

REPORT OF THE BOARD OF PUBLIC WORKS

The Board of Public Works oversees the Department of Public Works (DPW), which consists of the following programs: Engineering, Highway, Park, Recycling and Disposal, Management Services, Water and Sewer. All of these programs are funded from general tax revenues except for the Water Program and the Sewer Program which, as enterprise funds, are funded exclusively by users fees.

In March 2007, David A. T. Donohue was elected to a three-year term on the Board of Public Works. In June 2007, David Donohue was elected Chairman; William E. Charlton, Vice Chair, and Michael D. Humphrys, Secretary of the Board of Public Works, effective July 1, 2007.

Engineering Division

The Engineering Division provides the Town of Wellesley with the highest level of professional engineering services. It is involved with almost every engineering-related task in the Town: preparation of engineering related reports and technical memoranda, preparation of detailed design plans and cost estimates, deed information, computer-aided design and drafting, Geographic Information System (GIS) implementation and maintenance, surveying, complete contract administration and project representation services for construction projects, and many other services. The Engineering Division uses state of the art technologies to perform these tasks, and to adjust to the ever-changing needs and priorities of the Department of Public Works and the Town of Wellesley. The following are highlights of the Division's work during fiscal year 2007.

Walnut Street/Cedar Street/River Street Intersection Improvement Project

During FY07, the Engineering Division was responsible for the project management and construction administration for the reconstruction of the intersection at Walnut Street, Cedar Street and River Street. The work consisted of excavation, cold planing and resurfacing of the roadway, construction of geometric improvements, driveway reconstruction, sidewalk construction, wheelchair ramps, installation of traffic signals, installation of curbing, removing and resetting of curbing, drainage improvements, improved signage and pavement markings.

Santorelli Construction of Wakefield, MA was the general contractor for the project, which was funded utilizing the Town's available Chapter 90 road construction funds. The total project cost was \$323,309. It was completed on time and within budget.

Reconstruction of Glen Road (Washington Street to Wellesley/Weston Town Line)

During FY07, the Engineering Division was responsible for the project management and construction administration for the reconstruction of Glen Road, from Washington Street to the MBTA railroad bridge. The work consisted of the full depth reconstruction of the roadway and installation of the binder course, construction of drainage improvements, reconstruction of bituminous concrete sidewalks, ADA

wheelchair ramps and driveway aprons, the installation of granite curbing, highway guardrails and improved signage, and pavement markings.

The project will also include the installation of pedestrian signals at the intersection of Riverdale Road and Glen Road. These signals are scheduled to be installed in early FY08 along with the top course of roadway pavement.

The Park and Highway Division is the general contractor for the project. The Park and Highway Division hired subcontractors to perform the cold planing, grading and installation of granite curbing.

Municipal Facilities Building Project

During FY07, the Department of Public Works, along with the Municipal Light Plant, continued its planning for the Municipal Facilities Building Project. The project consists of the design and construction of a new MLP garage and warehouse, and a separate new Water and Sewer Division garage building to house Water and Sewer Division vehicles and personnel. The Engineering Division was the lead division for this project in coordinating the appropriate consulting, engineering and architectural services, and preparing various layouts and the definitive site plans for the proposed buildings.

The project includes demolition of the existing MLP garage and warehouse shared by the MLP and DPW, construction of a new garage/warehouse for the MLP and a new garage and office building for the DPW Water and Sewer Division. These facilities are required to provide adequate space for MLP, Water and Sewer equipment, inventory and personnel, create operational efficiencies for the departments, and provide buildings that are ADA compliant and meet all other building codes.

The Engineering Division was responsible for the permitting of the project, which included preparation of the Site Plan Approval and the Special Permit application for the Zoning Board of Appeals for review and approval. The hearings were held and closed and the Zoning Board of Appeals voted to grant Site Plan Approval and a Special Permit, in October of 2006. Necessary permits and approvals, including Design Review, and Planning Board Project of Significant Impact, have been obtained.

Work also continued and neared completion on the development of architectural plans and specifications for the proposed municipal facilities. The process to be followed by the Municipal Facilities Building Project will be the traditional design-bid-build process that has been utilized for all recently constructed town buildings. At the 2007 Annual Town Meeting, approval was given to proceed with the project, with funding provided. Bid openings for the demolition of the existing garage and warehouse building, as well as construction of the new buildings, are scheduled for the summer of 2007. The project is the responsibility of the Permanent Building Committee.

The Engineering Division worked closely with the project's licensed site professional, BETA Group toward the remediation of PCB's from portions of the

project site. This included the development of a remediation plan and its review and approval by the US EPA.

Wellesley DPW Highway Building Electrical Systems Upgrade Project

During FY07, the Engineering Division was responsible for the project management and construction administration for the rehabilitation and modernization of the electrical systems of the DPW Highway Building. The work consisted of the installation of all new power, lighting, and fire alarm systems as well as emergency electrical systems to the building. The work included installation of a new electrical generator, automatic transfer switches, panels, lighting fixtures, fire alarm equipment, receptacles, and wiring. Lightning protection for the building was also provided.

Richard T. Losordo Electrical Services, Inc. of North Easton, MA is the general contractor for the project. The project was the responsibility of the Permanent Building Committee. The project was substantially complete in FY07, with only punch list work remaining to be accomplished. The total project cost is \$953,139.

Linden Square Development Project

During FY07, the Engineering Division continued to work with Federal Development Company and its construction manager, Cranshaw Construction, in the reconstruction of Linden Street between Hilltop Road and Everett Street as part of Federal's Linden Square Development Project. The street reconstruction project includes the upgrade and relocation of some utilities, which included a major stormwater culvert replacement for Cold Spring Brook, the installation of water quality devices that will reduce sediment deposition in the Town Hall Duck Pond, new concrete sidewalks, granite curbing, new ornamental street lights, the installation of ornamental traffic signals at the site driveway, and a new roadway surface that includes brick paver crosswalks to better identify and make crosswalks safer.

The Division's involvement consisted of the participation in project progress meetings, review of shop drawings and coordination of the construction of the loop traffic signal system specified in the development agreement with the Town, review of proposed changes to utility locations and sizes during construction and providing any assistance or consultation as were required relating to the Town's infrastructure and issues affecting the public safety.

Linden Street Reconstruction Project

The project locus is from Rockland Street to Hilltop Road, with the exception of the Kingsbury Street intersection, and from Everett Street to Weston Road. For the section from Hilltop Road to Kingsbury Street, improvements consist of the replacement of the brick paver sidewalks with concrete sidewalks, new street lighting, installation of new granite curbing and a new roadway surface. The section from Kingsbury Street to Rockland Street includes the reconstruction of bituminous concrete sidewalks, construction of a bituminous concrete Cape Cod berm, the installation of pedestrian signals at Alba Road and Upwey Road and the cold planing and repaving of the roadway. The roadway width will be in accordance with

negotiated improvements with the Linden Street neighborhood. The section of Linden Street from Everett Street to Weston Road will include similar improvements as have been previously stated.

With the development of the former Diehl's site by Eastern Development and its successor, Federal Development Co., as part of the negotiated development agreement with the Town, Federal Development is in the process of constructing the Linden Street improvements within their project area from Everett Street to Hilltop Road. During the past year, Eastern Development provided the Town with \$1.2 million in funding for the reconstruction of the remaining portions of Linden Street.

The reconstruction of Linden Street from Hilltop Road to Kingsbury Street is expected to be completed during the first quarter of FY08 and prior to the start of the 2007-08 school year. The remaining sections of Linden Street between Kingsbury Street and Rockland Street and Everett Street to Weston Road are expected to begin shortly thereafter and be completed during the latter part of FY08.

Stormwater Management Program

During FY07, the Engineering Division continued the implementation of the Town's stormwater management program. In September 2003, the Town was issued its General Permit for the discharge of stormwater to the waterways of the US. The 2004 Annual Town Meeting approved a change to the Town Bylaw that permitted the Board of Public Works to promulgate and implement Municipal Stormwater Drainage System Regulations that govern the use of the Town's stormwater drainage system. These regulations were implemented in January 2005 and were amended in November 2006.

Under the terms of its EPA General Permit, the Town is required to adopt regulations to limit erosion and sedimentation of soil at construction sites. These regulations have been drafted and are currently under review. They are scheduled to be adopted during FY08.

As part of its stormwater management responsibilities, the Engineering Division prepared an annual report for submission to the US EPA in compliance with the Town's general permit under the Phase II NPDES regulations. This involves reporting on stormwater management activities performed over the past year and periodic revision to the Town's Notice of Intent, which serves as the basis for the Town's stormwater management program. Part of the stormwater management activity was to create a stormwater brochure for residents of the Town. The stormwater brochure explains the definition of stormwater and how to effectively manage stormwater. During FY07, the Engineering Division designed, produced and mailed these brochures to each resident in Wellesley.

Water and Sewer Division Cleaning and Cement Lining Project

During FY07, the Engineering Division provided project management and construction engineering services for the cleaning and cement-lining of water mains on Oakland Street. The project consisted of the cleaning and centrifugal lining with cement mortar of 2900 linear feet of the interior of the 10-inch cast iron water main, the reconfiguration of the existing 10-inch water main at the Standish Road

intersection, the installation of temporary bypass mains and services and the installation of new gate valves and fittings. The contractor for the project was Dewcon, Inc. of Basking Ridge, New Jersey.

The project was completed on time. The total project cost was \$247,165.

Infiltration/Inflow Reduction Program

During FY07, the Engineering Division provided project management and construction engineering services for the sewer rehabilitation project in the Wellesley Farms area. The project consisted of the cleaning and television inspection of approximately 45,936 linear feet of sewer laterals, testing of 7,932 pipe joints and the sealing of 2,449 pipe joints. The contractor for the project was National Water Main Cleaning Co. of Hyde Park, Massachusetts. FY07 was the third year of a three-year contract for the performance of this work. The infiltration/inflow reduction program will continue in FY08 after a new contract is competitively bid.

The project was completed on time. The total project cost was \$239,440.

Utility Permit Program

The Engineering Division manages the Town's Street Occupancy Permit Program. This program regulates all utility and excavation work within the public way in accordance with the Rules and Specifications Regulating Street Excavations, Obstructions and Driveway Aprons, promulgated by the Board of Public Works. The comparative program statistics for FY05, FY06 and FY07 are:

| | <u>FY05</u> | <u>FY06</u> | <u>FY07</u> |
|--|-------------|-------------|-------------|
| Number of permits issued: | 850 | 823 | 783 |
| Number of permits completed as of June 30 th | 501 | 456 | 352 |
| Number of outstanding permits | 349 | 367 | 429 |

The majority of outstanding permits are typically telephone or water line repairs that have not yet been permanently patched. Verizon routinely waits a year after excavation to permanently patch the street openings it makes. The number of outstanding permits at year's end also include those streets that require cold planing, followed by an overlay of the pavement surface and those permits where the contractor is required to delay the final patch for a period of 60 days to account for settlement of the excavation.

Park & Highway Division

Highway

The Highway Program is responsible for the maintenance and repair of all Town roads, street signs, sidewalks, and all surface and subsurface drainage systems. Maintenance includes the cleaning of streets, drains, catch basins, brooks, and culverts. The resurfacing program maintains the structure of streets through trench

and pothole repair, crack sealing, resurfacing and reconstruction. During the winter, roads and sidewalks are kept safe for travel through the winter maintenance program, which includes salting, sanding, plowing and snow removal. The Sign Shop maintains all of the traffic control signs, street signs, street line painting and parking meters. This includes replacement of worn, damaged or missing signs and meters and the installation of new signs and meters. Highway also provides a wide range of construction and maintenance services.

New Street Sign Project

In conjunction with the Selectmen’s Office, the street signs throughout Town are being upgraded in a Five Phase Program. Phase Four of this program was completed and Phase Five was begun. The Highway Meter and Sign Shop replaced approximately 235 street signs. This included the installation of new bases, posts and hardware.

Winter of 2006-2007

The winter of 2006-2007 was a mild snow season with less snow precipitation than normal. Even with the light snow precipitation there were still numerous winter events which required sand/salt response. The majority of the snow fell in March which proved to be problematic due to the increased damage to lawn areas since the ground was not frozen as is typical during the mid-winter months.

The total snow accumulation measured at the Park and Highway Division facility for the winter of 2006-2007 was 18.0 inches. The DPW responded to a total of 16 events. Three of the 16 events required the attention of snowplowing crews. The remainder of the storms were treated with a combination of sand, salt and liquid calcium chloride. Responding to storms resulted in the use of 513.65 tons of sand, 2041.13 tons of salt, and 3,800.0 gallons of liquid calcium chloride. There were no snow removal operations necessary this year, although hand crews were used on several occasions to make passages in the snow banks for pedestrians in the commercial areas of Town.

Monthly Snow Accumulation

Winter 2006-2007

| | | | |
|----------|--------|----------|--------|
| December | 1/2” | February | 6 5/8” |
| January | 1 1/2” | March | 9 3/8” |

FY07 Street Resurfacing

The following streets were resurfaced in fiscal year 2007: Abbott Road, Croton Street (Glen Road to Glen Cross Road), Hastings Street, Madison Road, Peck Avenue, Seaver Street and Forest Avenue (Wellesley Ave to Needham Line).

Due to a technical problem at the bituminous concrete plant of our contractor, several of the streets that were paved in the FY06 season failed. The contractor

milled and repaved the following failed streets at their own expense: Hillside Road, Fiske Road, Prospect Street, Damien Road and River Street. The remainder of the failed streets will be milled and repaved in FY08.

Glen Road Reconstruction Project (Phase 1)

The Highway Program began work on Phase 1 of the Glen Road Reconstruction Project. Phase 1 extends from Washington Street to Croton Street, approximately 2,350 linear feet. The goal of this project is to improve the street through drainage improvements, sidewalk and curb replacement and creating a new base for the roadway surface. The reconstruction includes the full depth reclamation of the bituminous concrete roadway, installation and upgrade of drain pipes and catch basins, installation of new granite curbing and reconstruction of the existing sidewalks including all driveway aprons. The majority of the project was completed including all roadway work except for paving the final course of bituminous asphalt. With a combination of hired contractors and Highway Program crews all drainage work, reclamation, grading and base course paving of the roadway, installation of granite curbing and removal of the existing sidewalk were finished. The remainder of Phase 1 will be completed during the summer of 2007.

Edmunds Road – Arnold Road – Lowell Road Drainage Project

In conjunction with a contractor, a failed drain line was replaced to prevent future flooding problems in the area. The drain line was replaced using a combination of the traditional open cut trench construction and an innovative pipe bursting technology performed by a contractor. This combination of techniques enabled the Town to completely replace the drain line with minimal impact to private properties while using a cost effective solution. A total of approximately 880 feet of drain pipe was upgraded/replaced. Additionally, three catch basins and six drain manhole structures were completely rebuilt along the drain line extending from Cypress Road to Lowell Road. This drainage project required extensive trenches, installation of pipe, building of catch basin and manhole structures, coordination of the private contractor, continuous dewatering of all trenches, and the restoration of stone walls, driveways and landscaped yards. With the installation of this new drainage pipe, three houses were able to connect directly to the drainage line to discharge their sump pumps.

Other FY07 Highway Activities

- Due to a mild mid-winter, extensive work was accomplished in the cleaning of brooks and culverts. Several stream beds were cleared of brush and debris in the following areas: Academy Brook near Brookside Road Pumping Station, Academy Brook at Lincoln Road & Windsor Road, Fuller Brook at Wellesley Avenue, Caroline Brook at the High School Library and the Reed's Pond Forebay.
- As required by the Department of Environmental Protection Agency, the street sweeping materials and catch basin cleaning materials stored in the DPW yard were properly disposed of at a lined landfill. Regulations required the Town to haul these materials for disposal.

HIGHWAY**Comparative Statistics**

| | FY06 | FY07 |
|--|-------------|-------------|
| Street Resurfacing & Cracksealing | | |
| Bituminous concrete resurfacing (public ways) | 4.16 mi. | 2.90 mi.** |
| Bituminous concrete resurfacing (private ways) | -- | 0.06 mi |
| Roadway cold planned | -- | 0.80 mi |
| Streets cracksealed | 4.3 mi | 7.0 mi. |
| Curbing (replaced, renewed or new) | | |
| Granite curbing | 60 lf* | 3,294 lf |
| Bituminous concrete curbing | 850 lf | 2,974 lf |
| Sidewalks resurfaced | 2,080 lf | 1,304 lf |
| New sidewalk construction | -- | -- |
| Sidewalks reconstructed | 1,575 lf | -- |
| Guardrail fencing | | |
| Highway steel guardrail fencing installed | -- | -- |
| Signs & Markings (replaced, renewed or new) | | |
| Street signs | 222 | 235 |
| Regulatory signs | 100 | 95 |
| Sign Posts | 300 | 266 |
| Parking Meters | | |
| Maintain Meters – replace batteries, etc | 750 | 25*** |
| New Cale units installed | 1 | -- |
| -- | -- | -- |
| Winter Maintenance | | |
| Winter weather events responded by DPW | 14 | 16 |
| Total snowfall, inches | 40.25 | 18.0 |
| Salt used for ice control on roads and walks, tons | 2,006 | 2,041 |
| Calcium chloride for ice control on roads, gallons | 10,615 | 3,800 |
| Sand used for ice control on roads and walks, tons | 1,385 | 514 |
| Sidewalks plowed each storm, miles | 56 | 49**** |
| Highway Maintenance Inventory | | |
| Streets, miles | 110 | 110 |
| Sidewalk, miles | 118 | 118 |
| Curbing, miles | 78 | 78 |
| Fencing, miles | 6 | 6 |
| Culverts, miles | 75 | 75 |
| Brooks & streams, miles | 15 | 15 |
| Catch basins, each | 3,650 | 3,650 |

*Concrete Curbing

**Additional roadways were cold planed and paved by Contractor to repair the failing asphalt applied in FY06

***Parking meter electronic maintenance was turned over to Parking Clerk.

**** Sidewalks were inventoried this year using GIS map estimates.

Park & Tree

The Park & Tree Program is responsible for the year-round maintenance of the Town's parks, athletic fields, outdoor recreation facilities, conservation lands and public shade trees. Listed below is a breakdown of the Town properties routinely maintained by the division.

- The grounds of Wellesley's branch libraries, Town Hall and Police Station
- The Recreation Department's Morses Pond Beach Facility
- 9 playgrounds of Wellesley's Public Schools
- 13 playing field sites totaling 47 acres of the Natural Resources Commission and School Department properties.
- 4 tennis courts (Hunnewell, Sprague, Schofield, Kelley) totaling 17 courts.
- 6 conservation reservations and the Wellesley Town Forest
- 10 municipal parking lots of the Board of Selectmen
- 18 parks and 5 playgrounds of the Natural Resources Commission
- 68 traffic islands
- 3 linear parks (Caroline Path, Cochituate Path and Fuller Brook)
- 8 ponds including annual mechanical and manual harvesting of invasive weeds at Longfellow, Rockridge and Morses Ponds
- 3,150 public shade trees and vegetation management along Town roadways.

During the fiscal year **2007**, the Park & Tree Program also completed the following tasks and capital improvements:

- Installed a new toddler swing set at Perrin Park along with improving existing fibar surfaced playgrounds town wide.
- Completed renovation of Kelly #2 & Kelly #4 baseball infields and backstop areas. Renovations also included a new ADA pathway for Kelly #3.
- Planted and maintained 132 new public shade trees town-wide with funding provided by the Natural Resources Commission and other various capital project funds and donations.
- Completed landscape improvements to the traffic Island at Chesterton & Beverly Road along with 66 new shrub plantings town wide.
- Completed landscape renovations to the Morse Pond Beach pathway by removing over 100 feet of old chain link fencing and invasive trees and shrubs. The area was pruned back to create more public access through pleasant vistas and to encourage the growth of more native plants.
- In the spring of 2007 successfully sprayed over 800 public shade trees to control damage from invasive Winter Moth caterpillars. Also, in cooperation with the Natural Resources Commission provide public information to Town residents on how they can best protect their private trees against this destructive pest.
- Installed a new raised planting bed for improved handicap access at the Brookside Community Gardens.
- Installed new ADA drinking fountains at Perrin Park and Sprague Field.
- In response to the West Nile Virus, assisted the Middlesex Mosquito Control and the Wellesley Heath Department with treating over 3,100 catch basins with larvicide to help reduce the mosquito population in the town.

Recycling and Disposal Division

The Recycling and Disposal Facility (RDF) is located at 169 Great Plain Avenue (Route 135). This 88-acre facility is open 6 days a week. The hours of operation are Monday, Tuesday and Wednesday 7 a.m. to 12 noon; Thursday and Friday, 7 a.m. to 3:45 p.m. ; and Saturday, 7 a.m. to 4:45 p.m. The facility is closed on Sunday.

The solid waste management strategy utilized by the RDF is the "3 R's" diversion method. Waste that cannot be diverted from the waste stream via **Reduction, Reuse, or Recycling** is transported to a State-approved disposal facility. All materials are processed in an environmentally, operationally and financially sound method.

Reduction:

Source reduction is the first step in managing the Town's waste. It is a simple concept to describe but difficult to quantify the results. To assist, the Massachusetts' Department of Environmental Protection provided the RDF with "Junk Mail Reduction Kits", which includes information on how to remove oneself from mailing lists and a "Non-Toxic Products" brochure with a listing of environmentally friendly products that can be used at home.

Reuse:

Reuse is the next component in the Town's solid waste management strategy and the RDF has a few areas for residents to take items that others no longer need.

The most visible and popular of these areas is the Reusables Area (Take-It-Or-Leave-It). The area was closed July 1, 2005 because of budget cuts. Friends of Recycling Inc. a community based non-profit organization, made up of Wellesley residents dedicated to helping the Town's recycling program, organized a volunteer effort to operate and manage the area. The area has since re-opened with a volunteer force of over 100 volunteers. The RDF staff and volunteers have successfully worked together to keep the area open.

The Book Exchange is also a very popular area in the facility. It is not uncommon to see residents relaxing and enjoying a good book, or just browsing through the many different types of books. Surplus books that are not taken are shipped free of charge to third world countries for reuse at libraries and schools. The Town's benefit is the avoided disposal costs (estimated at \$5,800 a year) and the fact that we are doing our part in helping to improve the world's literacy rate. The RDF has taken a leading role with other Massachusetts communities by assisting and helping to coordinate shipments.

The Earth Products Area gives residents another opportunity to take something back home with them. Brush, leaves and grass clippings are dropped off and processed on site. A trommel screener is used to produce a clean product whereby the screened compost is sold for a premium. Screened compost is offered to Wellesley residents at no charge by the shovel full. Residents can buy large quantities of compost for a fee.

Recycling:

Recycling eliminates the financial and environmental costs of landfilling waste and can generate revenues that go back into the Town's General Fund. A major component to the success of the RDF operation is the Lindemann Baler. This is a high-density baler that produces an export quality bale, thus enabling the RDF to market to upper level worldwide markets that are typically accessible only to high volume private companies. In order to achieve the highest economic benefit for the Town, every pound of recyclable material is inspected and/or sorted on a quality control conveyor. Contaminates are removed to ensure mill acceptance at a premium grade classification. The most important aspect of our marketing strategy is to eliminate the profit making middle companies or brokers. This enhances the Town's position to capitalize on the constantly changing market conditions to maximize revenue. Another benefit of this strategy is that it allows us to have more control over the operation, and allows us to develop long-term relations with mill buyers.

Recycling Revenue and Cost Avoidance:

The following is compilation of all relative recycling statistics:

| | |
|---------------------------------|--------------------|
| Product Sales Revenue: | \$458,813 |
| Compost Sales: | \$8,128 |
| Appliance Fees: | \$19,060 |
| Commercial Yard Waste Fees*: | \$22,135 |
| Cost Avoidance Benefits**: | <u>\$1,105,040</u> |
| Total Recycling Benefit: | \$1,613,176 |

*Fees collected from commercial vendors for the disposal of leaves, grass clippings, brush and woodchips that ultimately decomposes and is moved off site as compost.

** Avoided landfill disposal costs by diverting material out of the waste stream.

Municipal Solid Waste:

In FY07, a total of 9,044 tons of municipal solid waste (MSW) was processed and hauled off-site to a disposal facility in Seneca Falls New York. The DPW is currently in the fourth year of a ten-year contract with Seneca Meadows Incorporated for the disposal of solid waste.

Starting July 1, 2006, the Department of Environmental Protection included Commercial Construction and Demolition Material (C&D) on their waste ban list. This meant that the RDF had to develop a plan to accept commercial C & D material and divert it from the waste stream and process and ship C & D material to a recycling company. C & D material as defined in the Waste Ban Laws is the following material: asphalt pavement, bricks, concrete, metal and wood (treated and untreated wood). On July 20, 2006, the RDF implemented a program to divert residential wood products, brick and concrete. Residents now can separate these products at a lower cost to the Town.

The Executive Office of Environmental Affairs (EOEA) and the Department of Environmental Protection (DEP) have issued a Solid Waste Master Plan, which describes strategies and policies for working toward the State's goals in the coming decade. These goals are to: 1) Reduce the quantity and toxicity of our waste to the irreducible minimum, leaving as little waste as possible to be disposed; 2) Dispose only residuals from recycling and other waste reduction efforts; and 3) Ensure that waste handling facilities are environmentally sound.

The DEP has again expanded its regulatory requirements on all municipal and private waste disposal operations. We must inspect and conduct daily monitoring of all incoming commercial waste and also perform random comprehensive inspections on commercial loads. The RDF has been visited by State Inspectors and it has been determined that the RDF is in compliance with all pertinent laws.

Seventeenth Annual Household Hazardous Products Collection Day:

A fundamental component in Wellesley's environmentally responsible approach to integrated solid waste management is the annual Household Hazardous Products Collection Day. This year the event was held on Sunday, May 6, 2007. A total of 370 residents participated in bringing in a total of 10.97 tons of hazardous material. All products were collected and removed from the RDF by licensed and trained technicians and chemists.

Step Up Program

Step Up! You should have heard a lot by now about the RDF's recycling initiative called the Step Up Program. This is an effort to encourage **all** residents to increase their participation in waste reduction, regardless of where they are today, in terms of how much and what they recycle. Envision a staircase of recyclable materials; a non-recycler would be at the bottom step and veteran recyclers that recycle certain items occupy the next few steps. If the non-recycler started to recycle just paper, he would take a step up. If a resident who now only recycles paper started to also recycle bottles and cans, that would be a step up. The top step is community education and outreach. If every household took a step up and started to recycle one more product line, we would reach our overall goal of five percent more recycling over the next five years. Every resident can nudge us towards our goal by looking for one or two more items to recycle or remove from their trash. Recycling saves natural resources and makes the Town a lot of money.

The RDF picks up municipal recyclables and trash at most municipal buildings as well as the trash barrels on the sidewalk in the commercial areas in town. Last year, these routes were expanded to include the pick up of trash and recyclables at Town Hall and the Main Library saving considerable money for the Town.

New Initiatives

The RDF strives to be innovative and come up with ideas that will maximize the recycling diversion rate. Every ton of recyclables that is diverted from the waste stream equates to approximately \$100 per ton saved. A new initiative in FY07 diverted a total of 1,050 tons of wood waste, concrete, and bricks from the waste stream. Wellesley residents recycled 457 tons of mostly wood products. Commercial

customers recycled 593 tons of construction wood and other wood products. Another new initiative is the Business Initiative Program. The RDF accepted 679 tons of recycled products from three other communities. The inaugural year has proved to be profitable. The gross revenue was \$52,320, the cost of doing business was \$18,686 and the net profit to the Town was \$33,635. In FY08, the plan is to expand the program. Also, the new residential metal drop-off area brought in a total of \$59,299. The new collection method of separating non-ferrous from ferrous metal and selling the high grade metal for premium money resulted in the Town making an additional \$10,111 in the sale of copper, brass and aluminum products. All revenues generated were deposited into the Town's General Fund.

RDF Comparative Statistics

All figures in tons unless otherwise noted

| (A) Recyclables* | FY06 | FY07 | FY07 (Sales) ** |
|-----------------------------|-----------|-----------|-----------------|
| Paper | 2,266 | 2,651 | \$246,677 |
| Cardboard | 1,022 | 1,113 | \$105,441 |
| Glass: Clear | 114 | 112 | \$2,231 |
| Brown | 37 | 41 | \$612 |
| Green | 188 | 190 | N/A |
| Ferrous Metal | 498 | 470 | \$49,188 |
| Non-Ferrous Metal | 7 | 13 | \$10,111 |
| Aluminum Foil and Plates | 1 | 3 | \$289 |
| Steel Cans | 36 | 34 | \$4,905 |
| Refundable Containers | 24 | 34 | \$14,611 |
| Plastics | 123 | 148 | \$22,782 |
| Books | 78 | 9 | \$175 |
| Construction and Demolition | N/A | 1,050 | N/A |
| Batteries (Automotive) | 6 | 7 | N/A |
| Waste Oil | 5 | 12 | N/A |
| Tires | 17 | 20 | N/A |
| Textiles (Used Clothing) | 115 | 142 | N/A |
| Paint | 6 | 6 | N/A |
| Hazardous Products | 110 | 131 | N/A |
| Miscellaneous | 81 | 86 | N/A |
| Electronic Media | 1831 lbs | 1160 lbs | N/A |
| Crutches & Canes | 70 units | 120 units | N/A |
| Ink Jet Cartridges | 458 units | 463 units | \$728 |

| | | | |
|---------------------------------------|------------------------|--------------|-------------------|
| Mobile Phones | 229 units | 352 units | \$255 |
| Eye Glasses | 1421 units | 2588 units | N/A |
| (A) Total Recyclables | 4,665 | 6,272 | \$ 458,005 |
| Subtotal by source (estimated) | | | |
| Residential | 3,484 | 3,849 | \$279,184 |
| Municipal | 46 | 39 | \$2,829 |
| Commercial | 1,135 | 1,705 | \$123,671 |
| Business Initiatives | Incl. in commercial | 679 | \$52,321 |

| (B) Solid Waste | FY05 | FY06 | FY07 |
|------------------------------|---------------|---------------|--------------|
| Residential | 8,582 | 7,845 | 7,333 |
| Municipal | 366 | 427 | 327 |
| Commercial | 1,706 | 1,774 | 1,384 |
| (B) Total Solid Waste | 10,654 | 10,046 | 9,044 |

| (C) Yard Waste | FY05 | FY06 | FY07 |
|-----------------------------|--------------|--------------|--------------|
| Residential | 7,152 | 6,941 | 7,136 |
| Municipal | 931 | 1298 | 862 |
| Commercial | 557 | 479 | 406 |
| (C) Total Yard Waste | 8,640 | 8,718 | 8,404 |

| All Waste Materials | FY05 | FY06 | FY07 |
|-----------------------------|---------------|---------------|---------------|
| Total Weight (A+B+C) | 24,067 | 23,429 | 23,720 |

*Unsold tonnage in inventory is not included in the above figures, actual tonnage may be slightly higher

** Recycling Sales Revenue indicates the amount of all recycled products sold, however, some of these monies may be received in FY08

Recycling Percentages

| Excluding Yardwaste | FY05 | FY06 | FY07 |
|--------------------------------------|--------------|--------------|--------------|
| Residential | 29.7% | 30.7% | 34.4% |
| Municipal | 9.1% | 9.7% | 10.7% |
| Commercial | 39.5% | 39.0% | 55.2% |
| (C) Total Excluding Yardwaste | 30.9% | 31.7% | 41.0% |

| Including Yardwaste | FY05 | FY06 | FY07 |
|--------------------------------------|--------------|--------------|--------------|
| Residential | 55.7% | 57.1% | 60.0% |
| Municipal | 72.5% | 75.9% | 73.4% |
| Commercial | 49.5% | 47.6% | 60.4% |
| (C) Total including Yardwaste | 55.7% | 57.1% | 61.9% |

Per Capita Recycling

| Per Capita Recycling *** | FY05 | FY06 | FY07 |
|-----------------------------------|-------------|-------------|-------------|
| Residential | 272 | 262 | 334 |
| Municipal | 3 | 3 | 3 |
| Commercial | 84 | 85 | 135 |
| Total Per Capita Recycling | 359 | 351 | 471 |

*** does not include yardwaste

Revenue

| Revenue | FY05 | FY06 | FY07 |
|-----------------------------|-------------------|-------------------|-------------------|
| Recycling Sales | \$ 340,040 | \$ 326,875 | \$ 458,005 |
| Compost Sales | \$ 140 | \$ 3,124 | \$ 8,128 |
| Appliance Fees | \$ 19,630 | \$ 21,025 | \$ 19,060 |
| Earth Products Tipping Fees | \$ 32,942 | \$ 28,824 | \$ 22,135 |
| Commercial MSW Tipping Fee | \$ 217,986 | \$ 226,477 | \$ 180,377 |
| Total Revenue | \$ 610,738 | \$ 606,325 | \$ 687,705 |

Water & Sewer Division

The Water and Sewer Division is responsible for the operation and maintenance of the Town's water and sanitary sewer systems. Described herein are the Division's FY07 accomplishments.

Water Program

The Water Program is responsible for the operation and maintenance of the Town's wells, pump stations, water treatment facilities, water distribution and storage systems. The program provides a potable and reliable water supply for its users and for fire protection. Water conservation and water resource protection are important components of the program.

Wellesley's water system consists of seven wells, five well pump stations, three water treatment facilities, two booster pump stations, two storage facilities with a combined capacity of about 6 million gallons, and 149 miles of distribution main. Wellesley's water is supplied from 7 local wells and from the Massachusetts Water Resources Authority (MWRA). All water users connected to the system are metered.

We are pleased to report that the water quality of our supplies was in compliance with the Federal Safe Drinking Water Act throughout FY07.

Water Treatment Facilities:

The seven local wells pump into one of three water treatment facilities, which provide for corrosion control, iron and manganese removal, and disinfection. In FY07 the Division contracted with Woodard & Curran Engineers to install a variable speed drive on the backwash pump at the Longfellow Water Treatment Facility; the Division also replaced filter media (i.e. anthracite coal) at that facility.

Water Distribution:

During FY07 3,000 feet of ten-inch diameter water main on Oakland Street, between Grantland and Standish Roads, was cleaned and cement lined. The purpose of the project was to improve hydraulic capacity and extend the useful life of the water infrastructure. Rust deposits, known as tuberculation, collect on the inside of the pipe, constricting flow and corroding the pipe. Cement mortar lining is used to produce a smoother pipe interior and prevent future corrosion.

Water Supply:

We continue to monitor the contaminant plume of trichloroethylene in Needham. The Massachusetts Department of Environmental Protection (DEP) is overseeing the cleanup of this contamination including monitoring of the groundwater treatment system at Central Avenue in Needham. Throughout FY07 the Division continued monitoring observation wells in Rosemary Meadow and the Wellesley Avenue and Coughlin production wells as per our Management Action Plan. Throughout FY07 our monitoring showed no detection of plume contaminants.

The feasibility of installing a satellite well to restore the yield of the Coughlin was investigated under contract with Woodard & Curran Engineers. This feasibility study included the driving of three observation wells and the conducting two pump tests. Woodard & Curran is currently preparing a report for submission to the Massachusetts Department of Environmental Protection to obtain approval for such a satellite well.

Water Conservation:

Typically hot, dry summer weather causes water demand to double due to lawn irrigation. Our public awareness program included the distribution of complimentary rain/sprinkler gauges to encourage less frequent lawn irrigation and weekly advertisements in the Wellesley Townsmen newspaper, which gives notice of our current water conservation status. In FY07 weekly notices were printed in the Townsmen from June to September to alert residents of the current conservation status. The highest status reached during the year was WATCH.

Our water conservation program is encouraging prudent lawn water practices. We continue to distribute complimentary rain/sprinkler gauges, in order to encourage no more than an inch of water (combined rain and sprinkler) on the lawn per week.

The peak day water pumpage for FY07 was 5.18 million gallons. The peak month pumpage was 120.7 million gallons. The total water pumped for FY07 was 1,045 million gallons. Of this total water pumped, 78 percent came from local wells and 22 percent from the MWRA.

Water Meter Upgrade:

Customer meters have been read by radio since 1999; the devices that accompany the meters, which encode, receive, and transmit the data by radio signal are powered by batteries. The expected lives of these batteries are about half that of the meters. In FY07 we began replacing the batteries on these meters. Nearly 2,000 batteries were replaced in FY07, which is on pace with the projected 5-year battery replacement program.

Sewer Program

The Sewer Program is responsible for the operation and maintenance of Wellesley's sanitary sewer system, which includes 134 miles of collection lines and twenty-two lift stations. Sewage is delivered into the MWRA's regional sewerage collection system and is treated at the MWRA Wastewater Treatment Facilities at Deer Island near Boston Harbor.

Sewer Lift Station Replacement:

In FY07 the Division contracted with Weston & Sampson Engineers to design the replacement of the Shore Road and the DPW yard ejector lift stations. The replacement design was completed utilizing a conversion to centrifugal pumping, which is consistent with our 2003 Master Plan.

Sewer Collection System Rehabilitation:

In FY07 the Division contracted with National Water Main Company to continue its annual program of joint testing and sealing and manhole sealing. This work will include an additional 10 miles of sewer television inspection, 5 miles of joint testing and sealing, and 400 vertical feet of manhole sealing.

The purpose of the project is to remove as much extraneous water (infiltration/inflow) from the sanitary sewer system in the Wellesley Farms area as possible. Infiltration is water associated with groundwater, while inflow is water associated with storm events. Water from these sources takes up capacity that might normally be allotted to sewage flow, with the impact of raising the Town's annual MWRA sewer assessment.

MWRA Sewer Metering Program

A large portion of Wellesley's MWRA sewer assessment is based on the metered wastewater flows leaving the Town and entering the MWRA system. These measured flows are reported on a calendar basis, and are used to formulate the following fiscal year's assessment. The following is a comparison of the four most recent calendar-year wastewater flow statistics:

| <u>Calendar Year</u> | <u>MWRA Wastewater Flow Measurements</u> | |
|----------------------|--|-------------------|
| | Ave. Daily, MGD | Peak Monthly, MGD |
| 2003 | 4.84 (1.35%) | 7.73 (1.54%) |
| 2004 | 4.92 (1.34%) | 6.46 (1.44%) |
| 2005 | 4.48 (1.27%) | 6.76 (1.42%) |
| 2006 | 4.30 (1.20%) | 6.50 (1.20%) |

The percentage of Wellesley's contribution to the total MWRA system flow is noted within the parentheses. As can be seen from the above data, Wellesley's proportionate share of the regional wastewater (MWRA) flow has been in a steady decline over the past four years, which may indicate that our Sewer Collection System Rehabilitation Program is a success.

Water & Sewer Funds Audit Reports

The certified public accounting firm of Powers and Sullivan, L.L.P has prepared the FY2007 Financial Reports of the Water and Sewer Funds. The audited financial statements for the Water and Sewer Funds are included at the back of this Annual Town Report.

Division Statistics

| | <u>FY05</u> | <u>FY06</u> | <u>FY07</u> |
|-----------------------------------|-------------|-------------|-------------|
| Number of Water Accounts | 11,368 | 11,663 | 11,711 |
| Water Pumped from Local Wells, mg | 870.38 | 828.19 | 819.22 |
| Water Pumped from MWRA, mg | 182.04 | 293.66 | 225.34 |
| Total Water Pumped, mg | 1,052.42 | 1,121.79 | 1,044.56 |
| Peak-to-Average Day Water Demand | 1.76 | 1.67 | 1.81 |
| Total Water Billed, mg | 896.23 | 923.99 | 883.67 |
| New Meters Installed | 388 | 349 | 289 |
| Hydrants Replaced | 21 | 15 | 12 |
| Number of Sewer Accounts | 8,053 | 8,133 | 8,160 |
| Number of House Services Rodded | 340 | 312 | 322 |
| Feet of Sewer Main Rodded/Flushed | 295,470 | 307,609 | 297,711 |