

Enterprise Funds

Section 8



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Solid Waste Enterprise Fund Statement

On January 1, 2003 the Town began a fee-based solid waste program commonly referred to as “Pay-As-You-Throw” (PAYT). The PAYT program is overseen by the Town Engineer and requires residents to use Town of Northborough designated trash bags in order to have their trash and recycling collected at curbside by the Town’s contractor. The PAYT program is operated as an enterprise fund intended to generate fee revenue to cover solid waste and recycling collection and disposal costs previously provided within the tax base.

An enterprise fund, authorized by MGL Ch. 44 §53F½, is a separate accounting and financial reporting mechanism for municipal services for which a fee is charged in exchange for goods or services. It allows a community to demonstrate to the public the portion of total costs of a service that is recovered through user charges and the portion that is subsidized by the tax levy, if any. With an enterprise fund, all costs of service delivery—direct, indirect, and capital costs—are identified. This allows the community the option to recover total service costs through user fees. Enterprise accounting also enables communities to reserve as unrestricted the "surplus" or net assets generated by the operation of the enterprise rather than closing it out to the General Fund at year-end. Services that may be treated as enterprises include, but are not limited to, solid waste, water and sewer services.

Significant FY2020 Budget Changes or Initiatives

Recycling markets throughout the United States are going through a difficult and complicated transition. For many years China had been the primary market for our country’s recyclable materials. They offered the unique benefit of available shipping containers here in the United States that needed to go back to China, which had been loaded with recyclable materials. In early 2018 China revised their specifications for acceptance of recyclable materials to an unachievably low contamination standard, which eliminated the option of exporting these commodities to China. This has resulted in the need for a fast and drastic change to market for recyclable materials here in the United States.

The impact to central Massachusetts is similar to that of the rest of our nation. In years past, the value of recyclable materials would offset the cost of collecting and sorting them, which is no longer the case. As an example, certain materials which are heavy and costly to process for recycling, such as glass, have no market value, while others have very limited value due to an overabundance of availability. It can be summarized simply that there is far too much supply with very little demand.

Market instability is projected to continue until new material recovery facilities can be brought on-line here in the United States and in emerging countries around the world. The cost of this transition unfortunately is being borne by communities such as ours. MassDEP regulates that recyclable materials may not enter the solid waste stream, therefore collection and processing is mandated. As of the issuance of this budget report the cost per ton to process recyclable materials exceeds the cost to dispose of solid waste which results in the significant increase to this enterprise fund’s operating budget.



In accordance with the current trends in the recycling industry around the world, the Town is anticipating a significant increase from the current collection contract costs. The current collection contract with Republic Services, which has increased a very modest 4% in the last eight years, is set to expire at the end of this fiscal year and in order to get the best possible pricing going forward, the Town has issued an Invitation for Bids (IFB) for a new collection contract. The current trends in the recycling industry require the Town to conservatively estimate a 10% increase in collection costs for solid waste and recycling. The overall Solid Waste budget is estimated to increase by 15% as the proposed budget also includes a new cost for the disposal of the recyclable materials if necessary.

The FY2020 fee revenues are projected to be \$488,000 and the FY2020 expenses are estimated at \$933,959 leaving a projected general fund subsidy of \$417,160 with a transfer from the Solid Waste Fund Free Cash of \$28,799. In FY2020, the appropriation will again contain a \$10,000 Contingency Reserve account within the Solid Waste Fund to ensure adequate funding for the potential of an unforeseen event in the coming year.

As a result of the fees projected to be collected and the FY2020 expenses of \$933,959, a General Fund subsidy of \$417,160 is recommended in order to balance the Enterprise Fund. Following is a detailed explanation regarding projected revenues, overhead costs, disposal costs, projected tonnage and collection costs.

PAYT Revenues and Overhead Costs:

The Town continues to offer two sizes of bags and the bag fee was last revised in January of 2007 to better cover costs associated with the program and remains set at \$3.00/large bag and \$1.50/small bag. Additional fees were also created to help reduce the shortfall between revenues and expenditures. A fee of \$10 per box was instituted for the disposal of hazardous waste at the annual Household Hazardous Waste Day event in September of 2005. In addition, a sticker fee of \$10 per item for the disposal of large/bulky items set out at the curb was instituted in March of 2006.

As can be seen in the Trash and Recycling Comparison Chart at the end of this section trash and recycling disposal tonnage has been fairly constant for the last several years. Consistent trash tonnage and consistent bag prices have resulted in a stable revenue stream of \$488,000 each of the last few years.

During FY2019, the Town received \$5,400 as part of the Department of Environmental Protection's Recycling Dividends Fund program which provides payments to municipalities that have implemented specific programs and policies proven to maximize reuse, recycling and waste reduction. This money will be used to offset the cost of purchasing recycling bins and to offset the cost of producing and mailing the recycling calendar to each household in June. Due to the possibility of future state budget cuts, the Solid Waste budget also includes \$5,000 to cover these costs in FY2020.

In an effort to minimize additional staff workload the Town now works W.B. Mason to warehouse and distribute trash bags and bulk item labels to the authorized retailers at a cost of \$.02 per bag or label as the previous vendor Niman Paper was bought out by W. B. Mason last year. The total projected FY2019 overhead costs for the Pay-As-You-Throw program (purchase of bags, stickers, labels and their distribution) is estimated at \$50,000.



The Solid Waste budget also includes the cost of removing and disposing of the yard waste material (brush, leaves and grass) residents dispose of at the Highway Garage. The State Department of Environmental Protection banned yard waste, which includes grass and leaves, from the list of acceptable items that can be disposed of in landfills and incinerators/resource recovery facilities in 1991. The total cost for disposal of all yard waste is estimated to be \$70,000 for FY2020.

Disposal Costs and Projected Tip Fee:

In accordance with the Waste Disposal Agreement with Wheelabrator Millbury, Inc. as revised in 2014 the tip fee is to be adjusted each year on July 1st based upon the amount of change in the Consumer Price Index (CPI) for urban wage earners and clerical workers-Northeast Urban beginning on July 1, 2017. As outlined in the agreement the current tip fee is \$68.18/ton and based upon the most recent information from the Bureau of Labor and Statistics and the formula in the agreement, the tip fee for FY2020 has been estimated at \$70.00/ton, which will apply to the amount of trash disposed of between 7/1/19 and 6/30/20.

Projected Tonnage for FY2020:

Actual tonnage for the last 12 months (calendar year 2018) was 1,919 tons, which reflects a 1.9% decrease from the previous 12 months. Based on the number of new building permits for single family homes (11) during the last 12 months, the growth rate was 0.34%. The projected tonnage for FY2020 is approximately 1889 tons ($1,919 \times 0.981 \times 1.0034$). Therefore, using a conservative estimate of 2,100 tons of solid waste to be disposed of results in an FY2020 budget of \$147,000 based upon the projected tipping fee of \$70.00/ton.

Collection Costs:

As previously stated, an IFB has been issued but the bids had not been received at the time the budget was prepared. The proposed budget represents a 10% increase in both trash and recycling collection and a new cost for the disposal of the recyclable materials with an estimated cost of \$96,000. These estimated costs result in a 15% increase to the overall Solid Waste budget. The IFB, which traditionally required the hauler to assume the risk associated with the cost of marketing the recyclable materials also included an alternate bid whereby the Town would be responsible for paying the costs associated with the marketing of the recyclable materials in order to eliminate any mark up the haulers might add to their proposals.

Section 8-4

Solid Waste Enterprise Fund



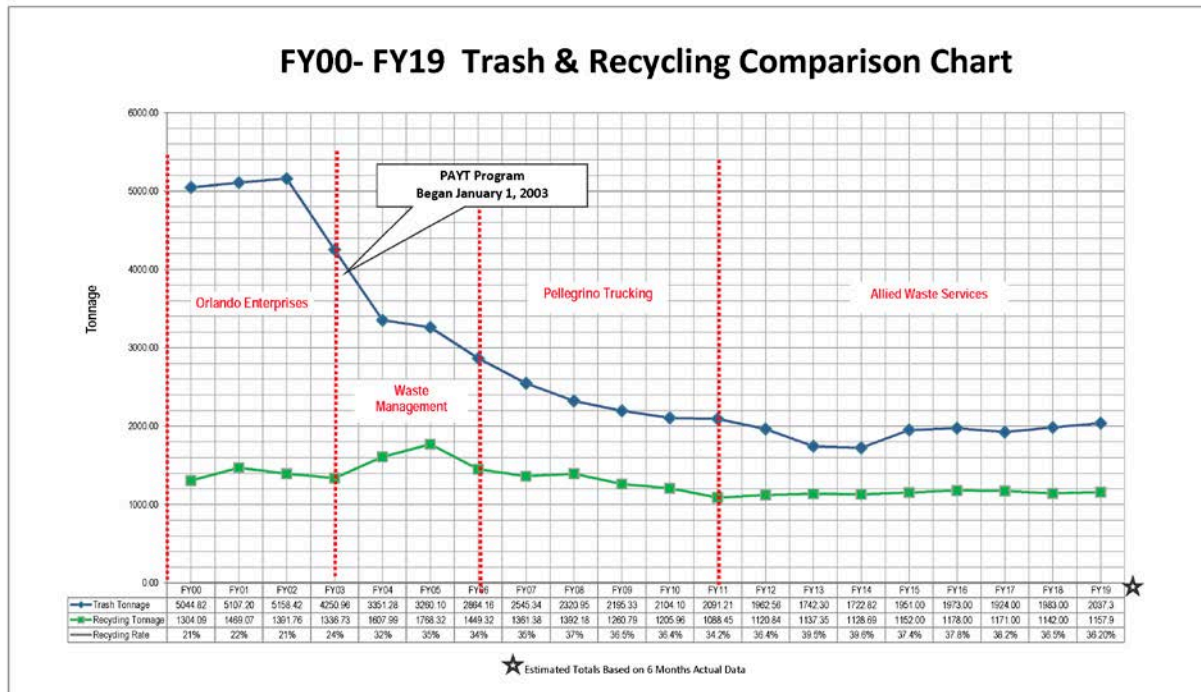
		FY2016	FY2017	FY2018	FY2019	FY2019	FY2020
		ACTUAL	ACTUAL	ACTUAL	BUDGETED	6 MONTHS	PROPOSED
SOLID WASTE ENTERPRISE FUND							
Expenses	Services						
52810	Unclassified	103,018	143,776	127,467	162,350	3,362	137,350
52910	Collection	475,000	476,538	481,955	494,190	247,095	543,609
57810	Disposal	126,547	127,069	129,675	145,299	58,350	243,000
59810	Extra Ordinary & Unforeseen Exp.	0	0	10,000	10,000	0	10,000
	SUBTOTAL	704,564	747,383	739,097	811,839	308,807	933,959
TOTAL:	SOLID WASTE	704,564	747,383	739,097	811,839	308,807	933,959

Additional Solid Waste Budget Detail

Unclassified :		
Newsletter, training, bins and misc. supplies:		\$5,000
Disposal of illegal dumping:		\$2,000
Household Hazardous Waste Day:		\$10,000
Pay-As-You-Throw costs:		\$50,000
Disposal of Yard Waste		\$70,000
SWANA Membership		\$225
SWANA Meetings		<u>\$125</u>
	Sub-total	\$137,350
Solid Waste & Recycling Collection :		
Trash Collection:		\$303,277
Recycling Collection:		<u>\$240,332</u>
	Sub-total	\$543,609
Solid Waste & Recycling Disposal:		
7/1/19 - 6/30/20: 2,100 tons x \$70.00/ton		\$147,000
7/1/19 - 6/30/20: 1,200 tons x \$80.00/ton		<u>\$96,000</u>
	Sub-total	\$243,000
Contingency Reserve		<u>\$ 10,000</u>
	Sub-total	\$ 10,000
	Grand Total	\$933,959



Waste & Recycling Trends from FY2000 to FY2019



Since its inception on January 1, 2003 the PAYT program has provided significant incentive to participants to reduce waste and increase recycling. Trash went from a high of 5,158 tons in FY2002 steadily downward to 1,722 tons in FY2014 and has only recently started to increase slightly. In addition, recycling rates have risen from 21% in FY2002 to approximately 39% in FY2014 and are holding steady. The difference between the 5,158 tons of trash in FY 2002 and the 2,100 tons of trash projected to be disposed in FY2020 is 3,058. In FY2020 that difference, multiplied by the projected disposal rate of \$70.00/ton, represents approximately \$217,118 in cost avoidance. This cost avoidance will continue to increase as disposal costs continue to rise in the future.



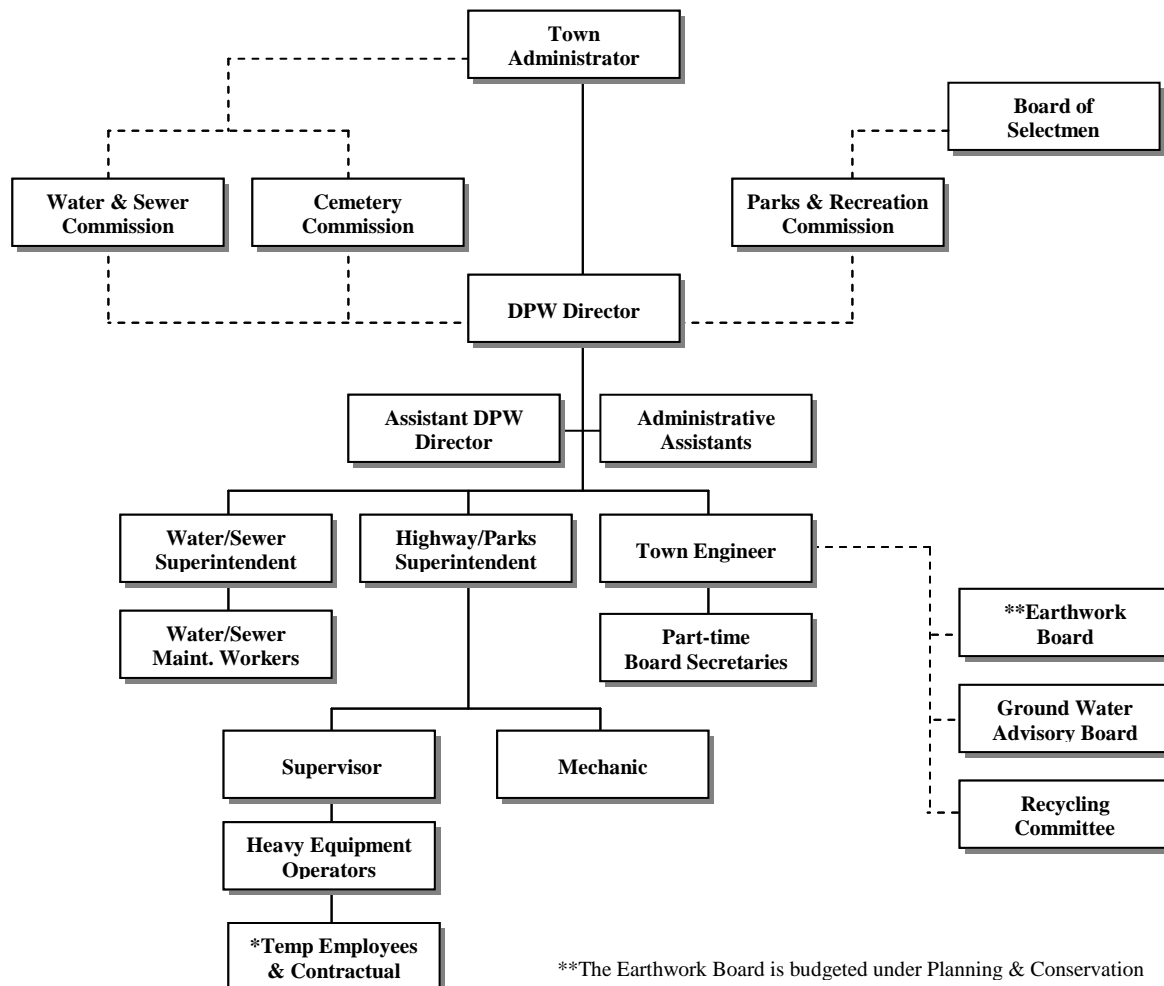
Water & Sewer Enterprise Funds

The Water and Sewer Divisions operate and maintain the Town's public water and sewer systems and related facilities. The Water and Sewer Divisions are operated as enterprise funds. Briefly, an enterprise fund as authorized under MGL Ch. 44 §53F½ is a separate accounting and financial reporting mechanism for municipal services for which a fee is charged in exchange for goods or services. It allows a community to demonstrate to the public the portion of total costs of a service that is recovered through user charges and the portion that is subsidized by the tax levy, if any. With an enterprise fund, all costs of service delivery—direct, indirect, and capital costs—are identified. This allows the community to recover total service costs through user fees if it chooses. For purposes of providing a departmental overview, personnel summary and goals/objectives, the Water & Sewer Divisions are included within Department of Public Works (DPW) Section 4 of the budget. The actual line item budgets associated with the Water and Sewer enterprise funds are contained here in Section 8 of this budget document.

Water & Sewer Commission

In addition to the DPW staff, the Water & Sewer Commission provides advisory oversight to the enterprise funds. The Water & Sewer Commission consists of three members appointed by the Town Administrator for three-year terms. The Commission is responsible for the development of policies, fees, rules and regulations pertaining to the care, superintendence, development and management of the Town's water supply and facilities and the Town's sewerage system. The DPW Director serves as the staff liaison to the Water & Sewer Commission.

DPW Organizational Chart



**The Earthwork Board is budgeted under Planning & Conservation



Background on the Northborough Water System

Northborough's Water System was first authorized by the State Legislature in 1882. A small portion of Town was originally served from the Northborough Reservoir located in Shrewsbury and Boylston before it was taken out of service in 1955. The connection to what is now called the Massachusetts Water Resources Authority (MWRA)¹ was initiated in 1954. The Town's four wells came online later. The Brigham Street well was brought online in 1956; the Lyman Street well was brought online in 1964; the Crawford Street well was brought online in 1969; and the Howard Street well was brought online in 1994.

In the past, the Town operated its own wells and supplemented production from the wells with water purchased from the MWRA. The MWRA water was originally provided directly from the Wachusett Aqueduct. When the Wachusett Aqueduct was shut down for repair in 2000, the water provided by the MWRA to the Town came through a connection in Bartlett Street. This is connected to the new MWRA Carroll Water Treatment facility in Marlborough.

From 2000 to 2009, all of the Town's water was being purchased from the MWRA because the well water was chemically incompatible with the water being provided by the MWRA. The Town well water has a pH of 6.5, and the new MWRA water source has a pH of 9. The higher pH in the MWRA water causes the Town's well water to drop the naturally occurring iron and manganese out of solution and turn the water red.

To address requirements of the Safe Drinking Water Act and to make the Town's water compatible, treatment alternatives were evaluated. The Town's consultant designed a new chemical addition facility at the Lyman Street well which the Town subsequently built. The Lyman Street well was reactivated in 2009 and produced approximately 225,000 gallons per day of the necessary 1 million gallons per day of average daily water usage in Northborough. Unfortunately, in June 2011, routine testing of the Lyman Street well indicated the presence of bacteria and the well was taken offline.

The Town then contracted with an engineering consultant to evaluate the Town's long-term water supply and distribution needs. The evaluation used historical population data and regional studies to project future water system demands for a 20-year period. Raw and finished water quality data will be reviewed to determine required improvements for treatment facilities to comply with current and future drinking water standards. The local well supplies were then contrasted with MWRA interconnections and a cost-benefit analysis performed to see if the Town should:

- Utilize the Town's existing wells (and possibly additional subsurface supplies through exploration) with added treatment facilities to meet the water consumption demands,
- Utilize the Town's existing wells along with MWRA interconnection for summer peak demands, or
- Utilize MWRA interconnection for all water supply needs.

¹ The MWRA is a public authority established under Chapter 372 of the Acts of 1984. The MWRA is an independent authority that provides wholesale water and sewer services to its customer communities and funds its operations primarily through user assessments and charges.

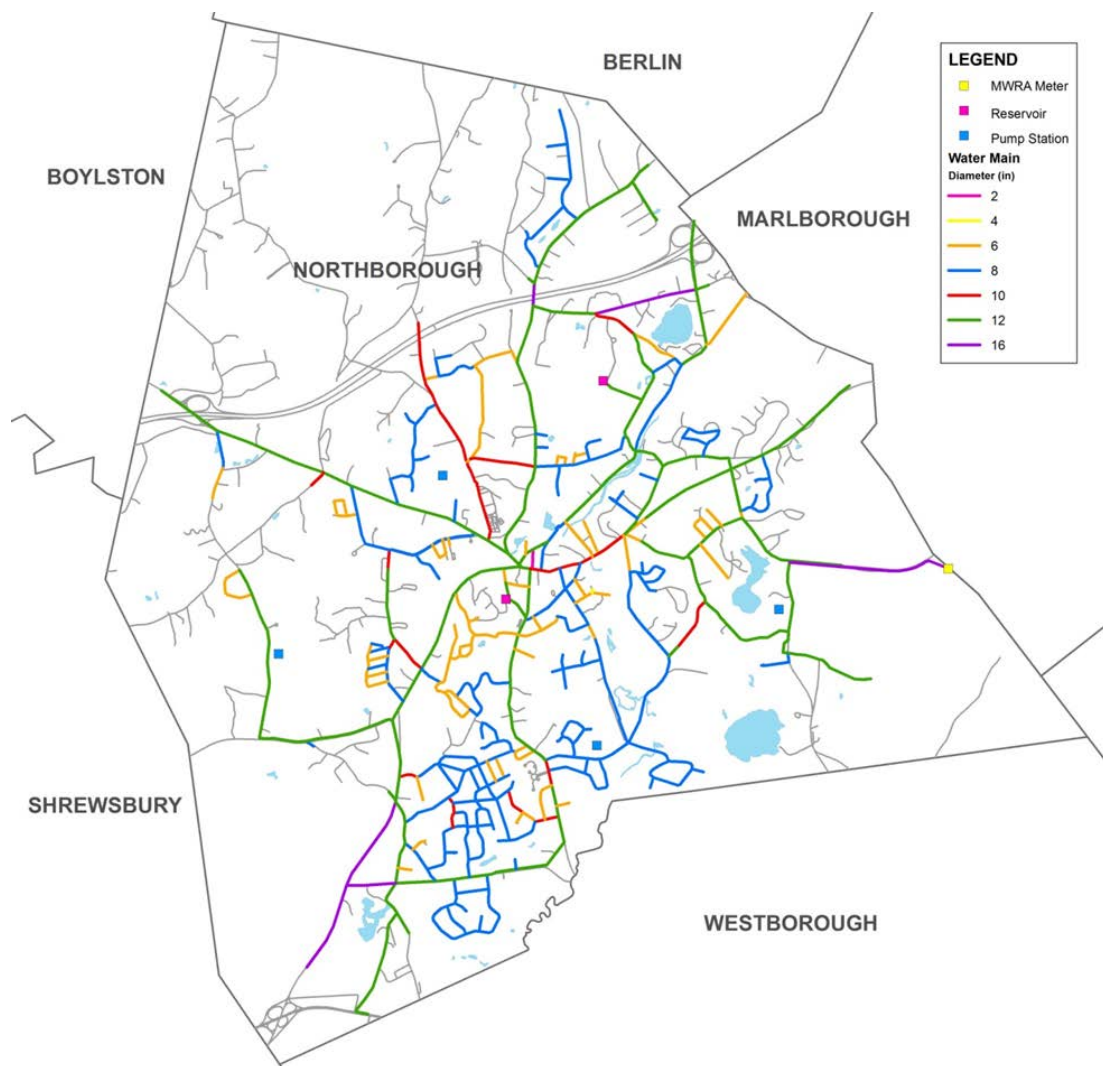


In order to fully determine which of the three options outlined above would be the best option for the Town, a water system master plan was prepared. The master plan focused on the entire potable water system and its ability to provide the Town with the most cost-effective method of delivering safe, clean potable water to the residents. The study included reviewing sustainable sources of water supply as well as evaluating the current distribution model, calibrating the model and calculating storage and system operating pressures.

The evaluation determined that while our distribution system is basically sound, the town-owned wells cannot supply the current water demand of an average of 0.87 million gallons per day (MGD) and a maximum or peak demand of 1.73 MGD. The Town is capable of pumping 1.02 MGD but it is limited by the Department of Environmental Protection to withdrawal of only 0.74 MGD from the aquifer. At present, the Town receives 100% of its water from the MWRA and the four wells remain off-line in an emergency only capacity.

Approximately 80% of the Town receives water from the public water supply system. The map below shows the water system service area.

Northborough Water System Map





Water & Sewer Enterprise Funds

Section 8-9

Significant FY2020 Budget Changes or Initiatives

The FY2020 Water Enterprise Fund is budgeted at \$2,548,680 which is an increase of \$51,962 or 2.08%. This increase is due to a number of factors, the largest of which is a \$56,994 (49.7%) increase in contracted services. This account includes a number of modest increases for State mandated leak detection compliance, engineering costs related to the abandoned dam in Shrewsbury, introduction of a new value maintenance program, and some additional MIS/GIS costs. The second largest increase is a \$32,666 (2.6%) increase in the MWRA water assessment.

In the second quarter of FY2014, a base charge was added to each water account to recover a portion of fixed costs paid from the enterprise funds such as debt, meter reading, billing and collection, regardless of the amount of water usage. Based upon formal rate studies, the water utility user rates are expected to increase approximately 5% per year due to a combination of inflationary pressures (between 2% and 3% annually), annual water use fluctuations and the need to make regular infrastructure investments.

A primary focus for the DPW Water Division Enterprise Fund is the successful implementation of the Capital Improvement Plan. The plan is the result of a multi-disciplinary approach to infrastructure management. It includes replacement of poor condition and undersized water mains in concert with roadway improvement projects, repairs and improvements to the Assabet water storage tank, and systematic replacement of vehicles and equipment.

	FY2016 ACTUAL	FY2017 ACTUAL	FY2018 ACTUAL	FY2019 BUDGETED	FY2019 SIX MONTHS	FY2020 PROPOSED
WATER ENTERPRISE FUND						
Personnel Services						
² 51010 Full-time Wages	143,119	159,215	162,405	166,773	77,155	169,856
³ 51100 Full-time Salary	48,858	43,361	62,467	62,339	16,990	63,007
⁴ 51120 Full-time Permanent wages	47,026	37,549	35,084	35,783	17,202	36,110
⁵ 51130 W&S Commissioner Stipends	1,080	1,080	1,080	1,080	0	1,080
⁶ 51135 GIS Salary	12,000	12,000	13,912	14,329	0	14,760
51300 Overtime	37,096	41,697	40,602	41,694	23,074	42,464
51410 Longevity Pay	1,560	1,320	1,170	1,320	1,320	1,410
51970 Stipends	850	1,800	900	900	0	900
51920 Uniforms	1,800	1,080	1,800	1,800	900	1,800
SUBTOTAL	293,389	299,102	319,420	326,018	136,640	331,387

² Line 51010 represents the 60% of the Water/Sewer Supervisor salary and Water/Sewer Maintenance Workers' wages. The other 40% of these personnel expenses are included in the Sewer Enterprise Fund budget.

³ Line 51100 represents 30% (12 hrs/ week) of the DPW Director and Asst Director salaries. 20% is reflected in the Sewer Enterprise Fund Budget and the balance (50%) is included in the DPW budget Section 4 of this document.

⁴ Line 51120 represents 24 hours per week of an Administrative Assistant

⁵ Line 51130 represents the three Water & Sewer Commissioners who receive \$600 each per year, split 40% (\$720) Sewer Fund Budget and 60% (\$1,080) Water Fund Budget

⁶ Line 51135 represents 14.3% (6 hours per week) of the GIS Director's time supporting the Water Enterprise fund.

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Water & Sewer Enterprise Funds



	FY2016 ACTUAL	FY2017 ACTUAL	FY2018 ACTUAL	FY2019 BUDGETED	FY2019 SIX MONTHS	FY2020 PROPOSED
WATER ENTERPRISE FUND						
Expenses						
51710 Workers' Compensation	8,876	9,319	12,495	13,174	13,174	13,438
51730 F.I.C.A.	4,453	4,453	4,587	3,785	0	4,806
51740 Life Insurance	88	88	88	88	0	88
51750 Health Insurance	39,828	43,421	55,488	53,307	0	49,481
52110 Utilities	14,808	15,126	16,000	16,000	5,207	16,500
52610 Building Maintenance	8,853	11,899	5,000	10,900	12,730	13,300
52620 Equipment Maintenance	14,446	22,328	18,000	18,000	2,604	18,000
52800 Contractual Services	71,022	34,209	116,570	114,700	32,433	171,694
52850 Audit	1,837	1,873	1,911	1,949	1,949	2,008
53020 Legal Services	2,570	1,499	5,000	5,000	0	5,000
53110 Printing	6,521	9,432	8,400	9,445	4,400	8,807
53170 Water Analysis	6,224	15,057	14,000	17,000	2,074	10,500
53190 Training	7,140	5,421	8,325	8,325	4,024	8,325
54290 Office Supplies	536	833	1,500	1,500	2,843	1,500
54350 Howard Street Well	0	0	0	0	0	0
54370 Private Work	0	0	0	0	0	0
54380 Brigham Street Well	0	0	0	0	0	0
54390 MWRA Assessment	1,103,542	1,135,772	1,245,202	1,280,283	635,529	1,312,949
54400 Lyman Street Well	0	0	0	0	0	0
54410 Crawford Street Well	0	0	0	0	0	0
54420 Materials & Supplies	62,330	95,337	117,115	121,100	58,267	124,800
54820 Gasoline	10,545	10,545	10,545	10,545	0	10,545
55990 Chemicals	0	0	0	0	0	0
56220 Worcester Regional Retirement	37,175	40,394	42,527	47,225	47,225	33,340
57110 Travel/Mileage	525	521	600	600	101	600
57410 Liability/Building Insurance	15,235	15,997	16,798	17,639	17,639	17,639
58530 Capital Outlay	0	1,756	0	0	0	0
59810 Extraordinary and Unforeseen	0		75,000	75,000	0	75,000
59990 Other Financing Uses	132,000	560,000	0	0	0	0
SUBTOTAL	1,548,554	2,035,277	1,775,151	1,825,565	840,198	1,898,320



Water & Sewer Enterprise Funds

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	FY2016 ACTUAL	FY2017 ACTUAL	FY2018 ACTUAL	FY2019 BUDGETED	FY2019 SIX MONTHS	FY2020 PROPOSED
WATER ENTERPRISE FUND						
Expenses (Debt Service)						
59100 Principal / Long Term Debt	244,000	244,000	282,150	281,606	0	272,856
59150 Interest / Long Term Debt	77,133	68,444	59,660	52,929	8,570	46,117
59270 Interest / Temporary Loans	16,510	23,386	0	10,600	0	0
SUBTOTAL	337,643	335,831	341,810	345,135	8,570	318,973
TOTAL: WATER ENTERPRISE FUND	2,179,586	2,670,210	2,436,381	2,496,718	985,409	2,548,680

Section 8-12 Water & Sewer Enterprise Funds



Background on the Northborough Sewer System

The Town operates a collection system of sewer pipes that bring sewerage to the City of Marlborough's Westerly Wastewater Treatment Plant where it is treated and discharged into the Assabet River. When the sewer system was started in the mid 1960's it was designed to service only the central portion of Town. While sewer pipe installation did not start until the 1970's, in 1964 land was purchased for a Northborough sewage treatment plant on Boundary Street.

In the late 1960's when the Town of Northborough attempted to obtain approvals for a sewerage treatment plant from the Massachusetts Department of Public Health, the regulators told the Town that since Marlborough was building a plant across Boundary Street, that they would not allow two plants across the street and side-by-side with each other on the river. As a result, the Town of Northborough was required to become a tenant in the Marlborough Westerly Wastewater Treatment Plant by entering into an Intermunicipal Agreement with the City of Marlborough for sewerage treatment.

In 1970, the Town of Northborough entered into the first of two twenty-year agreements with Marlborough for 800,000 gallons per day. The Marlborough Westerly Plant has a design capacity of 2.89 million gallons per day (MGD). Therefore, Marlborough's portion is 2.09 MGD and Northborough's is 0.80 MGD. While our sewer pipe installation has continued into the present in accordance with a Master Plan initially generated in the early 1980's, the Town's sewer capacity at the Westerly Plant has not changed since the original 1970 agreement. It has remained at 0.80 MGD.

Sewer service area and future capacity needs

In the late 1970's the Town hired the engineering firm of Camp Dresser & McKee (CDM) to begin developing the sewer system and mapping out the sewer service area for the Town. It was estimated that the sewerage to be contributed by the users in the original sewer service area would use the full 0.80 MGD of sewer capacity. Therefore, as long as the Town's capacity at the treatment plant remains at 0.80 MGD, it cannot provide sewer to any other parts of Town currently outside of the sewer service area.

During 2000, CDM updated the sewer service area and determined that there was only 50,000 gallons per day of sewer capacity for development of the southeast and southwest industrial areas. The Avalon Bay/Northborough Crossing development is now complete and discharges approximately 80,000 gallons per day. Not only does this use up the 50,000 gallons per day allocated for industrial development, but it also uses 30,000 gallons per day more of capacity previously targeted for existing residential areas in Town. Therefore, it is critical for the Town to pursue additional capacity at the Marlborough Westerly Wastewater Treatment Plant. Should the Town not be successful in getting additional capacity, the amount of capacity previously designated for users within the sewer service area will need to be reduced by 30,000 gallons per day to stay within our 0.80 MGD.

Assabet Consortium Study

In 2000, Town Meeting authorized \$500,000 to study the Town's current sewer needs through the Assabet River Consortium Study. The Assabet Consortium Study is a collaboration of the six towns whose sewerage treatment plants discharge to the Assabet River; these include Northborough, Marlborough, Westborough, Shrewsbury, Hudson and Maynard. As part of the discharge permit for each sewerage treatment plant (there are four) each Town must produce a study that evaluates the effect of the treatment plant's discharge on the Assabet River. The



engineering firm of Fay, Spofford & Thorndike (FST), was hired to do the study for the Town of Northborough. FST inventoried the Board of Health records for septic system failures, excessive pumping, Building Department records for building construction, soils maps, zoning and other applicable files and information to calculate the sewer capacity necessary to service the entire Town of Northborough. They determined that the Town, including existing users, would need 1.25 MGD. This means that there is not enough capacity in the existing sewage treatment plant for the Town to provide sewer to every area that needs it. Marlborough's consultant determined that Marlborough also needed additional capacity. Between Northborough & Marlborough the total sewage treatment capacity needed is 4.15 MGD. With the plant capacity permitted for 2.89 MGD, the deficit is 1.26 MGD.

Through the Assabet Consortium Study process, the Department of Environmental Protection (DEP) and the Federal Environmental Protection Agency (EPA) originally informed the Town that no additional flows would be permitted into the Assabet River. Therefore, the additional 4.15 MGD of capacity necessary for Northborough and Marlborough must be handled by infiltrating it into the ground through subsurface discharge. Even though the effluent water is treated to just about drinkable standards, the DEP and EPA goal is to replenish the ground water rather than let it flow away down the river.

Haitsma Property Acquisition

At the August 10, 2004 Special Town Meeting the Town opted to purchase, through the Chapter 61A tax relief statute, the Haitsma farm at 455 Main Street. The primary purpose of this land was to serve future sewer utility expansion, thus allowing proper build-out and economic development of the Town. According to the Town's consultants, an additional 1.5 MGD of sewer capacity could be achieved through subsurface disposal on the Haitsma property, if needed. However, the cost would be significantly higher than discharging to the river. Consultants for Marlborough and Northborough proposed putting all the additional flows into the river because of the negative environmental impact of clearing all the land necessary to put the additional flows into the ground as well as the additional energy costs of the subsurface disposal. Further evaluation by the Town's consultant in 2018 determined that subsurface disposal of effluent at the Haitsma property would likely result in the discharge entering the Assabet River due to the local hydrogeologic conditions, calling into question the viability of subsurface disposal at that location.

Status of the Marlborough Westerly plant expansion

On November 16, 2009, after spending more than 8 years working with both the State DEP and Federal EPA, the National Pollutant Discharge Elimination System (NPDES) Permit modification for the Marlborough Westerly Treatment Plant was finally granted. This is the permit that allows the Westerly Treatment Plant additional flow into the Assabet River, instead of more expensive alternatives such as subsurface disposal on the Haitsma property. The NPDES permit modification also included significant and expensive upgrades to water treatment, particularly with regard to phosphorus discharge limits.

Unfortunately, after granting the increase in flow, the EPA abruptly and unexpectedly decided to rescind the NPDES permit on February 23, 2010. However, since the granting of the permit, Marlborough has completed the \$30 million expansion and upgrades to the plant and although the plant is seeing great results on the quality of the effluent, it is coming at a significant increase in operational costs. Under the proposed Intermunicipal Agreement, the Town of Northborough will owe 30% of the cost of construction. It remains to be seen how the issue of additional

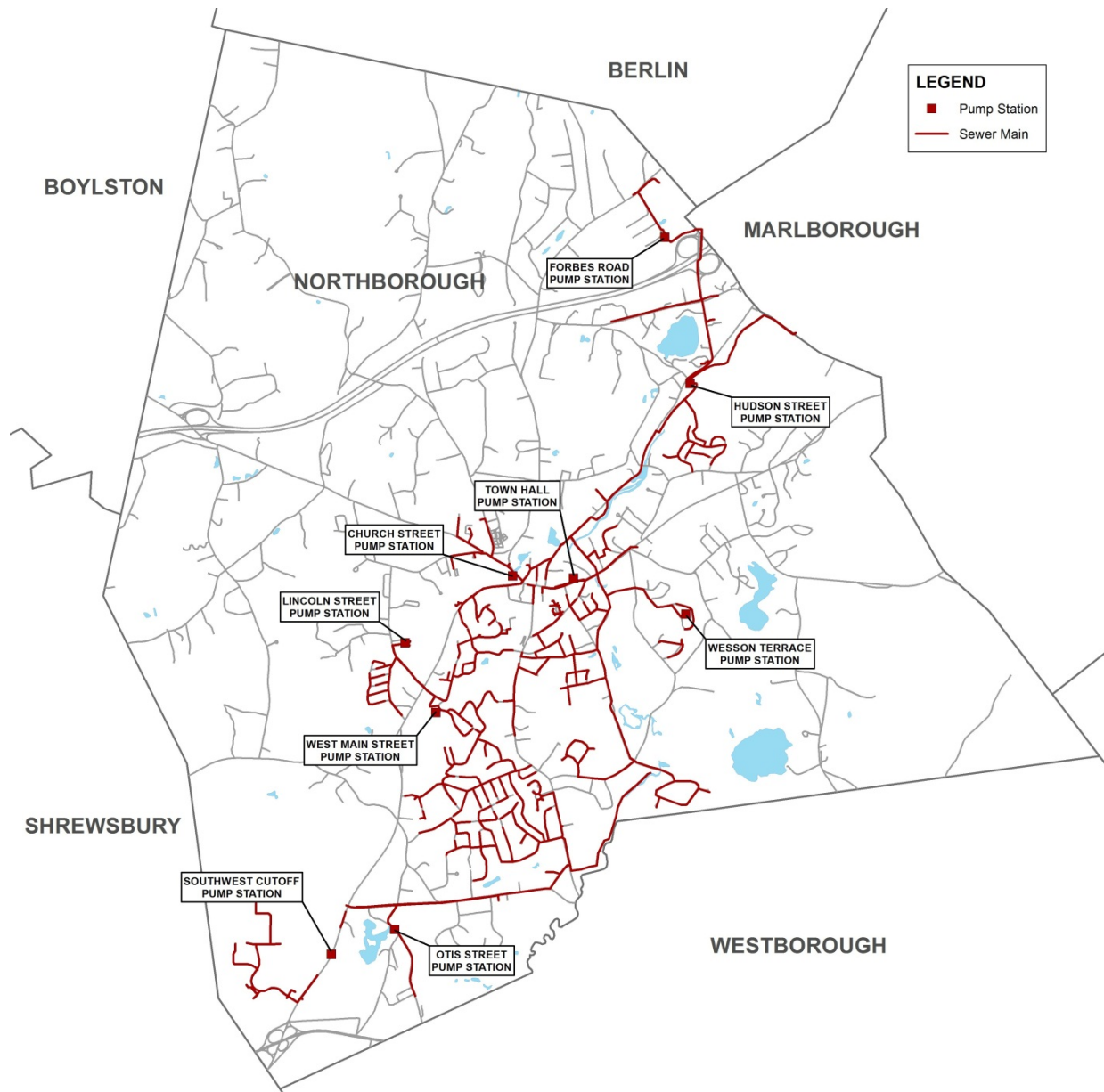
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capacity will be resolved, but the EPA has indicated that it intends to take up the matter as part of the renewal process for the existing NPDES permit for the Marlborough Westerly Plant

Approximately 30% of the Town has access to the sewer wastewater system. The map below shows the sewer system service area.

Northborough Sewer System Map





Water & Sewer Enterprise Funds

Section 8-15

Significant FY2020 Budget Changes or Initiatives

The FY2020 Sewer Enterprise Fund is budgeted at \$2,244,114, which is an overall increase of \$111,399 or 5.2%. The budget reflects an estimated 5% increase in the Marlborough use charge of \$35,125. Annual debt payments have increased by \$34,510 to pay for recent capital projects, including the recently completed West Main Street Pump Station Improvements. Several smaller initiatives account for the remainder of the increase with the largest being the annual replacement of the grinder cartridges. The Town installed three sewer grinders to better manage solids at the pump stations. The equipment includes grinder teeth cartridges which are wear parts that require replacement approximately every three years at a cost of \$16,000 per unit. Other smaller initiatives include replacement of ageing testing equipment and alarms, and system mapping services.

The critical issue facing the DPW Sewer Enterprise Fund continues to be negotiations for a new Intermunicipal Agreement with the City of Marlborough. The matter is currently in litigation, the outcome of which will establish our contribution to the operational expenses of the Westerly Wastewater Treatment Plan as well as Northborough's share of the \$30 million plant improvement project. Sewer rates were recently increased in the second quarters of FY2014, FY2016, FY2017, and FY2018 in anticipation of a large plant improvement payment to Marlborough. The sewer use charges for FY2019 increased by 5% to account for regular operating cost increases and periodic capital expenditures. A similar increase is expected in FY2020 based upon the most recent rate study.

	FY2016 ACTUAL	FY2017 ACTUAL	FY2018 ACTUAL	FY2019 BUDGETED	FY2019 SIX MONTHS	FY2020 PROPOSED
SEWER ENTERPRISE FUND						
Personnel Services						
51010 Full-time Wages	95,412	106,143	108,270	111,182	51,437	113,238
51100 Full-time Salary	32,572	28,907	41,645	41,559	11,326	42,005
51120 Full-time Permanent wages	31,351	24,996	23,389	23,856	11,468	24,074
⁷ 51130 W&S Commissioner Stipends	720	720	720	720	0	720
51135 GIS Salary	8,000	8,000	9,275	9,553	0	9,840
51300 Overtime	24,731	27,798	27,068	27,796	15,383	28,310
51410 Longevity Pay	1,040	880	760	880	880	940
51970 Stipends	1,000	1,200	1,000	1,000	0	1,000
51920 Uniforms	1,200	720	1,200	1,200	600	1,200
SUBTOTAL	196,026	199,365	213,327	217,746	91,094	221,327

⁷ Line 51130 represents the three Water & Sewer Commissioners receive \$600 each per year, split 40% (\$720) Sewer Fund Budget and 60% (\$1,080) Water Fund Budget

Section 8-16 Water & Sewer Enterprise Funds



	FY2016 ACTUAL	FY2017 ACTUAL	FY2018 ACTUAL	FY2019 BUDGETED	FY2019 SIX MONTHS	FY2020 PROPOSED
SEWER ENTERPRISE FUND						
Expenses						
51710 Workers' Compensation Ins.	5,917	6,213	7,810	8,234	8,234	8,399
51730 F.I.C.A.	2,978	2,978	3,068	2,523	0	3,210
51740 Life Insurance	59	59	59	59	0	59
51750 Health Insurance	26,552	28,948	36,992	35,538	0	32,988
52110 Utilities	45,026	49,498	51,640	51,640	17,765	57,518
52310 Marlborough Use Charge	400,000	400,000	638,600	702,500	200,000	737,625
52600 Building Maintenance	17,925	14,917	15,000	76,600	6,251	93,200
52620 Equipment Maintenance	15,892	33,332	35,000	35,000	2,348	35,000
52800 Contractual Services	22,825	2,786	48,780	128,200	11,097	151,232
52850 Audit	1,224	1,249	1,274	1,300	1,300	1,339
53020 Legal Services	14,631	33,938	50,000	50,000	0	50,000
53110 Printing	4,347	6,310	5,600	6,297	2,933	5,688
53170 Testing	1,610	1,610	2,000	2,000	0	6,400
53190 Training, Dues and Licenses	1,155	458	3,240	3,240	87	3,240
54290 Office Supplies	362	981	1,500	1,500	134	1,500
54420 Materials & Supplies	9,869	41,775	33,310	36,800	11,912	36,600
54820 Gasoline	7,030	7,030	7,030	7,030	0	7,030
55990 Chemicals	0	0	0	0	0	0
56220 Worcester Regional Retirement	24,786	26,932	28,354	31,486	31,486	22,227
57110 Mileage	238	307	400	400	67	400
57410 Liability/Building Insurance	10,158	10,665	11,199	11,759	11,759	11,759
58730 Capital Outlay	0	0	0	0	0	0
59810 Extraordinary and Unforeseen	0	0	75,000	75,000	0	75,000
59990 Other Financing Uses	38,000	150,000	0	0	0	0
SUBTOTAL	650,582	819,986	1,055,856	1,267,106	305,374	1,340,414



Water & Sewer Enterprise Funds

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	FY2016 ACTUAL	FY2017 ACTUAL	FY2018 ACTUAL	FY2019 BUDGETED	FY2019 SIX MONTHS	FY2020 PROPOSED
SEWER ENTERPRISE FUND						
Expenses (Debt Service)						
59100 Principal / Long Term Debt	419,843	415,281	579,853	484,852	170,666	476,102
59150 Interest /Long Term Debt	148,577	131,775	193,730	149,761	30,460	137,941
59270 Interest / Temporary Loans	1,651	21,875	8,262	13,250	0	68,330
SUBTOTAL	570,071	568,930	781,845	647,863	201,126	682,373
TOTAL: SEWER ENTERPRISE FUND	1,416,679	1,588,281	2,051,028	2,132,715	597,593	2,244,114



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