along Benvenue Street and the removal of these trees were approved in a joint meeting with the Planning Board.

NRC's EFFORTS TO PROTECT TOWN LAND AND WATER RESOURCES

Lawns, Buffers and Water Quality

Maintenance of the Town's half-dozen major and minor ponds is essential to Wellesley's quality of life. Under modern circumstances that means periodic dredging. Wellesley's ponds were largely weed-free up to the end of World War II. That was when retooling wartime industries and suburban developers sold the parents of the baby boomers on evergreen lawns. Sweeping green lawns symbolized English estates, where cool, damp weather and grazing sheep made them easy to maintain. But in America, grass is supposed to go to seed and become hay in July. Currently, Americans pour priceless water, fertilizer and herbicides onto their lawns, and the nutrients from these unnatural lawns pour into our streams, lakes and ponds. That is why ponds need dredging. In the words of the Town's Morses Pond consultant Dr. Ken Wagner, "Green lawns mean green lakes." The quality of Wellesley's water supply and the cost of maintaining our ponds are directly related to the amount of pesticides and fertilizers used by Town residents. Perfectly manicured lawns need to be made socially unacceptable. Buffers as wide as possible need to be planted between overfed lawns and golf courses and storm drains and ponds.

Organic Turf Management Efforts

In FY12, the NRC continued to work with the DPW in implementing an Organic Turf Management Plan for the parks and playing fields under the NRC's jurisdiction. This year saw a transition to a total Organic Turf Management Program that includes cultural practices for cutting heights, multiple types of aeration techniques, proper irrigation scheduling, and regular seeding with high quality grass seed. The

NRC continues to work with the DPW on the organic turf management of all playing fields and parkland under the NRC's care.

NRC's Pond Restoration Master Plan Implementation

The Commission continues to implement its *Pond Restoration Master Plan*, which sets priorities for restoring the Town's beautiful ponds. The NRC's Master Plan was developed in conjunction with the DPW and was endorsed in a resolution approved unanimously by Town Meeting in March 1998. As a capital budget priority, the NRC supports an alternating schedule of dredging feasibility studies and actual dredging for the next several years. Dredging studies are required because the method of dredging must be determined, the quality of the dredged material must be tested, and suitable disposal sites must be found. There are contracts to be written and issues of truck access, hours of operation, and the like to be resolved before work starts. To date, Reeds Pond, Bezanson Pond, Rockridge Pond and the Town Hall Duck Pond have all been successfully restored. A long-term comprehensive management plan has been developed for Morses Pond and is currently being implemented (see below). Next up are feasibility studies for State Street Pond (aka Skating Pond), and Abbotts Pond.

The NRC asks every resident to take personal action to prevent pesticides, fertilizer and herbicides from contaminating Wellesley's natural resources including the Town's drinking water supply.

Development of the Morses Pond Comprehensive Management Plan

Morses Pond is Wellesley's preeminent natural, recreational and scenic resource. Approximately 40% of the Town's water supply is pumped from municipal wells located at the Pond, and the public beach and the open space bordering the pond have been used by many generations of Town residents. But Morse's Pond is facing a wide range of problems due to the fact that it provides drainage for an 8.8 square mile watershed, including commercial industry and several miles of heavily traveled Route 9. These problems, which include eutrophication and the increasing and dramatic spread of aquatic invasive plants and algae, support the immediate need for a comprehensive management plan to examine the options available to address these problems. Over 300 residents from throughout the Town signed a Citizens Petition in support of the development of this plan, which documents the community's broad-based support and concern for the health of the Pond.

In recognition of the need to address the health of Morses Pond, the CPC, Advisory Committee and Town Meeting supported funding for the development of a Comprehensive Management Plan for the pond at a cost of \$150,000, with CPC and Advisory sharing the costs evenly. The Board of Public Works, NRC and Recreation Commission formed the Morses Pond Ad Hoc Committee (MPAHC) to work with the Town's Pond Consultant, Dr. Ken Wagner, of ENSR, for a year and a half in evaluating options for the pond's preservation and restoration. As part of this evaluation process, the NRC voted to affirm its adherence to its Integrated Pest Management Policy that prohibits the use of all pesticides, including fluridone, in Morses Pond. As a result of this vote, fluridone was not considered as a management technique to be used in Morses Pond and other safer and non-toxic management alternatives form the Comprehensive Management Plan for the Pond. The plan, completed and approved by the three boards in Nov. 2005, outlines the options

evaluated, makes recommendations for implementation, identifies a 5-year timeline for implementation, and costs for the implementation of the identified options. The three boards, spearheaded by the NRC, work collaboratively in managing the pond and implementing the Plan.

Implementation of the Morses Pond Comprehensive Management Plan

Over the past several years, the NRC has been successful in requesting and securing over \$1,500,000 in funding from the Advisory Committee, the Community the Morses Pond Comprehensive Management Plan. The first component of the plan was the purchase of a new weed harvester in 2006 to remove invasive plants in the pond. The second component was the 2007 installation of a Phosphorus Inactivation System (PIS) designed to help capture phosphorus and prevent it from entering the pond, thereby reducing algae growth and improving water clarity. On-going, long-term Morses Pond management efforts include weed harvesting, operation of the PIS, installation of rain gardens and other low-impact development projects and watershed education efforts to encourage residents to eliminate the use of fertilizers and pesticides. Please visit the "Morses Pond" link on the NRC's website at www.wellesleyma/NRC for more detailed information on what you can do to help protect the water quality and recreational resources of the pond.

In FY12, Town Meeting appropriated to the NRC \$166,500 in operating costs related to the Morses Pond Plan, including funds for operating a new weed harvester whose procurement funding was approved in FY06 and which was purchased in FY07. The weed harvester is operated through a program using DPW personnel. Additional operating expenses for FY11 included: operation of the phosphorus inactivation station that was installed in the spring of 2008; funding to hire a professional pond manager; organizing volunteer manual harvesting throughout the pond to complement the Town's weed harvesting efforts; and the design of a Low Impact Development demonstration sites.

The NRC is the lead board for the implementation of this project and works collaboratively with the Board of Public Works and the Recreation Commission and the Town's Morses Pond Consultant, Dr. Ken Wagner, to implement the Morses Pond Comprehensive Management Plan. These three boards have formed the Morses Pond Management Committee, which oversees the implementation and management of the Plan.

Morses Pond Northern Basin Dredging Project

In the last quarter of FY12, the NRC, DPW and Recreation Commission jointly requested \$400,000 in additional funding from the CPC and Town Meeting to complete the Morses Pond Northern Basin Dredging Project, one of the largest and most critical components of the long-term Morses Pond Comprehensive Management Plan. The project was scheduled to begin in September 2012 and the dredging portion of the project will be completed by the end of the year. The project involves the hydraulic dredging, pumping, and disposal of sediments from the pond and will restore the Northern Basin's detention capacity, which will allow particulate matter to settle in this area before reaching the main part of the pond. The removal of sediment and plant material that have accumulated over many decades will help improve the overall health and clarity of the pond and will prevent the Northern

Basin from becoming a degraded water body. The dredging will involve the use of a 56 ft. x 10 ft. platform that contains a large suction pump that will remove approximately 12,695 cubic yards of sediment material. Approximately half of the dredged material will be pumped and drained at the Town Beach, where the clean material will be used to replenish the sandy beach. The remaining dredged material will be pumped to the St. James parking lot, where it will settle in large "GeoTubes" through April 2013 and the sediment will then be hauled off-site and the clean water pumped back into the pond. This project is the third and final substantial "in-pond" implementation component of the 2005 Morses Pond Comprehensive Management Plan and the project was bid and contracted with Cashman Dredging and Marine Contracting Company.

Development of a Morses Pond Watershed Education Website Prototype

In FY12, NRC member Neal Seaborn and the NRC Director Janet Bowser completed their work with Dr. Wagner and his staff to develop a Morses Pond Watershed Education Website that will help educate residents regarding action steps that they can take to help protect the watershed and improve the pond's water quality. Please visit the NRC's website for more information.

NRC Town-Wide Residential Lawn Care Questionnaire and Education Effort

The NRC and Dr. Wagner developed Town-wide Residential Lawn Care Questionnaire to evaluate the present state of lawn care practices as reported by homeowners in Wellesley, and portions of Natick and Weston in the Morses Pond Watershed. The survey responses indicated that a majority of Wellesley residents are interested in "going green" and using environmentally friendly lawn care practices. It is also clear that a majority of Wellesley residents have a lack of knowledge about the type and quantities of pesticides and fertilizers applied to their lawns, due to the fact that a significant number of residents outsource their lawn care management. The questionnaire, which residents could respond to on-line or by mail, had a tremendous response rate and is helping the NRC better understand the Town's watershed management needs and how to develop an educational program to protect the Town's land and water resources.

NRC's EDUCATIONAL EFFORTS TO PROTECT WELLESLEY'S NATURAL RESOURCES

NRC's Pesticide Awareness and Organic Land Care Educational Campaign

The mission of the NRC's Wellesley Pesticide Awareness Campaign (WPAC) is to reduce the exposure of children and adults to pesticides and pesticide breakdown products which are known or probable health hazards, to protect Wellesley's water supply, and to restore Wellesley's land use style to healthier and less toxic land care practices.

Eleven years ago, the NRC was instrumental in hiring Dr. Sarah Little as Wellesley's first Pesticide Awareness Coordinator, the first such local position in the state. Dr. Little resigned from her position with the Town in order to pursue her work on a more regional level, and the NRC thanks Dr. Little for her continuing efforts to help

residents reduce pesticide use and educate residents about the harmful effects of toxics.

This year, the NRC continued to implement grants from both the Mass. Department of Environmental Protection and from the Mass. Toxics Use Reduction Network, to develop a local and regional Pesticide Use Reduction and Education Program. The NRC's Pesticide Awareness Campaign continued to focus on educating Town residents about reducing pesticide use in and out of the home, growing and caring for an environmentally safe lawn and garden, and on learning about the health risks posed by pesticides. For more information on alternatives to pesticides, and for a listing of organic lawn care companies, please visit the NRC's pesticide use reduction website at www.wellesleyma.gov/nrc/pesticide.

There is an increasing body of scientific evidence that synthetic pesticides in extremely small amounts can disrupt hormones, particularly in the fetus and in young children. Around the world deformed or absent amphibians—frogs, salamanders, toads—are signaling that something pervasive is terribly wrong. Please contact the NRC office for more information, and we encourage residents to take the NRC "Pledge to Learn About Alternatives to Pesticides" and receive a "Safe and Pesticide-Free Lawn" sign for your yard. Poison is bad for people as well as pets. Talk with your veterinarian if you want to know what lawn chemicals are doing to dogs and cats. Under no circumstances allow your children to play on recently treated lawns. If you are thinking about lightening your workload by reducing the size of your lawn, your family and all of us will be healthier.

This year, the Pesticide Awareness Campaign included extensive public education efforts including continued distribution of numerous fact sheets and brochures. Ten years ago, the NRC and the School Committee approved an Integrated Pest Management (IPM) Policy for land under their respective control, and the NRC continues to work with the DPW, the Board of Health and the School Committee to implement the policy. The NRC continues to work with the Department of Public Works, the Health Department and the School Department to track the Town's annual pesticide purchases and work towards reducing and eventually eliminating the use of pesticides on Town property.

The NRC continues to be concerned with the amount of pesticides and fertilizers used within the Town on private residences, and one of its top priorities is to continue its education program aimed at reducing the amount of pesticides and fertilizers used in Town in order to protect our natural resources and drinking water supply.

Use of Goats to Control Invasive Vegetation in Boulder Brook Reservation

In May of 2012, the NRC hired a company called "The Goat Girls" to use goats to control invasive plants that had taken over the Rocky Ledges of Boulder Brook Reservation after a significant unauthorized tree cutting reduced the tree canopy. The NRC is committed to sustainability, including methods of preserving the natural beauty and integrity of Wellesley's many natural resources. The NRC's Green Wellesley Campaign was established as part of the NRC's commitment to educate Wellesley's residents about the ways in which daily practices can affect our natural resources. As part of this campaign, the NRC asks residents to eliminate or

minimize the use of chemical fertilizers, pesticides and herbicides on their lawns to protect the community's water supply. The NRC also recognizes that lowering the use of these lawn chemicals will reduce the long-term financial impacts to the Town of mitigating problems caused by run-off in the watershed. The Goat Girls are committed to the same principals as the NRC and their methods provide a suitable alternative solution to the use of herbicides for restoring the Rocky Ledges area of Boulder Brook Reservation. Using goats to manage the growth of invasives and nuisance plants is a sustainable method of control because it avoids the use of herbicides and pesticides, which can be harmful to people and the environment. It also eliminates the need for machines that cannot reach difficult topography and would typically rely on diesel fuel, offering a carbon-neutral option for land management. The NRC will continue to evaluate non-toxic, non-pesticide methods for controlling invasive vegetation, both at Boulder Brook Reservation and on other NRC land.

NRC Rain Garden and Sustainable Landscape Educational Program

On May 1, 2012, the NRC held a program on Rain Gardens and Sustainable Landscapes by Ed Himlan of the Mass. Watershed Coalition. This presentation focused on the environmental benefits of creating rain gardens and what property owners can do to lower their impact on local waterways by the installation of sustainable landscaping techniques such as permeable pavement, use of rain gardens, rain barrels, and installing native buffering plantings.

NRC's Low Impact Development and Rain Garden Project at Morses Pond

On May 19, 2012, the NRC unveiled the installation of its Morses Pond Rain Garden as well as other low-impact development ("LID") features at a public forum near the Morses Pond Beach House. These LID elements will protect and enhance the water quality of the pond and allowed residents to learn firsthand about the plants and designs that can be used in rain gardens and how they can be installed on residential properties.

As a follow-up to this LID program, the NRC website has been expanded to include an extensive amount of information on rain gardens and LID techniques that the public can use on their own property.

NRC Works With Wellesley Country Club Regarding Pesticide Use and Development of an Integrated Pest Management Plan

In FY12, the NRC continued to work with representatives of the Wellesley Country Club regarding their pesticide use and the continued evolution of an Integrated Pest Management (IPM) Plan. The Country Club and its consultant developed a "Turfgrass Management Plan using an Integrated Pest Management Approach" in order to formalize its current turf and pest management practices with an effort to reduce the amount of pesticides it uses on the golf course, which is located in a Water Supply Protection District. The NRC continues to work with the Country Club to encourage them to reduce the amount of pesticides and fertilizer they use on their property in order to protect the Town's natural resources and drinking water supply.

NRC's Vernal Pool Education Program

In FY12, the NRC Director organized this annual effort to protect Wellesley's vernal pools that includes a vernal pool program to educate the public about vernal pools and the many species that inhabit them. Although Wellesley's Wetlands Protection Bylaw protects all State "certifiable" vernal pools, including their associated upland habitats (areas within 100 feet of the pools), finding vernal pools is the first step in protecting them. Approximately 50 children and their parents attended this year's program, held on May 12, 2012.

NRC Supports Organic Lawn Care Services in Wellesley

As part of the NRC's Pesticide Awareness and Organic Land Care Educational Campaign, the NRC has reached out to lawn care and landscape service companies doing business in Wellesley to support and educate them regarding the need to reduce and eliminate the use of herbicides, pesticides and synthetic fertilizers in order to protect public health, our natural resources and the Town's drinking water supply.

NRC Collaboration with the Board of Health on Healthy Living Grant

In FY12, the NRC Director continued to work with the Health Department on a Wellesley Healthy Living Grant that is being funded through the West Suburban Community Health Network. The NRC continues to work with the Board of Health on this project to encourage residents to use of the Town's Trail Systems and natural resources, as well as integrating a range of healthy living approaches in the home and encouraging the use of non-toxic alternatives.

NRC's Pesticide-Free Gardening Education Effort

The NRC continues to educate and encourage residents to garden with perennials and foliage grasses that require no fertilizer or pesticides and only rainwater to flourish. The NRC has created three brochures towards this goal: *A Guide to the Demo Garden*; *Buffers Are Beautiful—Protecting Water and Wildlife*; and *Plants for Landscaping Ponds, Banks, Buffer Areas and Wet Areas while Encouraging Wildlife*. The three brochures are available in the NRC office in Town Hall.

NRC Administrative Oversight of the Brookside Community Garden

The Brookside Community Garden at Oakland Street and Brookside Road had another successful year. The NRC provides administrative oversight of the community garden for the DPW, which owns the land. The Town requires that all gardeners at Brookside Garden manage their gardens organically with no use of pesticides. This year, the DPW completed garden landscape improvements including tree pruning to improve the area and accessibility. There were many new gardeners who created beautiful gardens and added to the sense of community at Brookside. In addition, the NRC and the gardeners have initiated the establishment of a Brookside Garden Management Committee to manage the garden with NRC oversight.

NRC Collaboration with Wellesley Cancer Prevention Project

The NRC continues to support the work of the Wellesley Cancer Prevention Project (WCPP), which focuses on assessing the relationship between environmental issues and the incidence of cancer. The NRC looks forward to continuing to work with and support the WCPP's educational efforts aimed at cancer reduction and awareness.

NRC'S Wetlands Protection Committee

The NRC serves as the Town's Conservation Commission and appoints the five volunteer members, and two associates, of its Wetlands Protection Committee (WPC). The NRC delegates to the WPC the power and authority to administer and enforce the Wetlands Protection Act (G.L. Chapter 131, Section 40) and Wellesley's Wetlands Protection Bylaw (Article 44).

Wetlands Permits

In FY12, the WPC held 18 public meetings, reviewing 56 filings made under the State Wetlands Protection Act and the Wellesley Wetlands Protection Bylaw. Hearings included the review of 25 new Notices of Intent (NOI), 26 Requests for Determinations of Applicability, 1 Abbreviated Notice of Resource Area Delineation, 3 Requests to amend existing Orders of Conditions and 11 Requests for Certificates of Compliance. None of the WPC's decisions were appealed. Wetland fees received in FY12 totaled \$13,327.50.

Wellesley's Wetlands Protection Bylaw

The Wellesley Wetlands Protection Bylaw (Article 44) was approved by Town Meeting on April 2, 2002 and became effective on September 12, 2002. The WPC adopted application Filing Fees on October 9, 2003; Regulations, including Performance Standards in October 2003 (revised on June 24, 2004 and August 28, 2008); and Rules for Hiring Outside Consultants on April 22, 2004.

Bylaw Resource Areas. The following areas (referred to as "resource areas") are protected by Wellesley's Wetlands Protection Bylaw:

Wetlands *marshes, wet meadows, bogs, swamps, banks, reservoirs, Lakes, ponds, rivers, streams, creeks*

<u>Isolated wetlands</u>	containing at least 2,500 square feet of surface area;
<u>Upland areas</u>	land within 100 feet of the above resource areas;
<u>Vernal pool habitats</u>	that include the upland areas within 100 feet of vernal pools;
<u>200 foot Riverfront</u>	land within 200 feet of perennial streams/rivers; and
<u>Lands that flood wetlands) and;</u>	bordering land subject to flooding (i.e., abutting
	isolated land subject to flooding (i.e., upland area depressions)
	<i>(the above floodplains do not have buffer zones)</i>

The Wetlands Permitting Process

Anyone proposing to alter any areas that are located within 100 feet of a wetland or within 200 feet of a perennial stream must file a NOI under State and Town wetland protection laws prior to commencing any activities. If the applicant is in any doubt as to whether an activity is subject to wetland regulation (i.e. whether a wetland permit would

be required), they should file a Request for a Determination of Applicability (an informal process to ask the WPC to determine whether a NOI needs to be filed for the proposed project).

The WPC regularly processes several kinds of applications under the State Act and Town Bylaw. The following applications are the most commonly filed with the Committee:

1. Request for Determination of Applicability (RFD) – to determine whether the law applies to a particular area and project.
2. Notice of Intent (NOI) – for projects that propose to alter a State or town resource area.
3. Abbreviated Notice of Resource Area Delineation (ANRAD) – for the review of wetland and/or upland resource area boundary lines, or for “simplified review” certification.

The response to an RFD is a Determination of Applicability (DOA). The DOA establishes which portions of a property are subject to the law and which are not. A positive DOA would be issued for proposed work that requires the filing of a NOI. The WPC’s response to an NOI is an Order of Conditions (OOC) to do the work. This can include either a denial of the project, or an approval that can spell out in detail the terms under which the proposed work can be performed. An ANRAD can be filed prior to a NOI, as it allows an applicant to receive certification for the exact boundaries and status of their property’s resource areas before designing a project and filing a NOI. An Order of Resource Area Delineation (ORAD) is the response to an ANRAD, and addresses resource area and boundary delineations, as well as “simplified reviews.” The above Orders and Determinations are valid for three years. The wetlands administrator is available to help guide residents or their representatives through the wetland permitting process.

Significant Wetlands Protection Projects and Concerns:

Protecting Wellesley’s rivers, streams and ponds: Most of the permit applications that are received by the WPC involve proposed projects that are located in riverfront areas or near streams or ponds. Filings often propose the expansion of an existing building, the replacement of an existing building with a larger building, or the removal of natural vegetation (often mature trees) for the creation of grassed lawns. Protecting our streams and their receiving water bodies from the cumulative adverse effects of resource area alterations, while accommodating reasonable expectations of property owners, is an on-going concern.

Buffer Zone Landscaping Protection. The WPC endeavors to protect our lakes and streams by requiring natural buffer zones between manicured lawns and wetland areas. This, unfortunately, only provides minimal protection to Wellesley’s natural assets, since runoff from manicured lawns will still end up running into streets, street drains, and eventually into our lakes, ponds and streams. Therefore, the WPC encourages homeowners and developers to use native plants in their landscaping plans. Native plants are beautiful, have excellent wildlife habitat value, are drought resistant, and are low/no-maintenance. Realizing that modern civilization requires certain tradeoffs, the WPC, in collaboration with the NRC’s Pesticide Awareness Campaign, seeks to educate residents about the adverse effects of their modern ways, such as:

- Purchasing fertilizers and chemicals for the sole purpose of creating greener

lawns. These chemicals will eventually end up in our lakes and ponds, playing a major role in their accelerated rate of eutrophication.

- Applying herbicides and chemicals for the sole purpose of killing non-grass species. Herbicides and chemicals can have serious side effects to wildlife, to neighboring and downstream vegetation, and to human health.
- Misuse/Overuse of precious water resources. Installing irrigation systems and freely using limited water resources for the perfect lawn threatens our water supply. New England was blessed with an abundant supply of pure groundwater, but over the years, that supply has been threatened by overuse and misuse. The Committee works to help protect the Town's water resources.

Summary of Significant On-going Permitted Projects

In FY12, the WPC continued to support contractors, property owners, other municipal departments and development professionals working on on-going projects with active wetlands permits. Examples of such work included conducting on-site meetings and inspections with property owners, contractors and engineers at construction project sites to resolve permit compliance issues, and provide site specific wetlands education.

As a condition in all permits for work issued by the Wetlands Protection Committee, the Committee and/or Assistant NRC Director are obligated to conduct inspections of project sites before, during and after construction to ensure wetlands are protected and projects are completed in compliance with their permits. In FY11, the NRC and the WPC hired a Wetlands Field Inspector to assistance with inspections at project sites with active wetlands permits.

Wetlands Committee Membership

In FY12, Derek Redgate was appointed by the NRC to serve as a full member of the Wetlands Protection Committee after several years as an Associate Member. At the end of FY12, the membership of the Wetlands Protection Committee consisted of Eric Seaborn, chair; Jay Hammerness; J. Stanley Waugh; Robert Collins and Derek Redgate.

Natural Resources Department Staff

The NRC staff consists of a full-time director, a full-time assistant director, a full-time secretary position that is shared by two employees, and a part-time environmental education coordinator. In FY12, Diane Torres joined the Department as the Assistant NRC Director.

NRC Director Janet Bowser was reappointed this year to serve on the Massachusetts Municipal Association's Environmental Policy Committee. Ms. Bowser also continues to serve as an elected member of the Executive Board of the Massachusetts Society of Municipal Conservation Professionals, which focuses on state-wide and local issues affecting municipal conservation and natural resource protection. In addition, throughout FY12, Ms. Bowser provided extensive professional expertise, oversight and management assistance to other Town Departments, elected officials, and the NRC's subcommittee's including the Morses

Pond Management Committee, Pesticide Awareness Committee, Trails Committee, Wetlands Protection Committee, as well as to the Playing Fields Task Force, the Integrated Pest Management Advisory Committee, the Fuller Brook Park Coordinating Committee and the Town-Wide Encroachment Corrections Committee.

NRC and Committee Membership and Elections

Neal Seaborn continued to serve as NRC Chairman in FY12, and Heidi Gross was re-elected to the NRC for a three-year term. Stephen Murphy was elected to the NRC in March 2012 for a three-year term replacing Paul Cramer who did not run for re-election. The NRC thanks Paul for his service to the Town and his commitment to protecting the Town's natural resources. In FY12, Miguel Lessing was elected chairman of the Trails Committee and Eric Seaborn continued to serve as Chair of the Wetlands Protection Committee.

The NRC thanks all its volunteers for their time and considerable effort towards protecting our natural resources.

Citizen Inquiries and Educational Outreach

The NRC is committed to providing the highest level of service to the Town's citizens. The Department averages over 120 citizen inquiries per week, and many of these inquiries involve walk-in office visits after citizens are referred to the NRC by other Town Departments. The NRC staff assists citizens with a wide range of questions concerning the use and improvement of park, playground, forest, conservation and recreational land, acquisition and protection of open space, public shade tree regulations, wetlands protection requirements, vernal pool protection, toxics and pesticide reduction, encroachment corrections, and the process of project approval and scheduling of meetings with the NRC and its committees.

Wildlife Notes

Wellesley is fortunate to have a wide diversity of wildlife throughout its open space, and wildlife habitat protection is one of the NRC's top land protection priorities in order to preserve and protect this diversity. Many red-tailed and broad-winged hawks were seen in Centennial Reservation, Town Forest and near the Town Hall Duck Pond. Great blue herons, a variety of ducks including several wood ducks and hooded mergansers, ring-necked pheasants, northern bobwhites, great horned owls, woodpeckers, eastern bluebirds, warblers, finches, sparrows and many other species of birds continued to be in abundance throughout the Town's open space this year. Wild turkeys were once again sighted throughout Town. Many residents enjoy fishing for bass, pike, pickerel and the occasional trout in the Town's ponds and streams and Alewife were seen in Fuller Brook. Deer, coyotes, foxes, possums, opossums, rabbits, porcupines, weasels, fishers, woodchucks, skunks and turtles were among the wildlife spotted throughout the NRC's conservation reservations.

Volunteers and Donors

Volunteers make Wellesley. The NRC needs and uses volunteers for its committees. We need Friends groups for every park and pond in Town. We need trail monitors. We need wildlife inventory compilers. We need people willing to take the initiative. Waiting for you is work, friendship and the old-fashioned sense of a job well done. Please call

the NRC and let us know what interests you.

Many thanks to all the volunteers, especially the NRC's Wetlands Protection Committee, Trails Committee and the Girl Scouts and Boy Scouts, who help protect Wellesley's open space and keep it clean on a continuing basis! Generous gifts were received this year from the Wellesley House and Garden Club and the Wellesley Garden Study Group. *Thank you!*

Many of the benches, trees and landscape in Wellesley are gifts to the Town in memory of someone dear. The Commission needs gifts to make additional improvements throughout Town and especially along the Fuller Brook Park. Will you help? Please contact the NRC office if you would like more information and to volunteer.

Respectfully submitted,

NATURAL RESOURCES COMMISSION

Neal Seaborn, Chairman
Ursula G. King, Vice Chairman
Heidi K. Gross, Secretary
Joan Gaughan
Stephen Murphy

Janet Hartke Bowser, Esq.
NRC Director