

**Section V**  
**Sewer Fund**

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Mission Statement

The mission of the Sewer Division is to enhance Concord's quality of life, and through sound management, innovation, teamwork and vision, provide dependable, high quality, responsive sewer utility services, consistent with values and at reasonable costs to Concord's citizens, businesses, institutions and visitors.

Highlights

- The proposed FY12 sewer rate of \$9.20 per unit represents a 5% increase over the FY11 rate of \$8.76 per unit.
- The proposed FY12 capital improvement plan is \$623,000.
- In accordance with Article 41 of 2009, Wastewater Planning Capacity Study, the Town hired Weston & Sampson to assess wastewater management alternatives required to meet long-range community development and redevelopment visions.
- The proposed FY12 operating budget is \$3,221,540, an increase of 2.9% from that of FY11.

Sewer Fund Budget Contents

Overview pp. 1-2  
 Sewer Rates p. 3  
 Program Highlights pp. 4-5  
 Revenues and Expenditures pp. 6-10  
 Sewer Financial Statement p. 11  
 Debt Service pp. 12-13  
 Capital Spending pp. 14-15  
 Sewer Rates and System Map pp. 16-17

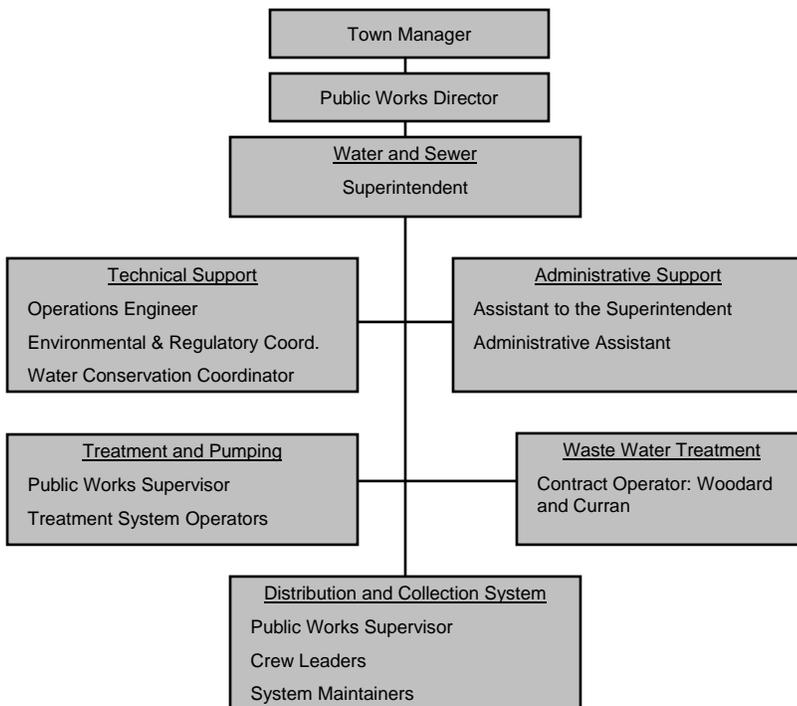
Expenditure Summary				
	FY09 Actual	FY10 Actual	FY11 Budgeted	FY12 Proposed
Operating Income	\$ (635,123)	\$ (975,637)	\$ (769,529)	\$ (742,540)
Net Income	\$ (706,668)	\$(1,046,499)	\$ (525,539)	\$ (485,257)
Undesignated Fund Balance	\$ 3,581,726	\$ 3,311,505	\$ 3,364,474	\$ 3,458,272

Description:

In 1894, Concord received legislative authority to create a municipal sewer system. Today, the system consists of 33 miles of collection main, two pumping stations, six neighborhood lift stations, and an advanced treatment plant.

The 1976 Annual Town Meeting established a Sewer Fund to ensure that the operation, maintenance, and capital improvement of the sewer system would be a financially viable enterprise. Expenses for this system are covered entirely by user fees. As of June 30, 2010, the total value of collection system and treatment plant infrastructure assets was approximately 25.9 million dollars.

The municipal sewer system serves over 1,815 residential and commercial customers representing approximately 33% of the community. The wastewater treatment facility also handles approximately 1.6 million gallons per year of septage pumped from residential and commercial establishments served by private septic systems within the Town of Concord.



Long-Term Financial Stability

Along with its core mission to operate and maintain the Town’s municipal sewer system in a reliable and efficient manner, the sewer enterprise must also be financially self-supporting. This means that the Sewer Division is expected to cover all costs associated with operations, capital maintenance and repairs by generating sufficient revenue through user fees and special service fees. The Sewer Division maintains a detailed 10-year financial proforma to facilitate long range planning for all revenues and anticipated investments.

Since the sewer enterprise fund was formally established in 1976, there have been no property tax contributions to subsidize pre-existing operations or infrastructure improvements. Taxpayer support has been sought through Town Meeting for projects which have been designed to expand the sewer collection system and to support major upgrades to the Wastewater Treatment plant, as it also accepts septage from properties which are not directly connected to the sewer system.

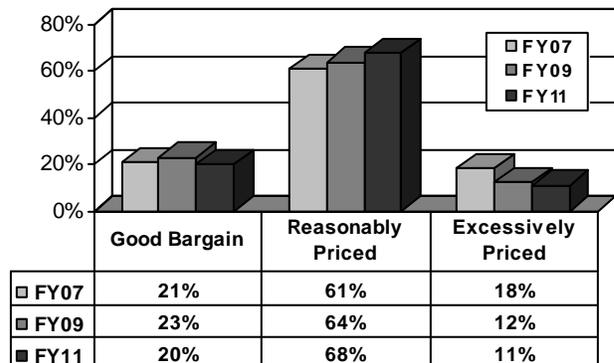
Citizen Survey

In the fall of 2006, 2008, and 2010, the Town conducted a telephone survey of 300 randomly selected Concord residents. For the Sewer Division, two questions were asked:

**1. What is your opinion of the price of Town Sewer Services?**

The vast majority of Concord households that are on Town sewer lines feel that the service is at least “reasonably priced,” while 20% of survey respondents even describe it as “a good bargain.”

**1. Opinion of Sewer Service Price**



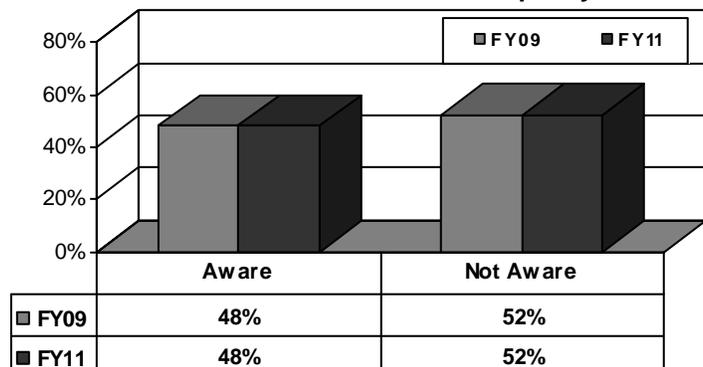
**2. Are you aware that the wastewater treatment plant is nearing capacity and that this may limit the ability of sewer services to be expanded in the future?**

The response suggests that many residents are aware of limitations that the current wastewater treatment capacity imposes on the Town. However, there has been no change in the overall level of awareness of this issue over the past two-years.

A component of the \$142,000 wastewater management plan (Art. 41 of 2009) will involve public education efforts on this issue.

See page V-4 for more on capacity issues.

**2. Awareness of WWTP Capacity**



Sewer Rates:

The total revenue projected to be raised through sewer rates in FY 2012 is: **\$2,341,000**. This represents 94% of total Sewer Fund operating revenues.

Rates are set each year by the Public Works Commission following a public hearing with the following goals:

1. To ensure that the Division has the resources to operate, maintain and improve the system;
2. To minimize rate "shock" so that sewer costs can be a relatively predictable expense; and
3. To accurately reflect sewer use (which may be different than seasonally skewed water use).

**Sewer Rate Highlights**

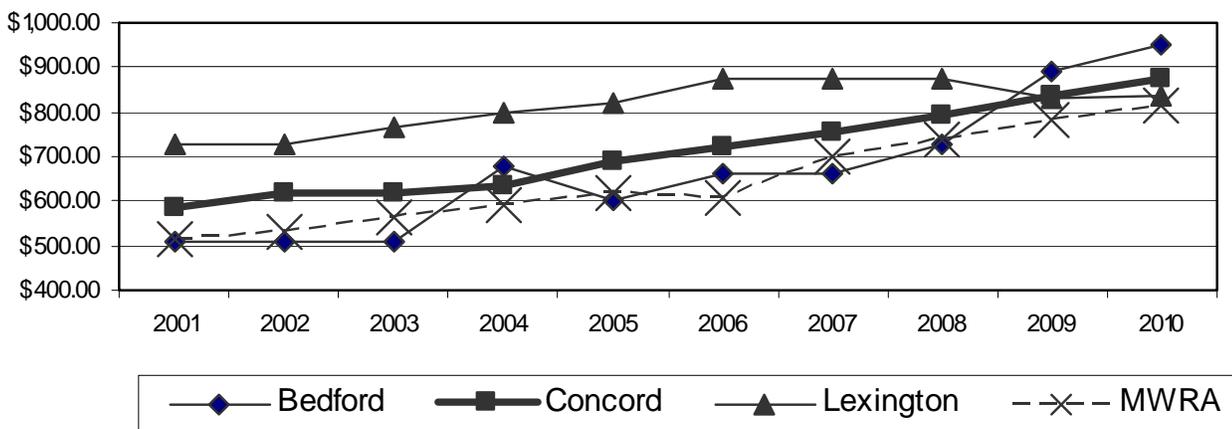
*The proposed FY 2012 sewer rate is \$9.20 per unit (1 unit = 748 gallons) which represents a 5% increase over the FY 2011 rate.*

- Summer/fall residential sewer usage is billed at the level of winter/spring water consumption to eliminate the effect of seasonal outdoor water use.
- A typical residential customer using approximately 17 units bimonthly can expect to pay a total of \$920 for sewer service over the course of a year.
- Non-residential sewer billing is based on water use year-round.
- The proposed FY 2012 septage rate is \$0.077 per gallon which represents a 2.6% increase from FY 2011.

**Benchmarking Sewer Rates**

The comparison of sewer rates between individual systems and communities can be particularly difficult, given the wide variation in management and financial structures and customer demographics. Some level of public sewerage service is provided by 57% of Massachusetts communities. Some systems, like Concord, adhere to strict enterprise principles (i.e., full cost accounting with consideration of long range investments and depreciation of fixed assets) while other systems are subsidized through a municipality's general fund. Statewide, 58% of communities have adopted a flat rate structure, 31% use an ascending rate structure and 11% assess a flat fee. More sophisticated and flexible rate designs, such as the winter/spring demand basis employed by Concord for residential customers, have been adopted by only 4% of systems across the state.

**Comparison of Annual Residential Sewer Bills**



This chart demonstrates how rate adjustments (and cost of service) over time have impacted Concord and three neighboring systems. For comparison purposes, annual sewer usage is assumed to be 100 units per residential customer.

*Wastewater services and treatment* needs have received a significant amount of attention within the past decade, both within the community and by outside regulatory agencies. These interests have spurred a number of studies, which have culminated in capital improvements (including process upgrades and service area expansions) and, of equal importance, identified service limitations.

The programs and initiatives detailed below have been designed to strike a balance between customer interests relating to cost effective and reliable service, and broader community and regulatory interests attributed to evolving water resource protection challenges and publicly supported land-use development and re-development.



The Bedford Street Wastewater Treatment Facility

**Wastewater Planning:** The Concord community has continued to maintain a high level of interest in long-range wastewater planning. Following the December 2007 release of the “Status of Municipal Wastewater Treatment in Concord, MA,” the Wastewater Planning Task Force formed at the request of the Board of Selectmen presented Article 41 “Wastewater Planning Capacity Study” at the 2009 Annual Town Meeting. A resolution of support for this article called for an evaluation of wastewater treatment and capacity management alternatives to accommodate wastewater flows above and beyond those flows necessary to meet existing requirements and obligations resulting from development and re-development under current zoning.

Weston & Sampson continues to support town staff and the Wastewater Planning Task Force in identifying wastewater management alternatives required to meet long-range community development and redevelopment visions. Their work includes: the review of past wastewater planning work, the development of a Conceptual Wastewater Alternative Analysis, and the development of a detailed wastewater alternatives analysis which will involve public participation and possible presentations to future Town Meetings.

This past year, town staff worked with Weston & Sampson to develop a wastewater alternatives evaluation matrix to allow for comprehensive and objective comparisons of likely wastewater management alternatives with specific consideration of economic, environmental, feasibility, public acceptance, regulatory, and scheduling factors. The Wastewater Planning Task Force accepted the general outline of this matrix and provided valuable input to ensure the final product will include a user-friendly ranking system which will help illustrate and support recommendations as to how such a document may be used in future public presentations.

**Pumping Station Equipment/Structures:** Progress continued on planned rehabilitation of all original pumping equipment associated with our wastewater pumping facilities as they reach the end of their useful lives. The equipment within these facilities was installed in the mid 1980s. Plans and specifications were developed for the rehabilitation of both the Gifford and Park Lane sewer ejector stations. The scope of work includes the installation of bypass piping and an overhaul of all electrical, mechanical and instrumentation systems within both ejector stations. The recently upgraded Pilgrim Road and Laurel Street pumping stations were furnished with cathodic protection installed by Ark Engineering (Cohasset, MA).

**Collection System Modeling Effort:** Black and Veatch has been working with Water/Sewer staff to develop a Stormwater Management Model (INFO SWMM) which, when calibrated, will assist in ongoing sewer system collection system inflow/infiltration analysis. This tool will also be used to highlight sewer collection system carrying capacity constraints and opportunities for system improvements based upon various build-out scenarios. Concerted efforts have gone into the population of the model with sewer collection system infrastructure data, historic flow data collected from individual pumping stations, and data-set verification required for final model calibration

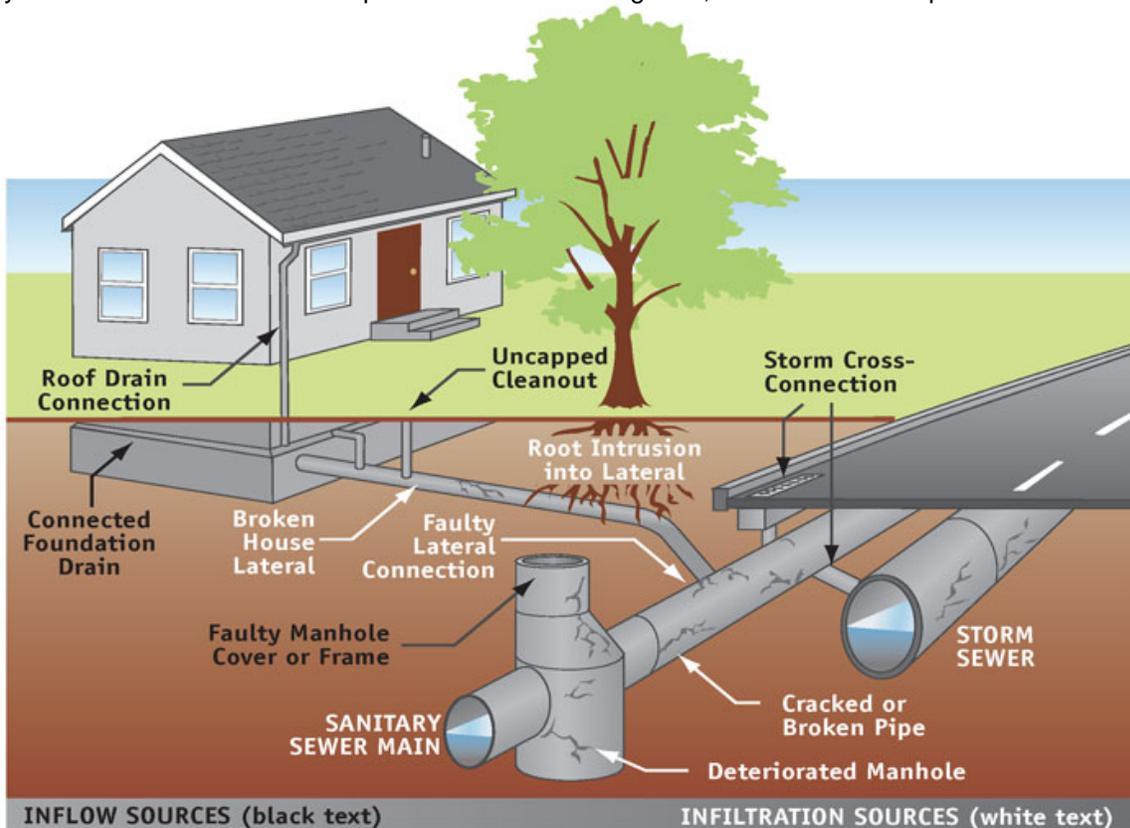
**Wastewater Treatment Facility:** Woodard & Curran, Inc. continues to operate the Town's Wastewater Treatment Plant (WWTP), located off Bedford Street, under the supervision of the Water and Sewer Division. The plant maintains excellent compliance with its regulatory requirements, in accordance with state and federally issued permits.

In accordance with the National Pollutant Discharge Elimination System Permit (NPDES) as of the March 13, 2009 deadline, the facility was required to meet a new summer seasonal monthly average for total phosphorous limit of 0.2 mg/l. These permits are re-issued every five years by the Massachusetts Department of Environmental Protection and federal Environmental Protection Agency. Concord's permit is presently under review. EPA and DEP issued Concord an NPDES Renewal Application form which was submitted before the August 2010 deadline.

Both secondary clarifiers were taken off-line, drained, cleaned, and visually inspected. While Unit #2 was noted to be in good operating and physical condition, it was determined that Unit #1 required extensive work on the mechanical rake arm assembly. Plans and specifications for associated rehabilitation needs were pulled together and bid with assistance from Woodard & Curran, Inc. Plant staff worked with systems engineers to install a control loop to allow for improvement of the CoMag sludge thickening and chemical feed process resulting in increased cost savings/efficiency.

## Inflow and Infiltration (I/I)

**Inflow/Infiltration:** Continued investigation and repairs of inflow and infiltration problems are important to the upkeep of a properly functioning sewer system. Over the last several decades, Concord has performed a variety of work with the goals of identifying the locations of I/I problems and correcting the problems deemed most detrimental to the sewer system. This work has included flow monitoring, television inspections of numerous reaches of sewer pipe, smoke testing, dye testing, root control treatment, joint testing and sealing, pipe lining, and occasionally replacement of sewer pipe. In addition, manhole inspections are performed to evaluate the integrity of sewer manholes and their potential for contributing to I/I, with rehabilitation performed as necessary.



Graphic Credit: King County, Washington, Department of Natural Resources and Parks

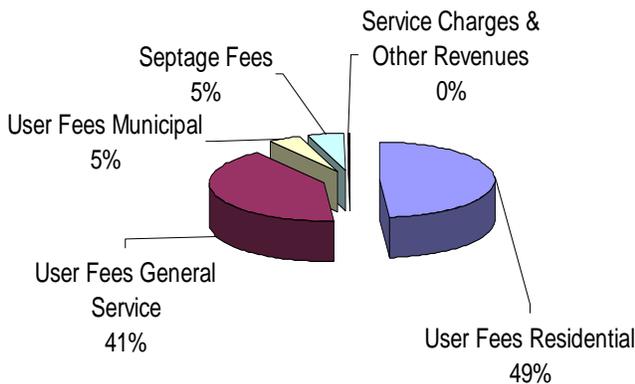
Program Implementation:

The proposed FY12 operating budget is \$3,221,540. This represents a 2.9% increase as compared to the sewer fund's revised FY11 operating budget. Depreciation expense reflects the cost of the annual use, or wear-and-tear, of the Sewer Division's more than \$25.9 million worth of infrastructure (as of the end of FY10). The budgeted depreciation expense, totaling \$1,785,704, therefore reflects a depreciation of roughly 7% of these capital assets in FY12. Personnel Services are budgeted to total \$333,515 in FY12, a 7.9% increase from the revised FY11 total of \$309,030. Although this increase reflects a proposed \$12,600 in overtime, no additional personnel have been requested.

The proposed budget increase for the wastewater collection system is 4% with a 8% increase proposed for the Wastewater Treatment Plant. The costs associated with the operation of the Wastewater Treatment facility are directly related to meeting state and federally mandated National Pollutant Discharge Elimination System (NPDES) permit, and contract operation service presently performed by Woodard & Curran. While the 5-year NPDES permit is presently under review by EPA and DEP, we do not anticipate any significant change in permit conditions, at least in FY12. More importantly, the 10-year Wastewater Treatment Plant Operations contract ends in December of 2011, and we anticipate an increase in the cost of contracted operation services. The budget plan allows for an 11% increase in the latter half of the fiscal year.

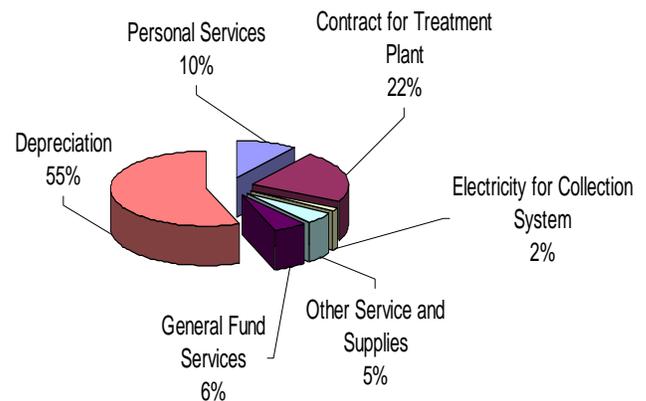
**Sewer Operating Revenues**

**Totaling \$2,479,000**



**Sewer Operating Expenses**

**Totaling \$3,221,540**



Operating Income:

This FY12 Budget calls for Operating Expenditures that are \$742,540 above Operating Revenues. This results in an operating loss for the year. However, by FY17, the Sewer Fund recovers its operating balance as its depreciation expense, which accounts for roughly 50% of all operating expenses, begins to decline and revenues increase (see page V-11, Sewer Financial Statements).

**OPERATING REVENUES**

	FY09 Actual	FY10 Actual	Rev. FY11 Budget	FY12 Estimate
Sewer User Fees	\$ 1,968,085	\$ 2,028,274	\$ 2,226,000	\$ 2,341,000
Service Charges	5,950	3,300	4,000	5,000
Septage Rates	111,400	106,318	120,000	122,000
Liens & Tax Titles	8,015	8,725	8,000	8,000
Other Revenue	24,601	3,536	3,500	3,000
<b>Operating Revenues Total</b>	<b>\$ 2,118,051</b>	<b>\$ 2,150,153</b>	<b>\$ 2,361,500</b>	<b>\$ 2,479,000</b>

**OPERATING EXPENSES**

<u>Sewer Divisions</u>	FY09 Actual	FY10 Actual	Rev. FY11 Budget	FY12 Estimate
<b><u>Collection</u></b>				
Personnel Services	\$ 250,500	\$ 263,991	\$ 273,642	\$ 285,716
Purchased Services	103,194	138,158	126,114	125,151
Supplies & Materials	45,230	31,739	36,273	45,117
Other Charges & Expenses	14,828	34,337	17,978	17,044
General Fund Services	86,936	87,816	88,904	92,314
Audit Adjustments	(61,045)	(1,626)	-	-
<b>Subtotal</b>	<b>\$ 439,643</b>	<b>\$ 554,415</b>	<b>\$ 542,911</b>	<b>\$ 565,342</b>
<b><u>Treatment</u></b>				
Personnel Expenses	\$ 45,284	\$ 48,457	\$ 35,388	\$ 47,799
Purchased Services	19,940	20,616	23,000	28,000
Supplies & Materials	705,252	692,224	660,246	702,382
Other Charges & Expenses	10,567	-	-	-
General Fund Services	86,936	87,816	88,904	92,313
<b>Subtotal</b>	<b>\$ 867,979</b>	<b>\$ 849,113</b>	<b>\$ 807,538</b>	<b>\$ 870,494</b>
<b><u>Other</u></b>				
Depreciation Expense	1,445,552	1,722,262	1,780,580	1,785,704
Capital Reserve	-	-	-	-
<b>Subtotal</b>	<b>\$ 1,445,552</b>	<b>\$ 1,722,262</b>	<b>\$ 1,780,580</b>	<b>\$ 1,785,704</b>
<b>Total Operating Expense</b>	<b>\$ 2,753,174</b>	<b>\$ 3,125,790</b>	<b>\$ 3,131,029</b>	<b>\$ 3,221,540</b>

**AUTHORIZED POSITIONS**

<b>Collections Personnel Costs</b>	FY11 Revised Budget		FY12 Initial Budget	
	Positions/Hours	\$ Amount	Positions/Hours	\$ Amount
<b>Regular Staff</b>				
Water and Sewer Superintendent	0.20 FTEs	\$ 19,662	0.20 FTEs	\$ 19,682
Assistant to Superintendent	0.20	15,163	0.20	15,163
Environmental Analyst	0.20	12,638	0.20	12,638
Administrative Assistant	0.20	10,603	0.20	10,603
Public Works Supervisor	0.40	28,180	0.40	28,849
Crew Leader	0.40	23,628	0.40	23,628
Treatment System Operator	0.60	30,663	0.60	31,693
System Maintainer	1.00	44,037	1.00	44,037
Subtotal	3.20 FTEs	\$ 184,574	3.20 FTEs	\$ 186,293
<b>Other Personnel</b>				
GIS Project Specialist	312 hrs.	5,460	312 hrs.	6,006
Subtotal	0.15 FTEs	\$ 5,460	0.15 FTEs	\$ 6,006
<b>Employee Benefits</b>				
Health Insurance	N/A	\$ 14,900	N/A	\$ 11,000
Life Insurance	N/A	100	N/A	100
Dental Insurance	N/A	1,000	N/A	755
OPEB	N/A	17,025	N/A	18,625
Retirement Contribution	N/A	6,241	N/A	8,836
Subtotal	N/A	\$ 39,266	N/A	\$ 39,316
<b>Payroll Taxes</b>				
Medicare Tax	N/A	\$ 2,200	N/A	\$ 2,200
Social Security Contribution	N/A	300	N/A	300
Subtotal	N/A	\$ 2,500	N/A	\$ 2,500
<b>Other Personnel Costs</b>				
Overtime (5130)	500 hrs.	\$ 18,590	800 hrs.	\$ 31,192
Police Overtime (5131)	90 hrs.	3,600	90 hrs.	3,600
Standby Pay (5111)	680 hrs.	20,663	680 hrs.	12,607
Charges to Snow Account	40 hrs.	(1,011)	40 hrs.	(1,011)
Charges to Capital Projects	0 hrs.	-	N/A	(4,920)
Vacancy Savings (Sys. Maintainer)	N/A	-	N/A	-
Salary Adjustments (4.5%)	N/A	-	N/A	10,133
Subtotal	N/A	\$ 41,842	N/A	\$ 51,601
<b>Total Collections</b>	3.35 FTEs	\$ 273,642	3.35 FTEs	\$ 285,716
<b>Treatment Personnel Costs</b>				
Public Works Engineer	0.80 FTEs	\$ 42,517	0.80 FTEs	\$ 51,660
Vacancy Savings	N/A	-	N/A	-
Charge to Capital Projects	N/A	(10,629)	N/A	(9,686)
Salary Adjustments (2%)	N/A	-	N/A	2,325
Health	N/A	3,000	N/A	3,000
Life	N/A	-	N/A	-
Dental	N/A	-	N/A	-
Medicare Tax	N/A	500	N/A	500
<b>Total Treatment</b>	0.80 FTEs	\$ 35,388	0.80 FTEs	\$ 47,799
<b>Total Sewer Personnel</b>	<b>4.15 FTEs</b>	<b>\$ 309,030</b>	<b>4.15 FTEs</b>	<b>\$ 333,515</b>

**NET INCOME**

	FY09 Actual	FY10 Actual	Rev. FY11 Budget	FY12 Estimate
<b>Statement of Net Income:</b>				
Operating Revenues	\$ 2,118,051	\$ 2,150,153	\$ 2,361,500	\$ 2,479,000
Less Operating Expenses	(2,753,174)	(3,125,790)	(3,131,029)	(3,221,540)
<b>Operating Income</b>	<b>\$ (635,123)</b>	<b>\$ (975,637)</b>	<b>\$ (769,529)</b>	<b>\$ (742,540)</b>
<b>Non-operating Revenues (Expenses)</b>				
Add Investment Income	\$ 76,803	\$ 19,847	\$ 13,390	\$ 13,683
Add CoMag Incentive Payments	-	-	373,045	423,000
Add Sewer Improvement Revenues	104,292	113,736	80,000	29,000
Less Int. Exp.	(252,640)	(204,445)	(222,445)	(208,400)
<b>Non-operating Income</b>	<b>\$ (71,545)</b>	<b>\$ (70,862)</b>	<b>\$ 243,990</b>	<b>\$ 257,283</b>
<b>Net Income</b>	<b>\$ (706,668)</b>	<b>\$ (1,046,499)</b>	<b>\$ (525,539)</b>	<b>\$ (485,257)</b>

\*FY10 Net Income of \$(1,046,499) plus Sewer Betterment income of \$187,114 equals the change in net assets of \$(859,385) seen in the FY10 Audited Financial Statements.

**AVAILABLE RESOURCES**

<b>Resources Available from Current Operations for Replacement &amp; Renewal of Facility:</b>				
	FY09 Actual	FY10 Actual	Rev. FY11 Budget	FY12 Estimate
<b>Capital Purposes</b>				
Add Depreciation Exp. & Cap. Rsv.	\$ 1,445,552	\$ 1,722,262	\$ 1,780,580	\$ 1,785,704
Add Net Income	(706,668)	(1,046,499)	(525,539)	(485,257)
Less Bonds Payable	(561,727)	(564,684)	(574,072)	(583,649)
<b>Net Available for Capital</b>	<b>\$ 177,157</b>	<b>\$ 111,079</b>	<b>\$ 680,969</b>	<b>\$ 716,798</b>

**CASH POSITION AND FUND BALANCE FORECAST**

	FY11		FY12	
	Operating Fund	Depreciation Fund	Operating Fund	Depreciation Fund
<b>Cash at Year Opening</b>				
<b>Cash on July 1st</b>	\$ 3,321,066		\$ 3,374,034	
Add Receivables	389,731		389,731	
Less Cash held for Liabilities	(399,293)		(399,293)	
<b>Fund Balance on July 1st</b>	\$ 3,311,505		\$ 3,364,474	
<b>Fund Balance Details (projected)</b>				
Fund Balance on July 1st	\$ 1,051,312	\$ 2,260,193	\$ 19,994	\$ 3,344,480
Net Income	(525,539)	-	(485,257)	-
Bonds Payable	(574,072)	-	(583,649)	-
Capital Outlay (non-borrowing)	-	(628,000)	-	(623,000)
Interfund Transfer	68,293	(68,293)	1,079,093	(1,079,093)
Add Depreciation Exp./Capital Rsv.	-	1,780,580	-	1,785,704
Balance Projected at June 30th	19,994	3,344,480	30,181	3,428,091
<b>Fund Balance on June 30th</b>	\$ 3,364,474		\$ 3,458,272	
<b>Cash at Year End (projected)</b>				
Fund Balance on June 30th	\$ 3,364,474		\$ 3,458,272	
Less Receivables	(389,731)		(389,731)	
Add Cash Held for Liabilities	399,293		399,293	
<b>Projected Cash at June 30th</b>	\$ 3,374,034		\$ 3,467,833	
<b>Sewer Improvement Fund Cash</b>	\$ 1,859,748		\$ 1,778,748	
<b>Unrestricted Cash</b>	\$ 1,514,286		\$ 1,689,085	

**Sewer Improvement Fund**

	FY09 Actual	FY10 Actual	Rev. FY11 Budget	FY12 Estimate
<b>Cash on July 1st</b>	\$ 1,906,360	\$ 1,957,632	\$ 2,054,748	\$ 1,859,748
Revenues	104,292	113,736	80,000	29,000
Expenditures	(55,910)	(16,619)	(275,000)	(110,000)
Adjustment	2,890	-	-	-
<b>Cash on June 30th</b>	<b>\$ 1,957,632</b>	<b>\$ 2,054,748</b>	<b>\$ 1,859,748</b>	<b>\$ 1,778,748</b>
<b>Net Activity</b>	<b>\$ 51,272</b>	<b>\$ 97,116</b>	<b>\$ (195,000)</b>	<b>\$ (81,000)</b>

Note: The Sewer Improvement Fund is included in the cash and fund analysis found on the preceding page (the Sewer Betterment Account, shown below, is not).

**Sewer Betterment Cash Flow Statement**

<u>Activity</u>	FY09 Actual	FY10 Actual	Rev. FY11 Budget	FY12 Estimate
<b>Cash at July 1st</b>	<b>\$ 459,806</b>	<b>\$ 504,996</b>	<b>\$ 615,913</b>	<b>\$ 582,524</b>
Cash Received	204,066	269,626	125,152	126,604
Cash Expended	(158,876)	(158,710)	(158,540)	(158,368)
<b>Cash at June 30th</b>	<b>\$ 504,996</b>	<b>\$ 615,913</b>	<b>\$ 582,524</b>	<b>\$ 550,760</b>
<b>Net Activity</b>	<b>\$ 45,190</b>	<b>\$ 110,916</b>	<b>\$ (33,389)</b>	<b>\$ (31,764)</b>
<b><u>Net Assets</u></b>				
Cash	\$ 504,996	\$ 615,913	\$ 582,524	\$ 550,760
Unapportioned Receivable	1,656,184	1,500,761	1,406,963	1,313,165
Other Receivables	7,301	11,669	12,793	13,951
Less Remaining Debt Service	(2,672,542)	(2,513,832)	(2,355,292)	(2,196,924)
<b>Net Assets</b>	<b>\$ (504,061)</b>	<b>\$ (385,490)</b>	<b>\$ (353,012)</b>	<b>\$ (319,047)</b>

Note: The negative number shown as Net Assets will be offset by future collections from interest earned on the account's cash holdings, as well as by interest charged to property owners with outstanding balances (both of which accounting practices do not allow to be shown as an asset).

**Sewer Fund**

**Financial Statement**

A	B	C										R											
		F	G	H	I	J	K	L	M	N	O		P	Q									
		ACTUAL	BUDGET	PROJECTION																			
		FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021										FY12-21
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## DEBT SERVICE (\$)

	FY09	FY10	Rev. FY11	FY12
	Actual	Actual	Budget	Estimate
<b>Long-Term Debt Repayment</b>				
Principal	\$ 561,727	\$ 564,648	\$ 574,072	\$ 583,649
Interest	252,640	204,445	222,445	208,400
Debt Issuance Expense	-	-	-	-
<b>Total</b>	<b>\$ 814,367</b>	<b>\$ 769,093</b>	<b>\$ 796,517</b>	<b>\$ 792,049</b>

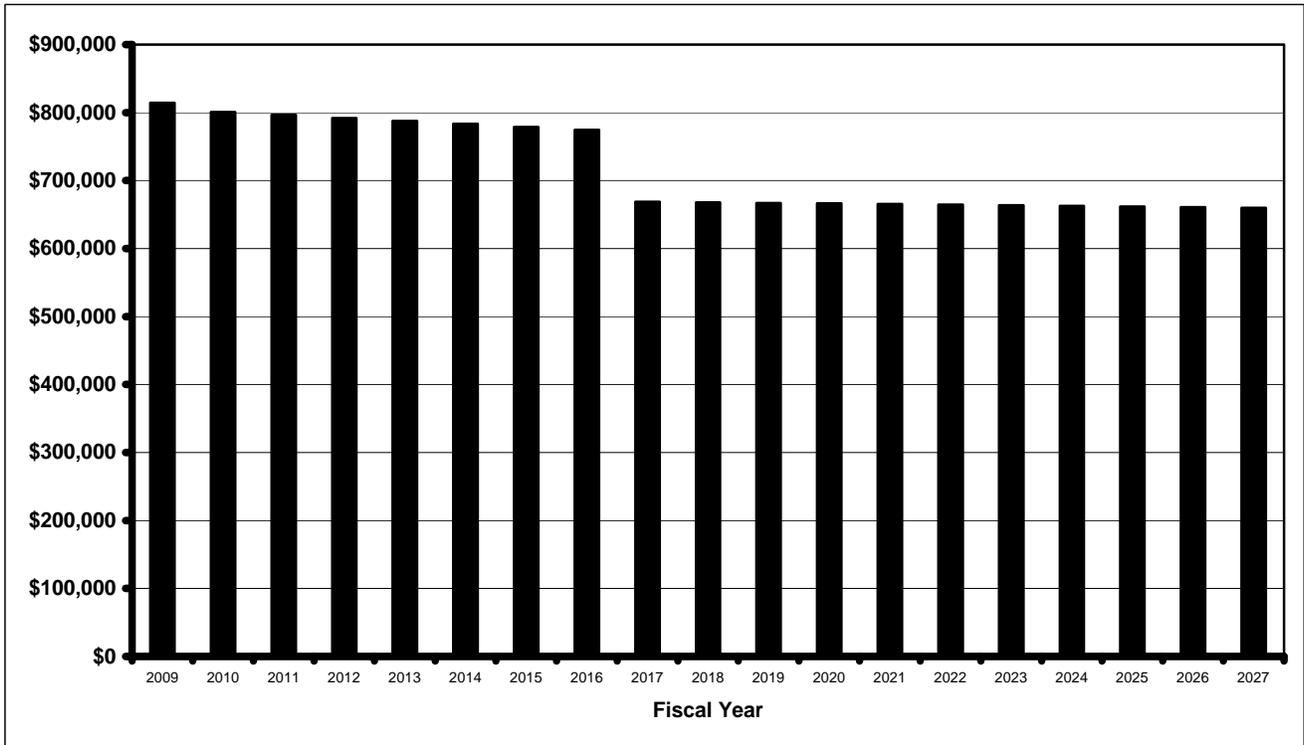
## PAYMENTS TO THE GENERAL FUND (\$)

	FY09	FY10	Rev. FY11	FY12
	Actual	Actual	Budget	Estimate
<b><u>Management &amp; Engineering</u></b>				
Highway Maintenance	\$ 3,828	\$ 3,944	\$ 4,024	\$ 4,026
133/135 Keyes Road	12,852	12,729	11,997	10,922
Public Works Engineering	16,096	16,184	15,690	16,426
Public Works Administration	27,870	28,882	29,678	29,680
<b>Subtotal</b>	<b>\$ 60,646</b>	<b>\$ 61,739</b>	<b>\$ 61,389</b>	<b>\$ 61,054</b>
<b><u>Finance &amp; Administrative</u></b>				
Town Manager	\$ 26,083	\$ 26,314	\$ 26,401	\$ 26,542
Human Resources	3,349	3,788	4,316	4,499
Town Accountant				
Accounting Services	10,352	10,858	10,806	10,855
Audit Services	6,000	6,000	6,000	6,000
Treasurer-Collector	10,684	11,078	11,521	11,663
Finance Administration	16,910	16,561	15,601	16,135
Information Systems	-	-	1,303	1,316
Town House Facility	2,961	2,987	3,495	3,482
<b>Subtotal</b>	<b>\$ 76,339</b>	<b>\$ 77,586</b>	<b>\$ 79,443</b>	<b>\$ 80,492</b>
<b><u>Natural Resources</u></b>				
Planning Administration	\$ 5,469	\$ 5,490	\$ 5,653	\$ 5,707
Natural Resource Protection	5,232	5,171	5,269	5,511
Health Department Services	26,185	25,646	26,054	26,225
<b>Subtotal</b>	<b>\$ 36,886</b>	<b>\$ 36,307</b>	<b>\$ 36,976</b>	<b>\$ 37,443</b>
Salary Reserve	-	-	-	5,638
<b>Totals</b>	<b>\$ 173,871</b>	<b>\$ 175,632</b>	<b>\$ 177,808</b>	<b>\$ 184,627</b>

**Sewer Debt Service (\$)**

*Exclusive of betterment financing*

Fiscal Year	Principal	Interest	Admin. Fees	Total
2009	561,727	237,158	15,482	\$814,367
2010	564,684	221,684	14,603	\$800,971
2011	574,072	208,546	13,899	\$796,517
2012	583,649	195,219	13,181	\$792,049
2013	593,420	181,698	12,448	\$787,566
2014	603,388	168,230	11,700	\$783,318
2015	613,557	154,461	10,938	\$778,956
2016	623,932	140,461	10,160	\$774,553
2017	534,516	124,876	9,366	\$668,758
2018	545,314	114,078	8,556	\$667,948
2019	556,331	103,062	7,730	\$667,123
2020	567,570	91,823	6,887	\$666,280
2021	579,036	80,357	6,027	\$665,420
2022	590,734	68,659	5,149	\$664,542
2023	602,668	56,725	4,254	\$663,647
2024	614,843	44,550	3,341	\$662,734
2025	627,265	32,129	2,410	\$661,804
2026	639,936	19,457	1,459	\$660,852
2027	652,865	6,529	490	\$659,884
2028	0	0	0	\$0
<b>Totals</b>	<b>\$11,229,507</b>	<b>\$2,249,700</b>	<b>\$158,079</b>	<b>\$13,637,286</b>



**FY12 Capital Plan:****COLLECTION SYSTEM****Station Structures: \$60,000**

Annual capital outlay for improvements and replacement of structures including six neighborhood lift stations and two main pump stations. The budget plan provides for the replacement of an outdated elevator/lift system within the Assabet pumping station.

**Station Equipment: \$110,000**

Annual capital outlay for improvements and replacement of equipment housed within six neighborhood lift stations and two main pump stations. This equipment is required to control, monitor, pump, store, and treat wastewater enroute to the WWTP including mechanical systems (motors, pumps, air compressors, piping, valves, etc.) and associated instrumentation and electrical systems. Specific work scheduled to be performed includes the rehabilitation of the Park Lane neighborhood sewer lift station.

**Mains (Sewer Collectors): \$10,000**

Annual capital outlay for improvements and extension to sewer collector system. The program is intended to insure that aging, deteriorating mains and appurtenances are replaced in a methodical and prudent manner. The Division will continue to coordinate system upgrades with other Town Departments to insure division needs are considered in light of other public works improvement efforts (such as Roads Program and CMLP initiatives).

**Inflow/Infiltration: \$100,000**

The wastewater treatment plant currently receives about one million gallons of sewer flow per day. Annual inflow and infiltration (I/I) activities are required to reduce groundwater and stormwater which enters the collection system through deteriorating pipes, leaking manholes or illicit stormwater connections. Sewer main replacement work is planned along the Fielding Road and Union Street area in coordination with water main and drainage system improvements.

**Meter Replacement Program: \$10,000**

Sewer fund portion (20%) of costs associated with system-wide meter replacement efforts. Investment and effort expanded in coordination with meter reading and billing system hardware and software upgrades made in concert with CMLP initiative.

**WASTE WATER TREATMENT PLANT****Structures: \$50,000**

Annual capital outlay for improvements and replacement of WWTP structures. Planned work will include an energy efficiency audit for entire WWTP facility with anticipated improvements made in accordance with findings including possible repairs to the main building roofing system.

**Equipment: \$25,000**

Annual cost to replace equipment presently in use beyond its recommended service life, including motors, pumps, motor control panels, chemical feed systems, and process instrumentation. Planned work includes replacement of the outside sump pump system, rehabilitation of plant water system and other unscheduled improvement needs.

**Wastewater Planning: \$10,000**

Ongoing support from Weston & Sampson for design and permitting activities associated with wastewater treatment expansion/enhancement interests which will likely include groundwater recharge alternatives.

**GENERAL PLANT****Keyes Road Facility: \$12,000**

Sewer Fund portion (20%) of capital outlay for improvements to Water/Sewer Administrative Office and Garage facilities.

**Vehicles: \$236,000**

Sewer Fund portion of fleet replacement costs. The Water/Sewer Fleet consists of 17 vehicles and miscellaneous service equipment such as a compressor, vacuum, etc. FY12 plan includes 80% of the replacement cost of a 3 CY Vactor truck with a 10 CY vehicle for significantly improved excavation and sewer cleaning capabilities.

**Capital Spending Plan**

<u>Capital Activities</u>	FY09 Actual	FY10 Actual	Rev. FY11 Budget	FY12 Estimate
<u>Collection System</u>				
<u>Pumping Plant</u>				
Station Structures	734	-	15,000	60,000
Station Equipment	54,465	197,141	150,000	110,000
Other	-	-	-	-
Subtotal	55,199	197,141	165,000	170,000
<u>Collection Plant</u>				
Sewer Mains/Laterals	29,013	-	10,000	10,000
Inflow & Infiltration (1)	88,904	13,538	100,000	100,000
Meter Replacement	6,937	-	9,000	10,000
Sewer Service Connections	-	-	-	-
Subtotal	124,854	13,538	119,000	120,000
<u>Wastewater Treatment Plant</u>				
Structures	3,065	131,904	100,000	50,000
Plant Equipment	7,502	16,569	35,000	25,000
Other	-	-	-	-
Facilities Plan Improvements	405,465	21,607	-	-
Capacity/Treatment Optimization	26,794	-	-	-
Personnel Services	10,833	-	-	-
Subtotal	453,659	170,080	135,000	75,000
<u>General Plant</u>				
Keyes Road CPW Facility	399	-	7,000	12,000
Harris System/GIS	-	-	-	-
Vehicle Replacement	10,322	-	11,000	236,000
Miscellaneous Equipment	-	-	16,000	-
Personnel Services	9,214	-	-	-
Subtotal	19,935	-	34,000	248,000
<u>Wastewater Management Project</u>				
Wastewater Planning (1)	28,002	-	175,000	10,000
Phase I Construction Cost	-	-	-	-
Subtotal	28,002	-	175,000	10,000
<u>Audit Adjustments</u>				
Audit Adjustment (Other)	-	1,625	-	-
Subtotal	-	1,625	-	-
<b>Total</b>	<b>\$ 681,649</b>	<b>\$ 382,384</b>	<b>\$ 628,000</b>	<b>\$ 623,000</b>
<b>Funding the Capital Plan</b>				
From Debt	\$ -	\$ -	\$ -	\$ -
From Sewer Fund Resources	\$ 681,649	\$ 382,384	\$ 628,000	\$ 623,000
Total	\$ 681,649	\$ 382,384	\$ 628,000	\$ 623,000

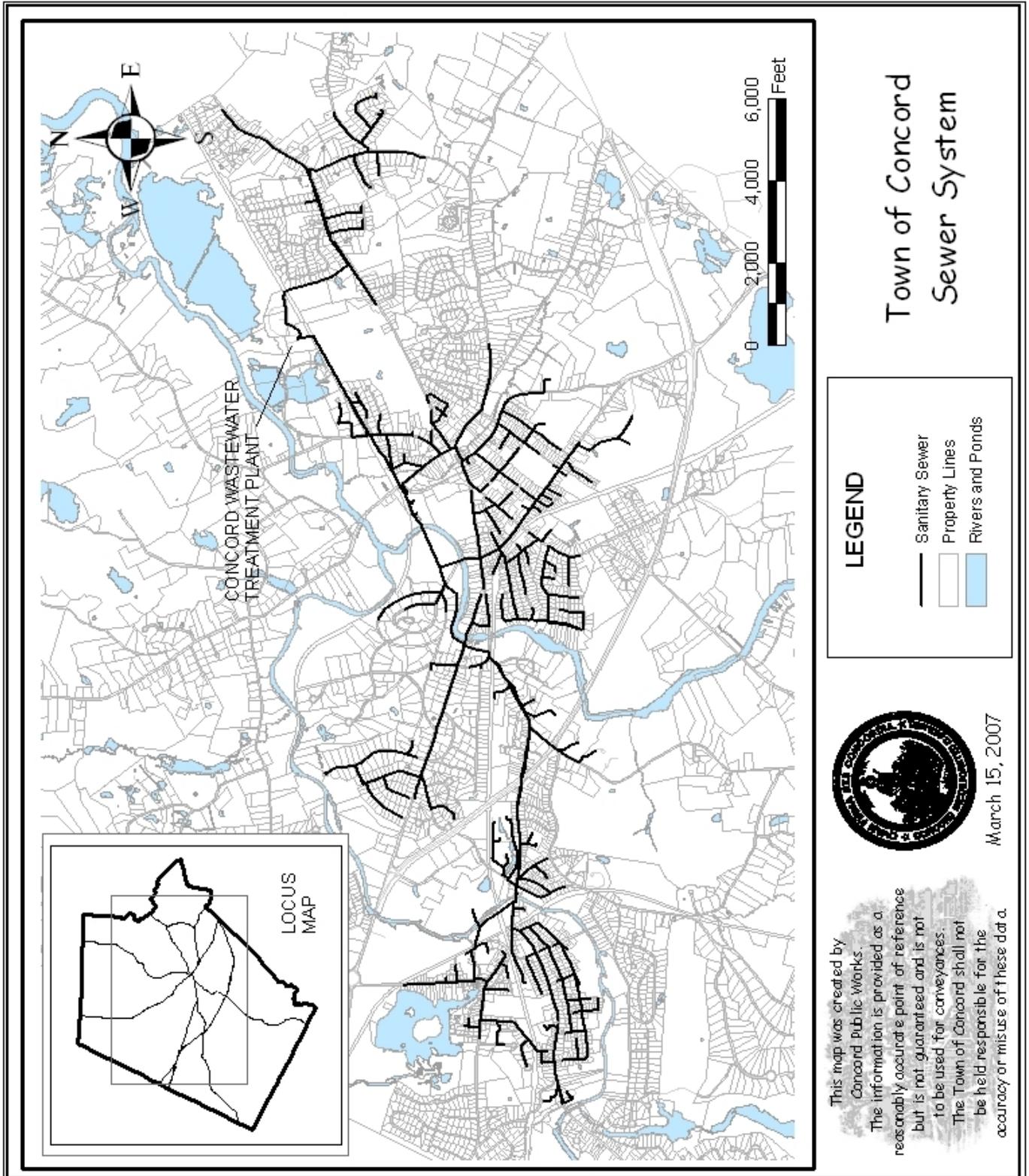
(1) Currently charged 100% to the Sewer Improvement Fund

**SEWER RATES**

(Per 100 Cubic Feet)

<b>Class of Customer</b>	<b>Current FY11</b>	<b>Proposed FY12</b>	<b>%Chg.</b>
<b>S-11</b> (1 unit = 100 cubic feet = 748 gallons)			
1 <b>Residential Service</b> Rate billed year around but uses wintertime average consumption for non-wintertime months.	\$ 8.76	\$ 9.20	5%
2 <b>Non-Residential Service</b> Rate billed year around using actual readings for each billing period.	\$ 8.76	\$ 9.20	5%

<b>Sample Impacts</b>	<b>Current Annual</b>	<b>Proposed Annual</b>	<b>Annual Change</b>	<b>Monthly Change</b>	<b>% Chg.</b>
1 <b>Average Residential Customer</b> (17 units bimonthly wintertime use)	\$ 876	\$ 920	\$ 44.00	\$ 3.67	5%
2 <b>Typical Non-Residential Customer</b> (18 cubic feet bimonthly)	\$ 946	\$ 994	\$ 47.52	\$ 3.96	5%



This map was created by Concord Public Works. The information is provided as a reasonably accurate point of reference but is not guaranteed and is not to be used for conveyances. The Town of Concord shall not be held responsible for the accuracy or misuse of these data.



March 15, 2007

LEGEND

- Sanitary Sewer
- Property Lines
- Rivers and Ponds

Town of Concord  
Sewer System

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