

## **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, Park & Highway, 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 2008, William E. Charlton was elected to a three-year term on the Board of Public Works. In June 2008, William Charlton was elected Chairman; Michael D. Humphrys, Vice Chair, and David A. T. Donohue, Secretary of the Board of Public Works, effective July 1, 2008.

### **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 2008.

#### **Reconstruction of Weston Road**

The Engineering Division began the planning and design for the reconstruction of Weston Road. The first phase of the project is the section from Linden Street to Worcester Street (Route 9). Subsequent phases will be the sections from Worcester Street to the Weston town line and from Washington Street to Central Street.

The Engineering Division began working with the Board of Selectmen, Police Department, and its on-call civil engineering and the Town's traffic engineering consultant toward the development of conceptual design plans for the project. Through the end of FY08, four (4) public meetings have been held to obtain public input into the project. The latest, held on June 11, 2008 at the Middle School, presented the 25% conceptual plans of the project. Substantial public input was obtained at the public meeting and subsequent to the June 2008 public meeting. As the result of the public input, a neighborhood core group has been established to review the design plans and provide further input into the plan development.

Of paramount concern in the project development are the reduction of vehicle speeds on Weston Road, and improvement of pedestrian and bicycle safety. To partially address these concerns, three (3) new pedestrian signals and crossings are proposed for the Phase 1 corridor. These crossings are located at Linden Street (approved by the 2008 Annual Town Meeting), Turner Road and Hardy Road.

As FY2008 ended, future public meetings to present 65% and 75% design plans were proposed for September 2008 and October 2008, respectively. The current project schedule calls for the bidding of the project to take place during the winter 2008-2009. Construction of the Phase 1 project is scheduled to take place during the 2009 construction season and be substantially completed by November 2009. Reconstruction of Glen Road (Washington Street to Wellesley/Weston Town Line) During FY08, 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, construction of drainage improvements, reconstruction of bituminous concrete sidewalks, ADA wheelchair ramps, driveway aprons, the installation of granite curbing, highway guardrails and improved signage and pavement markings.

The project also included the installation of a pedestrian signal at the intersection of Riverdale Road and Glen Road. These signals were installed at the request of the neighborhood to improve the pedestrian safety of school children and commuters using the Wellesley Farms Commuter Rail Station.

The Park/Highway Division was the general contractor for the project. Subcontractors hired by the Park/Highway Division performed the following tasks; cold planing, grading and installation of granite curbing.

### **Municipal Facilities Building Project**

During FY08, the Department of Public Works, along with the Municipal Light Plant, began construction of the Municipal Facilities Building Project. The project consists of the 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, personnel and supplies.

The project included demolition of the existing MLP garage and warehouse that had been 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 worked closely with the project's licensed site professional, BETA Group toward the remediation of PCB's from portions of the project site. The bid opening for excavation and off-site management of PCB impacted soil on site was held in June 2007 and awarded to Mill City Environmental. Mill City Environmental successfully completed project work in October 2007 at a cost of \$225,835.

The bid opening for the demolition of the existing garage and warehouse building was held in August 2007 and awarded to S&R Corporation. Demolition work was completed by S&R Corporation in December 2007 at a cost of \$201,900.

The bid opening for the construction of the new municipal buildings was held in September 2007 and awarded to PJ Stella Construction at a bid price of \$8,942,000. Work on the building foundations, underground utilities and rough site grading is almost complete. It is anticipated the contract work will be completed in the spring season of 2009. The project construction is the responsibility of the Permanent Building Committee. The Engineering Division is responsible for project management and construction management of site related project items.

### **Linden Square Development Project**

During FY08, the Engineering Division continued to work with Federal Development Co. and its construction manager, Cranshaw Construction in the reconstruction of Linden Street between Hilltop Road and Everett Street as part of the Linden Square Development Project. The street reconstruction project included 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 looped traffic signal system specified in the development agreement with the Town, review of proposed changes to utility locations and sizes during construction, developing a punch list of work already completed and listing any deficiencies in that work not in accordance with Town specifications and standards.

### **Linden Street Reconstruction Project**

The project locus was 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 consisted 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 will include 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 a compromise negotiated 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. The reconstruction of Linden Street will be performed by the DPW Park/Highway Division and its paving sub-contractor.

The reconstruction of Linden Street from Hilltop Road to Kingsbury Street was completed during the second quarter of FY 2008. The section between Kingsbury Street and Rockland Street will be started in early FY09 and is expected to be substantially completed in November 2008. The section from Everett Street to Weston Road will be started during the last quarter of FY09.

## Stormwater Management Program

During FY08, 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 initial General Permit expired on April 30, 2008. The Town is currently awaiting the issue of the second 5-year General Permit. In the meantime the Town continues to function under the terms of the original General Permit.

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.

In response to a request from the Massachusetts Department of Environmental Protection (MDEP), the Engineering Division in association with the DPW Water and Sewer Division performed stormwater outfall monitoring and dry weather sampling of outfalls along the Fuller Brook, between Cameron Street and Dover Road. These outfalls were sampled by DEP during dry weather conditions, defined as 72 hours of <0.1 inch of precipitation. Some of the outfalls were flowing during the dry weather conditions and further, exhibited high levels of e-coli bacteria, an indicator organism for other contaminants. As part of the Engineering Division's investigation into the source and ultimate elimination of these contaminants, the DPW Water and Sewer Division and its contractor performed dye testing and television inspections of sanitary sewer crossings of Fuller Brook. No issues were found relating to sanitary sewage leaking into Fuller Brook. As FY2008 ended, the Engineering Division was planning to perform an additional investigation to further isolate and determine the source of the problem. This will be performed in early FY2009 and will involve further sampling of Fuller Brook and upstream points in the tributary stormwater drainage system.

## 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 FY06, FY07 and FY08 are:

	<u>FY 06</u>	<u>FY07</u>	<u>FY08</u>
Number of permits issued:	823	783	836
Number of permits completed as of June 30 <sup>th</sup>	456	352	478
Number of outstanding permits	367	429	358

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 Selectmen's Office, the street signs throughout Town are being upgraded in a Five Phase Program. The remainder of 5<sup>th</sup> phase has been completed with the installation of 96 street signs.

**Winter of 2007-2008**

The winter of 2007-2008 was a season with more snow and ice precipitation than the previous winter. The first of 22 snow events occurred on December 3, 2007 which provided enough snow to require a snow removal event prior to the holidays. There were still numerous winter events which required sand/salt response. The total snow accumulation measured at the Park and Highway Division facility for the winter of 2007-2008 was 46 inches. The DPW responded to a total of 22 events. Seven of the 22 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 515 tons of sand, 3,933 tons of salt, and 6,000 gallons of liquid calcium chloride. There were one snow removal operations necessary this year, and 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 2007-2008

December	23.25	February	15.25
January	7.5	March	0

## **FY08 Street Resurfacing**

The following streets were resurfaced in fiscal year 2008: Bristol Road, Crestwood Road, Dennis Road, Hampshire Road, River Glen Road, Shelley Road, Swarthmore Road, Thackeray Road, and Trinity Court. Pond Road received a leveling course of asphalt which was followed with a surface treatment of chip seal to prolong the life of the roadway. In October of 2007, Public Works in conjunction with UMass Amherst and Baystate Roads applied a "Warm Mix" Overlay on the RDF's access roadway. This process uses a different blend of conventional asphalt, which includes smaller stone and a more recyclable product in an attempt to re-use smaller stone added with polymer to provide a durable road surface.

Due to a technical problem at the bituminous concrete plant of our contractor, several streets that were paved in the FY06 season failed. The contractor milled and repaved the following failed streets at their own expense: Curve Street, Crest Road, Everett Street, Howe Street, School Street, and Westerly Street.

## **Linden Street Reconstruction**

In August the Highway Program began construction of Linden Street from the intersection of Kingsbury Street to Hilltop Road. The roadway portion of this project consisted of cold planing the existing roadway with a private contractor, installing a new brick banded crosswalk at the intersection of Donizetti Street, and finishing with an asphalt overlay and traffic markings. Sidewalks were also rebuilt, including the installation of new electrical conduit for street lights, new granite curbing, handicap accessible ramps, and new concrete sidewalks. New ornamental street lights were installed by the Wellesley Municipal Light Plant.

## **Glen Road Reconstruction Project (Phase 1)**

As the snow season closed, the Highway Program began the final stages of Phase 1. This included readjusting utility manholes and paving the roadway with a finishing course of asphalt. This paving was coordinated with the street resurfacing program while River Glen Road was paved. The installation of the crosswalk warning lights at the intersection of Riverdale Road was also completed with line painting for traffic control.

## **Glen Road Reconstruction Project (Phase 2)**

The Highway Program began work on Phase 2 of the Glen Road Reconstruction Project. Phase 2 extends from Hundreds Road to Ridgeway Road. Highway Program crews began the drainage portion of this project by installing approximately 520' of new drain line and the installation of 5 new catch basins and 2 new drain manholes. The remainder of the project will take place in FY 09.

## **Drainage Improvements DPW Building Reconstruction**

In the fall of 2007, Highway Program crews excavated and installed a "Storm Water Recharging" system located in the highway yard. The purpose of the system is to prevent excessive runoff waters from rain to enter the drainage system. The installation consisted of installing 77 pre-cast concrete vaults imbedded in trap rock

in an attempt for rain water to “re-enter” the ground in the immediate area and be in compliance of newer DEP regulations. During FY09 a second system will be installed including two new storm water quality devices.

#### **Other FY08 Highway Activities**

- The Highway Program also provided support labor for the RDF’s newly expanded Take and Leave area for the Friends of Recycling. This work was conducted by both RDF and Highway crews which excavated and installed a new concrete block retaining wall, re-graded, and paved the area for the expansion.
- During breaks between snow events, work was accomplished in the cleaning of brooks and culverts. Several stream beds were cleared of brush and debris in the following areas: Indian Springs Brook, and Boulder Brook to include removing sediment in the twin culverts under Lexington Road.
- As required by the Department of Environmental Protection, the street sweeping materials and catch basin cleaning materials stored in the DPW yard were properly disposed of at a lined landfill.

**HIGHWAY****Comparative Statistics**

	<b>FY07</b>	<b>FY08</b>
<b>Street Resurfacing &amp; Cracksealing</b>		
Bituminous concrete resurfacing (public ways)	2.90 mi.**	2.93 mi
Bituminous concrete resurfacing (private ways)	0.06 mi	0
Roadway cold planned	0.80 mi	0
Streets cracksealed	7.0 mi.	0
<b>Curbing</b>		
Granite curbing	3,294 lf	1072 lf
Bituminous concrete curbing	2,974 lf	914 lf
Sidewalks resurfaced	1,304 lf	246 lf
New sidewalk construction	--	--
Sidewalks reconstructed	--	3,470 lf
<b>Guardrail fencing</b>		
Highway steel guardrail fencing installed	--	--
<b>Signs &amp; Markings (replaced, renewed or new)</b>		
Street signs	235	104
Regulatory signs	95	25
Sign Posts	266	129
<b>Parking Meters</b>		
Maintain Meters – replace batteries, etc	25***	
New Cale units installed	--	
<b>Winter Maintenance</b>		
Winter weather events responded by DPW	16	22
Total snowfall, inches	18.0	46
Salt used for ice control on roads and walks, tons	2,041	3,933
Calcium chloride for ice control on roads, gallons	3,800	6,000
Sand used for ice control on roads and walks, tons	514	515
Sidewalks plowed each storm, miles	49****	49
<b>Highway Maintenance Inventory</b>		
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	3,657

\*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 & Highway Division**  
**Park**

The **Park & Tree Unit** of the Public Works Department 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 Moses Pond Beach Facility
- 9 Playgrounds of Wellesley's Public Schools
- 13 Playing Field sites totaling 47 acres of the Natural Resource 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 Moses Ponds
- 3,150 Public shade trees and vegetation management along town roadways.

During the fiscal year **2008**, the Park & Tree Unit also completed the following tasks and capital improvements:

- **Hunnewell Field Capital 08:** Installed new irrigation system and sod for Reidy Field in coordination with the Wellesley's Little League Dugout and Backstop renovations.
- **Elementary School Capital 08:** Relocated and built new Little League Baseball infield at Schofield School. Work included installing new sod at the location of the old baseball infield that was displaced from the expansion of the school building.
- **Playground Capital 08:** Replaced surfacing at the Fiske School's lower playground along with improving existing fibar surfaces through out the town's playgrounds.
- **Brown Playground:** With funding from the Natural Resources Commission and Friends of Brown Park installed a new playground at Brown Park.
- **Sprague Field Capital 08:** Installed new gate to keep vehicles out from pedestrian areas and planted 6 new trees around the Calvin Rd. parking lot.
- **Tree Planting:** Planted and maintained 106 new public shade trees town-wide with funding provided by the Natural Resources Commission and other various capital project funds and donations.

- **Traffic Island Capital 08:** Replaced trees and shrubs lost during storms and/or age at Brook Street, Upland Road, Donizetti Street, and Cedar Street at Walnut Street traffic islands.
- **Bike Rack Grant:** The Department of Public Works received a \$6,995 grant from the Massachusetts Area Planning Council to purchase 28 new bike racks. The Park & Tree Division installed these new bike racks around the Town's commercial areas, schools, Town Hall and Main Library.
- **Morses Pond:** Continued landscape improvements to the Morse Pond Beach area by removing another 200 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. Five more new trees were planted along the pathway as part of the Town's Arbor Day Program. These improvements were done in cooperation with the Friends of Morses Pond and the Wellesley Electric Light Plant, which donated the trees. The Division also installed a new irrigation pump to improve the turf conditions along the beach sitting areas.
- **Winter Moth Control:** In the spring of 2008 successfully sprayed over 800 public shade trees to control damage from invasive Winter Moth caterpillars. Also, in cooperation with the Natural Resources Commission provided public information to Town residents on how they can best protect their private trees against this destructive pest.
- **ADA Capital 08:** Made improvement to new raised planting bed to better provide handicap access at the Brookside Community Gardens.
- **Drinking Fountain Capital:** Installed a new ADA drinking fountain at Reidy Field. Also, installed a new water line for a new ADA drinking fountain at the Fiske School field.
- **Public Shade Tree Inventory:** Completed inventory of all of the town street trees. In FY09 the Division hopes to complete the tree inventory for parks, schools, public buildings and other formal landscapes.
- **Mosquito Control:** 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.

**Boulder Brook Reservation:** With funding from the Natural Resource Commission installed a new pedestrian footbridge over Boulder Brook by the Kelly Field and Bates School entrance. The work included drainage improvements and the planting of trees and plants to reduce storm water run-off into the brook.

## 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 p.m.; 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. Home-composters are available for purchase at the RDF and can significantly reduce each household's waste. Additionally, the Massachusetts' Department of Environmental Protection provided the RDF with "Junk Mail Reduction Kits", which include 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 or leave items that still have value.

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 \$6,000 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 an opportunity to take screened compost back home with them. Brush, leaves and grass clippings are dropped off, composted on site and screened for debris. This compost is available by the shovel full to Wellesley residents at no charge or larger quantities are available for purchase for residents and local businesses.

## **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:	\$ 618,396
Compost Sales:	25,298
Appliance Fees:	18,060
Commercial Yard Waste Fees*:	24,603
Cost Avoidance Benefits**:	832,827

**Total Recycling Benefit: \$1,519,184**

\*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 FY08, a total of 8,764 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 sixth 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 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.

### **Eighteenth 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 4, 2008. A total of 348 residents participated in bringing in a total of 6 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. In the second year of diverting construction material from the waste stream, in FY 2008 a total of 1,405 tons of wood waste, concrete, and bricks were diverted from the waste stream. Another new initiative is the **Business Initiative Program**. The RDF accepted 1,387 tons of recycled products from three other communities and a few recycling haulers. The

second year was more profitable than the first year. The gross revenue from the Business Initiative Program in FY 08 was \$133,216. The cost of doing business was \$34,976 for a net benefit of \$ \$98,240. The two year net benefit is \$131,875. 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 \$10,782 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*

<b>(A) Recyclables*</b>	<b>FY07</b>	<b>FY08</b>	<b>FY08 (Sales\$) **</b>
Paper	2,651	2,844	301,416
Cardboard	1,113	1,249	166,619
Glass: Clear	112	146	2,913
Brown	41	51	772
Green	190	199	N/A
Ferrous Metal	470	434	71,258
Non-Ferrous Metal	13	24	9,698
Aluminum Foil and Plates	3	3	1,084
Steel Cans	34	32	7,749
Refundable Containers	34	34	15,423
Plastics	148	231	39,092
Books	9	6	175
Wood Products	757	808	N/A
Stone/Brick/Concrete	293	618	N/A
Batteries (Automotive)	7	3	1,207
Waste Oil	12	13	74
Tires	20	18	N/A
Textiles (Used Clothing)	142	138	335
Paint	6	6	N/A
Hazardous Products	131	97	N/A
Miscellaneous	86	90	N/A
Crutches & Canes	120 units	160 units	N/A
Ink Jet Cartridges	463 units	1,189 units	552
Mobile Phones	352 units	548 units	29
Eye Glasses	2588 units	2000 units	N/A
<b>(A) Total Recyclables</b>	<b>6,272</b>	<b>7,044</b>	<b>\$ 618,396</b>
<b>Subtotal by source (estimated)</b>			
Residential	3,849	4,697	402,842
Municipal	39	42	3,602
Commercial	1,705	918	78,736
Business Initiatives	679	1,387	133,216

\*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 FY09

## RDF Comparative Statistics continued

All figures in tons unless otherwise noted

<b>(B) Solid Waste</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>
Residential	7,845	7,333	7,703
Municipal	427	327	294
Commercial	1,774	1,384	839
<b>(B) Total Solid Waste</b>	<b>10,046</b>	<b>9,044</b>	<b>8,836</b>

<b>(C) Yard Waste</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>
Residential	6,941	7,136	5,459
Municipal	1298	862	1372
Commercial	479	406	1819
<b>(C) Total Yard Waste</b>	<b>8,718</b>	<b>8,404</b>	<b>8,650</b>

<b>All Waste Materials</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>
<b>Total Weight (A+B+C)</b>	<b>23,537</b>	<b>23,720</b>	<b>24,320</b>

## Recycling Percentages

<b>Excluding Yardwaste</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>
Residential	31.6%	34.4%	37.9%
Municipal	7.9%	10.7%	12.5%
Commercial	38.6%	63.3%	73.3%
<b>(C) Total Excluding Yardwaste</b>	<b>32.2%</b>	<b>41.0%</b>	<b>44.4%</b>

<b>Including Yardwaste</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>
Residential	57.4%	60.0%	56.9%
Municipal	75.8%	73.4%	82.8%
Commercial	47.3%	66.8%	83.1%
<b>(C) Total including Yardwaste</b>	<b>57.3%</b>	<b>61.9%</b>	<b>64.0%</b>

## Per Capita Recycling

<b>Per Capita Recycling (tons) ***</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>
Residential	272	289	353
Municipal	3	3	3
Commercial	84	179	173
<b>Total Per Capita Recycling</b>	<b>359</b>	<b>471</b>	<b>529</b>

\*\*\* does not include yardwaste

### **Total Sales Revenue**

<b>Sales Revenue ****</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>
Recycling Sales and Commercial Fees *****	\$ 347,900	\$ 477,065	\$ 640,501
Commercial Trash Tipping Fees	\$ 226,477	\$ 180,377	\$ 170,629
Earth Product Sales and Commercial Fees	\$ 31,948	\$ 30,263	\$ 49,901
Commercial Snow Permits	\$ 2,800	\$ 950	\$ 16,650
<b>Total Sales Revenue</b>	<b>\$ 609,125</b>	<b>\$ 688,655</b>	<b>\$ 877,681</b>

\*\*\*\* \$759,761 was returned to the General Fund in FY08

\*\*\*\*\* Includes \$11,540 in residential appliance fees

### **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 FY08 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 FY08.

#### **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 FY08 the Division contracted with Woodard & Curran Engineers to install a variable speed drive on the backwash pump at the Moses Water Treatment Facility.

#### **Water Distribution:**

During FY08 2,300 feet of ten-, eight-, and six-inch diameter water mains on Lowell and Wynnewood were cleaned and cement lined.

#### 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 FY08 the Division continued monitoring observation wells in Rosemary Meadow and the Wellesley Avenue and Coughlin production wells as per our Management Action Plan. Throughout FY08 our monitoring showed no detection of plume contaminants.

#### Water Conservation:

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 FY08 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. A notice was sent to all postal patrons during the last week of August 2007 alerting all residents to reduce their outside water usage in order to avoid mandated water use restrictions, which are necessitated by the next higher status, namely the WARNING status. Fortunately usage did reduce following this notice and no mandatory water use restrictions were enacted.

Our water conservation program is encouraging prudent lawn irrigation practices.

**The peak day (i.e. Sept 3<sup>rd</sup>) water pumpage for FY08 was 5.4 million gallons. The peak month (i.e. August) pumpage was 132.4 million gallons. The total water pumped for FY08 was 1,106 million gallons. Of this total water pumped, 71 percent came from local wells and 29 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. In FY08 2,137 batteries were replaced, which is on pace with the projected 4-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 FY08 the Division contracted with North Atlantic Constructors of Rowley, MA for the rehabilitation of the Shore Road and the DPW / MLP Buildings Ejector Lift Stations. The rehabilitation design was completed utilizing a conversion to centrifugal pumping, which is consistent with our 2003 Master Plan, which was designed by Weston & Sampson Engineers of Peabody, MA. The Shore Road facility involved the conversion of the existing buried vault into the pump wet well chamber. The DPW / MLP Buildings facility required the construction of a new pump wet well chamber.

#### Sewer Collection System Rehabilitation:

In FY08 the Division contracted with National Water Main Company of Canton, MA to continue our annual program of joint testing and sealing and manhole sealing. During FY08 a total of 9,520 sewer pipe joints were tested and of that total 4,583 joints were sealed.

#### 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%)
2007	3.67 (1.19%)	7.80 (1.54%)

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 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. The peak monthly condition was the result of April 2007, which experienced extreme storm water conditions similar to the year 2003. Such conditions are a reminder that it is illegal for sump pumps to be connected to the household sanitary plumbing. The discharging of sump pumps into basement set tubs, or directly to the plumbing, may result in surcharging of the public sewers and may cause overflows from downgradient sewers into house basements or onto streets.

## **Water & Sewer Funds Audit Reports**

The certified public accounting firm of Powers and Sullivan, L.L.P has prepared the FY2008 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>FY06</u>	<u>FY07</u>	<u>FY08</u>
Number of Water Accounts	11,663	11,711	11,804
Water Pumped from Local Wells, mg	828.19	819.22	786.21
Water Pumped from MWRA, mg	293.66	225.34	319.90
Total Water Pumped, mg	1,121.79	1,044.56	1,106.11
Peak-to-Average Day Water Demand	1.67	1.81	1.79
Total Water Billed, mg	923.99	883.67	976.28
Unaccounted Water, %	17.6	15.4	11.7
New Meters Installed	349	289	189
Hydrants Replaced	15	12	8
Number of Sewer Accounts	8,133	8,160	8,156
Number of House Services Rodded	312	322	290
Feet of Sewer Main Rodded/Flushed	307,609	297,711	333,983