

FINAL REPORT

**TOWN OF EDISTO BEACH
WATER AND SEWER RATE STUDY**

JANUARY 2012

AEC Project No. 11-009

Prepared For:

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1.0 INTRODUCTION

The Town of Edisto Beach (Town) is located in northeast Colleton County. The Town operates a water system that consists of six (6) groundwater wells, a 100,000 gallon elevated storage tank, a 200,000 gallon ground storage tank, two (2) booster pump stations, and approximately 26 miles of waterline piping. The Town serves drinking water to approximately 2300 water customers. The Town also operates a 350,000 gallon per day wastewater treatment lagoon, 13 individual lift stations, and approximately 13 miles of sewer piping. There are approximately 1000 customers served by the Town's sewer system.

The Town of Edisto Beach retained the services of American Engineering Consultants, Inc. (AEC) to conduct a water and sewer rate study. The goal of this study was to evaluate whether the Town's current water and sewer rates provide sufficient revenue to meet the needs of the Utilities Department and allow for upcoming capital improvements to the water and sewer systems. Historical revenue and expense trends were evaluated to determine future projections. In addition, a survey of utilities was performed to provide a comparison of water and sewer rates.

2.0 CURRENT WATER AND SEWER RATES

The Town of Edisto Beach uses a volumetric rate method for calculating a customer's water and sewer charges. Water meters are only read twice per year and the sewer charges are based on water usage. Therefore, the current rates are structured for semi-annual billing. The current water rate schedule is designed so that customers are billed for a minimum usage of 24,000 gallons over a six month period. An inclining block rate is used for volumes over 24,000 gallons. The current sewer rate schedule is designed for a minimum semi-annual billing of 6,000 gallons. A uniform volumetric rate is used for any volume over 6,000.

The Town's water rates are broken down by customer classification and rates vary depending on whether the customer is a residential (inside or outside of town limits), business, or other type user. As can be seen in Table 1, residential users inside the town limits make up the majority of customers and account for approximately 85% of the revenue generated by the water system.

Table 1: FY09-10 Water System Characteristics By Class

Type	# Customers	Percentage of Total Users	Percent of System Revenue
WTR-Residential	2134	92.74%	85.30%
WTR-Business/Dock	60	2.59%	6.34%
WTR-Outside Town Limits	18	0.78%	2.34%
WTR-Park	1	0.04%	1.21%
WTR-Linkside Condos	16	0.70%	0.52%
WTR-No Charge	10	0.43%	0.00%
Irrigation Meter	63	2.72%	4.29%
Total	2301	100.00%	100.00%

The Town’s sewer rates are uniform for all customer classes, but the Town does track the number of users and revenue by class. As can be seen in Table 2, residential users also make up the majority of sewer customers and account for approximately 91% of the revenue generated by the sewer system.

Table 2: FY09-10 Sewer System Characteristics By Class

Type	# Customers	Percentage of Total Users	Percent of System Revenue
SWR-Residential	964	94.93%	91.02%
SWR-Business	26	2.51%	6.97%
SWR-Grease Trap	10	0.99%	0.78%
SWR-Linkside Condos	16	1.58%	1.23%
Total	1,015	100.00%	100.00%

A survey of other utilities was performed to provide a comparison of water and sewer rates. Since the bulk of the Town’s customer base is residential and this classification is what influences system revenues the most, the rate comparison will focus primarily on the residential charges. Water rates for all utilities include water purchase or production, and distribution costs. The sewer rates for all utilities surveyed include collection and treatment costs. The billing frequency among the utilities surveyed varied, with most billing on a monthly basis. The Town of Edisto is the only utility surveyed that invoices customers on a semi-annual basis. All rates were adjusted to both an equivalent monthly and equivalent semi-annual bill. The equivalent charges are shown for three different usage volumes, which were selected based on the current water rate structure for the Town. The monthly equivalent charges are summarized in Table 3 and Table 4 below. Appendix A includes bar graphs for the monthly equivalent

charges and Appendix B includes bar graphs for the semi-annual equivalent charges. The information provided in these figures is intended to provide an idea of where the Town's current rates fall. It is important to note that some of the utilities are similar by proximity and size, while others are provided simply as a means of comparison. The utilities surveyed also differ in whether they treat or purchase their own drinking water for distribution as follows:

Town of Edisto Beach – A groundwater well system with treatment provided by the Town

Kiawah Island Utility – Purchase water from the Charleston Water System

Broad Creek PSD – A groundwater well system with treatment provided by the PSD; Supplemented by BJWSA

South Island PSD – A groundwater well system with treatment provided by the PSD

Hilton Head PSD – A groundwater well system with treatment provided by the PSD; Supplemented by BJWSA

Georgetown County Water and Sewer District – A surface water system with treatment provided by GCWSD

Beaufort-Jasper Water and Sewer Authority – A surface water system with treatment provided by GCWSD

Town of Walterboro – A groundwater well system with treatment provided by the Town

Charleston Water System – A surface water treatment system with treatment provided by Charleston Water

Town of Hampton – A groundwater well system with treatment provided by the town

Town of Lexington – Purchase water from the City of West Columbia

All utilities surveyed treat their own wastewater with the exception of the Town of Lexington, which currently treats only a portion of the wastewater generated by customers and transmits the rest to the City of Cayce for treatment.

Table 3: Water Rate Cost Comparison By Volume

<u>Water System</u>		<u>Equivalent Monthly Water Charges</u>		
		<u>4,000 gal</u>	<u>9,000 gal</u>	<u>15,000 gal</u>
Town of Edisto Beach	Inside	\$20.51	\$27.52	\$37.24
	Outside	\$41.03	\$64.96	\$98.23
Kiawah Island Utility	All	\$48.27	\$61.02	\$77.84
Broad Creek PSD	All	\$5.80	\$13.05	\$21.75
South Island PSD	All	\$10.00	\$14.60	\$20.60
Hilton Head PSD	All	\$15.60	\$22.60	\$32.55
GCWSD	All	\$12.97	\$23.97	\$38.97
BJWSA	All	\$19.28	\$35.88	\$55.80
Town of Walterboro	Inside	\$19.28	\$25.68	\$33.36
	Outside	\$39.92	\$52.77	\$68.19
Charleston Water	Inside	\$14.47	\$24.29	\$36.08
	Outside	\$25.25	\$43.48	\$65.36
Town of Hampton	All	\$19.72	\$31.87	\$46.45
Town of Lexington	Inside	\$21.55	\$40.15	\$62.47
	Outside	\$38.79	\$73.54	\$115.24
Average		\$23.50	\$37.03	\$54.01

Table 4: Sewer Rate Cost Comparison By Volume

<u>Sewer System</u>		<u>Equivalent Monthly Sewer Charges</u>		
		<u>4,000 gal</u>	<u>9,000 gal</u>	<u>15,000 gal</u>
Town of Edisto Beach	Inside	\$40.95	\$56.70	\$75.60
Kiawah Island Utility	All	\$36.36	\$39.31	\$42.85
Broad Creek PSD	All	\$33.00	\$33.00	\$33.00
South Island PSD	All	\$14.80	\$21.80	\$30.20
Hilton Head PSD	All	\$20.00	\$30.00	\$32.00
GCW&SD	All	\$18.30	\$34.33	\$58.39
BJW&SA	All	\$28.40	\$45.00	\$45.00
Town of Walterboro	Inside	\$14.84	\$33.39	\$55.65
	Outside	\$28.16	\$63.36	\$105.60
Charleston Water	Inside	\$39.10	\$79.11	\$114.83
	Outside	\$54.03	\$109.09	\$158.25
Town of Hampton	All	\$28.75	\$57.50	\$92.00
Town of Lexington	Inside	\$23.89	\$45.84	\$72.18
	Outside	\$39.43	\$78.18	\$124.68
Average		\$30.00	\$51.90	\$74.30

In reviewing historical data that was provided by the Town, it is clear that there is a seasonal pattern of water usage. When analyzing the water usage over a full year, the average residential usage (inside town limits) per customer is equivalent to approximately 5,500 gallons per month. Based on a typical usage of 300 gallons per day per household, a residential user could be expected to use around 9,000 gallons of water per month. Water systems that have more year-round users would see that the average customer bill is more likely to be based off of approximately 9,000 gallons per month. This is an important difference because the bulk of operational expenses for the water and sewer system are fixed costs that do not vary significantly with the amount of water used or sewage treated. Therefore, the monthly charges from water and sewer revenues that the Town receives should also be evaluated for the average volumes used or treated. Table 5 compares the average residential monthly charges (inside town/city limits) that utilities receive for the expected average water consumption or sewer flow, which is determined based on whether that utility sees predominantly a seasonal or non-seasonal usage pattern. Appendix C includes bar graphs that further demonstrate the comparisons below.

Table 5: Average Monthly Charges Per Residential Customer

<u>System</u>	<u>Average Monthly Residential Water Charge</u>	<u>Average Monthly Residential Sewer Charge</u>
Town of Edisto Beach	\$22.57	\$45.68
Kiawah Island Utility	\$52.10	\$37.25
Broad Creek PSD	\$13.05	\$33.00
South Island PSD	\$14.60	\$21.80
Hilton Head PSD	\$22.60	\$30.00
Town of Walterboro	\$25.68	\$33.39
Town of Hampton	\$31.87	\$57.50
GCWSD	\$23.97	\$34.33
BJWSA	\$35.88	\$45.00
Charleston Water	\$24.29	\$79.11
Town of Lexington	\$40.15	\$45.84
Average	\$27.89	\$42.08

Note: Edisto Beach and Kiawah Island charges assume a predominantly seasonal pattern and are based on 5,500 gal/month. All other utilities are based on the typical 9,000 gal/month.

3.0 FINANCIAL ANALYSIS

The Town of Edisto Beach provided American Engineering Consultants, Inc. with Comprehensive Annual Financial Reports (CAFRs) that were available for the last four most recently completed fiscal years (FY07 – FY10). In addition, the unaudited Expenditure Reports were supplied in order to provide further details of the Utilities Department's expenses. A review of the records for the time period of FY07 to FY10 indicates that although the revenues and expenses did not increase or decrease by the same amount each year, they did increase by a total of approximately 15% to 16% each over the course of four years. In addition, the evaluation shows that the water system expenditures make up 59% of the Utilities Department expenditures and the sewer system expenditures make up 41%. The revenues generated by these systems are proportionate to their expenditures as illustrated in Figure 1 and Figure 2 below.

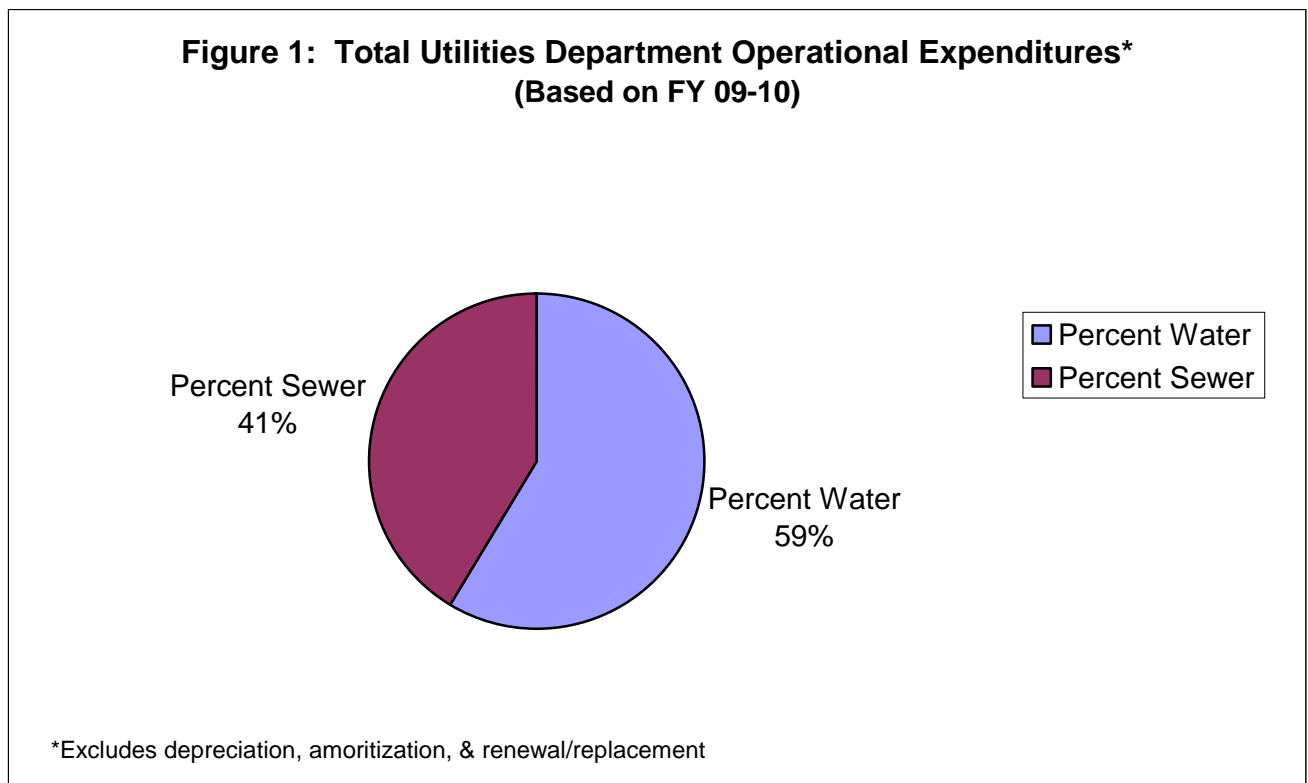
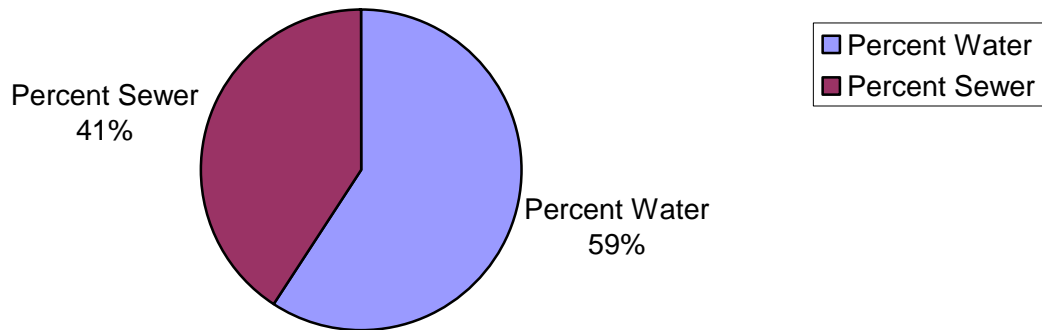


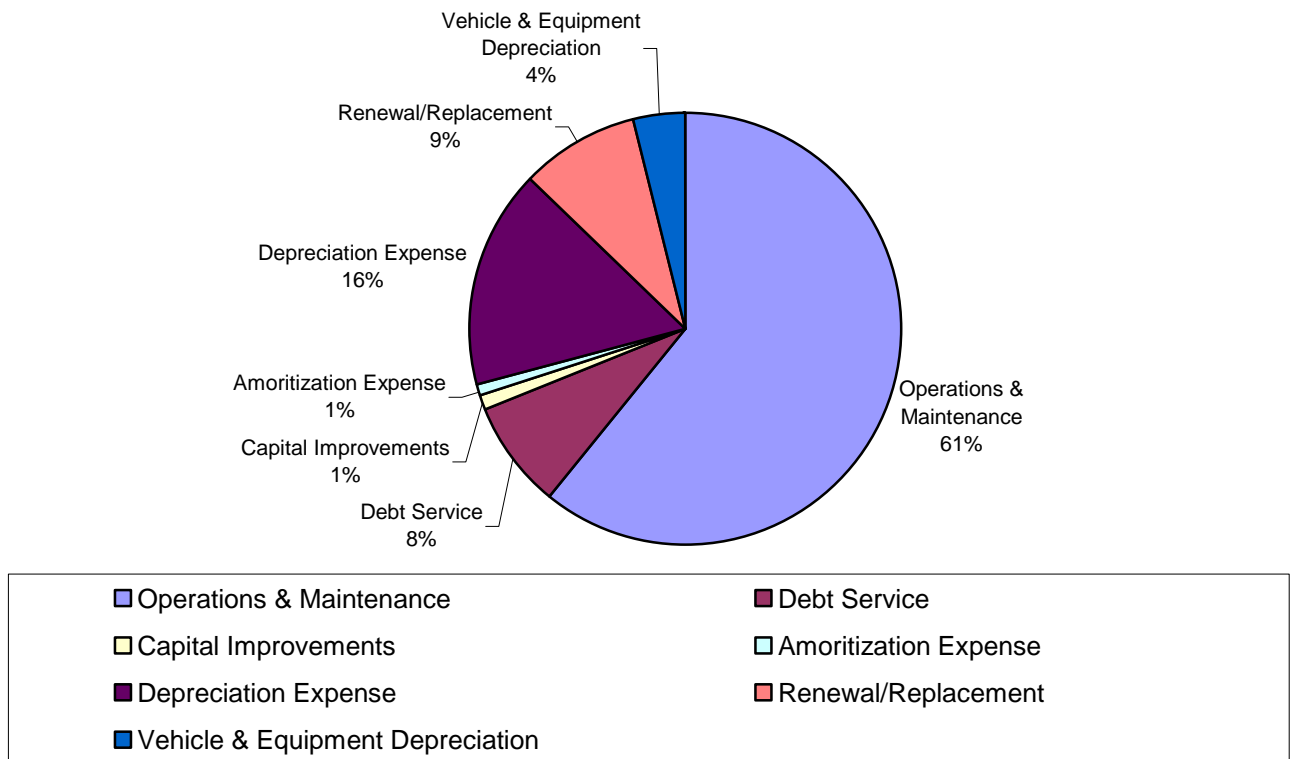
Figure 2: Total Utilities Department Operational Revenues
(Based on FY09-10 Data)



3.1 Expenditures

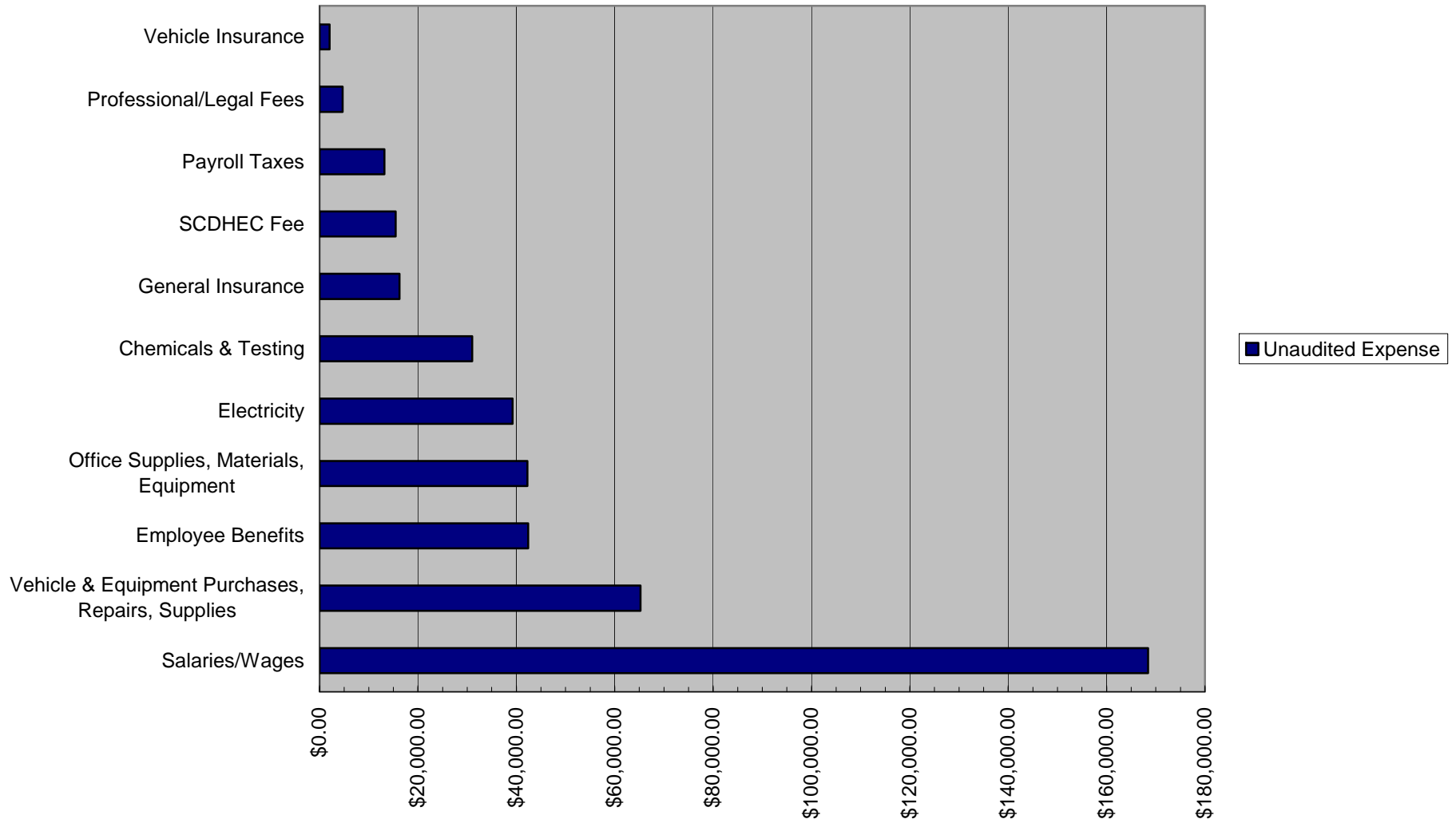
The last completed CAFR and unaudited Expenditures Report that were available were for the fiscal year ending June 30, 2010. The following graph shows a breakdown of the total water system expenditures for that year. Operations and Maintenance, as expected, is the largest expense.

Figure 3: Breakdown of Water Expenditures FY09-10



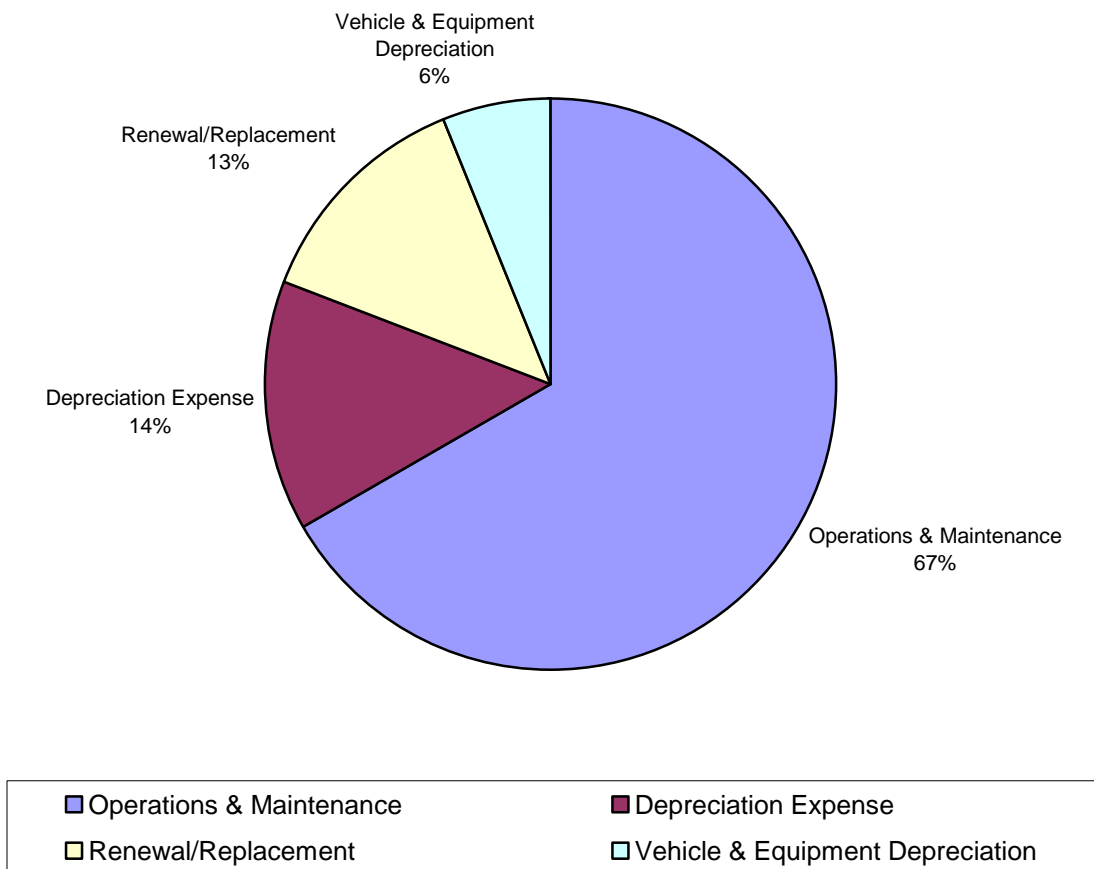
The largest portion of the Operations & Maintenance water expenditures is for salaries and benefits for employees, which equates to approximately 48% of all expenses. The following graph gives a more detailed breakdown of the water system expenditures.

Figure 4: O&M Expenditures for Water System FY09-10



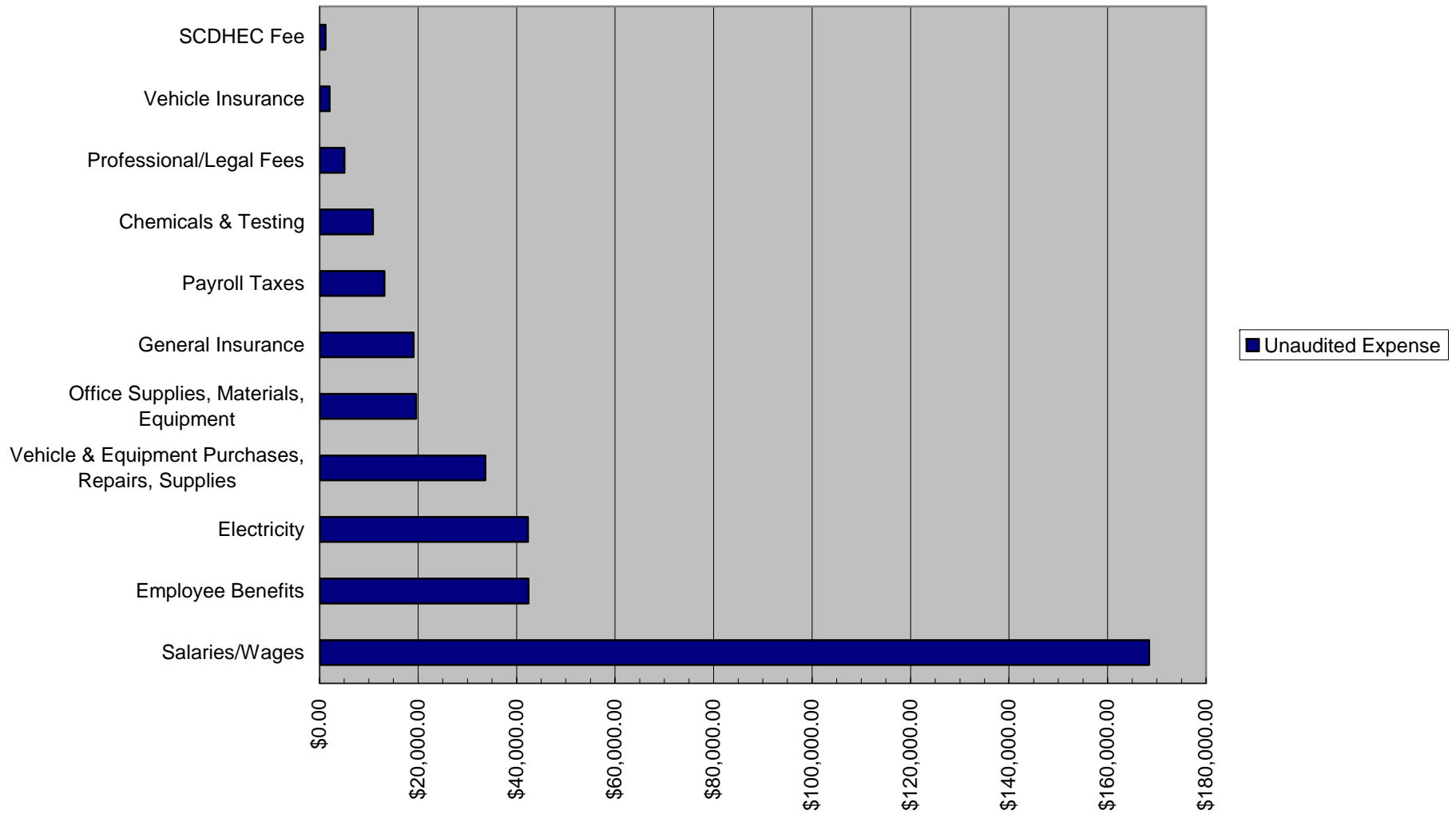
The following graph shows a breakdown of the total sewer system expenditures for the year ending June 30, 2010. As with the water system, the largest expense category is Operations and Maintenance.

Figure 5: Breakdown of Sewer Expenditures FY09-10



The largest portion of the Operations & Maintenance sewer expenditures is for salaries and benefits for employees, which equates to approximately 59% of all sewer system expenses. The following graph gives a more detailed breakdown of the expenditures.

Figure 6: O&M Expenditures for Sewer System FY09-10



As was briefly mentioned in Section 3.0, a considerable portion of the Town’s water and sewer operational expenses are considered fixed components. These expenses do not vary significantly with the quantity of water consumed or sewer contributed by customers. Typically, rates are structured to ensure that these fixed expenses can be recovered, regardless of how much water is used or sewage is treated. As seen in Table 6 and Table 7 below, approximately 84% of the water system operations and maintenance expenses are fixed components and approximately 85% of the sewer system operations and maintenance expenses are fixed components.

**Table 6: Water System Operations & Maintenance Fixed and Variable Expenditures
 (Based on FY09-10 Data)**

<u>Water O&M Expenditures</u>	<u>Type of Expense</u>	<u>Percentage of Total O&M Expenses</u>
Salaries/Wages	Fixed	38.26%
Vehicle & Equipment Purchases, Repairs, Supplies	Fixed	14.82%
Employee Benefits	Fixed	9.63%
Office Supplies, Materials, Equipment	Fixed	9.60%
Electricity	Variable	8.91%
Chemicals & Testing	Variable	7.05%
General Insurance	Fixed	3.70%
SCDHEC Fee	Fixed	3.52%
Payroll Taxes	Fixed	2.99%
Professional/Legal Fees	Fixed	1.06%
Vehicle Insurance	Fixed	0.46%
Total Percentage of Fixed Components		84.04%
Total Percentage of Variable Components		15.96%

**Table 7: Sewer System Operations & Maintenance Fixed and Variable Expenditures
 (Based on FY09-10 Data)**

<u>Sewer O&M Expenditures</u>	<u>Type of Expense</u>	<u>Percentage of Total O&M Expenses</u>
Salaries/Wages	Fixed	47.08%
Employee Benefits	Fixed	11.85%
Electricity	Variable	11.83%
Vehicle & Equipment Purchases, Repairs, Supplies	Fixed	9.41%
Office Supplies, Materials, Equipment	Fixed	5.47%
General Insurance	Fixed	5.33%
Payroll Taxes	Fixed	3.68%
Chemicals & Testing	Variable	3.03%
Professional/Legal Fees	Fixed	1.41%
Vehicle Insurance	Fixed	0.56%
SCDHEC Fee	Fixed	0.33%
Total Percentage of Fixed Components		85.14%
Total Percentage of Variable Components		14.86%

When evaluating whether the current and future rates are sufficient, recovery of fixed components in operations and maintenance expenditures and also fixed components in depreciation, renewal/replacement, debt service, and capital improvement expenditures, must be considered. The percentages of fixed components for all of these expenditures are shown in Table 8 and Table 9. This will be discussed further in Section 5.

Table 8: Percentage of Fixed Components for All Water System Expenses

	<u>Percentage of Fixed Expenses</u>	<u>Percentage of Total Water Expenses</u>
Operations & Maintenance	84%	51%
Debt Service	100%	8%
Capital Improvements	100%	1%
Amortization Expense	100%	1%
Depreciation Expense	100%	16%
Renewal/Replacement	100%	9%
Vehicle & Equipment Depreciation	100%	4%
Total Percentage of Fixed Components		90%

Table 9: Percentage of Fixed Components for All Sewer System Expenses

<u>Type of Sewer Expense</u>	<u>Percentage of Fixed Expenses</u>	<u>Percentage of Total Sewer Expenses</u>
Operations & Maintenance	85%	57%
Depreciation Expense	100%	14%
Renewal/Replacement	100%	13%
Vehicle & Equipment Depreciation	100%	6%
Total Percentage of Fixed Components		90%

3.2 Revenue Requirements

In order to evaluate whether the current water and sewer rates are sufficient, the total costs from known system expenditures must be projected into the future. In addition, it is helpful to incorporate the impacts of any planned capital improvements and anticipated system growth. Town personnel have provided a list of smaller projects that may be pursued over the next few years. In addition, there have been several master plans developed for the water and sewer systems. The expense for these things will be taken into consideration in order to provide the Town several options with varying revenue requirements. For this rate study, it has been assumed that the Town's customer base will not be expanded significantly. All residents inside town limits are already being served water and the potential to serve a substantial number of customers outside town limits is small considering the political climate with Edisto Island. There is room for growth inside town limits on the sewer side. However, given the difficulties of a discharge location, it has been assumed that sewer system growth will not occur in the near future.

3.3 Reserves

Reserve funds are necessary in order to offset unexpected fluctuations in expenses or revenues. A general operating reserve fund that is equivalent to one to three months of operating costs is typically recommended. However, since the Town only bills customers twice per year, a reserve fund equal to the operational expenses for one billing cycle (six months) is prudent. It is also recommended that the Town continue to

fund for future renewals and replacements of all infrastructure and equipment. The depreciation of assets should be accounted for and included in the revenue requirements in order to have money set aside for replacements.

4.0 RATE ANALYSIS

A comprehensive rate analysis was performed. There are two major components of the rate analysis that will be discussed. The first component addresses the revenue that is required to offset inflation and additional debt. The second component will outline the various philosophies of how to generate the revenue that is required. The projections of rates are given to provide the Town with an idea of what will need to be done in the future for various scenarios. Annually and prior to setting water and sewer rates for the following year, the projected rates should be evaluated to determine any negative or positive influences that may change the actual rate required.

4.1 Rate Revenue Scenarios

Several scenarios are presented that assume varying levels of debt and rate increases. For those scenarios that include additional debt, it was assumed that the Town would pursue approximately \$10 million of capital improvements projects based on the water and sewer system master plans that are in place. This evaluation can be made for other amounts of borrowing upon direction by the Town. All projections in the scenarios use the financial numbers from the FY10 CAFR as the base starting point. All scenarios assume there will be no growth in the customer base for the 10-year period evaluated. In addition, an interest rate of 5% is assumed for all new debt, as is straight-line depreciation over 40 years for new assets. All scenarios include a typical rate of 3% for inflation on operations and maintenance. Assumptions have also been made on how accelerated the Town wishes to complete major capital improvements. The scenarios are described below.

4.1.1 Rate Revenue Scenario Number One

The first scenario evaluated assumes that there will be no increase in water and sewer rates beyond the 5% increase that was previously approved by the Town. That rate increase will be reflected in revenues generated during the fiscal year ending June 30, 2011. A typical inflation rate of 3% each year for operations and maintenance expenditures was used for the projections. No major capital improvements were

included in this scenario and, therefore, no additional debt was projected. The goal of this scenario was to determine whether the Town could continue to operate as it has been without incurring additional debt and while still allowing for smaller budgeted capital improvements to the system. As can be seen in Table 10, the debt service coverage maintains a level well above the typically required minimum of 1.25 for all years in the projections, while allowing for \$250,000 in smaller capital improvements each year. It is important to note, however, that by fiscal year 2017, the operating expenses become greater than the income generated. This means that, without an additional rate increase, the Town would have to begin using cash reserves to offset the operating loss. The projected trends for debt service, operating income, and cash reserves through fiscal year 2020 are shown in Figures 7 through 9.

Table 10: Rate Scenario #1 Financial Projections
 Town of Edisto Beach, SC
 Summary of Water & Sewer Revenue Requirements

W&S Rate Increase		5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
O&M Inflation Rate		3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
	Audit	Current Year	9 Year Projection									
	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	
Total Revenues	\$ 1,252,207.00	\$ 1,314,817.35	\$ 1,314,817.35	\$ 1,314,817.35	\$ 1,314,817.35	\$ 1,314,817.35	\$ 1,314,817.35	\$ 1,314,817.35	\$ 1,314,817.35	\$ 1,314,817.35	\$ 1,314,817.35	\$ 1,314,817.35
Expenses												
Total O&M Water & Sewer	\$ 809,618.00	\$ 833,906.54	\$ 858,923.74	\$ 884,691.45	\$ 911,232.19	\$ 938,569.16	\$ 966,726.23	\$ 995,728.02	\$ 1,025,599.86	\$ 1,056,367.86	\$ 1,088,058.89	\$ 1,121,121.12
Depreciation - Existing	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,256.00	\$ 248,257.00	\$ 248,258.00	\$ 248,259.00	\$ 248,259.00
Depreciation - New	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Depreciation - Capital	\$ -	\$ 8,333.33	\$ 16,666.67	\$ 25,000.00	\$ 33,333.33	\$ 41,666.67	\$ 50,000.00	\$ 58,333.33	\$ 66,666.67	\$ 75,000.00	\$ 83,333.33	\$ 91,666.67
Total Expenses	\$ 1,057,873.00	\$ 1,090,494.87	\$ 1,123,845.40	\$ 1,157,946.45	\$ 1,192,820.53	\$ 1,228,490.82	\$ 1,264,981.23	\$ 1,302,317.35	\$ 1,340,523.53	\$ 1,379,625.86	\$ 1,419,651.22	\$ 1,459,680.00
Operating Income	\$ 194,334.00	\$ 224,322.48	\$ 190,971.95	\$ 156,870.90	\$ 121,996.82	\$ 86,326.53	\$ 49,836.12	\$ 12,500.00	\$ (25,706.18)	\$ (64,808.51)	\$ (104,833.87)	\$ (144,833.87)
Non-Operating Revenues (Expenses)												
Interest Income	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00
Interest Expense Existing	\$ (60,332.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (51,352.00)	\$ (46,602.00)	\$ (46,602.00)	\$ (46,602.00)	\$ (46,602.00)	\$ (46,602.00)
Interest Expense - New Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Non-Operating Revenues (Expenses)	\$ (53,367.00)	\$ (49,137.00)	\$ (49,137.00)	\$ (49,137.00)	\$ (49,137.00)	\$ (44,387.00)	\$ (39,637.00)	\$ (39,637.00)	\$ (39,637.00)	\$ (39,637.00)	\$ (39,637.00)	\$ (39,637.00)
Income (Loss) Before Contributions & Transfers	\$ 140,967.00	\$ 175,185.48	\$ 141,834.95	\$ 107,733.90	\$ 72,859.82	\$ 41,939.53	\$ 10,199.12	\$ (27,137.00)	\$ (65,343.18)	\$ (104,445.51)	\$ (144,470.87)	\$ (184,470.87)
Cash Flow Projections												
ADD:												
Depreciation - Existing	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,256.00	\$ 248,257.00	\$ 248,258.00	\$ 248,259.00	\$ 248,259.00
Depreciation - New	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Proceeds from New Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Depreciation - Capital	\$ -	\$ 8,333.33	\$ 16,666.67	\$ 25,000.00	\$ 33,333.33	\$ 41,666.67	\$ 50,000.00	\$ 58,333.33	\$ 66,666.67	\$ 75,000.00	\$ 83,333.33	\$ 91,666.67
Total Funds Available	\$ 389,222.00	\$ 431,773.81	\$ 406,756.61	\$ 380,988.90	\$ 354,448.16	\$ 331,861.19	\$ 308,454.12	\$ 279,452.33	\$ 249,580.49	\$ 218,812.49	\$ 187,121.46	\$ 155,412.46
Equipment Purchases	\$ (22,785.00)	\$ (25,063.50)	\$ (27,569.85)	\$ (30,326.84)	\$ (33,359.52)	\$ (36,695.47)	\$ (40,365.02)	\$ (44,401.52)	\$ (48,841.67)	\$ (53,725.84)	\$ (59,098.42)	\$ (64,476.00)
Capital Improvement Projects	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Capital Improvements from Revenue	\$ (19,695.00)	\$ (250,000.00)	\$ (250,000.00)	\$ (250,000.00)	\$ (250,000.00)	\$ (250,000.00)	\$ (250,000.00)	\$ (250,000.00)	\$ (250,000.00)	\$ (250,000.00)	\$ (250,000.00)	\$ (250,000.00)
Debt Principal - Existing	\$ (180,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)
Debt Principal - New Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers Out	\$ (4,365.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)
Cash Increase (Decrease)	\$ 162,377.00	\$ 113,710.31	\$ 86,186.76	\$ 57,662.07	\$ 28,088.64	\$ 2,165.72	\$ (35,244.90)	\$ (68,283.19)	\$ (102,595.18)	\$ (138,247.34)	\$ (175,310.96)	\$ (211,310.96)
Beginning Cash - July 1	\$ 1,588,940.00	\$ 1,751,317.00	\$ 1,865,027.31	\$ 1,951,214.07	\$ 2,008,876.14	\$ 2,036,964.78	\$ 2,039,130.50	\$ 2,003,885.60	\$ 1,935,602.41	\$ 1,833,007.23	\$ 1,694,759.89	\$ 1,519,448.93
Ending Cash - June 30	\$ 1,751,317.00	\$ 1,865,027.31	\$ 1,951,214.07	\$ 2,008,876.14	\$ 2,036,964.78	\$ 2,039,130.50	\$ 2,003,885.60	\$ 1,935,602.41	\$ 1,833,007.23	\$ 1,694,759.89	\$ 1,519,448.93	\$ 1,308,137.97
Bond Covenant Requirements												
Debt Service - Existing	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 89,352.00	\$ 94,936.00	\$ 94,937.00	\$ 94,938.00	\$ 94,939.00	\$ 94,940.00	\$ 94,940.00
Debt Service - Proposed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Debt Service (Annual)	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 89,352.00	\$ 94,936.00	\$ 94,937.00	\$ 94,938.00	\$ 94,939.00	\$ 94,940.00	\$ 94,940.00
Debt Service Coverage	4.70	5.11	4.84	4.57	4.29	4.21	3.67	3.36	3.05	2.72	2.39	2.12
Accumulated Depreciation	\$ 2,823,027.00	\$ 3,079,615.33	\$ 3,344,537.00	\$ 3,617,792.00	\$ 3,899,380.33	\$ 4,189,302.00	\$ 4,487,557.00	\$ 4,794,146.33	\$ 5,109,070.00	\$ 5,432,328.00	\$ 5,763,920.33	\$ 6,085,840.67

Figure 7: Rate Revenue Scenario #1 Debt Service Trends

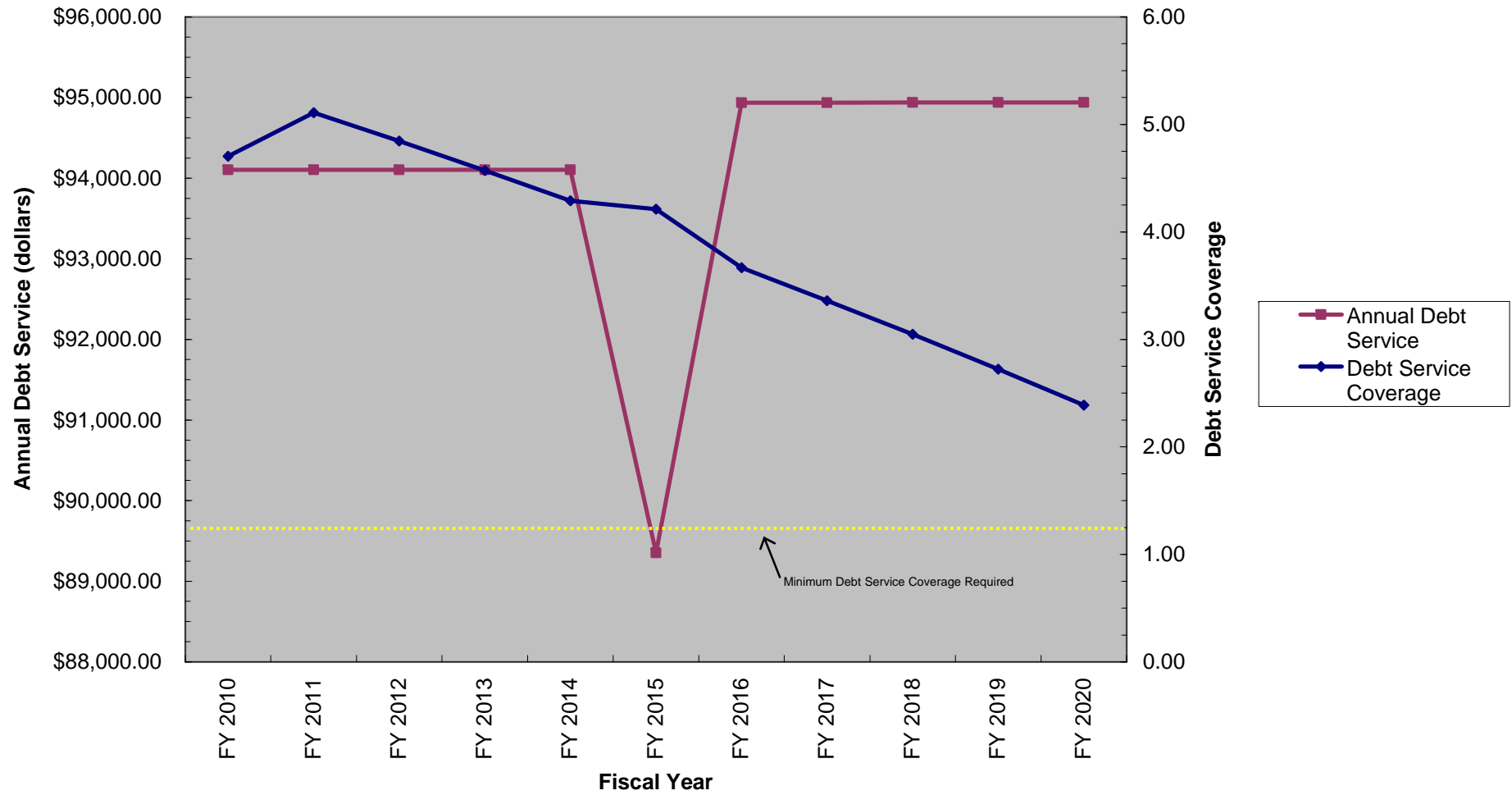


Figure 8: Rate Revenue Scenario #1 Operating Income (Loss)

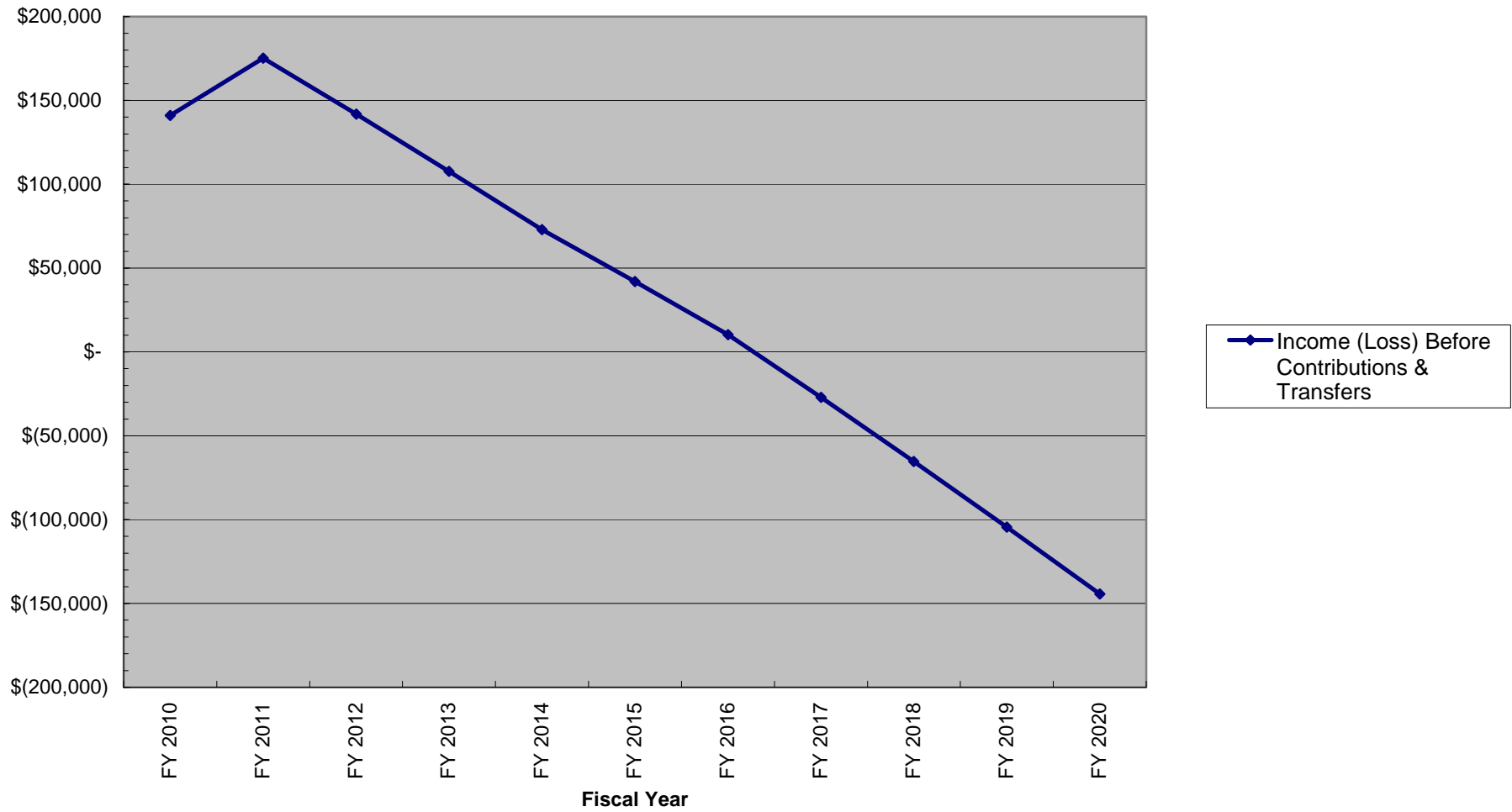
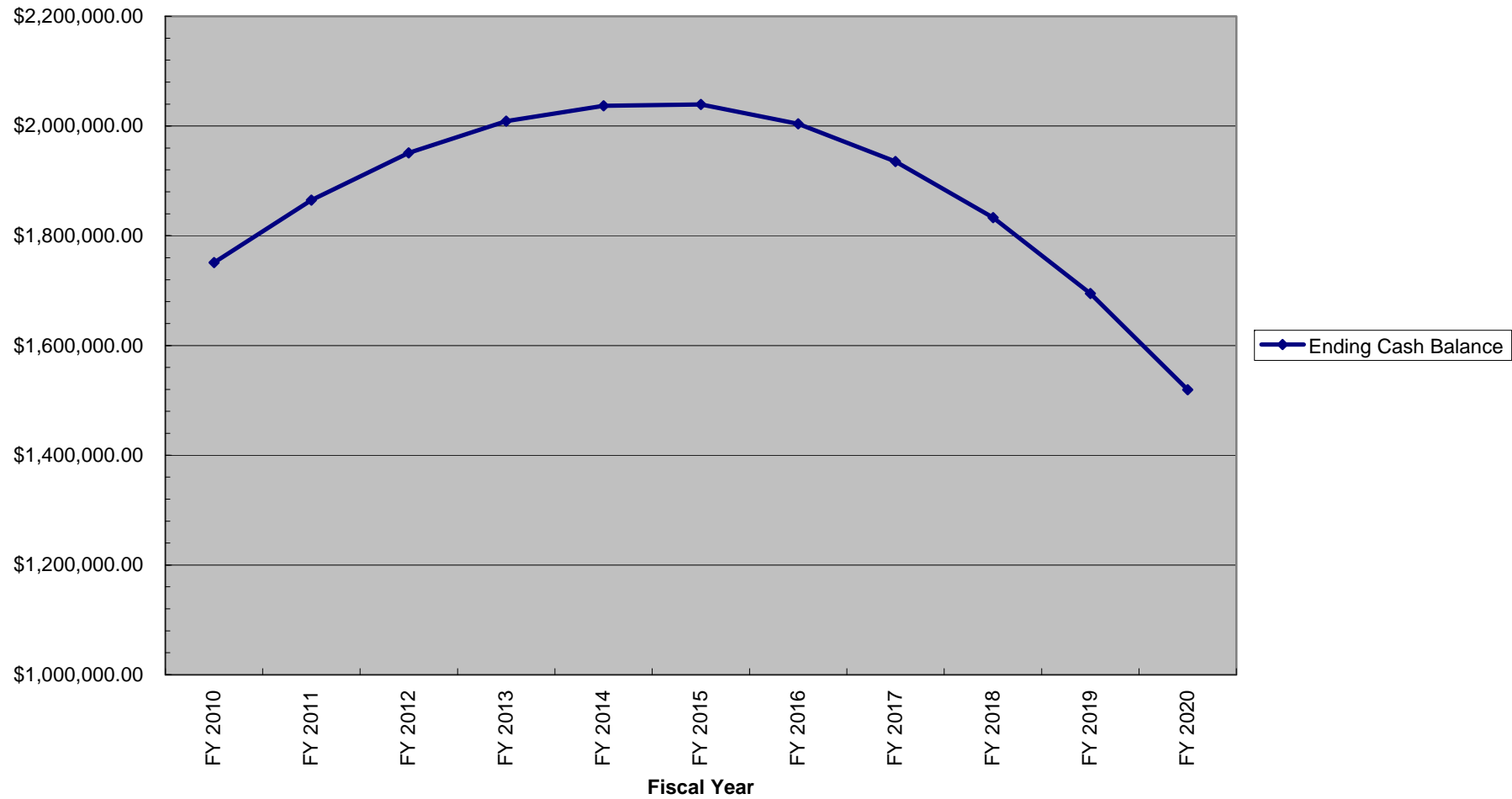


Figure 9: Rate Revenue Scenario #1 Cash Reserves



4.1.2 Rate Revenue Scenario Number Two

The second scenario evaluated assumes that the Town will pursue capital improvements projects totaling \$10 million over a 6-year period. In order to accommodate the additional debt and the typical 3% inflation each year for operations and maintenance expenditures, a rate increase will be required. This scenario assumes a 5% rate increase for each year of the projections. Based on the analysis shown in Table 11, the Town can afford to pursue \$10 million of improvements while borrowing only \$8 million over a 5-year period. The remaining \$2 million will come from the operating funds generated by the rate increases. As can be seen in Table 11, the required minimum debt service coverage of 1.25 can be achieved for all projected years except for fiscal year 2018 where it dips slightly below this to 1.24. Notice, however, that by year 2019, the debt service coverage is back above 1.25 and the operating income begins an upward trend. In addition, after using some of the cash reserves to limit borrowing to \$8 million, the cash balance also begins an upward trend by year 2017. It is also important to note that the cash reserves balance never drops below an amount that would be equivalent to six months of operational expenses. The projected trends for debt service, operating income, and cash reserves through fiscal year 2020 are shown in Figures 10 through 12.

Table 11: Rate Revenue Scenario #2 Financial Projections
 Town of Edisto Beach, SC
 Summary of Water & Sewer Revenue Requirements

			5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
			3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
	Audit FY 2010	Current Year FY 2011	9 Year Projection									
			FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	
Revenues												
Total Revenues	\$ 1,252,207.00	\$ 1,314,817.35	\$ 1,380,558.22	\$ 1,449,586.13	\$ 1,522,065.43	\$ 1,598,168.71	\$ 1,678,077.14	\$ 1,761,981.00	\$ 1,850,080.05	\$ 1,942,584.05	\$ 2,039,713.25	
Expenses												
Total O&M Water & Sewer	\$ 809,618.00	\$ 833,906.54	\$ 858,923.74	\$ 884,691.45	\$ 911,232.19	\$ 938,569.16	\$ 966,726.23	\$ 995,728.02	\$ 1,025,599.86	\$ 1,056,367.86	\$ 1,088,058.89	
Depreciation - Existing	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,256.00	\$ 248,257.00	\$ 248,258.00	\$ 248,259.00	
Depreciation - New	\$ -	\$ -	\$ -	\$ -	\$ 75,000.00	\$ 125,000.00	\$ 162,500.00	\$ 162,500.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	
Total Expenses	\$ 1,057,873.00	\$ 1,082,161.54	\$ 1,107,178.74	\$ 1,132,946.45	\$ 1,234,487.19	\$ 1,311,824.16	\$ 1,377,481.23	\$ 1,406,484.02	\$ 1,473,856.86	\$ 1,504,625.86	\$ 1,536,317.89	
Operating Income	\$ 194,334.00	\$ 232,655.81	\$ 273,379.48	\$ 316,639.68	\$ 287,578.24	\$ 286,344.55	\$ 300,595.91	\$ 355,496.98	\$ 376,223.19	\$ 437,958.20	\$ 503,395.36	
Non-Operating Revenues (Expenses)												
Interest Income	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	
Interest Expense Existing	\$ (60,332.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (51,352.00)	\$ (46,602.00)	\$ (46,602.00)	\$ (46,602.00)	\$ (46,602.00)	\$ (46,602.00)	
Interest Expense - New Debt	\$ -	\$ -	\$ -	\$ -	\$ (150,000.00)	\$ (246,857.13)	\$ (316,461.87)	\$ (309,225.42)	\$ (376,627.14)	\$ (367,077.52)	\$ (357,050.41)	
Total Non-Operating Revenues (Expenses)	\$ (53,367.00)	\$ (49,137.00)	\$ (49,137.00)	\$ (49,137.00)	\$ (199,137.00)	\$ (291,244.13)	\$ (356,098.87)	\$ (348,862.42)	\$ (416,264.14)	\$ (406,714.52)	\$ (396,687.41)	
Income (Loss) Before Contributions & Transfers	\$ 140,967.00	\$ 183,518.81	\$ 224,242.48	\$ 267,502.68	\$ 88,441.24	\$ (4,899.58)	\$ (55,502.96)	\$ 6,634.56	\$ (40,040.95)	\$ 31,243.68	\$ 106,707.95	
Cash Flow Projections												
ADD:												
Depreciation - Existing	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,256.00	\$ 248,257.00	\$ 248,258.00	\$ 248,259.00	
Depreciation - New	\$ -	\$ -	\$ -	\$ -	\$ 75,000.00	\$ 125,000.00	\$ 162,500.00	\$ 162,500.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	
Proceeds from New Debt	\$ -	\$ -	\$ -	\$ 3,000,000.00	\$ 2,000,000.00	\$ 1,500,000.00	\$ -	\$ 1,500,000.00	\$ -	\$ -	\$ -	
Total Funds Available	\$ 389,222.00	\$ 431,773.81	\$ 472,497.48	\$ 3,515,757.68	\$ 2,411,696.24	\$ 1,868,355.42	\$ 355,252.04	\$ 1,917,390.56	\$ 408,216.05	\$ 479,501.68	\$ 554,966.95	
Equipment Purchases	\$ (22,785.00)	\$ (25,063.50)	\$ (27,569.85)	\$ (30,326.84)	\$ (33,359.52)	\$ (36,695.47)	\$ (40,365.02)	\$ (44,401.52)	\$ (48,841.67)	\$ (53,725.84)	\$ (59,098.42)	
Capital Improvement Projects	\$ -	\$ -	\$ (1,000,000.00)	\$ (2,000,000.00)	\$ (2,000,000.00)	\$ (2,000,000.00)	\$ (2,000,000.00)	\$ (1,000,000.00)	\$ -	\$ -	\$ -	
Other Capital Improvements from Revenue	\$ (19,695.00)	\$ (180,000.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Debt Principal - Existing	\$ (180,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)	
Debt Principal - New Debt	\$ -	\$ -	\$ -	\$ -	\$ (62,857.37)	\$ (107,905.16)	\$ (144,729.10)	\$ (151,965.55)	\$ (190,992.52)	\$ (200,542.14)	\$ (210,569.25)	
Transfers Out	\$ (4,365.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	
Cash Increase (Decrease)	\$ 162,377.00	\$ 183,710.31	\$ (598,072.37)	\$ 1,442,430.85	\$ 272,479.35	\$ (319,245.21)	\$ (1,883,176.08)	\$ 667,689.49	\$ 115,047.86	\$ 171,899.70	\$ 231,965.28	
Beginning Cash - July 1	\$ 1,588,940.00	\$ 1,751,317.00	\$ 1,935,027.31	\$ 1,336,954.94	\$ 2,779,385.79	\$ 3,051,865.14	\$ 2,732,619.93	\$ 849,443.85	\$ 1,517,133.34	\$ 1,632,181.20	\$ 1,804,080.90	
Ending Cash - June 30	\$ 1,751,317.00	\$ 1,935,027.31	\$ 1,336,954.94	\$ 2,779,385.79	\$ 3,051,865.14	\$ 2,732,619.93	\$ 849,443.85	\$ 1,517,133.34	\$ 1,632,181.20	\$ 1,804,080.90	\$ 2,036,046.18	
Bond Covenant Requirements												
Debt Service - Existing	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 89,352.00	\$ 94,936.00	\$ 94,937.00	\$ 94,938.00	\$ 94,939.00	\$ 94,940.00	
Debt Service - Proposed	\$ -	\$ -	\$ -	\$ -	\$ 212,857.37	\$ 354,762.29	\$ 461,190.97	\$ 461,190.97	\$ 567,619.66	\$ 567,619.66	\$ 567,619.66	
Total Debt Service (Annual)	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 306,959.37	\$ 444,114.29	\$ 556,126.97	\$ 556,127.97	\$ 662,557.66	\$ 662,558.66	\$ 662,559.66	
Debt Service Coverage	4.70	5.11	5.54	6.00	1.99	1.49	1.28	1.38	1.24	1.34	1.44	
Accumulated Depreciation	\$ 2,823,027.00	\$ 3,071,282.00	\$ 3,319,537.00	\$ 3,692,792.00	\$ 4,103,547.00	\$ 4,514,302.00	\$ 4,962,557.00	\$ 5,410,813.00	\$ 5,859,070.00	\$ 6,107,328.00	\$ 6,355,587.00	

Figure 10: Rate Revenue Scenario #2 Debt Service Trends

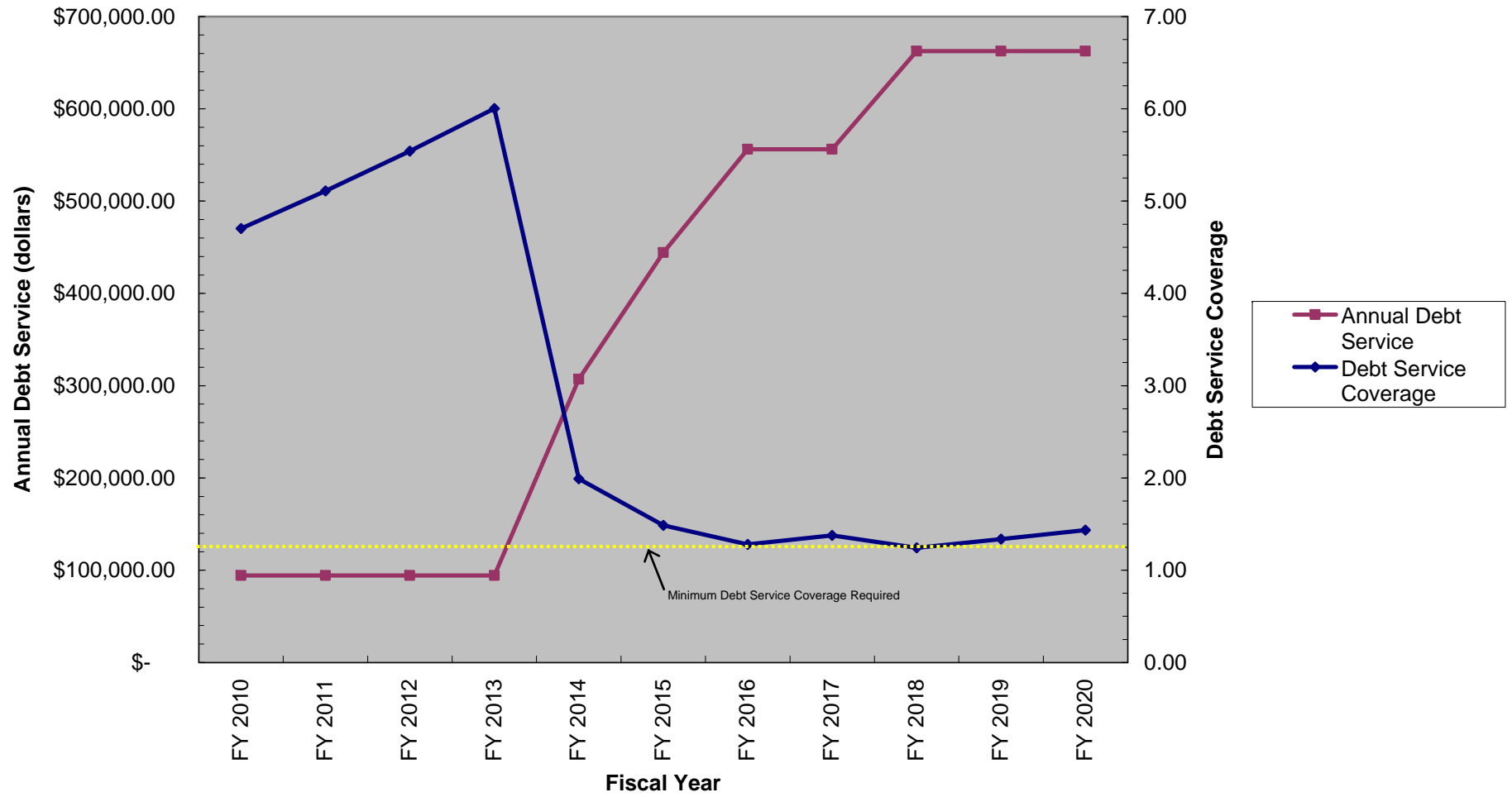


Figure 11: Rate Revenue Scenario #2 Operating Income (Loss)

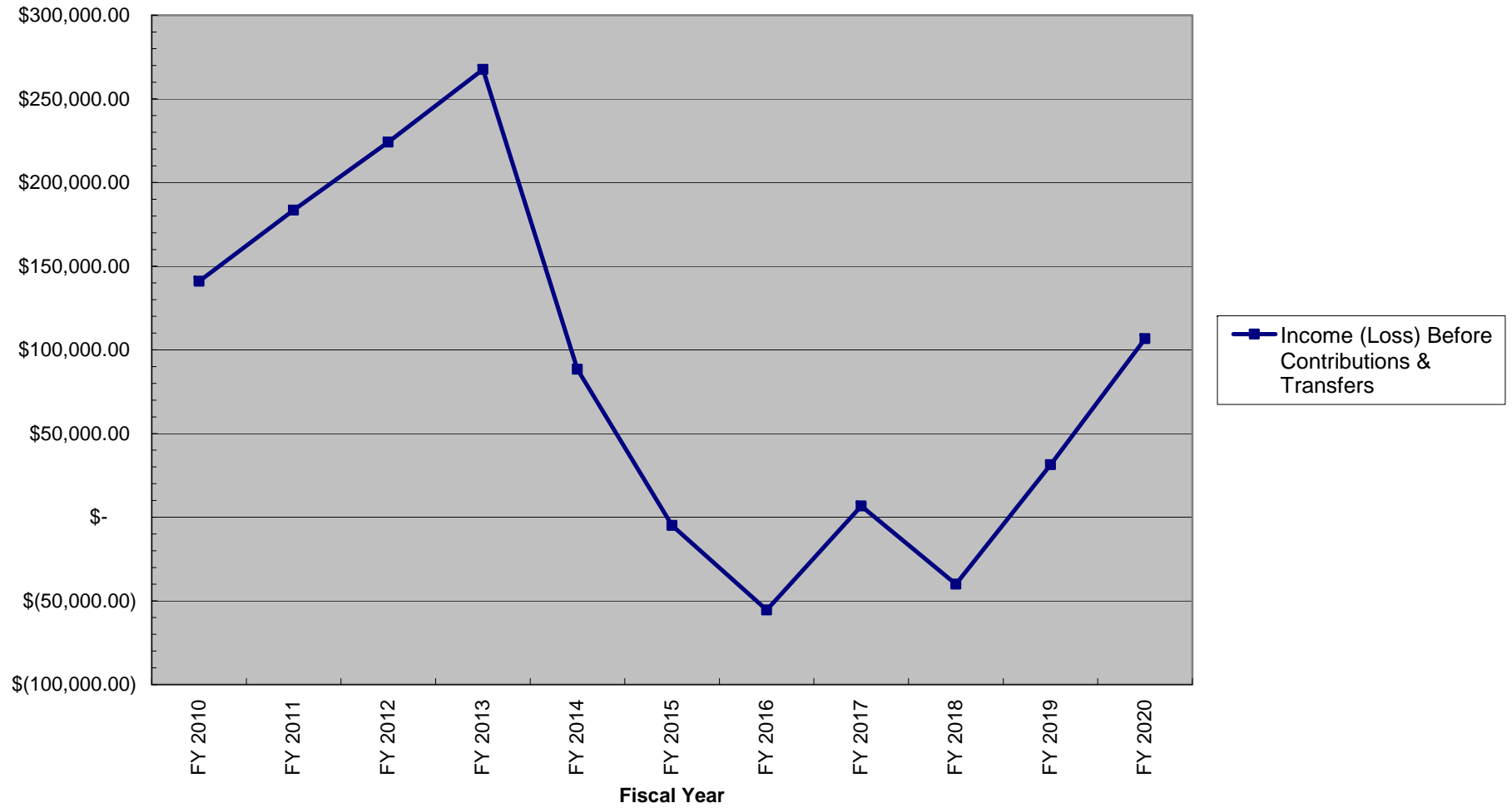
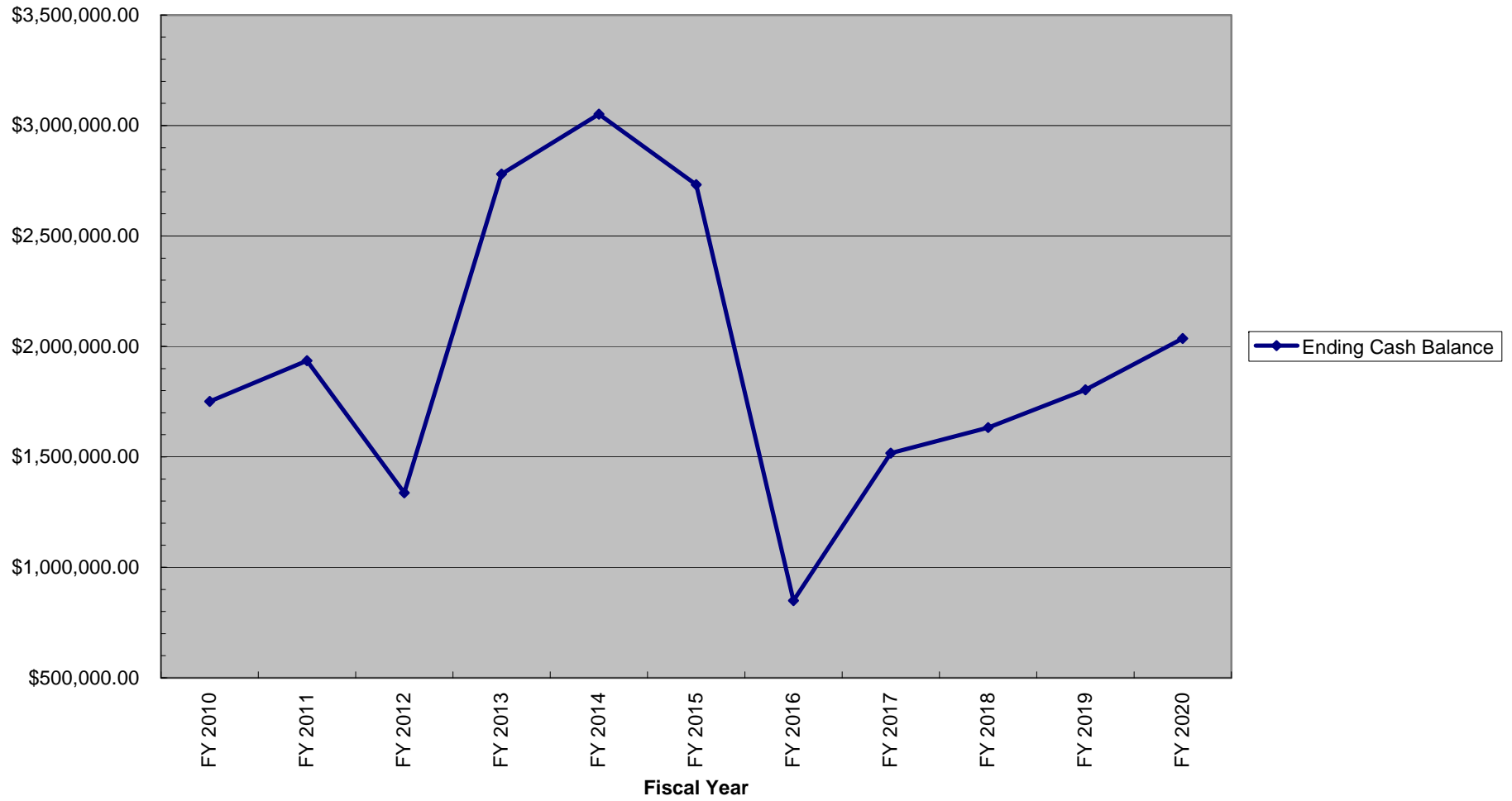


Figure 12: Rate Revenue Scenario #2 Cash Reserves



4.1.3 Rate Revenue Scenario Number Three

The third scenario evaluated also assumes that the Town will pursue capital improvements projects totaling \$10 million over a 6-year period. In order to accommodate the additional debt and the typical 3% inflation each year for operations and maintenance expenditures, a rate increase will be required. This scenario assumes an initial 10% rate increase and then 5% for each following year the projections. Based on the analysis shown in Table 12, the Town can afford to pursue \$10 million of improvements while borrowing only \$8 million over a 4-year period. The remaining \$2 million will come from the operating funds generated by the rate increases, just as in Scenario #2. As can be seen in Table 12, the financial trends are similar to the trends from Scenario #2, but the minimum required debt service coverage of 1.25 can be achieved for all projected years. In addition, the operating income and cash reserves are slightly more positive than in Scenario #2 and end on an upward trend. The cash reserves balance never drops below an amount that would be equivalent to six months of operational expenses. The projected trends for debt service, operating income, and cash reserves through fiscal year 2020 are shown in Figures 13 through 15.

Table 12: Rate Revenue Scenario #3 Financial Projections
 Town of Edisto Beach, SC
 Summary of Water & Sewer Revenue Requirements

	W&S Rate Increase		5%		10%		5%		5%		5%		5%		5%	
	O&M Inflation Rate		3%		3%		3%		3%		3%		3%		3%	
	Audit FY 2010	Current Year FY 2011	9 Year Projection													
			FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020					
Revenues																
Total Revenues	\$ 1,252,207.00	\$ 1,314,817.35	\$ 1,446,299.09	\$ 1,518,614.04	\$ 1,594,544.74	\$ 1,674,271.98	\$ 1,757,985.58	\$ 1,845,884.86	\$ 1,938,179.10	\$ 2,035,088.05	\$ 2,136,842.46					
Expenses																
Total O&M Water & Sewer	\$ 809,618.00	\$ 833,906.54	\$ 858,923.74	\$ 884,691.45	\$ 911,232.19	\$ 938,569.16	\$ 966,726.23	\$ 995,728.02	\$ 1,025,599.86	\$ 1,056,367.86	\$ 1,088,058.89					
Depreciation - Existing	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,256.00	\$ 248,257.00	\$ 248,258.00					
Depreciation - New	\$ -	\$ -	\$ -	\$ -	\$ 75,000.00	\$ 125,000.00	\$ 175,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00					
Total Expenses	\$ 1,057,873.00	\$ 1,082,161.54	\$ 1,107,178.74	\$ 1,132,946.45	\$ 1,234,487.19	\$ 1,311,824.16	\$ 1,389,981.23	\$ 1,443,984.02	\$ 1,473,856.86	\$ 1,504,625.86	\$ 1,536,317.89					
Operating Income	\$ 194,334.00	\$ 232,655.81	\$ 339,120.35	\$ 385,667.59	\$ 360,057.55	\$ 362,447.82	\$ 368,004.34	\$ 401,900.84	\$ 464,322.24	\$ 530,462.20	\$ 600,524.57					
Non-Operating Revenues (Expenses)																
Interest Income	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00					
Interest Expense Existing	\$ (60,332.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (51,352.00)	\$ (46,602.00)	\$ (46,602.00)	\$ (46,602.00)	\$ (46,602.00)	\$ (46,602.00)					
Interest Expense - New Debt	\$ -	\$ -	\$ -	\$ -	\$ (150,000.00)	\$ (246,857.13)	\$ (341,461.87)	\$ (383,701.61)	\$ (374,505.70)	\$ (364,850.01)	\$ (354,711.52)					
Total Non-Operating Revenues (Expenses)	\$ (53,367.00)	\$ (49,137.00)	\$ (49,137.00)	\$ (49,137.00)	\$ (199,137.00)	\$ (291,244.13)	\$ (381,098.87)	\$ (423,338.61)	\$ (414,142.70)	\$ (404,487.01)	\$ (394,348.52)					
Income (Loss) Before Contributions & Transfers	\$ 140,967.00	\$ 183,518.81	\$ 289,983.35	\$ 336,530.59	\$ 160,920.55	\$ 71,203.69	\$ (13,094.53)	\$ (21,437.77)	\$ 50,179.53	\$ 125,975.19	\$ 206,176.04					
Cash Flow Projections																
ADD:																
Depreciation - Existing	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,256.00	\$ 248,257.00	\$ 248,258.00	\$ 248,259.00					
Depreciation - New	\$ -	\$ -	\$ -	\$ -	\$ 75,000.00	\$ 125,000.00	\$ 175,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00					
Proceeds from New Debt	\$ -	\$ -	\$ -	\$ 3,000,000.00	\$ 2,000,000.00	\$ 2,000,000.00	\$ 1,000,000.00	\$ -	\$ -	\$ -	\$ -					
Total Funds Available	\$ 389,222.00	\$ 431,773.81	\$ 538,238.35	\$ 3,584,785.59	\$ 2,484,175.55	\$ 2,444,458.69	\$ 1,410,160.47	\$ 426,818.23	\$ 498,436.53	\$ 574,233.19	\$ 654,435.04					
Equipment Purchases	\$ (22,785.00)	\$ (25,063.50)	\$ (27,569.85)	\$ (30,326.84)	\$ (33,359.52)	\$ (36,695.47)	\$ (40,365.02)	\$ (44,401.52)	\$ (48,841.67)	\$ (53,725.84)	\$ (59,098.42)					
Capital Improvement Projects	\$ -	\$ -	\$ (1,000,000.00)	\$ (2,000,000.00)	\$ (2,000,000.00)	\$ (2,000,000.00)	\$ (2,000,000.00)	\$ (1,000,000.00)	\$ -	\$ -	\$ -					
Other Capital Improvements from Revenue	\$ (19,695.00)	\$ (180,000.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
Debt Principal - Existing	\$ (180,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)					
Debt Principal - New Debt	\$ -	\$ -	\$ -	\$ -	\$ (62,857.37)	\$ (107,905.16)	\$ (155,205.33)	\$ (183,918.05)	\$ (193,113.95)	\$ (202,769.65)	\$ (212,908.13)					
Transfers Out	\$ (4,365.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)					
Cash Increase (Decrease)	\$ 162,377.00	\$ 183,710.31	\$ (532,331.50)	\$ 1,511,458.76	\$ 344,958.66	\$ 256,858.06	\$ (838,743.87)	\$ (854,835.34)	\$ 203,146.91	\$ 264,403.70	\$ 329,094.48					
Beginning Cash - July 1	\$ 1,588,940.00	\$ 1,751,317.00	\$ 1,935,027.31	\$ 1,402,695.81	\$ 2,914,154.56	\$ 3,259,113.22	\$ 3,515,971.29	\$ 2,677,227.41	\$ 1,822,392.07	\$ 2,025,538.98	\$ 2,289,942.69					
Ending Cash - June 30	\$ 1,751,317.00	\$ 1,935,027.31	\$ 1,402,695.81	\$ 2,914,154.56	\$ 3,259,113.22	\$ 3,515,971.29	\$ 2,677,227.41	\$ 1,822,392.07	\$ 2,025,538.98	\$ 2,289,942.69	\$ 2,619,037.17					
Bond Covenant Requirements																
Debt Service - Existing	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 89,352.00	\$ 94,936.00	\$ 94,937.00	\$ 94,938.00	\$ 94,939.00	\$ 94,940.00					
Debt Service - Proposed	\$ -	\$ -	\$ -	\$ -	\$ 212,857.37	\$ 354,762.29	\$ 496,667.20	\$ 567,619.66	\$ 567,619.66	\$ 567,619.66	\$ 567,619.66					
Total Debt Service (Annual)	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 306,959.37	\$ 444,114.29	\$ 591,603.20	\$ 662,556.66	\$ 662,557.66	\$ 662,558.66	\$ 662,559.66					
Debt Service Coverage	4.70	5.11	6.24	6.74	2.23	1.66	1.34	1.28	1.38	1.48	1.58					
Accumulated Depreciation	\$ 2,823,027.00	\$ 3,071,282.00	\$ 3,319,537.00	\$ 3,692,792.00	\$ 4,116,047.00	\$ 4,564,302.00	\$ 5,012,557.00	\$ 5,460,813.00	\$ 5,909,070.00	\$ 6,157,328.00	\$ 6,405,587.00					

Figure 13: Rate Revenue Scenario #3 Debt Service Trends

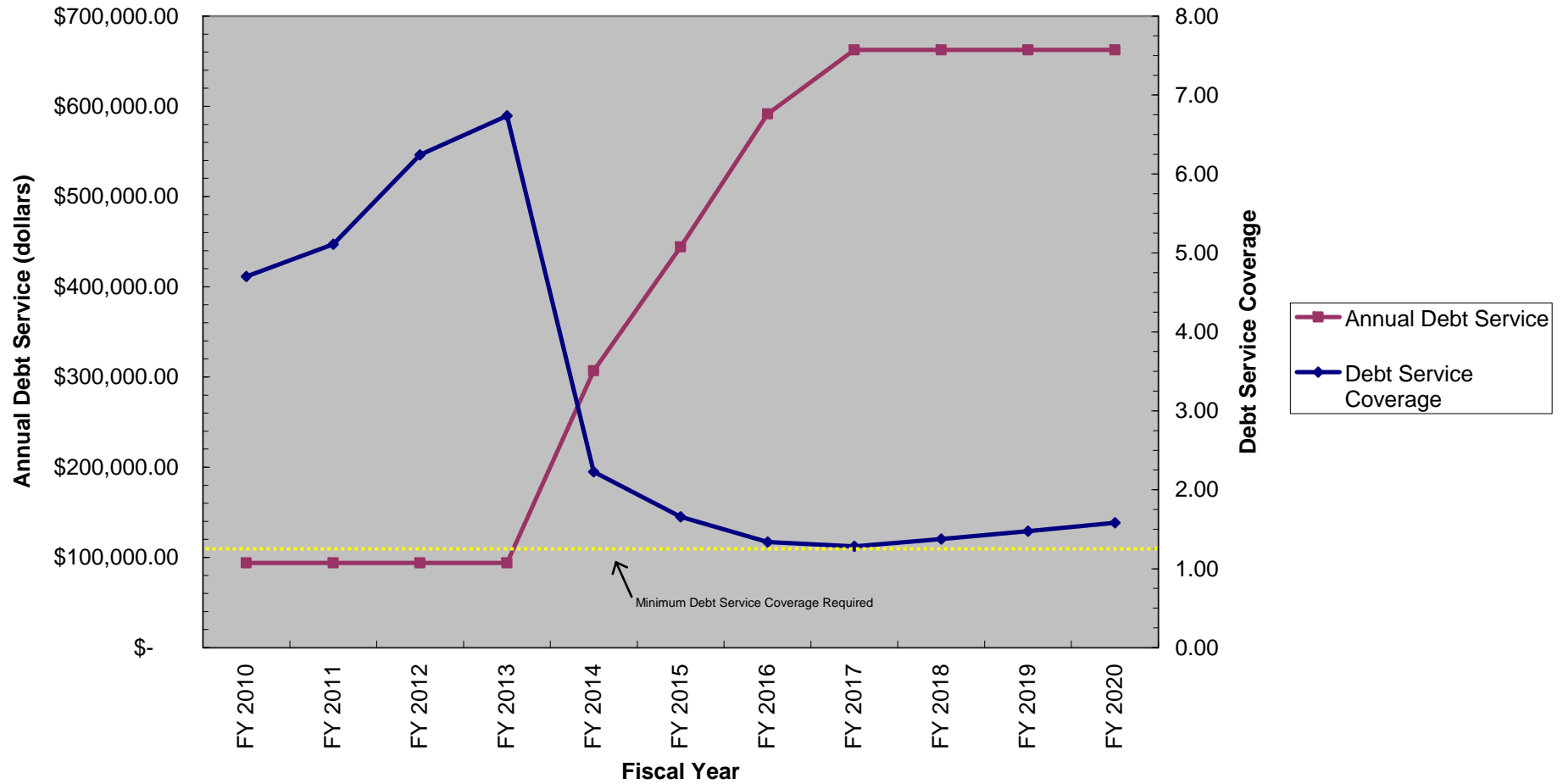


Figure 14: Rate Revenue Scenario #3 Operating Income (Loss)

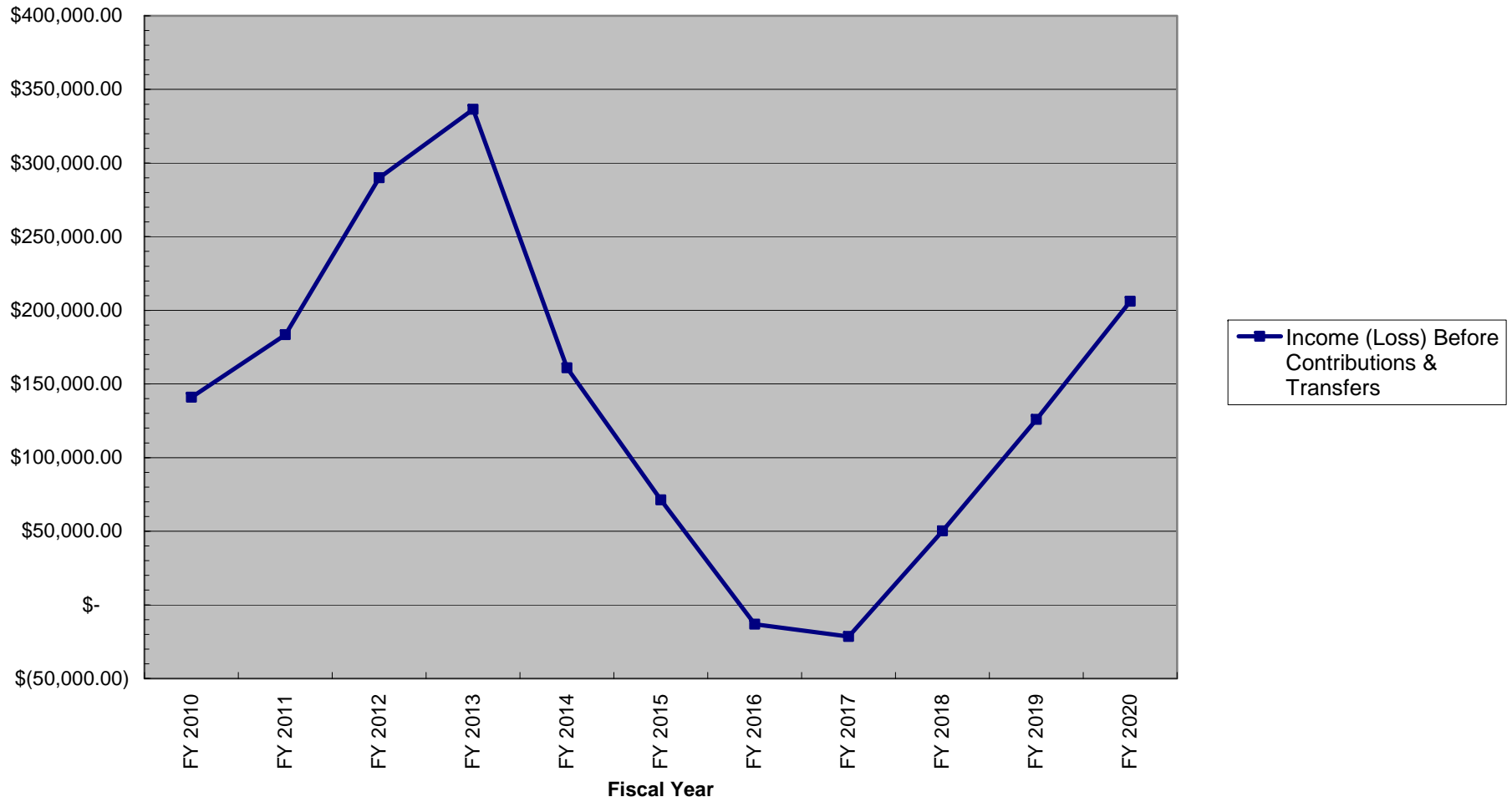
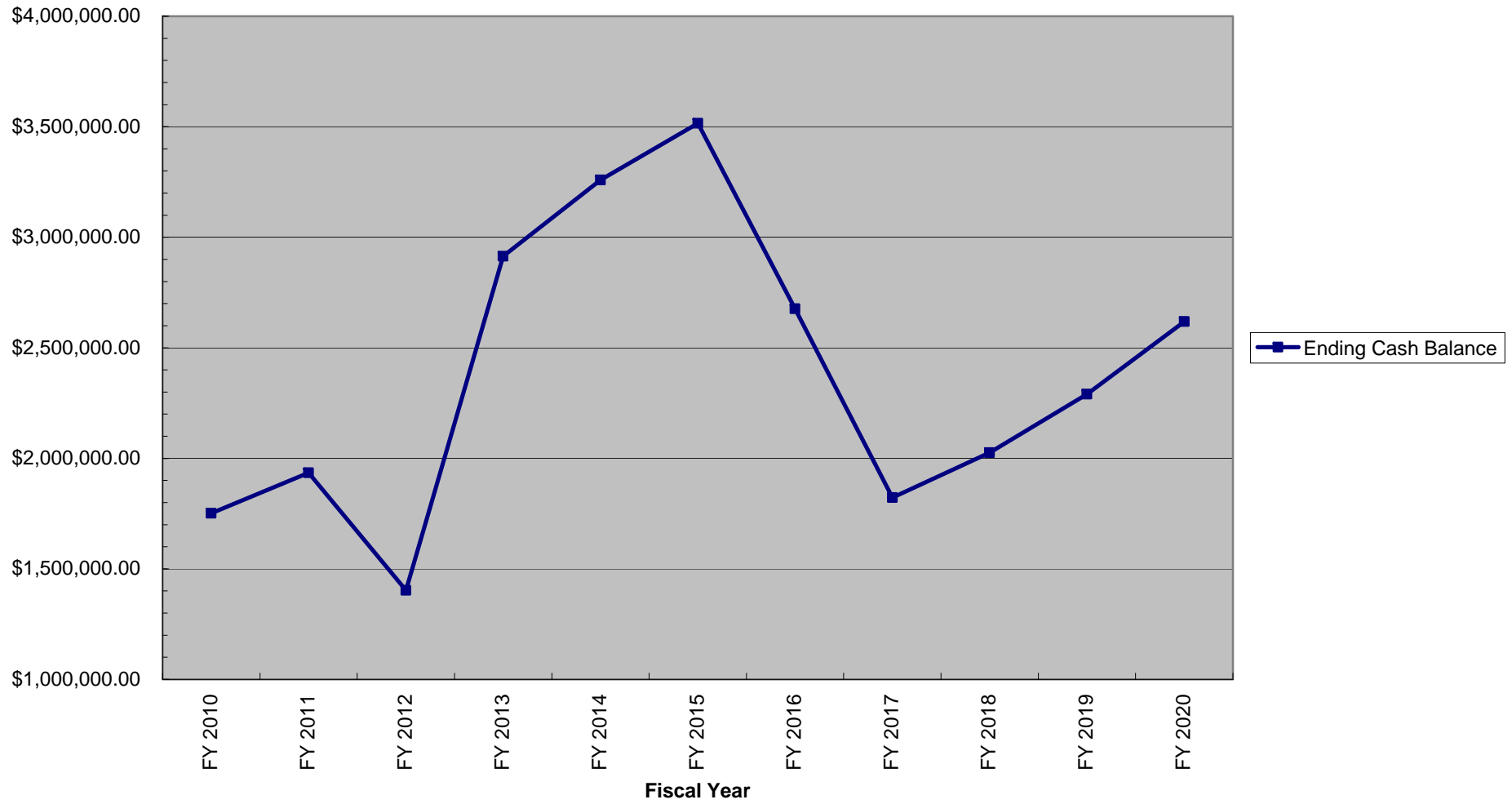


Figure 15: Rate Revenue Scenario #3 Cash Reserves



4.1.4 Rate Revenue Scenario Number Four

The fourth scenario evaluated assumes that the Town will pursue capital improvements projects totaling \$10 million over a shorter 3-year period. In order to accommodate the additional debt and the typical 3% inflation each year for operations and maintenance expenditures, a rate increase will be required. This scenario assumes two initial 10% rate increases, followed by two 5% increases. After the first four years in the projections, increases are only necessary to keep up with inflation, which equates to an increase of approximately 3% every other year. Based on the analysis shown in Table 13, the Town can afford to pursue \$10 million of improvements while borrowing only \$8 million over a 2-year period. The remaining \$2 million will come from the operating funds generated by the rate increases, just as in the previous scenarios. As can be seen in Table 13, the debt service coverage does dip slightly below the required minimum debt service coverage of 1.25 for several years. The cash reserves balance, however, never drops below an amount that would be equivalent to six months of operational expenses and is on a very positive trend from year 2015 forward. The projected trends for debt service, operating income, and cash reserves through fiscal year 2020 are shown in Figures 16 through 18. This scenario would be applicable if the Town has immediate large budget items that need to be addressed in a short timeframe. An example of where this could be applicable is if frustrations over the sodium chloride in the drinking water escalated to such a point that residents were willing to tolerate the higher increase in rates to address the problem by installing further treatment.

Table 13: Rate Revenue Scenario #4 Financial Projections
 Town of Edisto Beach, SC
 Summary of Water & Sewer Revenue Requirements

			5%	10%	10%	5%	5%	3%	0%	3%	0%	3%
W&S Rate Increase			5%	10%	10%	5%	5%	3%	0%	3%	0%	3%
O&M Inflation Rate			3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
	Audit FY 2010	Current Year FY 2011	9 Year Projection									
			FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	
Revenues												
Total Revenues	\$ 1,252,207.00	\$ 1,314,817.35	\$ 1,446,299.09	\$ 1,590,928.99	\$ 1,670,475.44	\$ 1,753,999.22	\$ 1,806,619.19	\$ 1,806,619.19	\$ 1,860,817.77	\$ 1,860,817.77	\$ 1,916,642.30	
Expenses												
Total O&M Water & Sewer	\$ 809,618.00	\$ 833,906.54	\$ 858,923.74	\$ 884,691.45	\$ 911,232.19	\$ 938,569.16	\$ 966,726.23	\$ 995,728.02	\$ 1,025,599.86	\$ 1,056,367.86	\$ 1,088,058.89	
Depreciation - Existing	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,256.00	\$ 248,257.00	\$ 248,258.00	\$ 248,259.00	
Depreciation - New	\$ -	\$ -	\$ -	\$ -	\$ 100,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	
Total Expenses	\$ 1,057,873.00	\$ 1,082,161.54	\$ 1,107,178.74	\$ 1,132,946.45	\$ 1,259,487.19	\$ 1,386,824.16	\$ 1,414,981.23	\$ 1,443,984.02	\$ 1,473,856.86	\$ 1,504,625.86	\$ 1,536,317.89	
Operating Income	\$ 194,334.00	\$ 232,655.81	\$ 339,120.35	\$ 457,982.55	\$ 410,988.25	\$ 367,175.06	\$ 391,637.96	\$ 362,635.17	\$ 386,960.91	\$ 356,191.91	\$ 380,324.41	
Non-Operating Revenues (Expenses)												
Interest Income	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	\$ 6,965.00	
Interest Expense Existing	\$ (60,332.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (56,102.00)	\$ (51,352.00)	\$ (46,602.00)	\$ (46,602.00)	\$ (46,602.00)	\$ (46,602.00)	\$ (46,602.00)	
Interest Expense - New Debt	\$ -	\$ -	\$ -	\$ -	\$ (200,000.00)	\$ (395,809.51)	\$ (387,219.00)	\$ (378,198.97)	\$ (368,727.93)	\$ (358,783.35)	\$ (348,341.53)	
Total Non-Operating Revenues (Expenses)	\$ (53,367.00)	\$ (49,137.00)	\$ (49,137.00)	\$ (49,137.00)	\$ (249,137.00)	\$ (440,196.51)	\$ (426,856.00)	\$ (417,835.97)	\$ (408,364.93)	\$ (398,420.35)	\$ (387,978.53)	
Income (Loss) Before Contributions & Transfers	\$ 140,967.00	\$ 183,518.81	\$ 289,983.35	\$ 408,845.55	\$ 161,851.25	\$ (73,021.45)	\$ (35,218.04)	\$ (55,200.80)	\$ (21,404.03)	\$ (42,228.44)	\$ (7,654.12)	
Cash Flow Projections												
ADD:												
Depreciation - Existing	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,255.00	\$ 248,256.00	\$ 248,257.00	\$ 248,258.00	\$ 248,259.00	
Depreciation - New	\$ -	\$ -	\$ -	\$ -	\$ 100,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	\$ 200,000.00	
Proceeds from New Debt	\$ -	\$ -	\$ -	\$ 4,000,000.00	\$ 4,000,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total Funds Available	\$ 389,222.00	\$ 431,773.81	\$ 538,238.35	\$ 4,657,100.55	\$ 4,510,106.25	\$ 375,233.55	\$ 413,036.96	\$ 393,055.20	\$ 426,852.97	\$ 406,029.56	\$ 440,604.88	
Equipment Purchases	\$ (22,785.00)	\$ (25,063.50)	\$ (27,569.85)	\$ (30,326.84)	\$ (33,359.52)	\$ (36,695.47)	\$ (40,365.02)	\$ (44,401.52)	\$ (48,841.67)	\$ (53,725.84)	\$ (59,098.42)	
Capital Improvement Projects	\$ -	\$ -	\$ (1,000,000.00)	\$ (4,000,000.00)	\$ (5,000,000.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Other Capital Improvements from Revenue	\$ (19,695.00)	\$ (180,000.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Debt Principal - Existing	\$ (180,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (38,000.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)	\$ (48,334.00)	
Debt Principal - New Debt	\$ -	\$ -	\$ -	\$ -	\$ (83,809.83)	\$ (171,810.15)	\$ (180,400.66)	\$ (189,420.69)	\$ (198,891.72)	\$ (208,836.31)	\$ (219,278.13)	
Transfers Out	\$ (4,365.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	\$ (5,000.00)	
Cash Increase (Decrease)	\$ 162,377.00	\$ 183,710.31	\$ (532,331.50)	\$ 583,773.71	\$ (650,063.10)	\$ 123,727.93	\$ 138,937.28	\$ 105,899.00	\$ 125,785.58	\$ 90,133.42	\$ 108,894.33	
Beginning Cash - July 1	\$ 1,588,940.00	\$ 1,751,317.00	\$ 1,935,027.31	\$ 1,402,695.81	\$ 1,986,469.52	\$ 1,336,406.42	\$ 1,460,134.35	\$ 1,599,071.64	\$ 1,704,970.63	\$ 1,830,756.21	\$ 1,920,889.62	
Ending Cash - June 30	\$ 1,751,317.00	\$ 1,935,027.31	\$ 1,402,695.81	\$ 1,986,469.52	\$ 1,336,406.42	\$ 1,460,134.35	\$ 1,599,071.64	\$ 1,704,970.63	\$ 1,830,756.21	\$ 1,920,889.62	\$ 2,029,783.95	
Bond Covenant Requirements												
Debt Service - Existing	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 89,352.00	\$ 94,936.00	\$ 94,937.00	\$ 94,938.00	\$ 94,939.00	\$ 94,940.00	
Debt Service - Proposed	\$ -	\$ -	\$ -	\$ -	\$ 283,809.83	\$ 567,619.66	\$ 567,619.66	\$ 567,619.66	\$ 567,619.66	\$ 567,619.66	\$ 567,619.66	
Total Debt Service (Annual)	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 94,102.00	\$ 377,911.83	\$ 656,971.66	\$ 662,555.66	\$ 662,556.66	\$ 662,557.66	\$ 662,558.66	\$ 662,559.66	
Debt Service Coverage	4.70	5.11	6.24	7.51	2.01	1.24	1.27	1.22	1.26	1.21	1.25	
Accumulated Depreciation	\$ 2,823,027.00	\$ 3,071,282.00	\$ 3,319,537.00	\$ 3,767,792.00	\$ 4,216,047.00	\$ 4,664,302.00	\$ 5,112,557.00	\$ 5,560,813.00	\$ 6,009,070.00	\$ 6,257,328.00	\$ 6,505,587.00	

Figure 16: Rate Revenue Scenario #4 Debt Service Trends

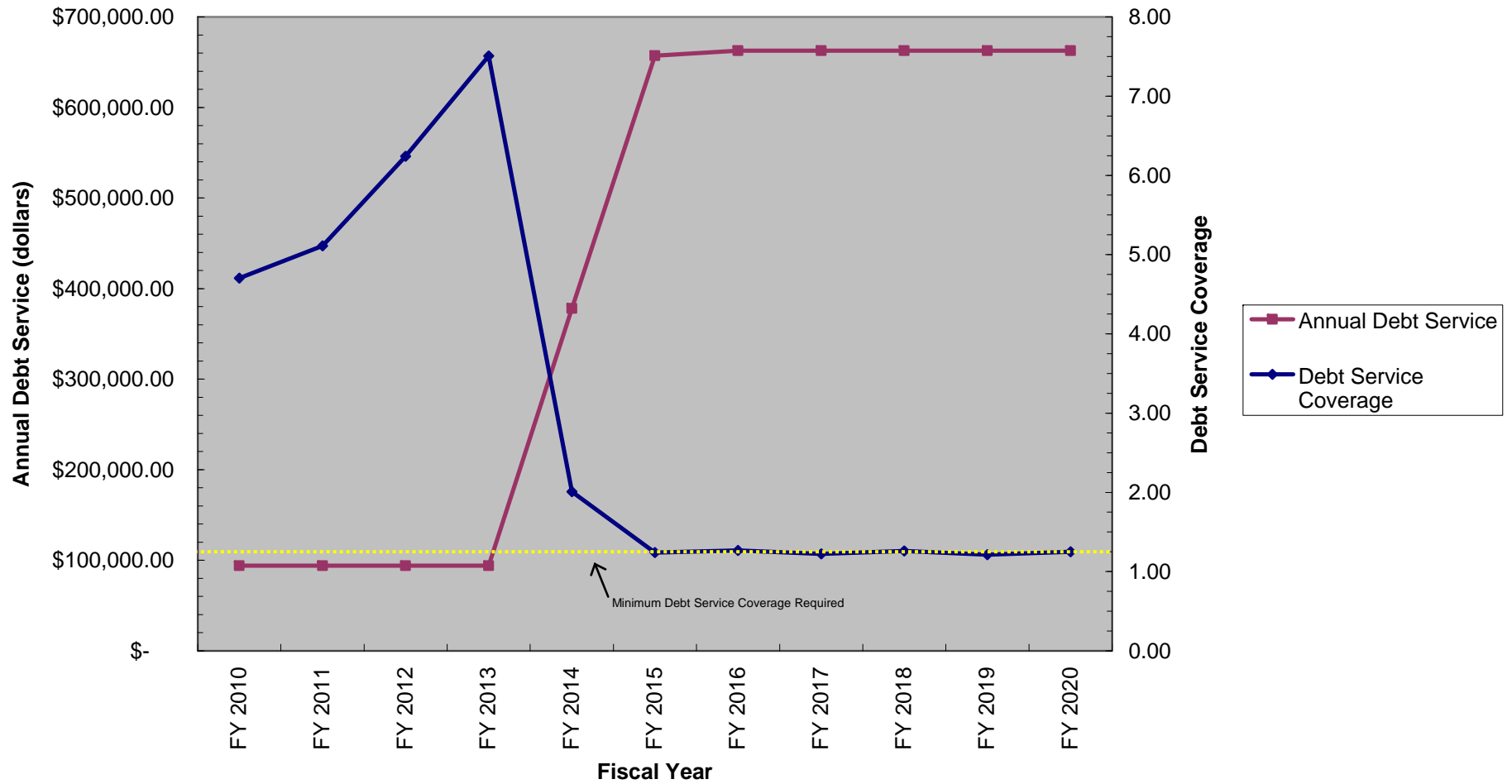


Figure17: Rate Revenue Scenario #4 Operating Income (Loss)

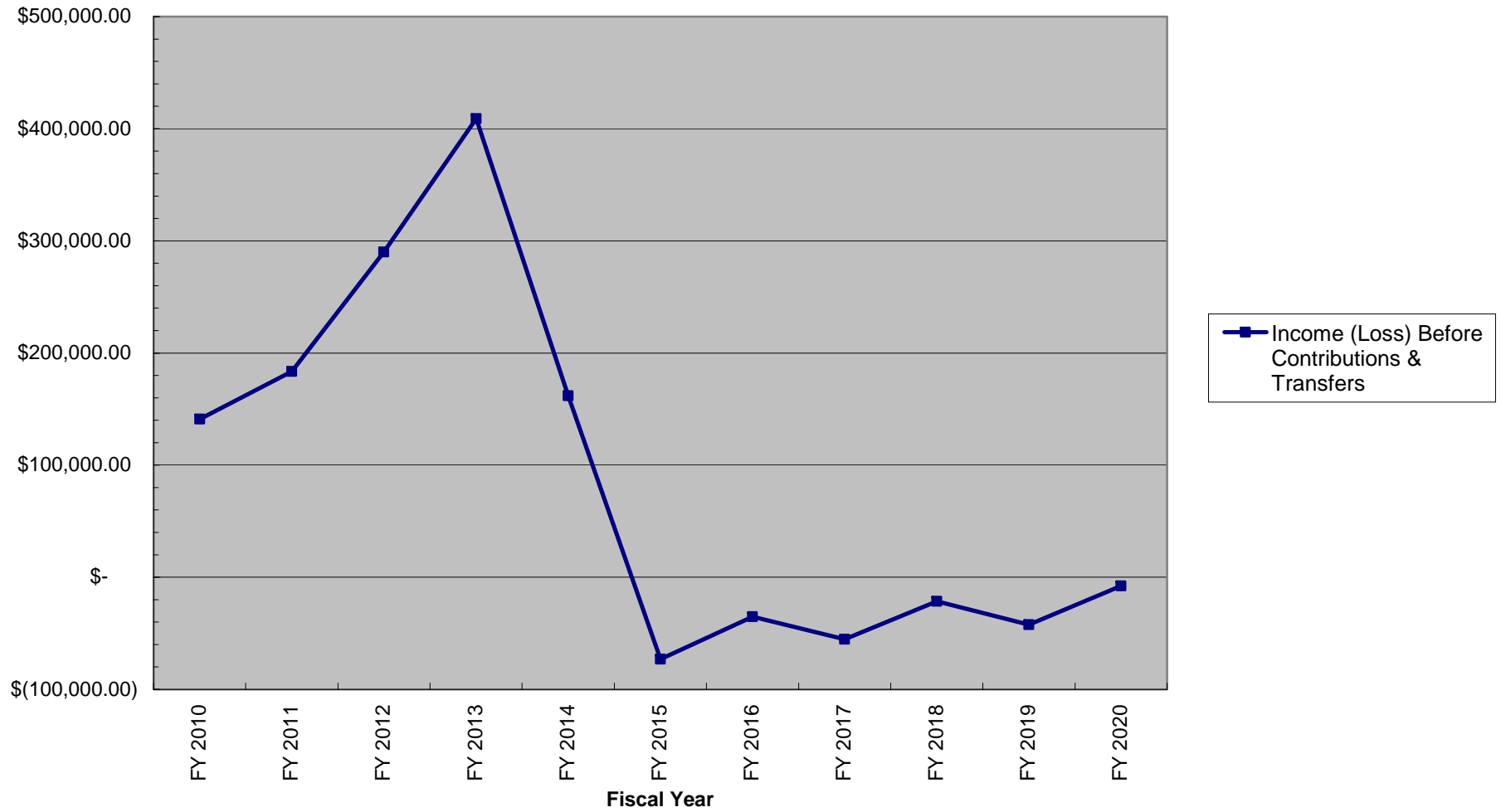
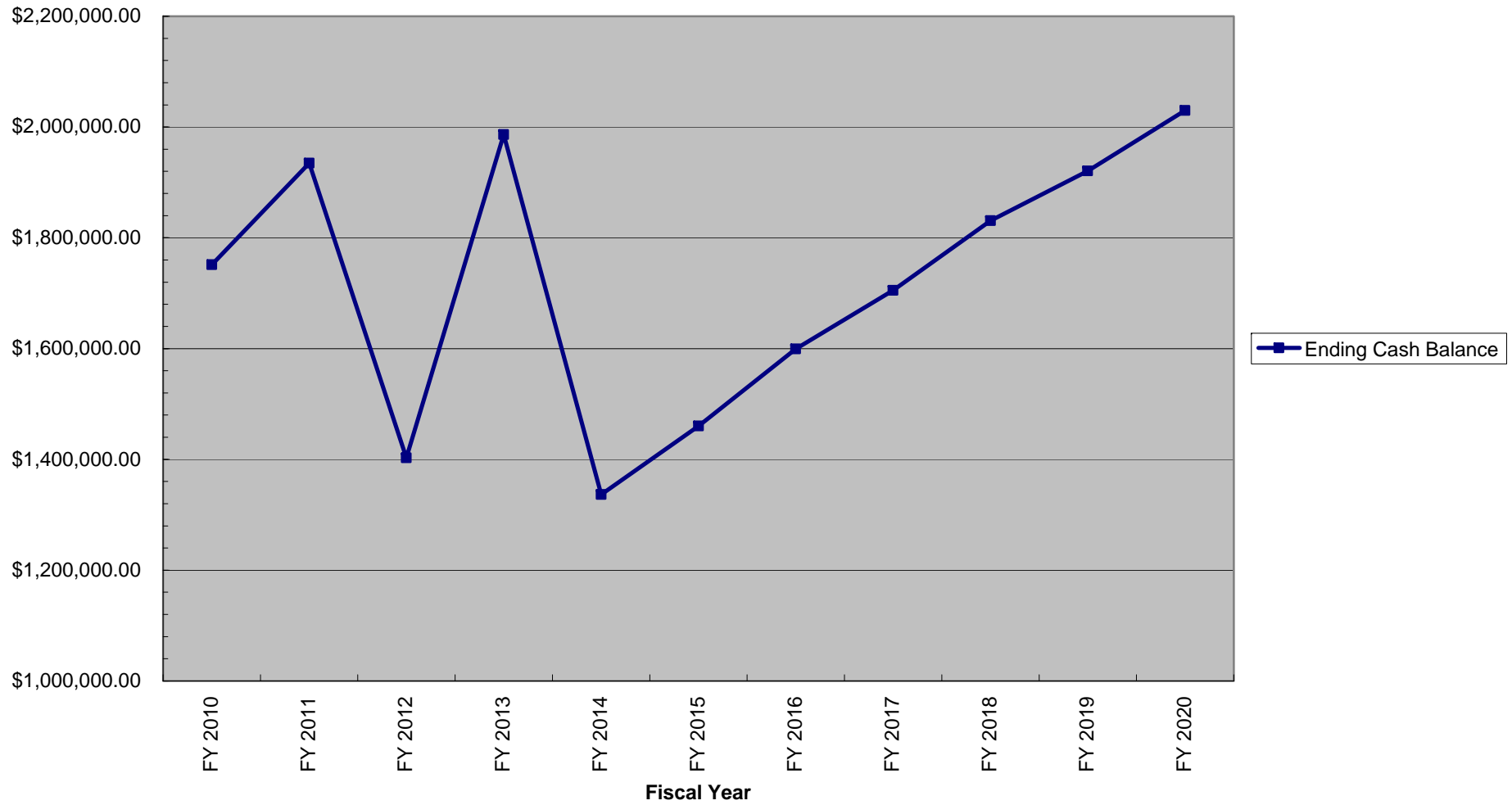


Figure 18: Rate Revenue Scenario #4 Cash Reserves



4.2 Rate Structure Alternatives

The Town's utility rate structure must comply with governing statutes and case law to ensure the water and sewer rates are fair and defensible if challenged by the court system. According to documentation published by the Water Environment Federation, local, state, and federal courts have been reasonably consistent in decisions made regarding utility rate setting. The following common principals from the Water Environment Federation's *Manual of Practice No. 27* should be used as a guideline in setting rates:

- *Rates must be just and reasonable.*
- *Rates must bear a reasonable relationship to a legitimate governmental interest or purpose.*
- *Rates must bear a reasonable relationship to a utility's current or future operating and capital costs.*
- *Rates set solely to generate revenue may be deemed to be a tax.*
- *Municipalities may establish classes of service for customers that are similarly situated and served and use a myriad of factors to justify different rates for the various classes.*
- *Municipalities may properly discriminate between residents and nonresidents by charging higher rates outside their corporate limits.*

The water and sewer rates for the Town should be structured so that they are self-sustaining and cover the needed revenue requirements. In addition, the rates should provide a stable source of income to the Utilities Department, the rates should be fair to all users, and the rates should be clearly defined and easy to understand.

Overall, there do not appear to be concerns with the majority of the current rates that would warrant them to be unjustifiable. However, caution should be taken when setting future rates for the out of town residents. The courts have generally upheld out of town/city rates that are no more than double the rates of those for residents inside the town/city limits. The Town of Edisto Beach's current outside town limit water volumetric rates are over three times the inside town limit rates. Without proper justification for these rates, they could be interpreted as a tax for areas over which the Town has no jurisdiction, which could be problematic. Also, it should be noted that the current ordinance regarding the water rate schedule alludes to the rates being semi-annual, but

it is not clear and indicates that the rates could be monthly. The Town should consider revising this ordinance to clarify the frequency.

In evaluating water and sewer rates, it is important to understand the various philosophies that can assist the Town in meeting its needs and that can influence the type of rate structure that should be selected. One of the items to consider is whether the Town's goal is to promote water conservation among users. The Town's current rates include an inclining block structure. However, the increase between blocks is only around 12%, which does not necessarily equate to a substantial cost that would encourage customers to conserve water. In addition, the Town has historically had difficulty meeting the peak demands in the summer. In the current semi-annual billing periods, months with higher usage (such as June, July and August) are averaged with months that are typically lower in usage (such as September, October, and November). Therefore, customers' water bills are not typically high enough to discourage high usage during those warmest months. Other philosophies to consider include whether the Town wishes to subsidize the water and sewer rates for the lower income users, and whether the Town wishes to recover all fixed costs in the base rate for all users.

In order to assist the Town in understanding how the various philosophies can change the rate structure, several rate structure alternatives are outlined below. Advantages and disadvantages for each alternative are discussed. These alternatives assume a 10% increase in revenue for fiscal year 2012. Note that residential rates are the focus of the rate structure analysis since these customers make up the bulk of the revenues generated by the water and sewer system. It is assumed that rates would be adjusted for the other user classifications in a similar manner as the residential customers. Their financial impact would just not be as significant as the effect of residential fees. In addition, assumptions were made on how many customers typically fall into each rate block. Once the Town decides which rate revenue scenario and rate structure philosophies best reflect the overall goals of the systems, the proposed rate schedules using actual customer block data, if available, can be adjusted. In addition, it should be noted that the scenarios below were chosen in order to provide the Town with an idea of the options available. There are an infinite number of possibilities that could be evaluated. Accommodations can be made to evaluate any additional rate structures or increases the Town may wish to suggest.

4.2.1 Rate Structure Alternative Number One

Description: Leave the rates as they are currently structured and add a straight 10% increase across the blocks.

Advantages: The structure is simple, it is what the Town has been using and, therefore, customers should easily understand the rates.

Disadvantages: There is no discouragement for water conservation during peak usage periods. The structure does not distribute costs equally between the base (fixed minimum) rate and volumetric (variable) rate to cover fixed system expenditures and variable system expenditures, respectively. The structure subsidizes customers that use more than 24,000 gallons per 6-month period since many customers do not use this amount.

Sample Rate Structure:

Table 10: Proposed Residential Semi-Annual Rate Structure for Alternative #1

	<u>0-24,000 gallons</u>	<u>24,000 - 48,000 gallons</u>	<u>48,000 - 72,000</u>	<u>> 72,000 gallons</u>
Current Water Rate (per 1,000 gallons)	\$123.08	\$1.37	\$1.53	\$1.71
Proposed Water Rate (per 1,000 gallons)	\$135.39	\$1.51	\$1.68	\$1.88

	<u>0-6,000 gallons</u>	<u>> 6,000 gallons</u>
Current Sewer Rate (per 1,000 gallons)	\$189.00	\$3.15
Proposed Sewer Rate (per 1,000 gallons)	\$207.90	\$3.47

4.2.2 Rate Structure Alternative Number Two

Description: Adjust the base rates to cover the 90% of water system and 90% of sewer system expenditures that are spent on fixed components that do not vary significantly with water consumed or sewer contributed. Also adjust the volumetric rates as needed to correlate to the 10% of expenditures that do vary with water consumption and sewer contributions.

Advantages: The structure is more reflective of the expenditures so that the Town can be assured fixed costs are recovered. The structure is simple.

Disadvantages: There is no discouragement for water conservation during peak usage periods. The structure subsidizes customers that use more than 24,000 gallons per 6-month period since many customers do not use this amount.

Sample Rate Structure:

Table 11: Proposed Residential Semi-Annual Rate Structure for Alternative #2

	<u>0-24,000 gallons</u>	<u>24,000 - 48,000 gallons</u>	<u>48,000 - 72,000</u>	<u>> 72,000 gallons</u>
Current Water Rate (per 1,000 gallons)	\$123.08	\$1.37	\$1.53	\$1.71
Proposed Water Rate (per 1,000 gallons)	\$179.94	\$0.86	\$0.97	\$1.08

	<u>0-6,000 gallons</u>	<u>> 6,000 gallons</u>
Current Sewer Rate (per 1,000 gallons)	\$189.00	\$3.15
Proposed Sewer Rate (per 1,000 gallons)	\$276.81	\$1.49

4.2.3 Rate Structure Alternative Number Three

Description: Leave the base rates at their current pricing, but decrease the volume included in the base rate by 50%. Adjust the volumetric rates as needed to accommodate the 10% increase in revenue required. Assumptions were made regarding the volumetric charges over 12,000 gallons for water and over 3,000 gallons for sewer due to the reduction in volume included in the base rate. Once data is collected with the new structure in place, rates could be adjusted accordingly to better account for the change in gallons included in the base rates.

Advantages: The customers that use more water will pay a higher percentage of the overall system expenditures. The structure is simple and customers are already familiar with the base rate cost. Customers are discouraged from using excess water over a six-month period because they will now have to pay for additional volumetric costs.

Disadvantages: There is no discouragement for water conservation during peak usage periods since high months can still be averaged with lower months. The structure does not distribute costs equally between the base (fixed minimum) rate and volumetric (variable) rate to cover fixed system expenditures and variable system expenditures, respectively.

Sample Rate Structure:

Table 12: Proposed Residential Semi-Annual Rate Structure for Alternative #3

	<u>0-24,000 gallons</u>	<u>24,000 - 48,000 gallons</u>	<u>48,000 - 72,000</u>	<u>> 72,000 gallons</u>
Current Water Rate (per 1,000 gallons)	\$123.08	\$1.37	\$1.53	\$1.71
Proposed Water Rate (per 1,000 gallons)	\$123.08	\$2.52	\$2.82	\$3.16

	<u>0-6,000 gallons</u>	<u>> 6,000 gallons</u>
Current Sewer Rate (per 1,000 gallons)	\$189.00	\$3.15
Proposed Sewer Rate (per 1,000 gallons)	\$189.00	\$5.48

4.2.4 Rate Structure Alternative Number Four

Description: Leave the base rates at their current pricing and current volumes included in the base rate. Adjust the volumetric rates as needed to accommodate the 10% increase in revenue required.

Advantages: The structure is simple and customers are already familiar with the base rate cost.

Disadvantages: There is no discouragement for water conservation during peak usage periods. The structure does not distribute costs equally between the base (fixed minimum) rate and volumetric (variable) rate to cover fixed system expenditures and variable system expenditures, respectively. The structure subsidizes customers that use more than 24,000 gallons per 6-month period since many customers do not use this amount.

Sample Rate Structure:

Table 13: Proposed Residential Semi-Annual Rate Structure for Alternative #4

	<u>0-24,000 gallons</u>	<u>24,000 - 48,000 gallons</u>	<u>48,000 - 72,000</u>	<u>> 72,000 gallons</u>
Current Water Rate (per 1,000 gallons)	\$123.08	\$1.37	\$1.53	\$1.71
Proposed Water Rate (per 1,000 gallons)	\$123.08	\$3.29	\$3.71	\$4.16

	<u>0-6,000 gallons</u>	<u>> 6,000 gallons</u>
Current Sewer Rate (per 1,000 gallons)	\$189.00	\$3.15
Proposed Sewer Rate (per 1,000 gallons)	\$189.00	\$5.75

4.2.5 Rate Structure Alternative Number Five

Description: Adjust the rate structure to a monthly or quarterly cycle. A penalty for high usage could be built into the volumetric charges.

Advantages: Water conservation would be encouraged during peak usage periods. Customers could no longer average higher usage periods with lower usage periods. Therefore, the Town would be able to better control peak demands. The customers that use more water will pay a higher percentage of the overall system expenditures.

Disadvantages: Currently, there is no monthly or quarterly usage data available since meters are only read twice per year. Therefore, it would be difficult to know what levels rates should be set to accomplish the water conservation goals. Customer would have more frequent payments (Note: This could be seen as an advantage, however, to some customers that would prefer more frequent smaller payments throughout the year rather than only two large utility bills in a year.)

Sample Rate Structure: The problem with peak usage in the summer can only be addressed through more frequent billing. If the Town desires to address this problem, it is recommended that the Town initialize monthly or quarterly meter reading and collect data for a period of one year. The appropriate rates could then be determined by analyzing that data.

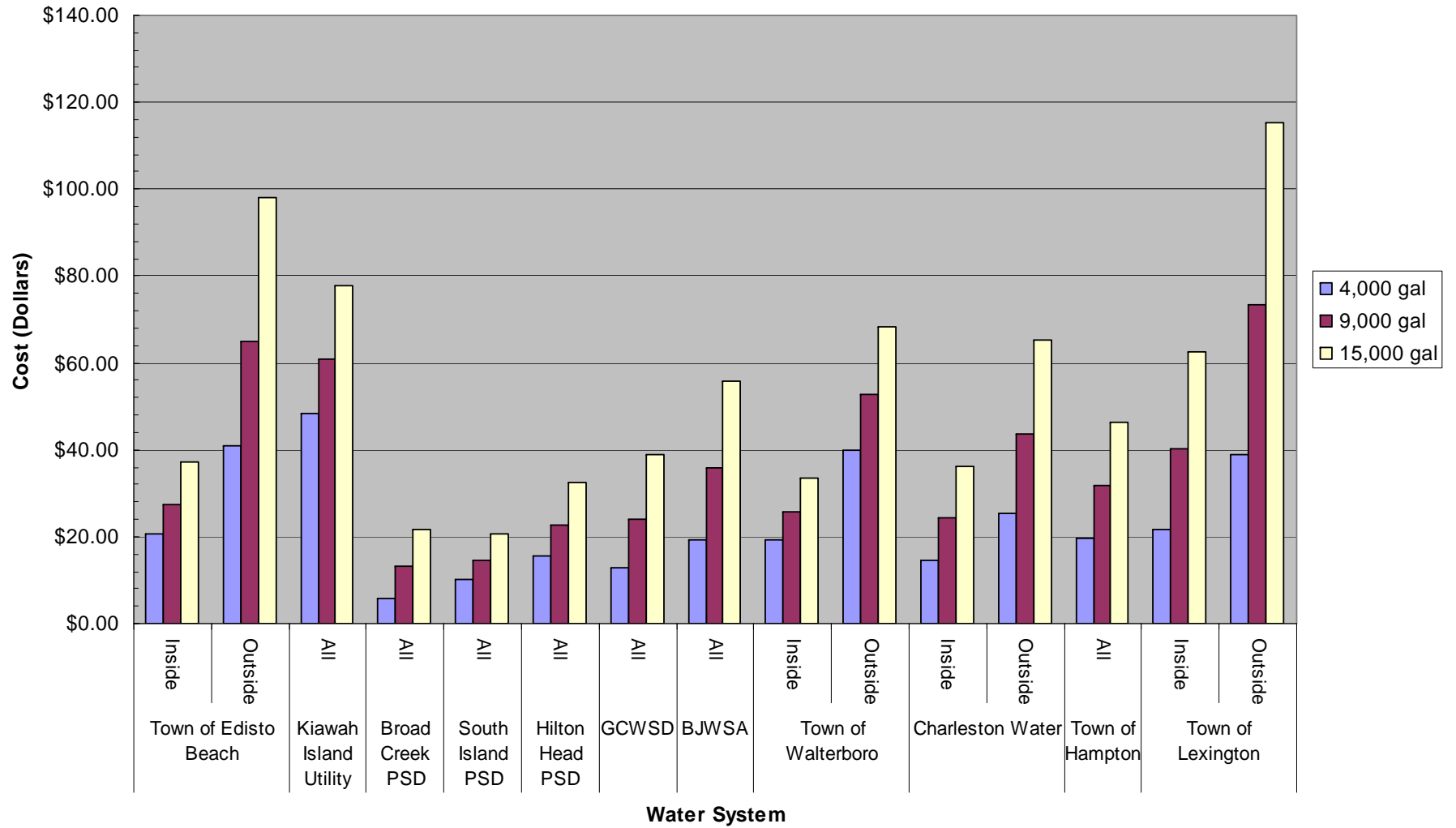
5.0 RECOMMENDATIONS & CONCLUSION

Although the Town's water and sewer system funds are currently adequate if no major capital improvements projects are to be initiated, it is clear the Town has needs and wishes to pursue system improvements. In order to offset any additional costs that may be incurred to accommodate these future projects, the Town will need to raise rates in accordance with one of the scenarios provided. The rate revenue scenarios outlined in this report determine the amount of money to spend over a designated period of time. The rate structure alternatives discussed in the report determine how the costs are distributed throughout the customer base. Selections of a scenario and alternative are mutually independent of each other and can be modified at any time.

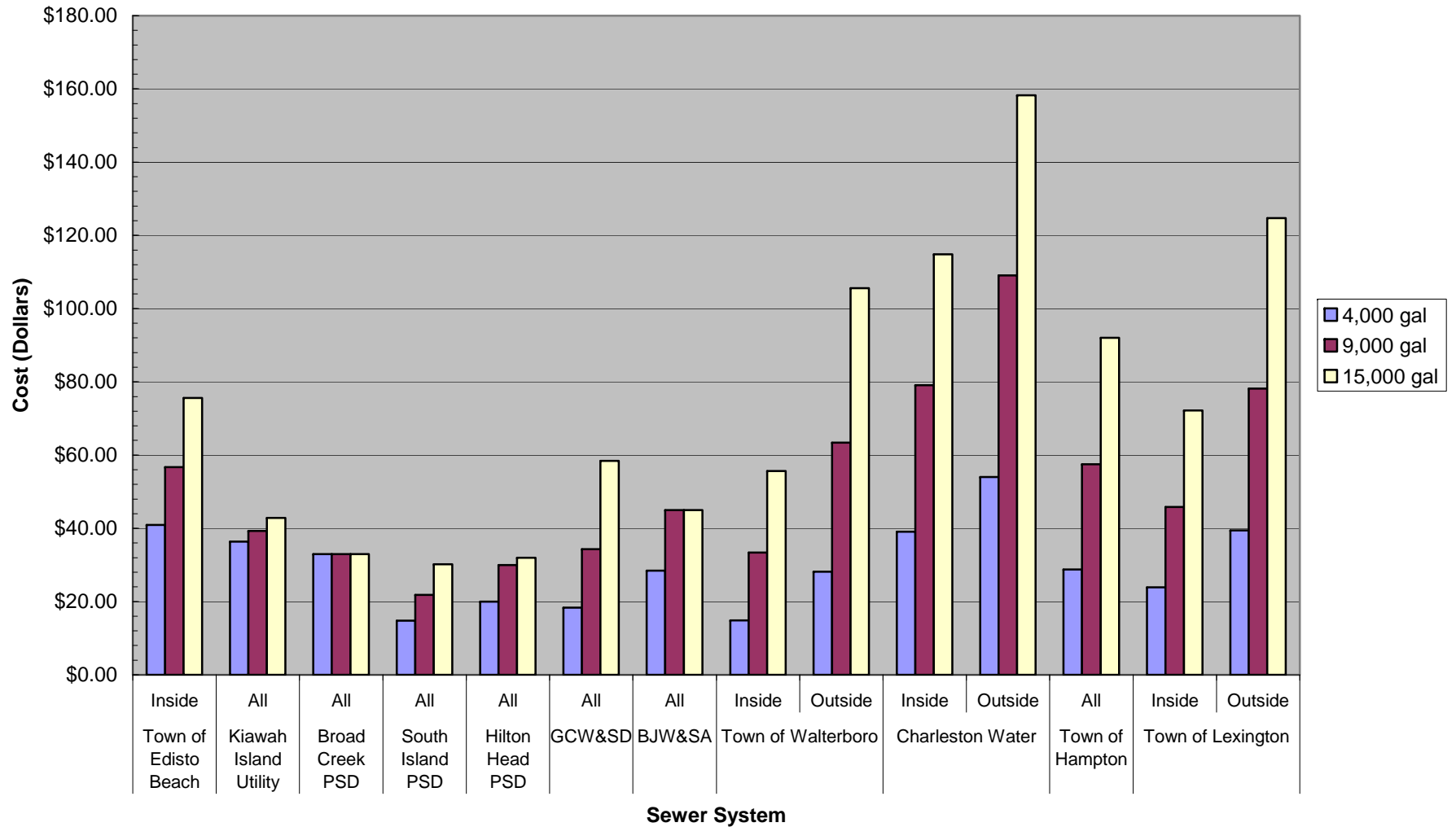
Appendix A

Monthly Equivalents By Volume Water and Sewer Rate Comparison Graphs

Monthly Residential Water Rates



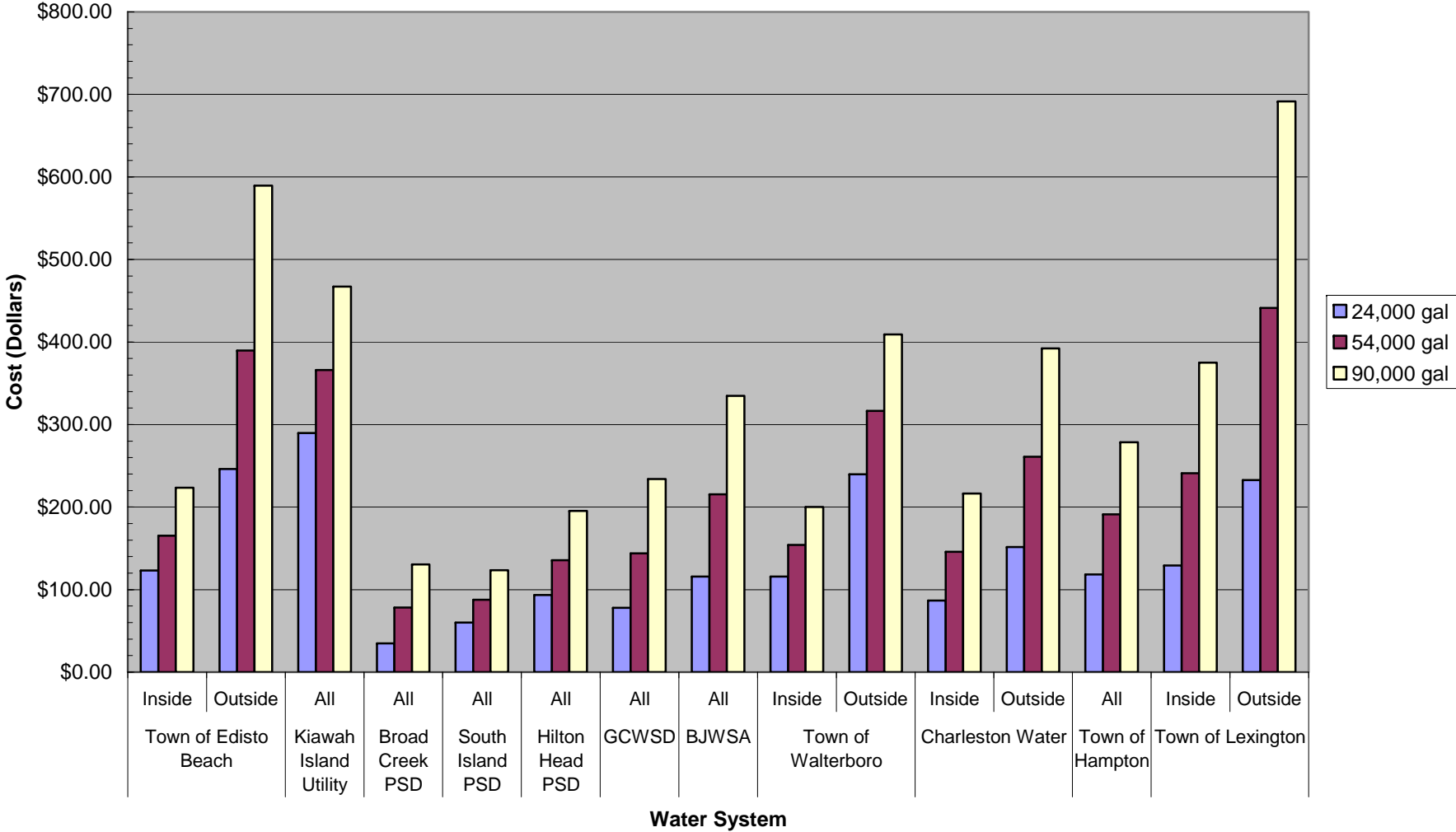
Monthly Residential Sewer Rates



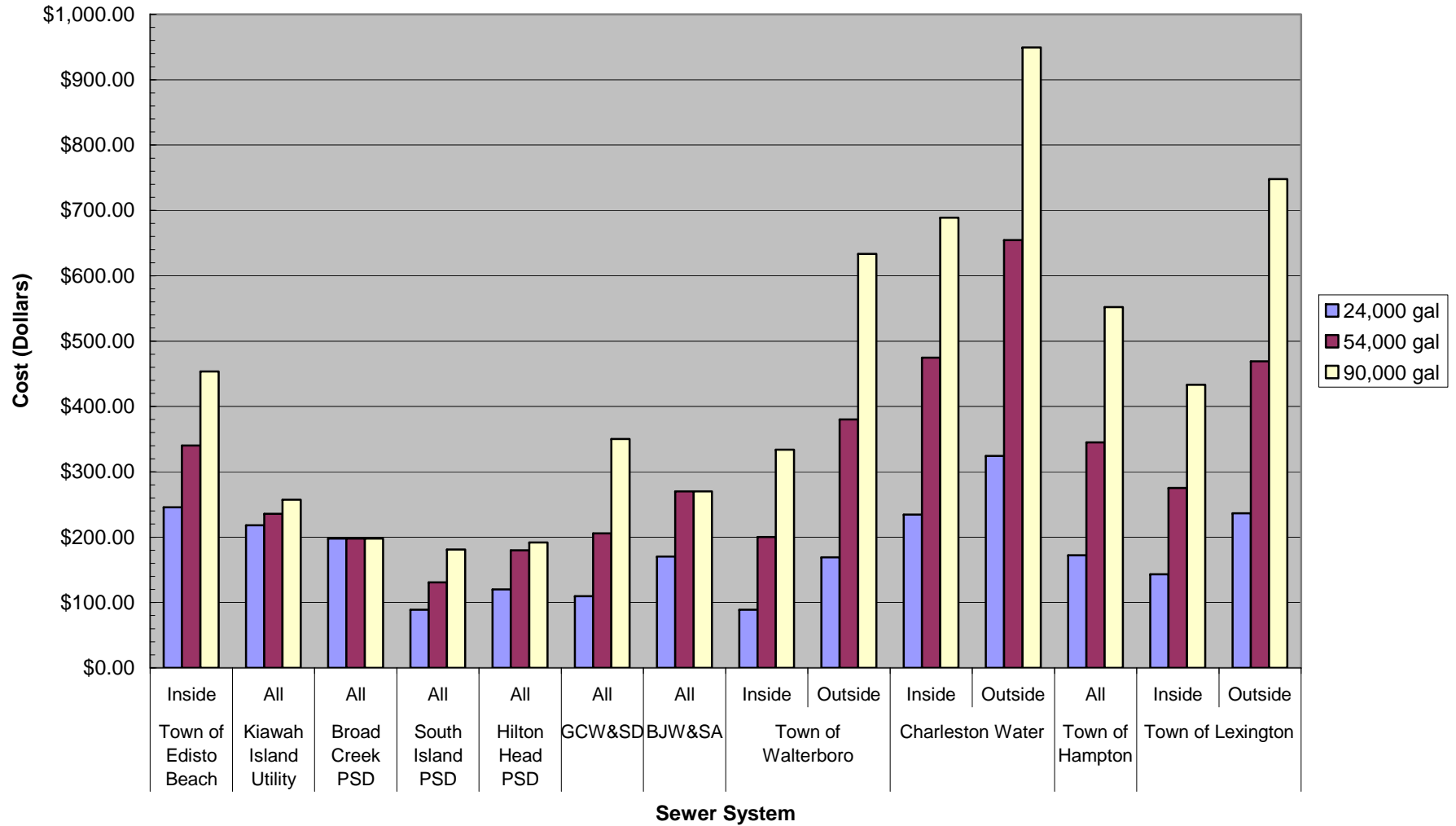
Appendix B

Semi-Annual Equivalents By Volume Water and Sewer Rate Comparison Graphs

Semi-Annual Residential Water Rates



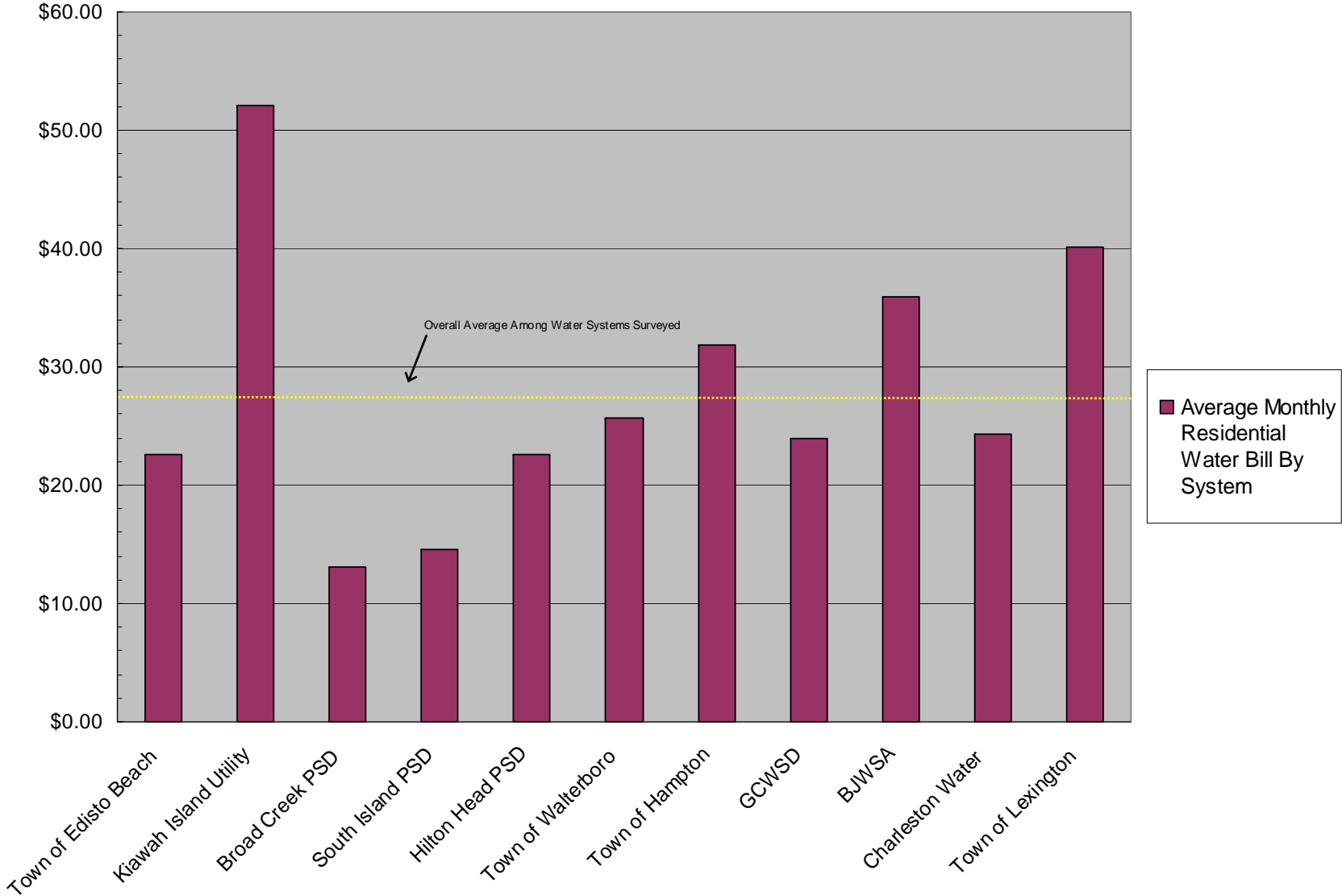
Semi-Annual Residential Sewer Rates



Appendix C

Average Monthly Charges Based On Estimated Use Water and Sewer Rate Comparison Graphs

Average Monthly Water Bill Per Residential Customer (within Town/City Limits)



Average Monthly Sewer Bill Per Residential Customer (within Town/City Limits)

