

**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.

**Sewer Fund Budget Contents**

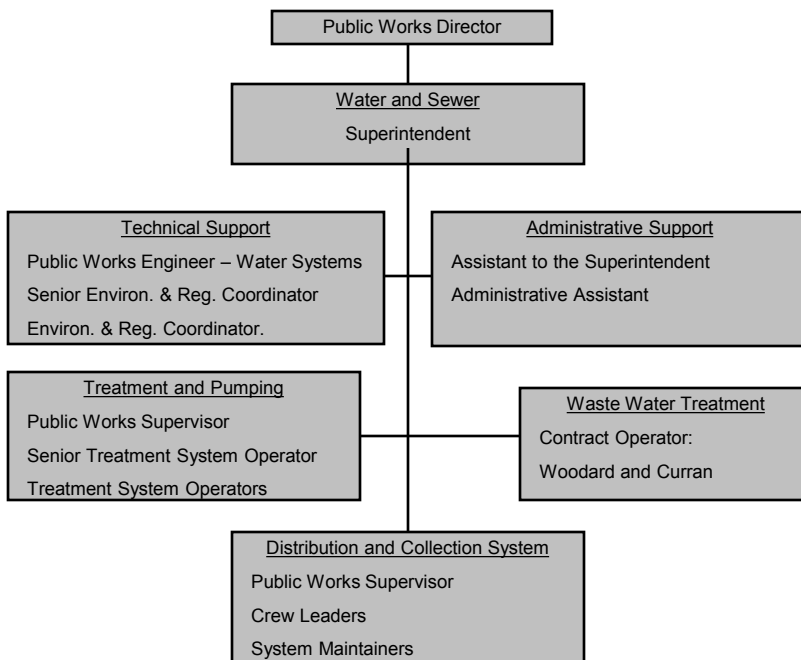
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**Highlights**

- The proposed FY13 sewer rate of \$9.66 per unit represents a 5% increase over the FY12 rate of \$9.20 per unit.
- The proposed FY13 capital improvement plan is \$859,000.
- Wastewater treatment capacity limitations imposed by Federal and State permits continue to represent a significant challenge to meeting the growing needs of the community, The FY13 budget includes a plan to move forward on permitting and design for groundwater discharge at the existing wastewater treatment site.
- The proposed FY13 operating budget is \$3,210,099, an increase of 0.9% over that of FY12.

<b>Expenditure Summary</b>				
	FY10 Actual	FY11 Actual	FY12 Budgeted	FY13 Proposed
Operating Income	\$ (975,637)	\$ (951,488)	\$ (818,610)	\$ (772,884)
Net Income	\$(1,046,499)	\$ (844,620)	\$ (333,075)	\$ (929,465)
Undesignated Fund Balance	\$ 3,311,505	\$ 3,603,695	\$ 3,383,867	\$ 2,690,214

See page V-9 for greater detail on income and fund balance results.



**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 2011 the total value of collection system and treatment plant infrastructure assets was approximately 24.1 million dollars.

The municipal sewer system serves over 1,825 residential and commercial customers representing approximately 33% of the community. The wastewater treatment facility continues to process over 1.0 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.

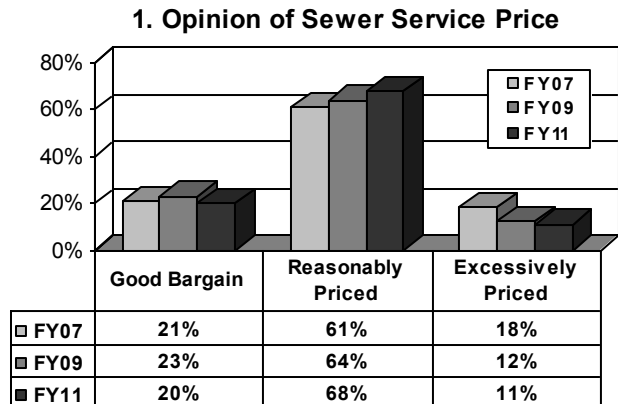
Since the sewer enterprise fund was formally established in 1976, there have been no property tax contributions to subsidize pre-existing operations or infrastructure improvements. Taxpayer support has been sought through Town Meeting for projects which have been designed to expand the sewer collection 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.”

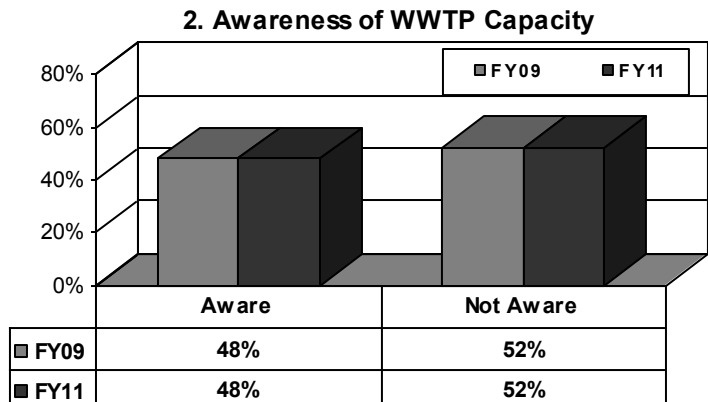


**2. Are you aware that the wastewater treatment plant is nearing capacity and that this may limit the ability of sewer services to be expanded in the future?**

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.



Sewer Rates:

The total revenue projected to be raised through sewer rates in FY 2013 is: **\$2,320,000**. This represents 95% of total Sewer Fund 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

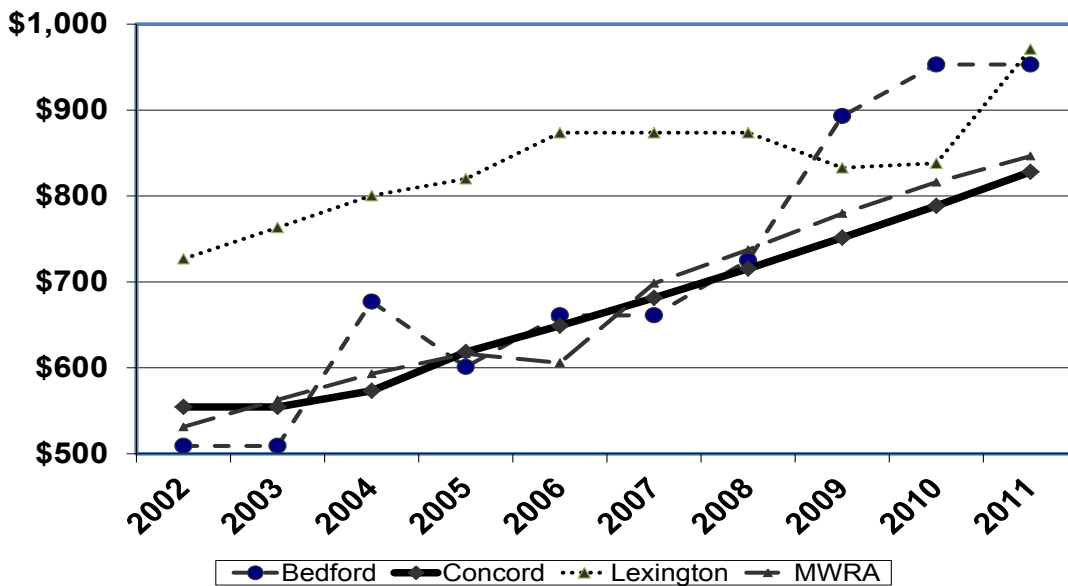
*The proposed FY13 sewer rate is \$9.66 per unit (1 unit = 748 gallons) which represents a 5% increase over the FY12 rate.*

- Summer/fall residential sewer usage is billed at the level of winter/spring water consumption to eliminate the effect of seasonal outdoor water use.
- Non-residential sewer billing is based on water use year-round.
- The proposed septage rate is \$0.078 per gallon which represents a 1.3% increase from FY 2012.

**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 3% of systems across the state.

**Average Annual Residential Sewer Bill**



**Discussion:** This table demonstrates how rate adjustments (and cost of service) over time have impacted Concord and three neighboring systems.

**Wastewater services and treatment** needs continue to receive a significant amount of attention, 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.



Clarifier Repairs

**Wastewater Planning:** Following the December 2007 release of the report “Status of Municipal Wastewater Treatment in Concord, MA, Article 41 was passed at the 2009 Town meeting supporting the need for the Town to conduct a “Wastewater Planning Capacity Study”. This study was designed to investigate wastewater treatment and capacity management alternatives (including continued conservation measures) to accommodate wastewater flows above and beyond those flows necessary to meet existing requirements resulting from development and re-development under current zoning for increased flows of up to 600,000 gallons per day. This planning volume represents the maximum projected wastewater flow associated with objectives referenced in a number of land-use planning reports quantified in the Wastewater Planning Task Force (WWPTF) Summary Report dated February 2009.

In keeping with this need, Weston & Sampson (Peabody MA) was retained and, working with the WWPTF, has identified a number of wastewater capacity management alternatives which could be pursued. Presently, it is clear that there is no one obvious or feasible alternative which will meet short-term and long-term needs. Of all the alternatives evaluated, the following two represent the most advantageous, based on existing conditions.

- **NPDES Permit Increase:** The Town must explore the option for seeking an increase to the existing permitted flow limit at the existing wastewater treatment plant. It is recognized that such requests have historically received significant resistance from watershed advocates and state or federal regulatory agencies
- **Groundwater Recharge at the WWTP site:** Weston & Sampson has completed a preliminary evaluation of a potential site located at the Wastewater Treatment Plant (WWTP). After performing a preliminary assessment of all the land associated with the WWTP, they have targeted their in-depth evaluation on the area where the former sand beds had been maintained for wastewater polishing. While such an option has a good potential for permitting success, the capacity will be limited to 100,000 to 200,000 gallons per day, satisfying only a portion of identified needs. Permitting and construction costs are being evaluated to determine the cost benefit of such an alternative.

**Pumping Station Equipment/Structures:** Aqua Line Utility, Inc. (E. Bridgewater, MA) received the construction contract to rehabilitate the Park Lane and Gifford lane sewer ejector stations. The scope of work included installation of emergency bypass systems and reconditioning of the subsurface chambers along with the integration of newer, more efficient and more easily maintained submersible pumping systems.

**Sewer Main Replacement:** In concert with the annual water main replacement project, Fenton & Sons replaced 1,194 feet of existing 6-inch clay sewer pipe with 8-inch PVC sewer pipe along Hubbard, Willow, Fielding and Union Streets. Work included replacement of services to newly established cleanouts located near property lines.

**Sewer Modeling Effort:** Black and Veatch Consulting Engineers (Burlington, MA) completed the development of a sewer collection system model. This model can now be used to assist staff in prioritizing ongoing inflow/infiltration analysis and to identify collection system carrying-capacity constraints and needs.

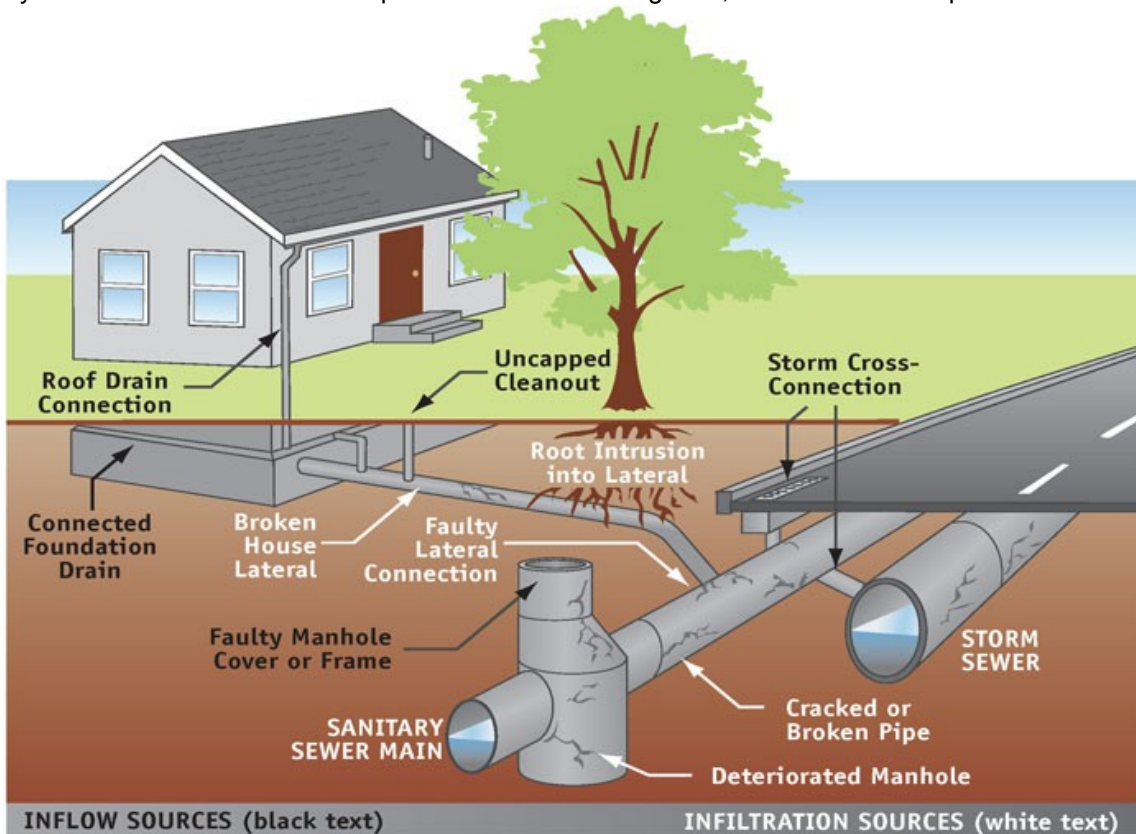
**Wastewater Treatment Facility:** Woodard & Curran, Inc. continues to operate the Town's Wastewater Treatment Plant (WWTP), located off Bedford Street, under the supervision of the Water and Sewer Division. The plant maintains excellent compliance with its regulatory requirements, in accordance with state and federally issued permits. In December of 2011, Woodard & Curran was awarded a new service contract for up to 10 years which will allow them to continue to provide quality operations and maintenance of this facility.

**Wastewater Flow Excursion:** Unusually high groundwater levels have been recorded over an extended period of time throughout much of the region since the flood of March 2010. As noted below, high groundwater directly impacts infiltration rates into the wastewater collection system. This past year, the result of this unusual condition has been increased flow being handled at the wastewater treatment plant. While the quality of discharge has not been adversely impacted, a 12-month rolling average flow permit limit has been exceeded. It is expected that this occurrence will likely result in additional regulatory scrutiny.

Notable maintenance and improvement activities performed at the WWTP over the past year included the rehabilitation of secondary clarifier unit #1 and trickling filter unit #1 including the refurbishing (sandblasting/coating) of the mechanical system; the rehabilitation of 1 of 4 existing primary scum plunger pumps, replacement of dampeners on both of 2 existing sludge pumps and replacement of two yard hydrants.

## 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 goal 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

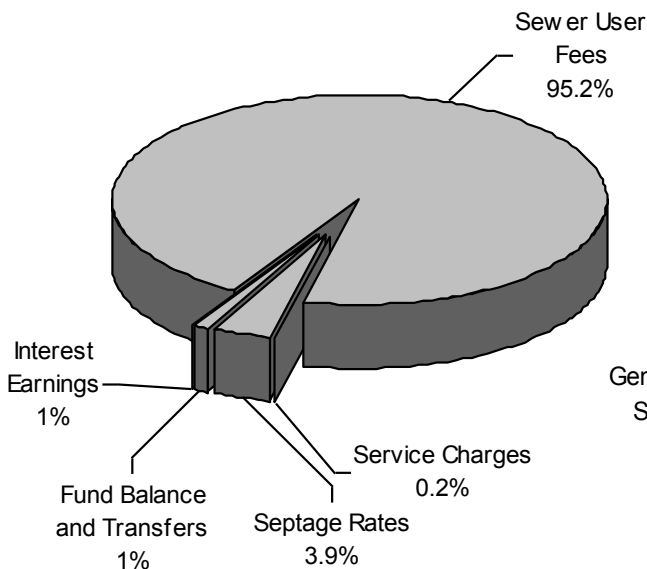


Program Implementation:

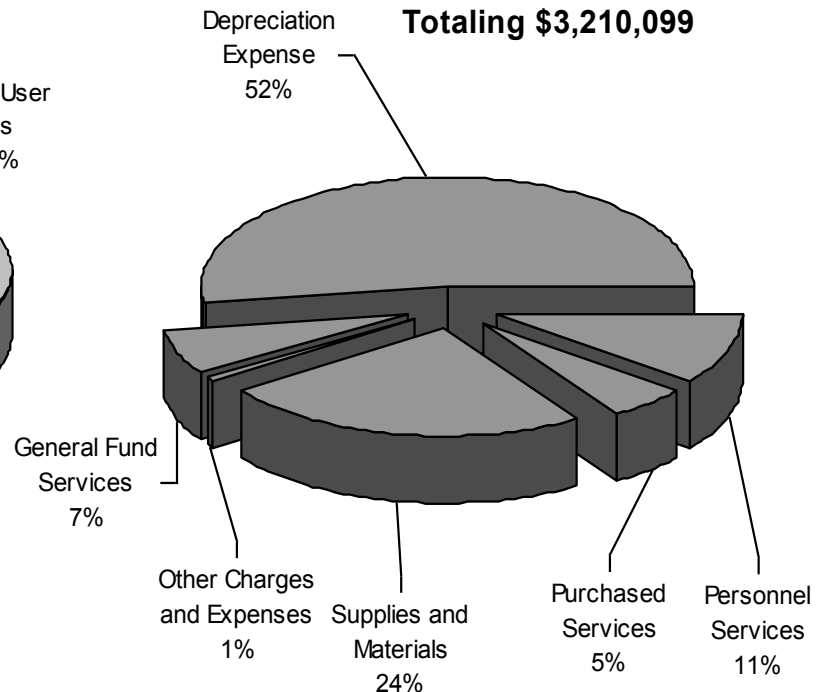
The proposed fiscal year 2013 operating budget is \$3,210,099. This represents a 0.9% increase as compared to the sewer fund’s revised FY12 operating budget. Depreciation expense reflects the cost of the annual use, or wear-and-tear, of the Sewer Division’s approximately \$24.1 million worth of infrastructure (as of the end of FY11). The FY13 budgeted depreciation expense, totaling \$1,688,232 therefore reflects a depreciation of roughly 6.6% of these capital assets in FY13. Personnel Services are budgeted at \$363,615 in FY13, a 3.1% increase from the revised FY12 total of \$352,776.

The FY13 budget proposes a 5.4% increase in wastewater collection costs and a 7.0% increase in wastewater treatment costs. 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 requirements and funding contract operation services presently provided by Woodard & Curran. Concord’s 5-year NPDES permit is presently under review by EPA and DEP and will be re-issued in the near future. While the Sewer Division has met with regulatory personnel, it is too early to predict what, if any, changes will be made to this permit. Any reduction in water quality limits will result in increased costs for chemicals, electricity and sludge management.

**Operating Revenues**  
**Totalling \$2,437,215**



**Operating Expenses**  
**Totalling \$3,210,099**



Operating Income:

This FY13 Budget calls for Operating Expenditures that are \$772,884 above Operating Revenues. This results in an operating loss for the year. However, by FY20, Net Operating Income turns positive 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).

<b>OPERATING REVENUES</b>				
	FY10	FY11	Rev. FY12	FY13
	Actual	Actual	Budget	Budget
Sewer User Fees	\$ 2,028,274	\$ 2,027,829	\$ 2,248,000	\$ 2,320,000
Service Charges	3,300	2,450	5,000	5,000
Septage Rates	106,318	105,612	92,000	94,000
Liens & Tax Titles	8,725	15,215	15,215	15,215
Other Revenue	3,536	2,969	3,000	3,000
<b>Operating Revenues Total</b>	<b>\$ 2,150,153</b>	<b>\$ 2,154,075</b>	<b>\$ 2,363,215</b>	<b>\$ 2,437,215</b>
<b>OPERATING EXPENSES</b>				
<b><u>Sewer Divisions</u></b>	FY10	FY11	Rev. FY12	FY13
<b><u>Collection</u></b>	Actual	Actual	Budget	Budget
Personnel Services	\$ 263,991	\$ 254,862	\$ 298,762	\$ 315,088
Purchased Services	138,158	116,566	125,151	134,530
Supplies & Materials	31,739	38,432	45,117	46,149
Other Charges & Expenses	34,337	13,516	17,044	17,919
General Fund Services	87,816	88,252	91,900	95,551
Audit Adjustments	(1,626)	32,479	-	-
<b>Subtotal</b>	<b>\$ 554,415</b>	<b>\$ 544,107</b>	<b>\$ 577,974</b>	<b>\$ 609,237</b>
<b><u>Treatment</u></b>				
Personnel Expenses	\$ 48,457	\$ 82,439	\$ 54,014	\$ 48,527
Purchased Services	20,616	4,066	8,000	30,000
Management Contract	692,224	668,987	699,041	738,551
Supplies & Materials	-	-	-	-
Other Charges & Expenses	-	-	-	-
General Fund Services	87,816	88,253	91,900	95,552
<b>Subtotal</b>	<b>\$ 849,113</b>	<b>\$ 843,745</b>	<b>\$ 852,955</b>	<b>\$ 912,630</b>
<b><u>Other</u></b>				
Depreciation Expense	1,722,262	1,717,711	1,750,896	1,688,232
Capital Reserve	-	-	-	-
<b>Subtotal</b>	<b>\$ 1,722,262</b>	<b>\$ 1,717,711</b>	<b>\$ 1,750,896</b>	<b>\$ 1,688,232</b>
<b>Total Operating Expense</b>	<b>\$ 3,125,790</b>	<b>\$ 3,105,563</b>	<b>\$ 3,181,825</b>	<b>\$ 3,210,099</b>

**AUTHORIZED POSITIONS**

<b>Collection Personnel Costs</b>	<b>Rev. FY12 Budget</b>		<b>FY13 Budget</b>	
	<b>Positions/Hours</b>	<b>\$ Amount</b>	<b>Positions/Hours</b>	<b>\$ Amount</b>
<b>Regular Staff</b>				
Water and Sewer Superintendent	0.20 FTEs	\$ 20,698	0.20 FTEs	\$ 20,708
Assistant to Superintendent	0.20	15,840	0.20	15,840
Senior Env. & Reg. Coordinator	0.20	13,486	0.20	13,486
Env. & Reg. Coordinator	0.00	-	0.20	10,250
Administrative Assistant	0.20	10,910	0.20	10,170
Public Works Supervisor	0.40	29,026	0.40	29,451
Crew Leader	0.40	24,308	0.40	24,651
Senior Treatment System Operator	0.00	11,665	0.20	12,181
Treatment System Operator	0.60	20,518	0.40	20,792
System Maintainer	1.00	45,424	1.00	45,934
Charges to Projects	N/A	(5,177)	N/A	(5,177)
<b>Subtotal</b>	<b>3.20 FTEs</b>	<b>\$ 186,698</b>	<b>3.40 FTEs</b>	<b>\$ 198,286</b>
<b>Other Personnel</b>				
GIS Project Specialist	312 hrs.	5,460	208 hrs.	4,004
<b>Subtotal</b>	<b>0.15 FTEs</b>	<b>\$ 5,460</b>	<b>0.10 FTEs</b>	<b>\$ 4,004</b>
<b>Employee Benefits</b>				
Health Insurance	N/A	\$ 15,290	N/A	\$ 15,290
Life Insurance	N/A	100	N/A	100
Dental Insurance	N/A	755	N/A	755
OPEB	N/A	18,625	N/A	20,342
Retirement Contribution	N/A	8,836	N/A	9,039
<b>Subtotal</b>	<b>N/A</b>	<b>\$ 43,606</b>	<b>N/A</b>	<b>\$ 45,526</b>
<b>Payroll Taxes</b>				
Medicare Tax	N/A	\$ 2,500	N/A	\$ 3,500
Social Security Contribution	N/A	-	N/A	-
<b>Subtotal</b>	<b>N/A</b>	<b>\$ 2,500</b>	<b>N/A</b>	<b>\$ 3,500</b>
<b>Other Personnel Costs</b>				
Overtime (5130)	800 hrs.	\$ 32,596	800 hrs.	\$ 35,865
Overtime Adjustment	N/A	\$ 4,700	N/A	\$ 1,040
Police Overtime (5131)	90 hrs.	3,600	90 hrs.	3,600
Standby Pay (5111)	565 hrs.	18,999	680 hrs.	12,870
Charges to Snow Account	40 hrs.	(1,011)	40 hrs.	(1,011)
IT Salary (5111)	N/A	1,614	N/A	1,567
Salary Adjustments (4.0%)	N/A	-	N/A	9,842
<b>Subtotal</b>	<b>N/A</b>	<b>\$ 60,498</b>	<b>N/A</b>	<b>\$ 63,772</b>
<b>Total Collections</b>	<b>3.35 FTEs</b>	<b>\$ 298,762</b>	<b>3.50 FTEs</b>	<b>\$ 315,088</b>
<b>Treatment Personnel Costs</b>				
Public Works Engineer	0.80 FTEs	\$ 52,694	0.80 FTEs	\$ 52,694
Other Full-Time	N/A	7,700	N/A	-
Charge to Capital Projects	N/A	(9,880)	N/A	(9,880)
Salary Adjustments (2%)	N/A	-	N/A	1,713
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	1,000
<b>Total Treatment</b>	<b>0.80 FTEs</b>	<b>\$ 54,014</b>	<b>0.80 FTEs</b>	<b>\$ 48,527</b>
<b>Total Sewer Personnel</b>	<b>4.15 FTEs</b>	<b>\$ 352,776</b>	<b>4.30 FTEs</b>	<b>\$ 363,615</b>



**NET INCOME**

	FY10 Actual	FY11 Actual	Rev. FY12 Budget	FY13 Budget
<b>Statement of Net Income:</b>				
Operating Revenues	\$ 2,150,153	\$ 2,154,075	\$ 2,363,215	\$ 2,437,215
Less Operating Expenses	(3,125,790)	(3,105,563)	(3,181,825)	(3,210,099)
<b>Operating Income</b>	<b>\$ (975,637)</b>	<b>\$ (951,488)</b>	<b>\$ (818,610)</b>	<b>\$ (772,884)</b>
<b>Non-operating Revenues (Expenses)</b>				
Add Investment Income	\$ 19,847	\$ 12,242	\$ 9,935	\$ 8,565
Add CoMag Incentive Payments	-	133,045	655,000	-
Add Sewer Improvement Revenues	113,736	148,190	29,000	29,000
Less Int. Exp and Admin. Fees	(204,445)	(186,609)	(208,400)	(194,146)
<b>Non-operating Income</b>	<b>\$ (70,862)</b>	<b>\$ 106,868</b>	<b>\$ 485,535</b>	<b>\$ (156,581)</b>
<b>Net Income</b>	<b>\$ (1,046,499)</b>	<b>\$ (844,620)</b>	<b>\$ (333,075)</b>	<b>\$ (929,465)</b>

Note: FY11 Net Income of \$(844,620) plus Sewer Betterment income of \$212,753 equals the change in net assets of \$(631,867) seen in the FY11 Audited Financial Statements.

**AVAILABLE RESOURCES**

<b>Resources Available from Current Operations for Replacement &amp; Renewal of Facility:</b>				
	FY10 Actual	FY11 Actual	Rev. FY12 Budget	FY13 Budget
<b>Capital Purposes</b>				
Add Depreciation Expense	\$ 1,722,262	\$ 1,717,711	\$ 1,750,896	\$ 1,688,232
Add Net Income	(1,046,499)	(844,620)	(333,075)	(929,465)
Less Bonds Payable	(564,684)	(574,072)	(583,649)	(593,420)
<b>Net Available for Capital</b>	<b>\$ 111,079</b>	<b>\$ 299,019</b>	<b>\$ 834,172</b>	<b>\$ 165,347</b>

Note: Net Available for Capital does not include funds available in the Sewer Improvement Fund

**CASH POSITION AND FUND BALANCE FORECAST**

<b>Cash at Year Opening</b>	<b>FY12</b>		<b>FY13</b>	
	Operating Fund	Depreciation Fund	Operating Fund	Depreciation Fund
<b>Cash on July 1st</b>	\$ 3,421,709		\$ 3,201,881	
Add Receivables	458,286		458,286	
Less Cash held for Liabilities	(276,301)		(276,301)	
<b>Fund Balance on July 1st</b>	<b>\$ 3,603,695</b>		<b>\$ 3,383,867</b>	
<b>Fund Balance Details (projected)</b>	Operating Fund	Depreciation Fund	Operating Fund	Depreciation Fund
Fund Balance on July 1st	\$ (200,725)	\$ 3,804,420	\$ -	\$ 3,383,867
Net Income	(333,075)	-	(929,465)	-
Bonds Payable	(583,649)	-	(593,420)	-
Capital Outlay (non-borrowing)	-	(1,054,000)	-	(859,000)
Interfund Transfer	1,117,449	(1,117,449)	1,522,885	(1,522,885)
Add Depreciation Expense	-	1,750,896	-	1,688,232
Balance Projected at June 30th	-	3,383,867	-	2,690,214
<b>Fund Balance on June 30th</b>	<b>\$ 3,383,867</b>		<b>\$ 2,690,214</b>	
<b>Cash at Year End (projected)</b>				
Fund Balance on June 30th	\$ 3,383,867		\$ 2,690,214	
Less Receivables	(458,286)		(458,286)	
Add Cash Held for Liabilities	276,301		276,301	
<b>Projected Cash at June 30th</b>	<b>\$ 3,201,881</b>		<b>\$ 2,508,228</b>	
<b>Sewer Improvement Fund Cash</b>	<b>\$ 1,897,260</b>		<b>\$ 1,326,260</b>	
<b>Unrestricted Cash</b>	<b>\$ 1,304,621</b>		<b>\$ 1,181,968</b>	

**Sewer Improvement Fund**

	FY10		FY11		Rev. FY12		FY13	
	Actual		Actual		Budget		Budget	
<b>Cash on July 1st</b>	\$	1,957,632	\$	2,054,748	\$	2,123,260	\$	1,897,260
Revenues		113,736		148,190		29,000		29,000
Expenditures		(16,619)		(79,677)		(255,000)		(600,000)
Adjustment		-		-		-		-
<b>Cash on June 30th</b>	<b>\$</b>	<b>2,054,749</b>	<b>\$</b>	<b>2,123,260</b>	<b>\$</b>	<b>1,897,260</b>	<b>\$</b>	<b>1,326,260</b>
<b>Net Activity</b>	<b>\$</b>	<b>97,116</b>	<b>\$</b>	<b>68,512</b>	<b>\$</b>	<b>(226,000)</b>	<b>\$</b>	<b>(571,000)</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**

	FY10		FY11		Rev. FY12		FY13	
	Actual		Actual		Budget		Budget	
<b>Activity</b>								
<b>Cash at July 1st</b>	\$	504,996	\$	616,320	\$	682,728	\$	639,362
Cash Received		270,034		224,948		115,002		113,082
Cash Expended		(158,710)		(158,540)		(158,368)		(158,192)
<b>Cash at June 30th</b>	<b>\$</b>	<b>616,320</b>	<b>\$</b>	<b>682,728</b>	<b>\$</b>	<b>639,362</b>	<b>\$</b>	<b>594,252</b>
<b>Net Activity</b>	<b>\$</b>	<b>111,324</b>	<b>\$</b>	<b>66,406</b>	<b>\$</b>	<b>(43,366)</b>	<b>\$</b>	<b>(45,110)</b>
<b>Net Assets</b>								
Cash	\$	616,320	\$	682,728	\$	639,362	\$	594,252
Unapportioned Receivable		1,500,761		1,316,680		1,228,901		1,141,122
Other Receivables		11,261		14,929		16,087		17,280
Less Remaining Debt Service		(2,513,832)		(2,355,292)		(2,196,924)		(2,038,732)
<b>Net Assets</b>	<b>\$</b>	<b>(385,490)</b>	<b>\$</b>	<b>(340,956)</b>	<b>\$</b>	<b>(312,575)</b>	<b>\$</b>	<b>(286,078)</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

# Revenues and Expenditures

Sewer Fund: Plan and Projection	BUDGET										10 years		
	ACTUAL FY 2011	FY 2012	PROJECTION FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY13-22
<b>Operating Revenue</b>	2,027,829	2,248,000	2,320,000	2,444,000	2,575,000	2,713,000	2,859,000	3,012,000	3,173,000	3,343,000	3,521,000	3,710,000	29,670,000
User Fees	126,246	115,215	117,215	119,215	120,215	122,215	124,215	126,215	128,215	131,216	133,216	135,216	1,257,153
Other	2,154,075	2,363,215	2,437,215	2,563,215	2,695,215	2,835,215	2,983,215	3,138,215	3,301,215	3,474,216	3,654,216	3,845,216	30,927,153
<b>Operating Expense</b>	1,387,852	1,430,929	1,521,867	1,568,337	1,616,257	1,665,677	1,716,644	1,769,210	1,823,427	1,879,351	1,937,038	1,996,547	17,494,356
O & M	1,717,711	1,750,896	1,688,232	1,582,329	1,638,729	1,699,150	1,699,150	1,652,192	1,598,385	993,189	1,005,636	987,972	14,542,496
Depreciation	3,105,563	3,181,825	3,210,099	3,150,666	3,254,986	3,362,359	3,415,794	3,421,401	3,421,812	2,872,541	2,942,674	2,984,519	32,036,852
Subtotal	-951,488	-818,610	-772,884	-587,451	-559,771	-527,144	-432,579	-283,186	-120,597	601,675	711,542	860,697	-1,109,699
<b>Operating Income</b>	12,242	9,935	8,565	12,400	13,654	12,566	16,940	23,041	33,197	47,541	67,158	93,408	328,470
ADD: Interest Income	133,045	655,000	0	0	0	0	0	0	0	0	0	0	0
Co-Mag Incentive Payments	148,189	29,000	29,000	29,000	158,000	155,000	152,000	149,000	146,000	143,000	140,000	137,000	1,238,000
Sewer Improvement Fees	186,609	208,400	194,146	179,930	165,399	150,621	134,242	122,634	110,792	98,710	86,384	73,808	1,316,666
LESS: Interest Expense	0	0	0	0	0	5,000	129,750	123,250	116,750	110,250	103,750	97,250	686,000
Existing Debt	0	0	0	0	0	25,000	0	0	0	0	0	0	25,750
New Debt	0	0	0	0	750	25,000	0	0	0	0	0	0	0
Bond Anticipation Notes (BANs)	0	0	0	0	0	0	0	0	0	0	0	0	0
Issuance expense	0	0	0	100	3,500	25,000	0	0	0	0	0	0	28,600
<b>Net Income</b>	-844,621	-333,075	-929,465	-726,081	-557,766	-585,200	-527,631	-357,029	-168,942	583,256	728,566	920,047	-1,600,245
<b>Available Resources from:</b>	-844,621	-333,075	-929,465	-726,081	-557,766	-585,200	-527,631	-357,029	-168,942	583,256	728,566	920,047	-1,600,245
Net income	1,717,711	1,750,896	1,688,232	1,582,329	1,638,729	1,696,683	1,699,150	1,652,192	1,598,385	993,189	1,005,636	987,972	14,542,496
Depreciation expense	873,090	1,417,821	758,767	856,249	1,080,962	1,131,483	1,171,519	1,295,163	1,429,443	1,576,446	1,734,202	1,908,019	12,942,251
subtotal	79,677	255,000	600,000	103,000	1,407,000	111,000	115,000	119,000	123,000	127,000	131,000	135,000	2,600,000
Funds Provided by Improvement Fees	574,072	583,649	593,420	603,388	613,557	623,932	534,516	545,314	556,331	567,570	579,036	590,734	5,807,798
Bond proceeds	0	0	0	0	0	5,000	130,000	130,000	130,000	130,000	130,000	130,000	785,000
Loan proceeds	0	0	0	0	0	2,500,000	0	0	0	0	0	0	2,600,000
LESS: Principal repayments	378,695	1,089,172	765,347	455,861	4,374,405	613,551	622,003	738,849	866,112	1,005,876	1,156,166	1,322,285	8,949,453
Existing Debt	148,011	1,054,000	859,000	409,000	4,230,000	367,000	444,000	319,000	319,000	338,000	343,000	355,000	7,983,000
New Debt	0	0	0	0	0	0	0	0	0	0	0	0	0
BAN Repayment	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Net Available for Capital Purposes</b>	3,320,659	3,421,709	3,201,881	2,508,228	2,452,089	1,189,494	1,325,045	1,388,048	1,688,896	2,113,008	2,653,884	3,336,050	7,983,000
<b>Capital Plan</b>	3,320,659	3,421,709	3,201,881	2,508,228	2,452,089	1,189,494	1,325,045	1,388,048	1,688,896	2,113,008	2,653,884	3,336,050	7,983,000
<b>Cash Position</b>	3,320,659	3,421,709	3,201,881	2,508,228	2,452,089	1,189,494	1,325,045	1,388,048	1,688,896	2,113,008	2,653,884	3,336,050	7,983,000
Beginning balance	378,695	1,089,172	765,347	455,861	4,374,405	613,551	622,003	738,849	866,112	1,005,876	1,156,166	1,322,285	8,949,453
ADD: Net available	148,011	1,054,000	859,000	409,000	4,230,000	367,000	444,000	319,000	319,000	338,000	343,000	355,000	7,983,000
LESS: Planned Capital	79,677	255,000	600,000	103,000	1,407,000	111,000	115,000	119,000	123,000	127,000	131,000	135,000	2,971,000
Sewer Improvement Fee Support	49,957	0	0	0	0	0	0	0	0	0	0	0	0
Cash Flow Adjustment	3,421,709	3,201,881	2,508,228	2,452,089	1,189,494	1,325,045	1,388,048	1,688,896	2,113,008	2,653,884	3,336,050	4,168,335	0
Ending balance	2,123,261	1,897,261	1,326,261	1,252,261	3,261	47,261	84,261	114,261	137,261	153,261	162,261	164,261	0
Sewer Improvement Fund Balance (included in Ending Balance)	1,298,448	1,304,621	1,181,968	1,199,828	1,186,233	1,277,784	1,303,787	1,574,636	1,975,748	2,500,623	3,173,789	4,004,074	0
Ending balance w/o Sewer Improvement													

## DEBT SERVICE

<b>Cash Basis</b>	FY10 Actual	FY11 Actual	FY12 Rev. Budget	FY13 Budget
Long Term Debt Repayment:				
Principal	\$ 564,684	\$ 574,072	\$ 583,649	\$ 593,420
Interest	221,684	208,546	195,219	181,698
BAN Interest Expense	-	-	-	-
Administration Fee (WPAT)	14,603	13,899	13,181	12,448
<b>Totals</b>	<b>\$ 800,971</b>	<b>\$ 796,517</b>	<b>\$ 792,049</b>	<b>\$ 787,566</b>

Note: The Debt Schedule above and on the facing page does not account for Accrual periods across fiscal years, and so differs from the Town's Audited Financial Statements.

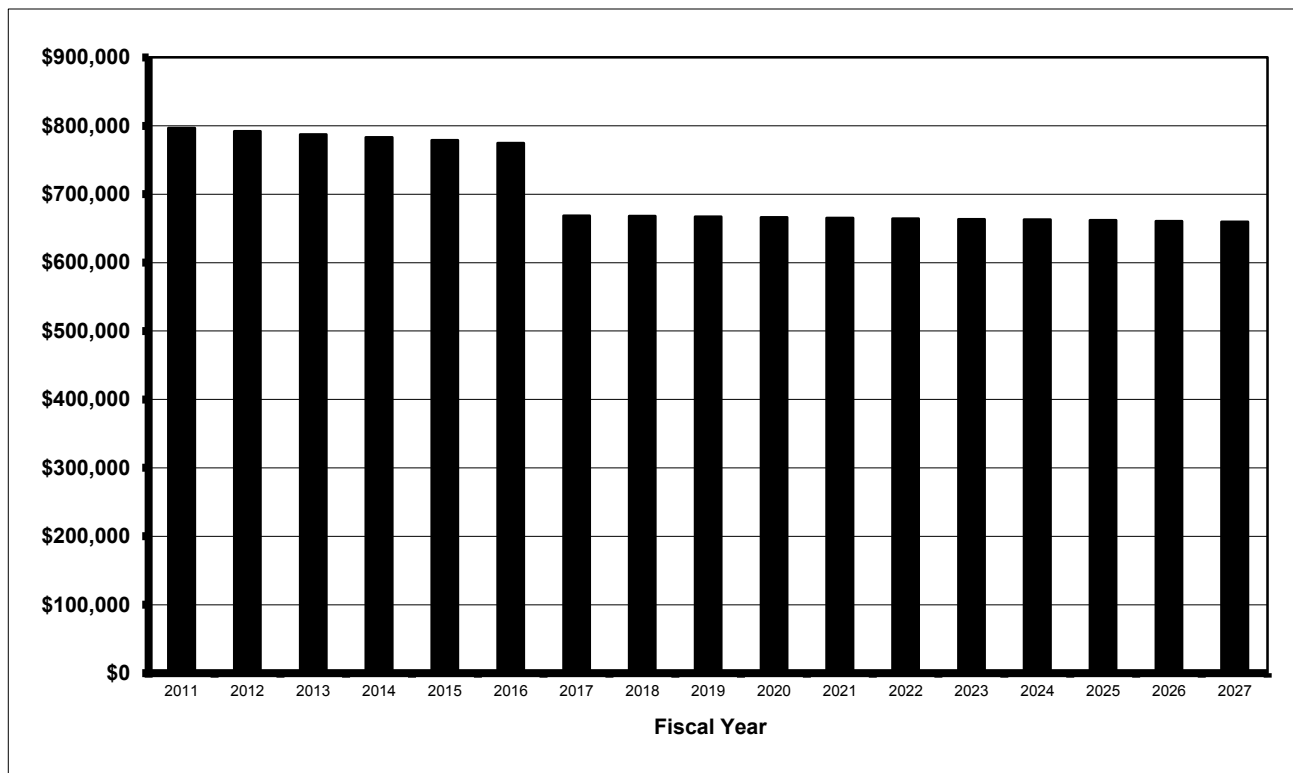
## PAYMENTS TO THE GENERAL FUND

	FY10 Actual	FY11 Actual	FY12 Rev. Budget	FY13 Budget
<b>Management &amp; Engineering:</b>				
Highway Maintenance	\$3,944	\$4,024	4,159	\$4,209
133/135 Keyes Road	12,729	11,997	10,994	11,900
Public Works Engineering	16,184	15,690	16,978	17,033
Public Works Administration	28,882	29,678	31,067	30,995
<b>Subtotals</b>	<b>\$61,739</b>	<b>\$61,389</b>	<b>\$63,198</b>	<b>\$64,137</b>
<b>Financial &amp; Administrative:</b>				
Town Manager	\$26,314	\$26,401	\$ 27,527	\$ 27,752
Human Resources	3,788	4,316	4,688	5,029
Town Accountant:				
General Services	10,858	10,806	11,299	11,541
Audit Services	6,000	6,000	6,000	6,000
Treasurer-Collector	11,078	11,521	11,869	12,049
Finance Administration	16,561	15,601	16,659	16,021
Information Systems	-	-	-	-
Town House Facilities	2,987	3,495	3,579	2,415
<b>Subtotals</b>	<b>\$77,586</b>	<b>\$78,140</b>	<b>\$81,621</b>	<b>\$80,807</b>
<b>Natural Resource Protection:</b>				
Planning	\$5,490	\$5,653	\$ 5,955	\$5,890
Natural Resource Protection	5,171	5,269	5,682	5,686
Health	25,646	26,054	27,344	27,390
<b>Subtotals</b>	<b>\$36,307</b>	<b>\$36,976</b>	<b>\$38,981</b>	<b>\$38,966</b>
Salary Reserve	\$0	\$0	\$0	\$6,193
<b>Totals</b>	<b>\$175,632</b>	<b>\$176,505</b>	<b>\$183,800</b>	<b>\$190,103</b>

**Sewer Debt Service (\$)**

*Exclusive of betterment financing*

<b>Fiscal Year</b>	<b>Principal</b>	<b>Interest</b>	<b>Admin. Fees</b>	<b>Total</b>
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
<b>Totals</b>	<b>\$10,103,096</b>	<b>\$1,790,858</b>	<b>\$127,994</b>	<b>\$12,021,948</b>



## FY13 Capital Plan:

**COLLECTION SYSTEM****Station Structures: \$10,000**

Annual capital outlay for improvements and replacement of structures including six neighborhood lift stations and two main pump stations.

**Station Equipment: \$50,000**

Annual capital outlay for improvements and replacement of equipment housed within six neighborhood lift stations and two main pump stations. Equipment required to control, monitor, pump, store, and treat wastewater enroute to WWTP including motors, pumps, motor control panels, and air compressors. Planned improvements include the replacement of one 75-hp pump and motor at the Lowell Road pumping station.

**Mains (Sewer Collectors): \$15,000**

Annual capital outlay for improvements and extension to distribution system. Program intended to insure that aging deteriorating main is replaced in a methodical and prudent manner. The Water & Sewer Division will continue to coordinate system upgrades with other Town Departments to insure division needs are considered in light of other public work improvement efforts (such as Roads Program and CMLP initiatives). Planned work includes routine casting adjustments.

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

The wastewater treatment plant currently receives about one million gallons of sewer flow per day. In accordance with our WWTP NPDES permit, annual inflow and infiltration (I/I) activities are required to reduce groundwater and storm water which enters the collection system through deteriorating pipes, leaking manholes or illicit storm water connections. Planned work includes targeting TV inspections, metering and spot repair of sewer mains.

**Meter Replacement Program: \$14,000**

Sewer fund portion of costs associated with our system-wide meter maintenance and replacement efforts. Effort expanded in coordination with CMLP to allow for inclusion of radio-read and smart meter technology for improved meter-reading and demand management capabilities.

**WASTE WATER TREATMENT PLANT****Structures: \$30,000**

Annual capital outlay for improvements and replacement of WWTP structures. Planned improvements include potential odor control measures, electrical upgrades within the existing grit room, replacement of several yard hydrants and evaluation of energy efficiencies.

**Equipment: \$80,000**

Annual cost to replace equipment presently used beyond recommended service life, including motors, pumps, motor control panels, chemical feed systems, and process instrumentation. Planned work includes replacement of intermediate motor/pump, 50% of the existing UV lamps required for final disinfection and the replacement of a large sump pump.

**GENERAL PLANT****Keyes Road Facility: \$50,000**

Capital outlay for improvements to Water/Sewer Administrative Office and Garage facilities. Plan includes construction of Electrical Room rehab/upgrades (to accommodate SCADA/records room area) and reconfiguration/replacement of Emergency Generator

**Vehicles: \$10,000**

Water/Sewer Fleet consists of 17 vehicles and miscellaneous service equipment such as compressor, vacuum, skid steer and forklifts which are replaced in accordance with CPW criteria based on industry-accepted useful-life measures. Budget allowance includes the sewer share for replacement of a pickup truck and a hybrid SUV.

**GENERAL PLANT****Wastewater Capacity: \$500,000**

Includes capacity assessment and wastewater alternatives analysis (treatment/disposal alternatives analyses, NPDES negotiation support services, feasibility analyses of neighborhood treatment systems, and assistance in public outreach activities). Following a favorable hydrogeologic evaluation of the recently decommissioned intermittent sand beds located at the Wastewater Treatment Plant located off Bedford Road, the Wastewater Planning Task Force has recommended more extensive permitting and design efforts. Ultimately, the goal is to seek regulatory approval required to expand our municipal treatment capacity by at least 100,000 gallons per day.



## Capital Spending Plan

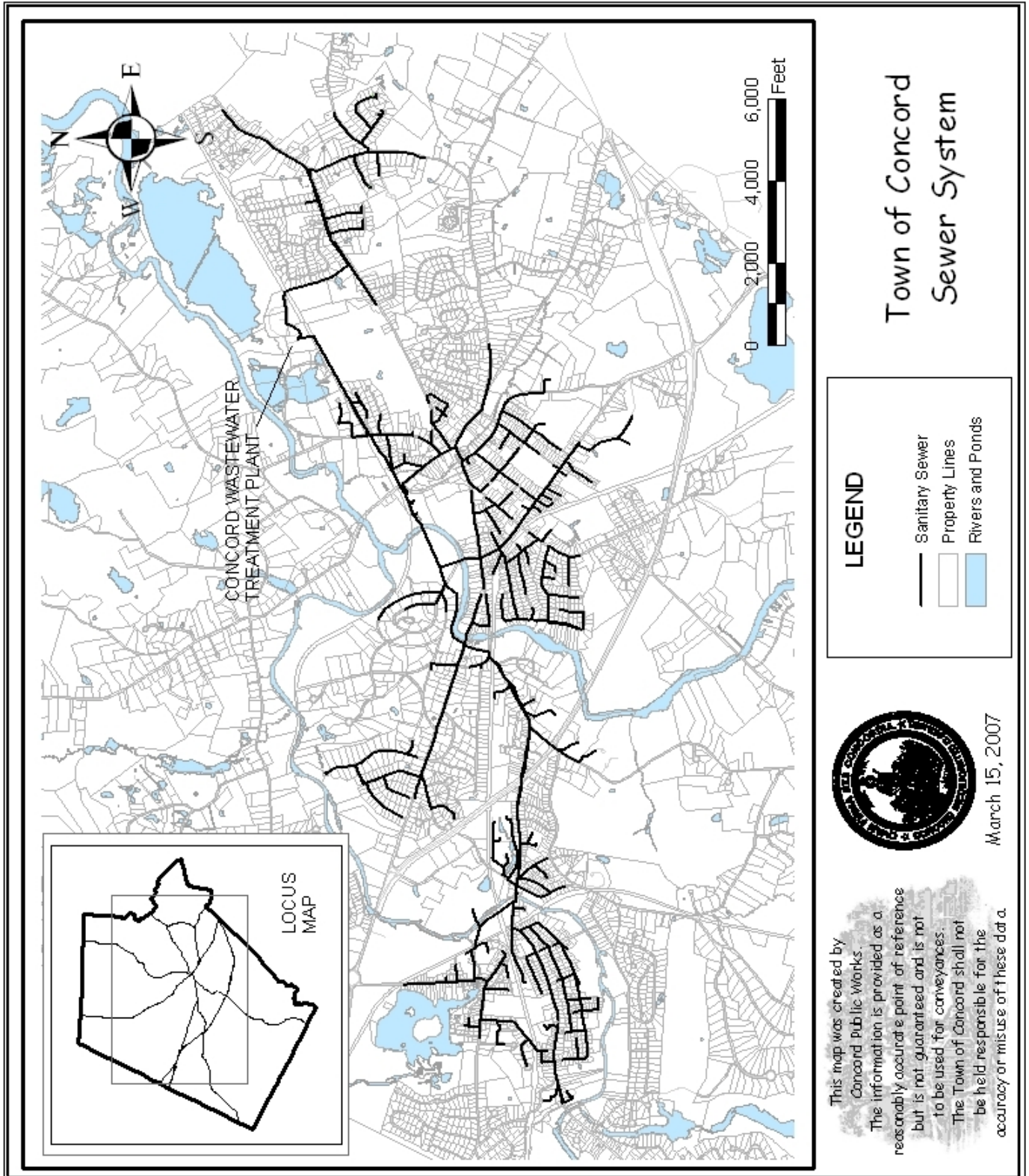
<u>Capital Activities</u>	FY10 Actual	FY11 Actual	FY12 Budget	FY13 Budget
<u>Collection System</u>				
<u>Pumping Plant</u>				
Station Structures	197,141	20,351	60,000	10,000
Station Equipment	-	9,537	280,000	50,000
Other	-	3,700	-	-
Subtotal	197,141	33,588	340,000	60,000
<u>Collection Plant</u>				
Sewer Mains/Laterals	-	-	20,000	15,000
Inflow & Infiltration	13,538	4,989	195,000	100,000
Meter Replacement	-	38	10,000	14,000
Sewer Service Connections	-	2,000	-	-
Subtotal	13,538	7,027	225,000	129,000
<u>Wastewater Treatment Plant</u>				
Structures	131,904	15,887	120,000	30,000
Plant Equipment	16,569	8,450	50,000	80,000
Other	-	-	-	-
Facilities Plan Improvements	21,607	-	-	-
Capacity/Treatment Optimization	-	-	-	-
Personnel Services	-	7,646	-	-
Subtotal	170,080	31,983	170,000	110,000
<u>General Plant</u>				
Keyes Road CPW Facility	\$ -	\$ 5,105	\$ 12,000	\$ 50,000
Harris System/GIS	-	-	-	-
Vehicle Replacement	-	13,998	247,000	10,000
Miscellaneous Equipment	-	1,165	-	-
Personnel Services	-	5,904	-	-
Subtotal	-	26,172	259,000	60,000
<u>Wastewater Management Project</u>				
Wastewater Planning	-	74,688	60,000	500,000
Phase I Construction Cost	-	-	-	-
Subtotal	-	74,688	60,000	500,000
<u>Audit Adjustments</u>				
Audit Adjustment (Personnel)	-	-	-	-
Audit Adjustment (Other)	1,625	(25,447)	-	-
Subtotal	1,625	(25,447)	-	-
<b>Total</b>	<b>\$ 382,384</b>	<b>\$ 148,011</b>	<b>\$ 1,054,000</b>	<b>\$ 859,000</b>
<b>Funding the Capital Plan</b>				
From Debt	\$ -	\$ -	\$ -	\$ -
From Sewer Fund Resources	\$ 382,384	\$ 148,011	\$ 1,054,000	\$ 859,000
<b>Total</b>	<b>\$ 382,384</b>	<b>\$ 148,011</b>	<b>\$ 1,054,000</b>	<b>\$ 859,000</b>

**SEWER RATES**

(Per 100 Cubic Feet)

Class of Customer	Current FY12	Proposed FY13	%Chg.
<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.	\$ 9.20	\$ 9.66	5%
2 <b>Non-Residential Service</b> Rate billed year around using actual readings for each billing period.	\$ 9.20	\$ 9.66	5%

Sample Impacts	Current Annual	Proposed Annual	Annual Change	Monthly Change	% Chg.
1 <b>Average Residential Customer</b> (17 units bimonthly wintertime use)	\$ 920	\$ 966	\$ 46.00	\$ 3.83	5%
2 <b>Typical Non-Residential Customer</b> (18 cubic feet bimonthly)	\$ 994	\$ 1,043	\$ 49.68	\$ 4.14	5%



# Town of Concord Sewer System

## LEGEND

- Sanitary Sewer
- Property Lines
- Rivers and Ponds



March 15, 2007

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.

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