

Department of Public Works

ADMINISTRATION

Description of Services:

DPW Administration staff plan, manage, coordinate, schedule and monitor the Department's activities; prepares budgets, monitors expenditures, develops bid specifications for DPW procurement and responds to citizens concerns and requests for service. They develop strategic plans in conjunction with DPW division supervisors and coordinate various activities with other Departments in support of the Town's needs. Administrative personnel also schedule work assignments, evaluate work performance, monitor attendance and other human resource activities.

ENGINEERING

Description of Services:

The Engineering Division is responsible for analysis and design, development of plans, specifications and estimates for a variety of projects, while managing and coordinating construction support for other DPW divisions. Infrastructure systems include: water and sewer utilities, storm water/drainage and transportation roadway. The Engineering Division works closely with other Town Departments to assist with private development planning and conservation review as well as traffic management. They provide technical support to Community Development and Town Counsel on numerous development undertakings. The department's Geographic Information System and the development and use of technology are advanced by engineering personnel for use by field staff and management of data/information. All water and sewer services as well as driveway installations and site modifications are inspected and approved onsite by the engineering staff. In addition, the Drain-Layers are approved and licensed by the Engineering Division.

The Engineering Division was consolidated into the DPW in FY10. Since that time they have assumed a broader scope of responsibilities, management and oversight of work that had been traditionally completed by the Highway Division, and third-party consultants. Additional consolidation of services was approved in the FY16 with the assignment of project management and inspection responsibilities for private developments approved by the Planning Board. The effort has insured compliance to Town construction standards and better coordination of various interests and stakeholders, while improving documentation of the as-built infrastructure and project closeout. In addition, DPW permitting and permit compliance are handled by the Engineering Division.

HIGHWAY

Description of Services:

The Highway Division provides for the maintenance and safe use of all public streets and sidewalks. The Highway personnel are responsible for the condition of approximately (314) lane miles of road and associated traffic control street markings, and more than 2500 traffic and street signs. Staff in the Highway Division patch roads, install drainage, gutter berm and driveway aprons, repair potholes, resurface, sweep, sand, and plow the streets, maintain approximately 20 miles of sidewalks, maintain and repair parking and traffic signs and posts, oversee contracts for the painting of street lines and crosswalks. They are also responsible for the cleaning and repair of the thousands of catch basins and drain manholes on Town roads and maintaining the underlying drain system. Work by developers, contractors and homeowners are inspected by the Highway/Engineering staff to ensure proper construction between the public and private boundary.

Due to reductions of Highway personnel in prior budget years, Forestry Division staff were consolidated into one Highway/Forestry operating Division in 2009. As a result of the budget reductions, roads, drainage systems and roadside vegetation have not been fully maintained, causing deterioration and failure with the elimination of services. In addition, staff reductions led to more contractual outsourcing, in both divisions. Although recent budget increases to both contractual services and in-house staffing have been funded, a continued deficit in staffing will limit response and services provided by this DPW division.

In the FY22 budget submission, supplemental requests have not been included in consideration of the contractual increases needed to meet agreed to obligations with subcontractors.

FORESTRY

Description of Services:

The Forestry Division removes and maintains an undetermined number of trees on town streets, in parks and on Town-owned open space lands, and cuts back numerous miles of roadside scrub/brush along public ways. In addition, the division works with the Health Department to maintain open waterways that become blocked by accumulated debris and animal activity. The objectives of the tree maintenance program are to identify and reduce hazardous conditions that threaten public and private property and to resolve requests for service and emergencies in a timely fashion. At one time

maintaining the health of the urban forest through planning, proper maintenance and planting was a goal of the program. However, staff limitations and restricted operating budgets have limited a continued effort to revitalize tree lined streets. The FY22 budget will continue to address prior budget cycle reductions in staffing by providing contractual service to address identified hazards and service requests. A supplemental request has been included in consideration of the increase in police details to maintain daily and emergency traffic control while addressing the public safety hazard posed by trees.

FLEET

Description of Services:

The Fleet division is responsible for service, repairs and supplies to fuel and maintain (79) pieces of DPW/Utility rolling-stock, (47) Police, (12) Fire Department vehicles and (6) Park Department vehicles. Another (34) mechanical attachments and trailered pieces of equipment, not including plows are maintained based on seasonal needs. In FY14 the Fleet mechanics began maintaining small service vehicles of the Fire and Park Departments; all parts, materials and third-party service is included in the Fleet Div. budget. Also, as part of the FY14 funding for Police, Fire and Park fuels were consolidated with in the Fleet Div. budget. In FY18 fuel for the Senior Center vans was added. Fuel, parts and supplies account for the majority of Road Machinery expenses.

The Fleet Division reviews Public Works equipment every year with division supervisors and makes recommendations for replacement within the 5-year Capital Improvement Program (CIP) budget. Enterprise fund supported vehicles and equipment have been replaced on a regular basis consistent with the replacement schedule. In recent year's equipment for traditional DPW services has been replaced which has added to improve productivity; at the same time refurbishment of existing vehicles/equipment have extended life cycles of the fleet. New equipment purchases have been identified and will be submitted as a separate request within the CIP Budget.

SNOW AND ICE OPERATIONS

Description of Services:

The Highway/Forestry Division is responsible for the snow and ice program and is assisted by other DPW divisions during full operations to remove snow from Town streets, sidewalks and parking lots. Snow operations include, salting, sanding and plowing. During the FY20 snow season the department implemented a liquid brine pretreatment program that can be applied prior to the regular salting applications. Post-storm operations may include scraping, pushing back snow-banks and hauling and removing snow piles. The Highway/Forestry Division Supervisor oversees the entire snow operation including private contractors performing snow removal activities. Approximately 75 % of snow removal effort is performed by private contractors. When snow removal operations occur outside of regular work time, DPW employees are paid on an overtime basis; contractors are paid on an hourly flat rate.

Tewksbury averages approximately 65 inches of snow per year. It takes approximately 6 hours to clear the Town's streets after the snow has stopped on an average snowfall of 6" inches. Sidewalk plowing will be prioritized during the 2019-2020 snow season. The Town has purchased (3) pieces of equipment for the removal of snow from sidewalks. Post-storm activities address slippery roads, drifting, sidewalk cleanup, pushing back corners for visibility and addressing requests.

WATER UTILITY

Description of Services:

The Town of Tewksbury's water system includes a water treatment plant, which has a capacity to treat up to (7) million gallons of water a day. This (6) acre facility is located on the banks of the Merrimack River which is also the source of raw water for the Town. There are two (2) pressure boosting station(s) and three storage tanks with a total storage capacity of (7) million gallons. The distribution system also contains thousands of valve gates, hydrants and over 150 miles of water mains with over 10,000 water service lines used to convey potable water to residential and commercial facilities. The Town's staff is responsible for installing, repairing and maintaining all components of the water system and for meeting all of DEP and EPA regulations concerning water and environmental quality. Residential customers are billed Tri-annually and larger commercial accounts on a quarterly basis. The metered water consumption is also used to determine a customer's sewer charge.

Operation and maintenance activities of the water system are delegated between the Water Treatment staff and the Distribution staff. The Water Treatment staff oversees the provision of quality water, repair water pumping equipment, maintains system hydraulics, performs backflow inspections and testing, handles consumer complaints and water tests at regular intervals for in-process monitoring and DEP requirements. Testing samples are collected from 12 designated locations and are tested weekly for Total Coliform and E-coli bacteria in compliance with the strict Drinking Water Regulations of Massachusetts and the Safe Drinking Water Act. Additional testing is performed on a schedule designated by DEP on daily, weekly, monthly and quarterly basis. Distribution staff provide customer service to the

system customers throughout town, repair and replace meters, maintain and repair the entire water system piping network with all associated valve and shut-offs, including approximately 2500 fire hydrants. Distribution staff work to assist with sewer collection system maintenance.

SEWER UTILITY

Description of Services:

The Sewer Collection staff maintains the entire sewer system network, and insures the safe and proper discharge of the Town's wastewater. The system's build-out was completed at the end of 2009 with final paving completed in the spring of 2010. The sewer system network currently has (47) pump stations and 158 miles of gravity and 15 miles of forced mains. Upon completion of the system, which has more than tripled in size, a significant work load has been added to current staff levels. Since FY2008 the percent increase in flow to Lowell's treatment plant has risen by 53%. Tewksbury's waste water is conveyed to the Lowell Treatment facility by two (2) interceptors.

Pumping stations are inspected twice weekly and maintained on a regular basis. Sewer personnel flush mains to reduce the number of backups and respond to assist residents when a backup occurs; they identify problems in the system and make repairs as needed. Collection system testing and investigations are also necessary to remove excessive amounts of inflow and infiltration (I and D) from entering the system. To minimize contamination of heavy metals and other harmful compounds, staff work with Lowell's Wastewater Utility staff to provide a pretreatment program with industrial users to expel industrial wastes before entering the Town's system. Pretreatment inspections are conducted by Lowell on a biannual basis.

STORMWATER UTILITY

Description of Services:

The Stormwater Enterprise was established to fund operation and maintenance of the Town's stormwater infrastructure as well as perform activities to ensure compliance with the EPA mandated Small Municipal Separate Storm Sewer System (MS4). In 2019, Special Town Meeting approved a stormwater fee. The fee is based on costs included in a separate Stormwater Budget that was first approved as part of the FY2021 budget cycle. The 2016 Massachusetts Small MS4 General Permit took effect in July of 2018. The 2016 General Permit increases the requirements for the six minimum control measures as compared to the 2004 permit and put in place new requirements for managing stormwater. The monitoring and sampling requirements in the new permit are significantly more involved than in the 2004 permit. The Engineering Division has been performing the new requirements including outfall mapping and screening, public education and outreach, and increased maintenance activities such as detention basin rehabilitation, street sweeping and catch basin cleaning. The Stormwater Enterprise also funds the cleaning and inspection of drain manholes and drainage pipe. The Town's stormwater infrastructure includes over 3,000 catch basins, more than 1,000 drain manholes, over 15 miles of drainage pipe, more than 200 culverts, and 48 stormwater detention basins.

Department of Public Works

PROPOSED FISCAL YEAR 2022 PROPOSED BUDGET

The Department of Public Works FY22 budget request supported by the General Fund presents a total increase of 1.4% or \$51,639 over FY21, not including Supplemental requests. The increase is prior to targeted allocations provided by the Water and Sewer Enterprise Fund(s), which support enterprise related programs. The FY22 salary budgets have increased by 2.59%, which includes adjustments for step in grade, longevity and retirement benefits. Salary projections do not include a cost of living adjustment, which has yet to be negotiated. The FY22 Salary budgets are based on hourly rates for a 52.2 week/year calculation. In addition, the operating budget has been reduced by -1.31% while providing a level-service commitment prior to the addition of Supplemental Budget Requests.

The two Water Enterprise budgets, Distribution and Treatment collectively, have decreased from the FY21 appropriation by a total of -0.54% or \$17,739. The decrease is due to Water Treatment Plant expenses. Increases in salary are due to contractual step increases, longevity and retirement benefits.

The FY22 Sewer budget has increased to account for a projection in Lowell sewer charges. The total requested increase is \$107,255 or 4.87% over FY21. The operating expense increase is largely based on the Lowell's sewer charges that have been estimated to increase by \$63,000 or 4.7%. However, a more accurate estimate is expected as Tewksbury's budget process progresses and more data is provided.

No funding to support Capital Outlay has been included in any of the divisional operating budgets. Project related funding and equipment requests will be submitted as part of the comprehensive 5-year Capital Budget Plan.

The two top priorities of the Department within the FY22 budget process are to increase staffing and Police Detail funding within the Highway Division and aptly fund the Fleet Division, whose inventory has grown in age and size. Supplemental requests have been made to support each effort. In addition, the Department continues its pursuit to develop the use of technology for field-use, strategic planning and institutional documentation/record keeping.

Staffing levels within the Highway Division cannot meet the community's demand for service and the necessities of infrastructure maintenance. Right-sizing the division's staffing should approach (14) to adequately address existing infrastructure and newer, more restrictive regulations. Currently there are (9) staff members assign to the highway work.

Subsequent to the Highway Division's restructuring and the addition of two staff (FY17), the division has increased production and expanded the Highway's scope of services, specifically in the areas of road and catch-basin repairs. Although these changes fall short of meeting planned program goals and addressing request demands, they have challenged historic budget appropriations designed to meet past production levels that now is ill-equipped to support the need for Police Details, purchase of asphalt and drainage supplies. However drain supplies shall be included for purchase with additional funds provided within the Stormwater fee.

The second priority is meeting the growing need in the Fleet Division to sufficiently fund operations that continue to see an increase to the number, complexity and age of vehicles and equipment. These increases correlate to expanded use of funds for outside vendor repairs and the volume and expense of in-house repair parts.

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PROPOSED FISCAL YEAR 2022 Supplemental Requests and Budget Priorities

Supplements – Incremental costs associated with improved or new services above a level service funding; may or may not be associated with Budget Priorities. Each request is outlined on budget line-item sheet

- Administration:
 - Computers (5429) –\$4,000.00; Replacement of (4) desktop computers and (2) screens. Four computers were identified in the DPW’s replacement schedule, which is funded through Information Technology Dept.
- Engineering
 - Professional Services(5310) - \$4000.00; Additional survey services to perform ROW surveys associated with safety and DPW projects
- Highway:
 - Regular Salaries (5111) – Staffing; Adjust the current MEO position to a HMEO (not shown in budget submittal); Grade 2 at step 4 to Grade 3 at step 1; Total annual increase \$2,825.00.
- Forestry:
 - All Other Supplies and Services (5423) - \$5000.00; Police Details for in-house staff and contractual tree removal services
 - Leases and Contracts (5270) -\$20,000.00 Increased use of private tree companies to address dangerous operations and hazardous trees.
- Fleet:
 - Equipment Maintenance (5245) - \$10,000.00; Expenses (parts and service) for vehicle repair and maintenance
- Sewer:
 - All Other Supplies and Services (5423) - \$5,000.00 for additional purchase of enzymes to breakdown fats, oils and grease (FOG) in pump station wet wells.

Budget Priorities:

- Staffing- Highway Division
 - the backlog of work (Maintenance and Repairs) results in reactionary daily planning and response; adds to the prolonged wait time residents experience and allows the degradation of the infrastructure to worsen.
 - By any measure – compared to other towns (Size and Composition) the number of in-house staff does not meet the demand of resident requests and system needs; over time the size and composition of the infrastructure has changed with new requirements from regulatory agencies
 - Town infrastructure has expanded and elements repaired w/short-term fixes are failing at an increasing rate and not addressed w/a suitable Capital plan/schedule
 - Resident and consumer expectations have changed
 - The Town doesn’t invest in road resurface/reconstruction; uses Chapter90 for all needs (Planning, Design and Construction of roads and storm-water systems); resulting in diminished road surface quality and dysfunctional storm-water system
 - Regulatory environment has become more restrictive, environmental and engineering standards have changed, placing more demands on existing resources (Traffic Controls/storm-water/materials management
- In compliance with the EPA’s sewer discharge permit the Town is required to implement a Collection System Operations and Maintenance (O&M) Plan that is currently being developed by Greenman – Peterdsen Assoc. The full program costs need to be determined, however establishing an asset management system for Pump stations and additional degreaser are important elements to an O&M plan, which have been included in the FY22 budget.

- Within the Water Treatment budget two priorities consist of replacement of the sludge sprocket drives so uninterrupted processing of sludge will not hamper continuous water treatment. The second priority is applying for and receiving from DEP a Beneficial Use Plan (BUD) to provide options for sludge disposal, which may provide potential savings.