

DEPARTMENT OF PUBLIC SERVICES

The end of fiscal year 2009 brought the retirement of several long-time city employees from various division of the Public Services Department. To them I offer my personal thanks for the many years of service they gave the city. They represent some of the best employees we have.

The challenge facing us this coming year is to complete consolidation of city and school maintenance functions. We still believe the consolidation will be good for both entities and look forward to making the transition complete this year.

Below is an accounting of the various divisions of the department for the fiscal year 2009.

ENGINEERING DIVISION

Director of Engineering-Frank J. Killilea, Jr., P.E.
Assistant City Engineer-Eric Barber, P.E.

GENERAL

- Fiscal Year '09 saw the start of construction on the North Beverly Brook Drainage Improvements project. Approximately 2,400 feet of 48" reinforced concrete pipe was installed in Tozer Road. This 1,000 acre area in the middle of the City is the final section that needed drainage improvements. Also, design work continues on supplemental drainage improvements in the Chubbs Brook basin in Beverly Farms.

- The Draft Environmental Impact Report for the Brimbal Avenue Interchange Project was completed and reviewed by both the City and the Mass Highway Department. It will now be submitted to Massachusetts Environmental Protection Agency for a 12-month review period prior to initiating preliminary design.
- During Fiscal year '09 the engineering firm of Dewberry-Goodkind, Inc. of Boston undertook the preliminary design of the Reconstruction of Route 1A from the Memorial Bridge to the Memorial Middle School. A Public Meeting on the progress of this project, including the road reconfiguration at Gloucester Crossing, is planned for this Fall.
- Roads being paved under the FY09 Chapter 90 Procurement include Clifton Avenue, Tremont Street, Longfellow Street, and Whittier Street.
 - Note: Chapter 90 money is being used to fund the Engineering Services portion of the Route 1A Reconstruction project.

DAILY OPERATIONS OF THE DEPARTMENT

- **Geographic Information System**
 - This past year we completed an update of the City's Water System. The GIS database has been Quality Assurance/Quality Control by Water Department personnel and their corrections have been made to the "electronic" GIS database. Our GIS is now at a standard that reflects all sources of information-drawings and personnel knowledge.
 - In June 2009 we completed a "New Look to the GIS Web Site" with the assistance of a consultant, Applied Geographics. We have now made the web site available to the public. As a result an individual can create a "Tax Map" at their convenience. The new GIS site has many additional "layers" such as places of interest, recreational features including trails, contours, natural resources, ward & precinct including polling location and 1947, 2002 and 2008 aerial photography. We also have two levels of password protected sub sites. The first is available to City Personnel that allows creating abutter lists. The second sub site has utilities for Public Services and Engineering personnel. The public availability of the GIS Web Site should reduce the number of requests the Engineering Department receives for maps.
 - We had expected the US Environmental Protection Agency (EPA) to issue new requirements for MS4 (Stormwater Discharges from Small Municipal Separate Storm Sewer Systems) General Permit. The Permit was never issued and in April EPA advised we had to submit a 6th year report based on the permit issued in May 2003. A major new permit requirement that

has been discussed by EPA is outfall sampling. This would be a significant un-funded mandate.

- FEMA is developing new FIRM (Flood Insurance Rate Map) maps. The maps in effect today were created in 1986. The City has participated in the development of the new flood maps by supplying our 2-foot contour GIS data layer. Without this data, FEMA would have used MassGIS data that is 3-meter (9.9 foot) contour lines. By supporting our data the new FIRM maps are much more accurate. The new maps are in the “Comment Phase” for Essex County and it is expected they will be adopted June/July 2010. The new maps will significantly reduce the number of Beverly buildings in the “flood zones”; however, there will be some buildings that are currently not in a flood zone that will be in a flood zone when the new maps are adopted. It also appears that FEMA will issue a new Insurance Rate Schedule when the new maps are adopted. People currently with FEMA Insurance will be grandfathered, but new applicants will be subject to the new rate schedule.

- **Electronic Database**

- With the importance and usefulness of having quality data in our GIS system, FY09 has had major developments in a project that began in FY07. The Engineering Department has continued to use the Ricoh 2400 that was purchased last year to scan drawings and manage files that come into the office. Original estimates were around \$35,000.00 to outsource the work required to convert our most regularly accessed drawings to electronic formats. To date, we have spent approximately \$9500.00 on hired part-time help to perform the same services. In FY09 we scanned well over 7,000 plans and entered 5,000 records. Our estimates are that approximately 50% or greater of the work has been completed already. We anticipate the project being completed for less than \$20,000, having higher quality control and costing half the amount by performing the work in-house.

- **Contractor Licensing**

- Contractors wishing to dig within the City of Beverly are required to become licensed. Licensing of a digging contractor letters of reference, current insurance certificate documentation, and a \$150.00 fee.

Licenses Issued in FY09: 37 for \$5,550.00

- **Permits**

- *Water/Sewer/Digging*

A primary function of the Engineering Department is to issue permits related to utility construction. In FY09, there were 380 permits issued for a total dollar amount of \$38,000 (average: 31.6 per month or 7.3 per week). Inspections are made to ensure that the work performed was installed properly and all materials meet the City of Beverly standards. Sean Ciancarelli provided these inspections under the training of Eric Barber. For water main installation and fire supplies the department oversees high-pressure water tests to ensure that no leaks develop and that the system is properly disinfected. The office also oversees testing on sewer mains and drain lines, which require low-pressure air tests to determine that all connections were made properly. Vacuum testing on all newly installed manholes is required by the City of Beverly, which also needs to be inspected.

A big issue that has been addressed is in the way that sewer and water ties are submitted to the City. These ties are the only way to accurately locate sewer or water services entering a property. They are often an essential piece of information and are a very common source that needs to be readily available. At this point in time almost all of the tie cards that are owed to the City for various utility work are in hand and received on an almost real-time basis.

Permits Sold in FY 09:

Water: 58 for \$5,800.00 (average: 4.8 per month or 1.1 per week)

Sewer: 48 for \$4,800.00 (average: 4 per month or .92 per week)

Digging: 280 for \$28,000.00 (average: 23.3 per month or 5.8 per week)

○ *Escrow*

With each street opening, an assessment is made to determine how much of an Escrow bond the contractor is required to provide. This bond ensures that all work is done in compliance with City Standards. This bond is returned to the contractor upon proper completion of the job, which includes paving the utility trenches. Currently there are 23 incomplete trench openings that require finish paving dating back to 2004. The City currently holds approximately \$27,000 in bonds that should be kept if the contractors are not going to perform the work.

Escrow collected in FY09: \$26,000 and is to be refunded to contractors

● **Water Demand Charges**

For projects that require a new water service line or an upgrade from the current line, we charge a Water Demand Charge. This charge is assessed based on the size of the water line being installed into a building or property. It is

representative of the “stress” on our water distribution system. Fees range based on the size of the line.

Water Demand Charges collected in FY09: \$36,500

- **Standley St Compost Passes**

Residents wishing to dispose of yard waste can do so at the Standley Street Compost Facility. Passes are sold to homeowners who wish to have a landscaping company dispose of their yard waste. These homeowners can purchase passes for \$10.00 per trip. Five can be purchased at any given time.

Standley St. Contractor Passes sold in FY09: 79 for \$790.00
Standley St. Pickup Truck Passes issued in FY09: 73

- **CRT Pickup**

The City of Beverly provides CRT television and computer monitor curbside pickup services through its trash and recycling contractor (JRM). JRM picks up CRT’s on the third Saturday of the month for residents who pay a \$20.00 fee and are placed on the list. All money collected for CRT pickup is paid to JRM to provide this service.

CRT’s collected in FY09: 333 for \$6,660.00

- **Water Meter Sales**

The Engineering Department sells meters to residents and contractors who have new buildings being constructed. The City of Beverly standardized on two manufacturers. For the most part Badger meters are provided for residential installations, and Metron meters are provided for commercial/industrial applications. Meters vary in price depending on size and configuration.

Water Meters sold in FY09: Water Meters sold \$27,325

- **Maps and Plans**

One of the services that the Department provides for City residents is the sale of maps and plans. Plans range in price depending on what information is requested. In FY09 we significantly improved our ability to provide residents with 11”x17” GIS prints through the purchase of our new Ricoh 2400 copier/scanner/printer. We have had positive feedback about the quality of the information.

Maps/Plans sold in FY09: \$3,949.00

- **Fire Flow Tests**

When fire flow tests are required, the Engineering department charges \$250.00 for the test. It also holds a deposit of \$500.00 to ensure that copies of test results from the contractor performing the work are given to the City. Once the results are received the City returns the deposit.

Fire Flow tests performed in FY09: 13 for \$3,250.00

- **Taps**

Contractors who are installing water services to buildings have two options when making the connection to the water main. They can make the connection themselves, or they can pay a fee of \$250.00 to have our water department perform the work.

Tap Fees paid in FY09: 2 for \$500.00

- **Treated Groundwater Discharge To Sewer**

There are some properties that discharge treated groundwater to the City sewer system. All flows are metered, and billed under the sewer rate to compensate us for the cost of disposal to the South Essex Sewerage District (SESD).

Treated Groundwater Discharge paid in FY09: \$28,905.81

TRASH AND RECYCLING PROGRAM

This Department continues to administer the City's curbside refuse and recycling collection program. The City serves 13,081 residences and 315 businesses at 10,584 stops. The City has granted 119 Senior citizen discounts and 239 hardship waivers. There are approximately 50 vacancy credits citywide at any one time.

Fiscal 2009 saw continued changes in customer behavior during the year, which have long-term benefits for the City. In 2008 the City began offering 65 gallon wheeled carts for collecting recycled paper and paper products. These carts make the accumulation of recycled materials much easier for residents and replace more than three standard recycling bins. These carts are priced at \$55, but were offered at a discount of \$20 each. To date, 994 of these carts have been sold. 841 standard bins were sold at the price of \$5. People report that recycling is easier with the wheeled carts resulting in increased volume at households using them. These reports are anecdotal, but intuitively make sense. If cart users increase recycling presented by 25 pounds per collection period, the discount pays for itself in 20 collection periods.

We have been working with JRM to make these carts available for the recycling of commingled containers as well. Unfortunately, the optimal recycle truck has a 70/30%

split of paper to containers resulting in a hopper for containers too narrow for use of the carts. We are offering stickers to affix to standard refuse barrels dedicated for container recycling. This solution offers the consumer some relief for the easy accumulation of recycled containers but lacks the uniformity which the carts would provide.

For the fiscal year just completed, the trash collected for tipping at the incinerator dropped from 14,666 tons to 13,449 tons which represents a nearly 9% drop in tons tipped. At current tipping rates, this translates into a savings of \$95,400 for the fiscal year. This 9% decline in tipped volume is in addition to the 13% drop in tons collected the previous year and the 20% decline the year before. The total saved from avoided incineration costs in fiscal 09 would be \$241,000. This number would be even higher had not the disposal rate per ton risen each year.

Beverly has embarked upon a recycling program running counter to conventional thinking in municipal recycling collection. Many communities have begun to offer weekly recycling collection in an effort to increase recycling participation. Beverly would have to double the recycled tons collected to pay the \$175,000 cost of weekly collection. We estimate that, at best, a 30% increase would result from weekly collection. Instead, Beverly is making the accumulation of materials and delivery of those materials to the curb easier. Increases in recycled materials collected show that this approach is working.

However, there are challenges ahead. About 50% of households participate in the recycling program. Further, we are collecting about 30% of the fiber product that theoretically makes up the waste stream. This represents a cost to the City of \$158,000 for the incineration of recyclable paper and paper products not diverted from the waste stream. The City must continue to engage in public education and behavioral change programs to increase diversion rates for trash.

CEMETERY DIVISION

During the fiscal year 2009, the City sold 27 grave lots; 8 of these lots are limited to cremation interments. The City has created full interment lots in Central Cemetery using abandoned grass roadways. There are full interment lots available at Beverly Farms Cemetery made possible by regrading land toward the rear of the cemetery. North Beverly Cemetery has 23 double grave lots to sell and there is no room to create additional lots after these are sold. We would encourage the acquisition of land from Moraine Farm to add growth potential to this cemetery. We believe that maximizing the use of the existing cemeteries economizes maintenance costs and allows the accumulation of the "Sale of Lots Fund" to invest in improvements to the Cole Street Cemetery land, when that becomes necessary.

During fiscal year 2007, this department performed 183 interments. Of this number, 84 or 46%, were cremation burials. We have reason to believe that many are withholding interment of cremated remains and some of these will come to us later while others may be buried without our participation. Fourteen years ago, cremation interments were less than 10% of the City's interment business. This trend has implications for the operation

of City cemeteries as the revenue generated from cremation interments will not sustain our interment services contractor, who the City needs available for opening full interment graves. At the same time, demand for full interment cemetery lots is declining thereby making it possible to continue operation of only three active cemeteries.

“Baby Boomers” are becoming a significant part of the business and families are beginning to use cemetery lots purchased after the “at-need” requirement was lifted in 1997.

One aspect of the services the City provides is the burial of indigent citizens. During the just completed period, the City provided graves in 2 such cases, consistent with the seven-year average for this service. When space for this service has been exhausted at Central Cemetery, the plan is to create new “City Lots” at the Dodge’s Row Cemetery.

On May 1, 2009, the City severed its relationship with its former contractor and awarded the municipal contract for grave opening services to Cemetery Services Inc. of Lawrence. The transition has been seamless and the new vendor has proven very responsive to requests of this Department for timely installation of foundations and righting fallen and slanting memorial stones. Several years of backlogged requests were completed in the first two months of the new contract.

Cemetery fees have remained stable since 2006. The City’s new contract suggests that opening fees for full body burials should be increased by \$150-\$200 up to \$850-\$900. Services for cremating burial can remain as can fees for foundation installation. The price of cemetery lots should be reviewed as well to keep current with surrounding municipal cemeteries.

FORESTRY AND GROUNDS DIVISION

The ultimate goal of the Forestry and Grounds Department is to continue to enhance and preserve the quality of life for the community of Beverly. During these challenging economic times, the department desires to be able to continue to provide the best service and workmanship possible. It is our belief that the city should continue to fund the reconstruction of parks as we have in the past. There are a number of projects that could be constructed that would further enhance our already beautiful park system.

The construction of at least one synthetic field in the City should be the highest priority. It was disappointing to not be able to include at least one field in the High School project but we should entertain the possibility of private funding for such a field. Having one synthetic field would allow safer play for a wider variety of sports regardless of weather.

The Parks department has successfully maintained the public grounds at existing budget levels. Crews continue to cut and clean all parks and athletic fields on a scheduled basis. Each area benefits from the annual fertility program and where applicable, seeding, aeration and sodding are performed. An aggressive maintenance program ensures that the public grounds remain sustainable for years to come at a reduced cost to the City.

The goal of the Forestry department is to plant, protect and maintain all the public shade trees. Each employee in the department is certified and adheres to current standards. The department recognizes the importance of a stable and sustainable urban forest and strives to educate the public and preserve that valuable resource.

The Forestry staff is assigned to inspect and prune City trees daily. Maintenance to the trees is predominately in response to a resident request. These requests address individual site problems that include trimming, removal, and general information. Older trees are also routinely inspected and trimmed to ensure long-term health and safety of the trees. Hazard tree evaluations are also conducted on an ongoing basis. The underlying factor determining tree removal is the comparison between the benefits provided and the liability of the tree. All trees that are declared hazardous are promptly removed.

The Forestry department plants new trees each year during the spring and summer months. Over one hundred trees are planted year throughout the City. Most plantings are resident requests. My planting plan is to match individual tree species to the planting site. Planting the right tree in the right place will reduce future maintenance and removal costs while increasing the value and longevity of the tree.

The Arbor Day Foundation named Beverly Tree City USA for the eighth year. This recognition is to honor the city's commitment to tree care.

Parks and forestry personnel continue with ongoing work safety programs and attend various training and educational seminars which are required to maintain all certifications.

MAINTENANCE DIVISION

The Building and Maintenance Division is led by Mr. Michael Bouchard. Currently there are 3 employees tending to the various responsibilities of the division. These responsibilities include maintaining all street signs and traffic markings, guardrails, parks and playground equipment, as well as a variety of maintenance and repair tasks on the City's roughly 50 buildings.

The Division's day-to-day maintenance of the buildings helps identify the more significant capital needs like the replacement of roofs or the pointing of masonry. Attention to detail has always been a strong suit. That detail has led us to be able to keep buildings more comfortable with less energy, which is a very important goal for the City.

Some of the Maintenance division's accomplishments are listed below.

- Continued renovation at the Police Station
 - Removed asbestos from police locker room
 - Remodeled ladies locker room

- Made lighting repairs
- Continued renovation of Commissioner's office at Public Services
- Renovation work at Innocenti Park
- Boilers in all municipal buildings cleaned and brought to code for winter
- Updated fire extinguishers for inspection in municipal buildings
- Continued citywide sign work, line painting, guardrail work, fence and bench repairs, graffiti removal
- Removal of dead animals from City streets and cremation arrangements
- Repairs at all City playgrounds
- Remove paint and electronics from City yard
- Build handicap accessible bathroom at Lynch Park
- Winterize all City buildings

HIGHWAY DIVISION

Paul Ruggiero is the Foreman of the Highway Division. The division consists of eight employees that perform the basic municipal operations of paving, pothole repairs, street sweeping, beach cleaning, and trash collection (parks, beaches, and downtown.) In the winter months the department is responsible for sanding, salting, and snow removal of all City streets and parking lots as well as over 35 miles of sidewalk.

The Highway Division also operates and maintains the City's sewerage system and drainage system. Sidewalk repairs to asphalt and concrete sidewalks throughout the City are performed to eliminate trip hazards and make the City more accessible.

The Highway Division also supports the Forestry Division with stump removals and the Water Division with asphalt and concrete sidewalks repairs.

The Highway Division oversees a variety of outside contractors hired by the City. These duties mainly relate to paving pre-approved streets. Also involved in paving are traffic safety, setup, inspection, and disposal of all outdated structures.

The Highway Division also responds to resident requests such as sidewalk repairs, sewer plugs, catch basin cleaning, flooding and other emergency issues.

This division is small in comparison to the task at hand, but these eight men are hard working, efficient, and professional. They remain available to respond to emergencies 24 hours a day. We hope to improve performance by obtaining construction certifications

and other continuing education courses. Worker safety is always foremost in our daily tasks.

We feel we provide an excellent service to the City within our fiscal limits and will continue to do so in the future.

WATER DIVISION

Mr. Brad Bixbee retired as head of this division at the end of the fiscal year. He was joined by long time employees Dick Doucette and Rollie Beaulieu. Collectively they represent nearly a century of experience but more than that they were our friends and co-workers and they will be missed. Mr. Jim Turcotte has taken over as division Foreman overseeing the water operations. Currently there are six (6) water division employees that oversee the operation and maintenance of the roughly 160 miles of water main and some 11,400-service connections. Additionally, a three-person crew is responsible for the operation and maintenance of the main water pumping station and 30 other drainage and sewage pumping stations.

The yearly hydrant-flushing program is currently on schedule with 1/2 of Beverly having been completed. There are over 1200 hydrants that receive an extensive annual inspection that allows personnel to identify problems with the hydrant and take appropriate action on replacing or repairing.

The Department has built and maintains the irrigation supplies and bubblers in the City's 22 parks and ball fields along with the water systems within the cemeteries. This includes winterizing the parks and cemeteries and again in the spring energizing them for use.

FLEET MAINTENANCE DIVISION

Mr. Frank Alleruzzo is the Division foreman and an ASE Certified Master Mechanic. He has a compliment of four well-trained mechanics that perform maintenance on all equipment in the City except fire trucks and school buses. This requires keeping track of maintenance intervals on hundreds of pieces of equipment from the most basic jackhammer to the newest police cruisers. It is these employees that must fix and rebuild our fleet to keep the rest of the organization functioning. During the upcoming year we will be replacing some of our oldest equipment with some sorely needed new pieces thanks to a recent budget appropriation.

It cannot be said enough how difficult it is to be flexible enough to work on the newest computer controlled vehicle with multiplexed wiring one minute and welding a broken backhoe the next. There is no end to the repairs as even the newest equipment breaks down and the ever tightening environmental controls make the newer equipment much more costly and complex to repair.

It is difficult to quantify the tasks accomplished by this division in any meaningful way. Suffice it to say they keep us running with a massive fleet of varied equipment and that speaks volumes in and of itself.

A new maintenance facility will be one of the City's top goals in coming years. The existing building is too small and lacks basic safety features found in modern buildings. The building was built in the 1930's to maintain the equipment common at that time. Today's trucks are much bigger and we have many more of them.