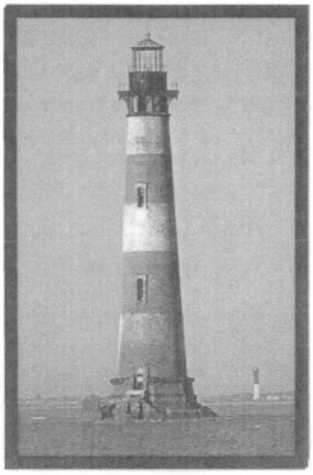

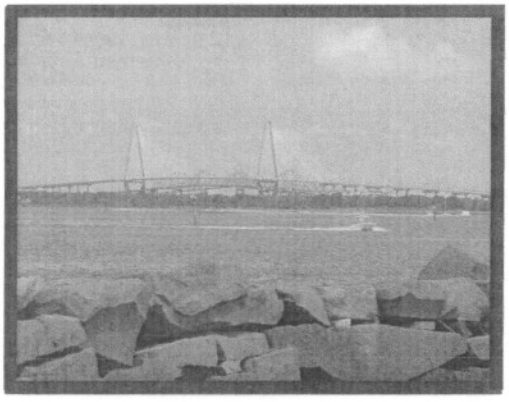

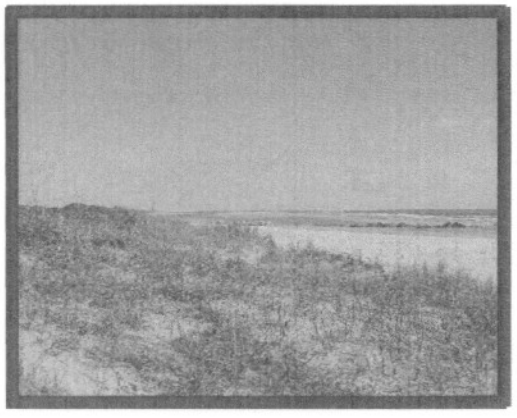

# Town of Sullivan's Island

## Water and Wastewater Rate and Financial Planning Study

### Final Report

March 6, 2009

RFC
RAFTELIS FINANCIAL CONSULTANTS, INC.

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March 6, 2009

Mr. Greg Gress
Town of Sullivan's Island
Water and Sewer Manager
2051 Gull Drive
Sullivan's Island, SC 29482

Dear Greg:

Enclosed are six copies of our final report for the Water and Wastewater Rate and Financial Planning Study ("Study") for the Town of Sullivan's Island ("Town"). The appendix to the report includes the various schedules from the financial planning and rate model.

The report describes the alternative water and wastewater rate structures we believe are more appropriate in addressing the Town's utility pricing objectives. As we discussed during the Town Council meeting on March 2, these rate structures provide improved customer equity and cost justification, and are more consistent with current industry rate practices than the current rate structures. Additionally, the report describes the various financial policy recommendations the Town should consider to enhance water conservation incentives and protect the financial sufficiency of the water and wastewater utilities.

We believe the collaborative process with Town staff and representatives was a key element to developing effective recommendations in meeting the Town's utility pricing objectives. In particular, we wish to express our thanks to you, Mike Perkis, Everett Presson, and Jerry Kaynard for your participation and cooperation extended throughout the study.

Should you have any questions, please do not hesitate to contact me at (704) 373-1199.

Sincerely yours,
RAFTELIS FINANCIAL CONSULTANTS, INC.

Frank Davis
Project Manager

# I. Introduction

In July 2008, the Town of Sullivan's Island ("Town") engaged Raftelis Financial Consultants, Inc. ("RFC") to perform a water and wastewater rate and financial planning study ("rate study"). The existing utility rate structure has been in place for some time and the Town anticipates significant financial impacts associated with increasing capital improvement costs related to its wholesale water arrangement with Charleston Public Works Commission ("CPW"). In addition, the Town decided to have the water and wastewater utilities fully fund the debt service on bonds issued for utility capital improvements. As a result, the Town asked RFC for assistance in evaluating the current rate structures and estimating the financial impacts of anticipated capital cost increases.

To address these issues, RFC developed a ten-year financial planning and rate model ("Model") that incorporates a financial forecast based on both the current rate structure and an alternative rate structure designed to more appropriately reflect cost of service principles and revenue sufficiency.

This report describes alternative water and wastewater rate structures that are more consistent with industry rate practices than the current rate structures. In addition, we also provide various rate and financial policy recommendations the Town should consider implementing to improve the financial sufficiency of the water and wastewater utilities. Finally, this report provides a ten-year forecast of anticipated utility rate adjustments necessary to fully fund the annual water and wastewater operations and maintenance ("O&M") and capital costs. These annual revenue requirements were developed based on the Town's fiscal year ("FY") 2009 operating budget and anticipated capital expenditures related to debt service, CPW capital improvements, and capital improvements to the Town's water and wastewater systems.

**Background**

Sullivan's Island is a barrier island located in Charleston County with a current population of approximately 2,000. The Water and Sewer Department provides water and wastewater services to approximately 1,020 active accounts with the majority of accounts representing residential customers. Prior to 1995, the Town provided drinking water through several groundwater wells. In 1995, the Town began purchasing 100% of its treated water from CPW as part of a wholesale agreement. Although the agreement requires a minimum purchase of 750,000 gallons per day ("gpd"), the Town's typical average daily usage is approximately 250,000 gpd. As a barrier island, future development is limited and it is unlikely the Town would ever approach water demands at the 750,000 gpd minimum purchase amount. The agreement also requires the Town to contribute 0.64% of all capital improvements made to the CPW Hannahan Water Treatment Plant ("WTP"). Planned

capital improvements during the ten-year forecast period will have a significant impact on the Town's water rates.

## Current Rate Structure

The Town's current water and wastewater rate structure includes minimum charges for the first 2,000 gallons of water usage per month, and tiered commodity charges that increase with the level of usage. In addition, the Town recently implemented a basic facilities charge for water customers to recover debt service costs associated with water bonds. This basic facilities charge increases with monthly usage within intervals or cut-offs that are not consistent with the tiered commodity charge usage intervals.

The current water and wastewater rates are summarized in Table 1 below.

**Table 1: Current Water and Wastewater Rates**

| Existing Rate Structure<br>Effective July 1, 2008 | | | | | | |
|---|---|---|---|---|---|---|
| | Water[1] | Wastewater | | Water | Wastewater | Irrigation |
| Usage Rates | | | Basic Facilities Charge | | | |
| Monthly Usage (gallons) | | | Monthly Usage | | | |
| < 2,000 | $0.00 | $0.00 | 0-5,000 | $10.00 | N/A | $14.00 |
| 3,000-4,000 | $6.61 | $6.95 | 6,000-7,000 | $12.00 | N/A | $14.00 |
| 5,000-8,000 | $7.35 | $7.71 | 8,000-10,000 | $14.00 | N/A | $14.00 |
| 9,000-11,000 | $7.81 | $8.21 | 11,000-13,000 | $16.00 | N/A | $20.00 |
| 12,000-14,000 | $8.41 | $8.83 | 14,000-16,000 | $18.00 | N/A | $20.00 |
| 15,000-17,000 | $9.01 | $9.48 | 17,000-19,000 | $20.00 | N/A | $20.00 |
| 18,000-20,000 | $9.62 | $10.12 | > 20,000 | $25.00 | N/A | $25.00 |
| > 20,000 | $9.91 | $10.43 | | | | |
| Monthy Minimum Charge | $11.86 | $13.17 | | | | |

1 Applies to irrigation customers.

Summer irrigation represents a substantial level of peak usage. To address this, the Town recently began a program offering separate irrigation meters. The irrigation meters are connected to the potable distribution system and the irrigation-only meters are assessed the same water rates as other water meters. However, the irrigation-only meters are not assessed for wastewater since the outside water usage does not return to the sewer collection system. The success of this program has resulted in a reduction in wastewater revenues as this irrigation usage is no longer included in billed wastewater demand. The reduction in wastewater revenues is anticipated to continue until customer connections to irrigation meters levels out to a steady rate in the next couple of years. Currently there are 45 irrigation accounts with an average monthly usage of 25,000 gallons per account, which is no longer assessed for wastewater discharge.

The water and wastewater rate structures are applicable to all customers and have been in place for a long time. Although the tiered water and wastewater rate structure encourages water conservation, it is unclear as to how usage intervals were developed or the cost justification for the rates. Furthermore, monthly minimum charges with minimum allowances are generally designed to ensure a certain level of predictable or fixed revenues. Although these monthly minimum charges are still used by many utilities, the national trend is moving toward a more equitable and cost justified type of fixed charge set to recover a level of fixed costs that should be recovered regardless of the level of water usage or wastewater discharged. Under the existing rates, any customer without any metered water usage during a month is essentially paying for 2,000 gallons of water usage which the customer is not receiving nor discharging back into the wastewater system. Due to this, the current rate structure is considered inequitable for customers with less than 2,000 gallons of metered water use per month. These low use customers are often low or fixed income families focused on limiting their monthly utility expenses.

The Town currently assesses a monthly minimum bill to vacant lots that currently do not receive water and wastewater services and have no water meter. However, the Town must purchase water capacity with CPW and has developed water and wastewater utility systems with the necessary capacity available to serve these lots once they are developed and connect to the utility systems. Therefore, the assessment of a monthly bill to these customers is necessary to recover the Town's capital investment to have utility services available to these properties. However, the 2,000 gallon minimum allowance could also be considered as an inequity for these customers.

## II. Recommended Rate Structures

As part of this rate study, RFC had Town staff and the members of the Water and Sewer Committee rank twelve utility pricing objectives as either "essential", "very important", or "important". Based on the results of the pricing objectives exercise, the Town's essential pricing objectives include cost of service based allocations, financial sufficiency, and revenue stability. The chart below summarizes the overall rankings of the twelve pricing objectives considered.

| Classification | Rank Total | Pricing Objectives | Total |
|---|---|---|---|
| Essential | 1 | Cost of Service Based Allocations | 15 |
| | 2 | Financial Sufficiency | 14 |
| | 2 | Revenue Stability | 14 |
| Very Important | 4 | Simple to Understand and Update | 13 |
| | 5 | Rate Stability | 12 |
| | 6 | Ease of Implementation | 11 |
| Important | 7 | Minimization of Customer Impacts | 8 |
| | 7 | Legality | 8 |
| | 9 | Affordability to Disadvantaged Customers | 7 |
| | 9 | Conservation | 7 |
| | 11 | Equitable Contributions from New Customers | 6 |
| | 11 | Economic Development | 6 |

Although each of the objectives is important, it should be noted that many of these pricing objectives can conflict with each other and our recommendations are designed to most effectively address those pricing objectives that were ranked as essential and very important to the Town. The water and wastewater rate structure recommendations are discussed below.

## Rate Structure Recommendations

To more effectively address its pricing objectives, RFC recommends the Town implements a water and wastewater rate structures that more appropriately reflects cost of service principles, provides revenue sufficiency, and continues to promote the efficient use of water resources. Each of our recommendations includes a brief explanation related to how the recommendation will more effectively address the Town's pricing objectives and/or improve the structures consistency with industry practices. We have segregated our water and wastewater recommendations into fixed monthly charges, volumetric usage rates, and rate policy categories.

Fixed Monthly Charges:

1. Eliminate the current 2,000 gallon minimum usage allowance for both water and wastewater. This will improve cost of service and customer equity as this usage allowance is inequitable to customers with less than 2,000 gallons of metered water use per month.
2. Eliminate the recently introduced basic facilities charge designed to recover debt service. This "flat" charge was introduced to recover fixed costs of capacity and increases with the monthly amount of water usage to ensure larger volume customers pay a greater

portion of the debt service. However, this charge can fluctuate for individual customers with seasonal usage patterns and is ultimately similar to tiered water volumetric rates.

3. Introduce monthly ***Base Charges*** for water and sewer charged according to meter size with no usage allowance. These monthly base charges are designed to recover the fixed costs related to meter reading, billing, and administration on a per bill basis since these costs are the same for all customers. In addition, a portion of capital costs are recovered through the base charge based on the level of demand a customer can potentially place on the system based on meter size.[1] The water base charge capital component is designed to recover 50% of existing debt service, 100% of lease payments, and 100% of annual contributions to the depreciation reserve fund. The wastewater base charge component is designed to recover 100% of existing debt service, 100% of annual capital replacements, and 100% of annual contributions to the depreciation reserve fund. Replacing the minimum and basic facilities charges with a monthly base charge recognizes customer capacities and serves to improve customer equity and understanding of the rate structure.
4. Introduce a monthly ***CPW Capital Charge*** charged according to meter size with no usage allowance, as a component of the overall water base charge. This monthly charge is similar to the monthly Base Charge as it would recover the Town's portion of the annual CPW capital improvements costs from customers based on meter size. Since this costs of these improvements is largely out of the Town's control but are necessary to ensure treated water capacity for its customers, these costs can be segregated out and assessed independently to demonstrate the annual cost the Town must incur to secure CPW capacity.

Volumetric Usage Rates:

Introduce ***Three-Tiered Conservation Usage Rate*** structures for both water and wastewater to replace the current seven-tiered structure assessed to all customers, with separate rates for water and wastewater usage. This inclining block rate structure will continue to encourage the efficient use of water resources but will reduce the complexity of the seven-tiered structure. In addition, the recommended structure has been designed to encourage water conservation and enhance the cost of service basis of the usage charges by:

1. Setting the block 1 essential water usage interval to represent usage below the average winter water usage per residential account (0 to 4,000 gallons) and setting the block 1 rate to be less than the average usage rate per 1,000 gallons.

[1] Meter conversion ratios are provided in the American Water Works Association Manual 6 (M-6).

2. Setting the block 2 average water usage interval between the average winter and average summer water usage per residential account (4,001 to 8,000 gallons) and setting the block 2 average rate to equal the average usage rate per 1,000 gallons.
3. Setting the block 3 discretionary water usage interval to represent usage above the average summer water usage per residential account (above 8,000 gallons) and setting the block 3 discretionary rate to be 50% above the average usage rate.

The water usage rates are designed to recover CPW water purchases, all O&M other than administrative costs, and all proposed debt service and other capital costs that are not recovered through the monthly base charges.

Rate Policies:

1. The Town should establish a policy for the usage block rate differentials. Our rate recommendations are based on a differential that would achieve a block 3 rate that is 50% above the average usage rate per 1,000 gallons for both water and wastewater rates. The block 1 rate would be set below the average usage rate at a level that would ensure the revenue requirements allocated to the usage rates are fully recovered. Since the Town does not have SCADA system data and utilizes storage capacity to reduce the fluctuations of water purchases from CPW, there is minimal peak water production or other data necessary to calculate base extra capacity based block usage rates. RFC believes a block 3 rate set 50% above the average usage rate is neither excessive nor out of line with industry trends for tiered conservation rate structures.
2. The Town should establish as a policy drought period water usage rates for residential, commercial, and irrigation customers. The residential drought usage rates should remain a three-tiered conservation rate structure, with the block 1 essential usage rate remaining unchanged. However, the block 2 and block 3 rates should be adjusted by a factor of 1.50 times during drought periods to provide further incentive to reduce non-essential water use. These drought rates will also shield the Town from significant revenue losses during restricted use periods. Wastewater rates would remain unchanged.
3. The Town should continue as policy the assessment of a minimum bill to owners of vacant properties. This minimum bill would represent the combined water and wastewater monthly base charges and the CPW capital charge. These fixed monthly charges would recover the fixed operating and capital costs associated with the capacity and other basic services provided through the water and wastewater systems the Town must invest to ensure these services are available for those properties regardless of whether those properties are actually connected to the systems. By eliminating the minimum usage allowance, the Town is recovering costs of providing system capacity to these customers in a more equitable manner.

Table 2 on the next page presents water and wastewater rates under the recommended rate structure developed to ensure recovery of fiscal year ("FY") 2009 revenues and the proposed rates developed to recover the anticipated FY 2010 water revenue requirements.

**Table 2: Recommended Rate Structure**

| Recommended Water Rate Structure | Revenue Neutral FY 2009 | | | Proposed FY 2010 | | | % |
|---|---|---|---|---|---|---|---|
| Usage Rates | Water | Drought | | Water | Drought | | |
| Monthly Usage (gallons) | | | | | | | |
| 0 - 4,000 | $3.86 | $3.86 | | $4.25 | $4.25 | | 10% |
| 4,001 to 8,000 | $7.18 | $10.77 | | $7.90 | $11.85 | | 10% |
| > 8,000 | $10.76 | $16.14 | | $11.84 | $17.76 | | 10% |
| Monthly Fixed Charges | Base | CPW Capacity | Total | Base | CPW Capacity | Total | |
| Meter Size | | | | | | | |
| 5/8" or 3/4" | $10.10 | $6.43 | $16.53 | $11.11 | $7.08 | $18.19 | 10% |
| 1" | $16.20 | $10.72 | $26.92 | $17.82 | $11.80 | $29.62 | 10% |
| 1.5" | $31.46 | $21.43 | $52.89 | $34.61 | $23.58 | $58.19 | 10% |
| 2" | $49.78 | $34.29 | $84.07 | $54.76 | $37.72 | $92.48 | 10% |

| Recommended Wastewater Rate Structure | Revenue Neutral FY 2009 | Proposed FY 2010 | |
|---|---|---|---|
| Usage Rates | Wastewater | Wastewater | % |
| Monthly Usage (gallons) | | | |
| 0 - 4,000 | $3.58 | $3.91 | 9% |
| 4,001 to 8,000 | $5.55 | $6.05 | 9% |
| > 8,000 | $8.32 | $9.07 | 9% |
| Monthly Base Charges | Base | Base | |
| Meter Size | | | |
| 5/8" or 3/4" | $16.69 | $18.20 | 9% |
| 1" | $26.23 | $28.60 | 9% |
| 1.5" | $50.08 | $54.59 | 9% |
| 2" | $78.69 | $85.78 | 9% |

The FY 2009 rates were developed to demonstrate the impacts on various customers of implementing the recommended water and wastewater rate structures without including the additional 10% water and 9% wastewater rate adjustments required to recover the forecasted FY 2010 revenue requirements. For more information on customer impacts, see Chart 5 on page 15.

It should be noted that a tiered conservation oriented usage rate structure is less appropriate for wastewater flows than water demands. Although the Town assesses wastewater charges based on water usage for non-irrigation metered accounts, not all metered water usage by these customers is returned to the sewer. However, an immediate shift from the current tiered structure to a uniform structure would result in lower water use customers experiencing the most significant customer impacts. To mitigate these potential impacts, we developed the tiered wastewater rate structure and recommend the Town consider a plan to eventually move toward a uniform wastewater usage rate structure for all customers by reducing the residential water usage block rate differentials over the course of several years.

## III. Ten-Year Forecast of Rate Adjustments

To determine utility rate adjustments to fully fund the estimated annual water and wastewater revenue requirements during the planning period, RFC developed the ten-year financial forecast of revenue requirements, customer demand, and utility revenues.

**Revenue Requirements**

To determine annual rate adjustments, a ten-year forecast of revenue requirements was developed based on the Town's FY 2008 utility operating budget and capital improvements plan ("CIP"). The budget includes O&M expenses related to salaries & benefits, water purchases from CPW, utilities, chemicals, and other recurring costs associated with providing water and wastewater services. Based on discussions with Town staff, we escalated the majority of these recurring O&M expenses to reflect 2.5% annual inflation, and assumed annual cost of living adjustments of 5.0% for salaries & benefits. Water purchases were assumed to increase by 2.0% annually to reflect anticipated rate increases from CPW with no overall growth in demand by Town.

In addition, capital expenditures such as debt service payments, annual rate funded capital projects, lease payments, the Town's portion of CPW capital improvements, and annual contributions to depreciation were projected over the ten-year forecast period. Annual debt service was determined based on existing water and wastewater debt plus estimated debt service on future debt issues to pay for capital projects included in the CIP. Annual rate funded capital improvements represent those capital project costs (primarily water and sewer line replacements) to be funded by annual rate revenues. Other capital items such as lease payments, contributions to depreciation, and CPW capital improvements were assumed to continue at levels estimated by Town staff.

Table 3 below summarizes the ten-year CIP funding plan. The water CIP includes annual water line replacements of $90,000 and anticipated average annual CPW capital improvements of $130,000. The sewer CIP includes sewer rehabilitations and replacements of $90,000 and a variety of sewer capital improvements identified as high, medium, and low priority. For the purpose of this Study, RFC has included all sewer capital improvements identified by the utility department and assumes debt financing will be needed to fund certain sewer projects in order to mitigate the annual sewer rate adjustments. However, the Town should consider the ramifications of issuing additional debt service to fund this capital plan such as necessary rate adjustments to meet annual debt coverage requirements. The Town must also consider the importance of these necessary capital improvements in relation to its ability to continue to providing appropriate levels of sewer service to its customer base.

**Table 3: Ten-Year CIP Funding Plan**

| | Ten-Year Total |
|---|---|
| **Water Funding Sources** | |
| Annual Rate Funded Capital | $ 880,000 |
| CPW Capacity Charges | $ 1,255,000 |
| Total Funding Sources | $ 2,135,000 |
| **Wastewater Funding Sources** | |
| Annual Rate Funded Capital | $ 900,000 |
| Debt Funded | $ 3,909,225 |
| Total Funding Sources | $ 4,809,225 |

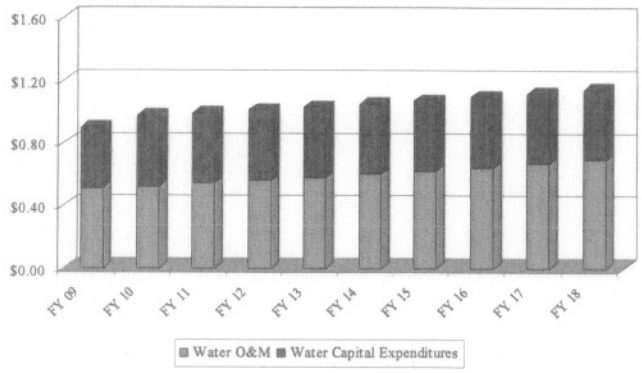
Schedule 2-A and Schedule 2-B provide more information on the specific water and wastewater projects included in the ten-year capital improvements plan. Table 4 below presents the annual water and wastewater debt service assumed as part of our financial forecast. This includes anticipated debt service on the approximately $4.0 million in new wastewater debt issues.

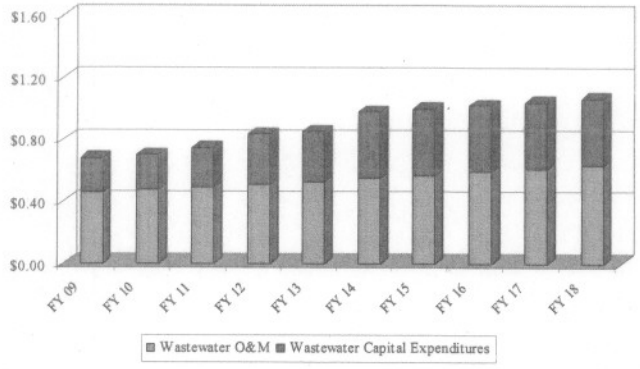
**Table 4: Annual Debt Service**

| | | Projected → | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 08/09 | 09/10 | 10/11 | 11/12 | 12/13 | 13/14 | 14/15 | 15/16 | 16/17 | 17/18 |
| Existing Debt Service | | | | | | | | | | |
| General Obligation Bond - Water | $ 203,429 | $ 203,142 | $ 202,656 | $ 206,970 | $ 205,985 | $ 209,701 | $ 208,117 | $ 206,234 | $ 209,152 | $ 211,771 |
| Revenue Bond - Wastewater | $ 73,114 | $ 73,244 | $ 74,289 | $ 74,228 | $ 75,060 | $ 75,786 | $ 75,385 | $ 75,878 | $ 77,264 | $ 77,501 |
| Total Existing Debt Service | $ 276,542 | $ 276,386 | $ 276,944 | $ 281,197 | $ 281,045 | $ 285,487 | $ 283,502 | $ 282,112 | $ 286,416 | $ 289,272 |
| Proposed Debt Service | | | | | | | | | | |
| Water | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| Wastewater | $ - | $ 5,569 | $ 33,390 | $ 99,842 | $ 99,842 | $ 204,432 | $ 204,432 | $ 204,432 | $ 204,432 | $ 204,432 |
| Total Proposed Debt Service | $ - | $ 5,569 | $ 33,390 | $ 99,842 | $ 99,842 | $ 204,432 | $ 204,432 | $ 204,432 | $ 204,432 | $ 204,432 |
| TOTAL DEBT SERVICE | $ 276,542 | $ 281,955 | $ 310,334 | $ 381,040 | $ 380,887 | $ 489,919 | $ 487,934 | $ 486,544 | $ 490,848 | $ 493,704 |

Based on the anticipated annual O&M expenses and capital expenditures, the annual water and wastewater revenue requirements during ten-year forecast period are presented in Chart 1 below.

**Chart 1: Forecast of Annual Revenue Requirements**
**(FY 2009 through FY 2018)**




## Demand Assumptions

An important factor affecting forecasted rate adjustments is annual demand for water and wastewater services. Our demand projections are based on adjusted water demand 12- from January through December 2007. In 2008, the Town experienced water use reductions of approximately 10% primarily resulting from an interruption in water services due to a problem with the CPW water connection. The Town's water demands were supplied through a connection with nearby Isle of Palms during October which resulted in reduced water demands during the October and November billing periods. To ensure the essential water needs of its residents were met during that period, the Town shut off all irrigation account meters which substantially reduced billed water use during the time. In addition, the Isle of Palms connection supplied water at significantly reduced water pressure in pounds per square inch ("psi") which further reduced billed water use. However, it is also believed that a certain amount of the reductions in billed water use also resulted from the recent down turn in the economy.

These reductions in demand had an adverse affect on utility revenues that were below the levels anticipated in the Town's annual budget. RFC adjusted the calendar year 2007 water

and wastewater demand to serve as the FY 2009 annual demands to reflect a certain level of the reduced demands and revenues may be related to:

- Reduced water consumption resulting from conservation price elasticity;
- Reduced water use for non-irrigation accounts by customers adding an irrigation account meter;
- Growth in irrigation accounts applied to annualized per account demands for those meters;
- Reduced wastewater revenues associated with growth in irrigation accounts which are not assessed for wastewater; and
- Future emergency watering restrictions related to drought conditions and/or interrupted service from the CPW connection.

To account for these factors, an adjustment of -2.3% was made to total 2007 water demand and -3.0% to total 2007 wastewater flows are assumed in estimating FY 2010 demands. These assumptions include irrigation demands based on 45 accounts and average daily usage of 800 gallons per day ("gpd"). The wastewater flows are adjusted by a higher factor to reflect the loss of metered water on regular water accounts by those customers electing to add an irrigation meter. Water and wastewater accounts and demand in subsequent years are assumed to have no growth other than a 2.0% annual growth in irrigation customers and demand. No growth is assumed since the Town is an island that is nearly built out with very little available land for additional growth. While there may be additional reductions in wastewater demands related to the shift towards irrigation meters, this loss is expected to be minimal as it is believed that most high use irrigation customers have already elected to install an irrigation meter. However, the Town should monitor the increase in irrigation accounts and its effect on wastewater demand and revenues and adjust the demand projections in the Model if the effects are substantial.

**Annual Rate Adjustments**

As mentioned above, water and wastewater rates were initially determined under the recommended rate structures to ensure the same level of user revenues as the rates in effect for FY 2009 to demonstrate the impacts on various customers without including additional rate adjustments to recover revenue requirements in subsequent years. However, with the demand adjustment and minimal growth assumptions mentioned above, and without any additional annual rate adjustments, the current rates will not generate sufficient revenues to fund the projected water and wastewater revenue requirements during the ten-year forecast period.

Table 5 presents the water and wastewater revenue surpluses and/or deficits in each year of the ten-year forecast period under the existing rates assuming no rate increases.

**Table 5: Revenue Sufficiency Under Existing Rates**

| Fiscal Year | Water | Wastewater | Total |
|---|---|---|---|
| 2009 | $ (272) | $ (20,123) | $ (20,395) |
| 2010 | $ (76,345) | $ (54,289) | $ (130,634) |
| 2011 | $ (94,274) | $ (84,676) | $ (178,949) |
| 2012 | $ (112,927) | $ (168,989) | $ (281,916) |
| 2013 | $ (132,342) | $ (187,588) | $ (319,930) |
| 2014 | $ (152,547) | $ (311,548) | $ (464,096) |
| 2015 | $ (173,580) | $ (331,725) | $ (505,305) |
| 2016 | $ (195,476) | $ (352,744) | $ (548,221) |
| 2017 | $ (218,276) | $ (374,644) | $ (592,920) |
| 2018 | $ (242,020) | $ (397,463) | $ (639,483) |

To fully recover the projected annual O&M expenses and fund ten-year capital programs for water and wastewater, the Town will need to implement a program of annual water and wastewater rate adjustments regardless of whether it implements the recommended rate structures or maintains the existing rate structures.

**Table 6: Annual Rate Adjustments to Achieve Financial Sufficiency**

| Fiscal Year | Water | Sewer |
|---|---|---|
| 2010 | 10.00% | 9.00% |
| 2011 | 3.00% | 7.00% |
| 2012 | 3.00% | 7.00% |
| 2013 | 3.00% | 7.00% |
| 2014 | 3.00% | 7.00% |
| 2015 | 2.00% | 7.00% |
| 2016 | 2.00% | 2.00% |
| 2017 | 2.00% | 2.00% |
| 2018 | 2.00% | 2.00% |

As Table 6 indicates, after an initial adjustment of 10% in FY 2010 the water utility can maintain financial sufficiency with a series of inflationary level rate adjustments. However, due to more substantial capital needs, the wastewater utility requires a more aggressive series of rate adjustments. Should the Town prefer not to issue any utility debt, it should consider eliminating or delaying some of the lower priority wastewater capital projects as the initial rate impacts would be too severe.

## Customer Impacts

Again, water and wastewater rates were initially determined under the recommended rate structures for FY 2009 to demonstrate the impacts on various customers without including additional rate adjustments to recover revenue requirements in subsequent years. To ensure revenue sufficiency in FY 2010, the Town will also need to implement the 10% and 9% across the board adjustments to both the water and wastewater rates respectively. To demonstrate the impacts of the recommended rate structures and the proposed FY 2010 rate adjustments, we calculated monthly residential water and wastewater bills under the existing FY 2009 rates, FY 2009 rates under the recommended rate structures, and FY 2010 rates under the recommended rate structures.

Charts 2, 3, and 4 compare residential water, wastewater and combined bills for customers using up to 15,000 gallons per month under existing rates and proposed rates.

**Chart 2: Monthly Residential Water Bills**

| Monthly Usage | Current Rates FY 2009 | Proposed Rates FY 2009 | Proposed Rates FY 2010 |
|---|---|---|---|
| 0 | $ 21.86 | $ 16.53 | $ 18.19 |
| 1,000 | $ 21.86 | $ 20.39 | $ 22.44 |
| 2,000 | $ 21.86 | $ 24.25 | $ 26.69 |
| 3,000 | $ 28.47 | $ 28.11 | $ 30.94 |
| 4,000 | $ 35.08 | $ 31.97 | $ 35.19 |
| 5,000 | $ 42.43 | $ 39.15 | $ 43.09 |
| 6,000 | $ 51.78 | $ 46.33 | $ 50.99 |
| 7,000 | $ 59.13 | $ 53.51 | $ 58.89 |
| 8,000 | $ 68.48 | $ 60.69 | $ 66.79 |

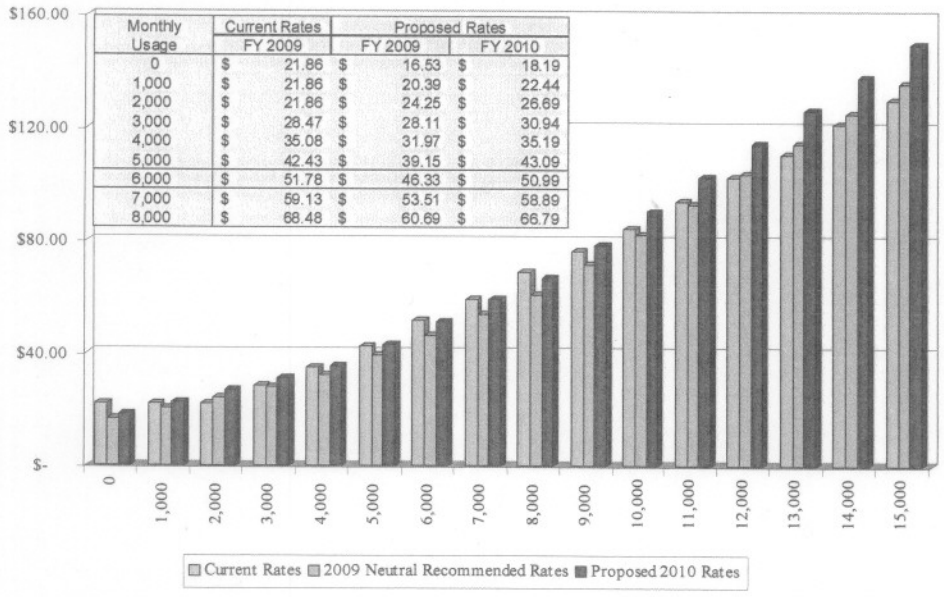
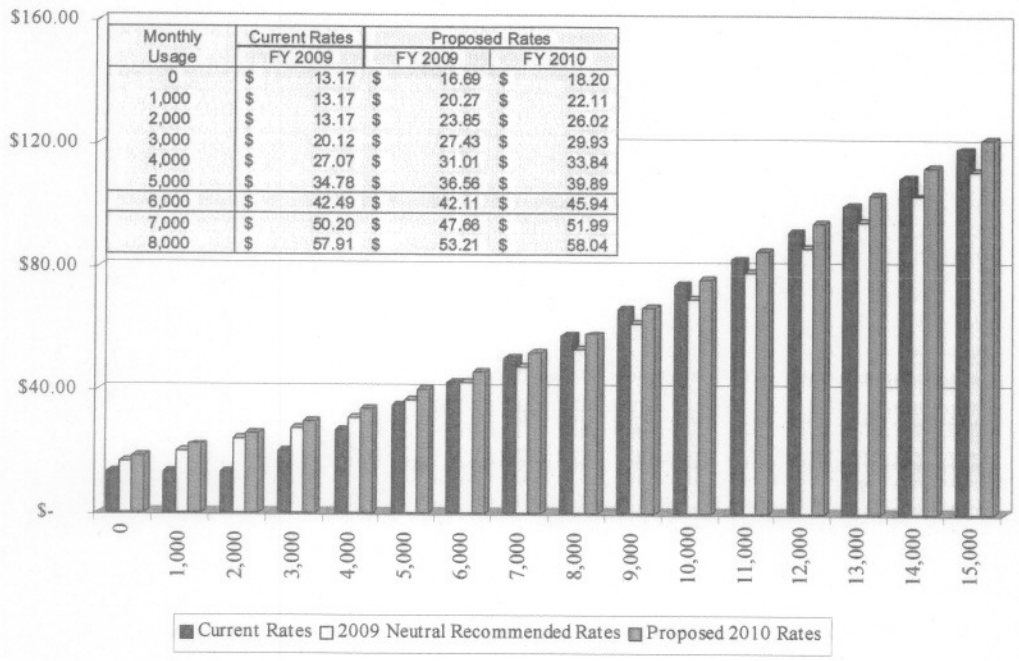
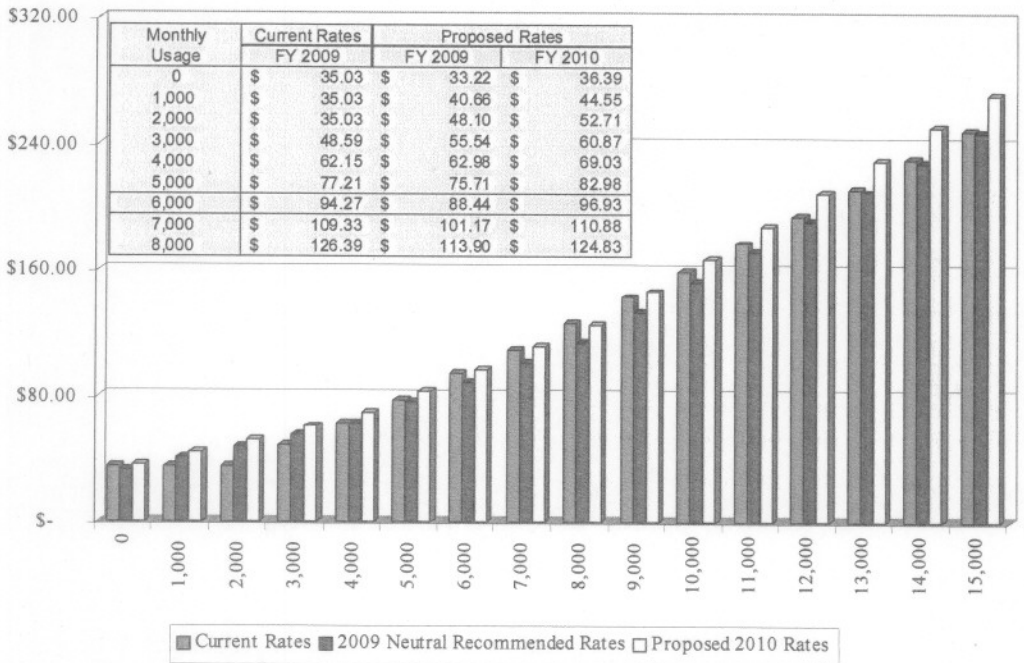


**Chart 3: Monthly Residential Wastewater Bills**




| Monthly Usage | Current Rates FY 2009 | Proposed Rates FY 2009 | Proposed Rates FY 2010 |
|---|---|---|---|
| 0 | $ 13.17 | $ 16.69 | $ 18.20 |
| 1,000 | $ 13.17 | $ 20.27 | $ 22.11 |
| 2,000 | $ 13.17 | $ 23.85 | $ 26.02 |
| 3,000 | $ 20.12 | $ 27.43 | $ 29.93 |
| 4,000 | $ 27.07 | $ 31.01 | $ 33.84 |
| 5,000 | $ 34.78 | $ 36.56 | $ 39.89 |
| 6,000 | $ 42.49 | $ 42.11 | $ 45.94 |
| 7,000 | $ 50.20 | $ 47.66 | $ 51.99 |
| 8,000 | $ 57.91 | $ 53.21 | $ 58.04 |

**Chart 4: Monthly Residential Combined Bills**




| Monthly Usage | Current Rates FY 2009 | Proposed Rates FY 2009 | Proposed Rates FY 2010 |
|---|---|---|---|
| 0 | $ 35.03 | $ 33.22 | $ 36.39 |
| 1,000 | $ 35.03 | $ 40.66 | $ 44.55 |
| 2,000 | $ 35.03 | $ 48.10 | $ 52.71 |
| 3,000 | $ 48.59 | $ 55.54 | $ 60.87 |
| 4,000 | $ 62.15 | $ 62.98 | $ 69.03 |
| 5,000 | $ 77.21 | $ 75.71 | $ 82.98 |
| 6,000 | $ 94.27 | $ 88.44 | $ 96.93 |
| 7,000 | $ 109.33 | $ 101.17 | $ 110.88 |
| 8,000 | $ 126.39 | $ 113.90 | $ 124.83 |

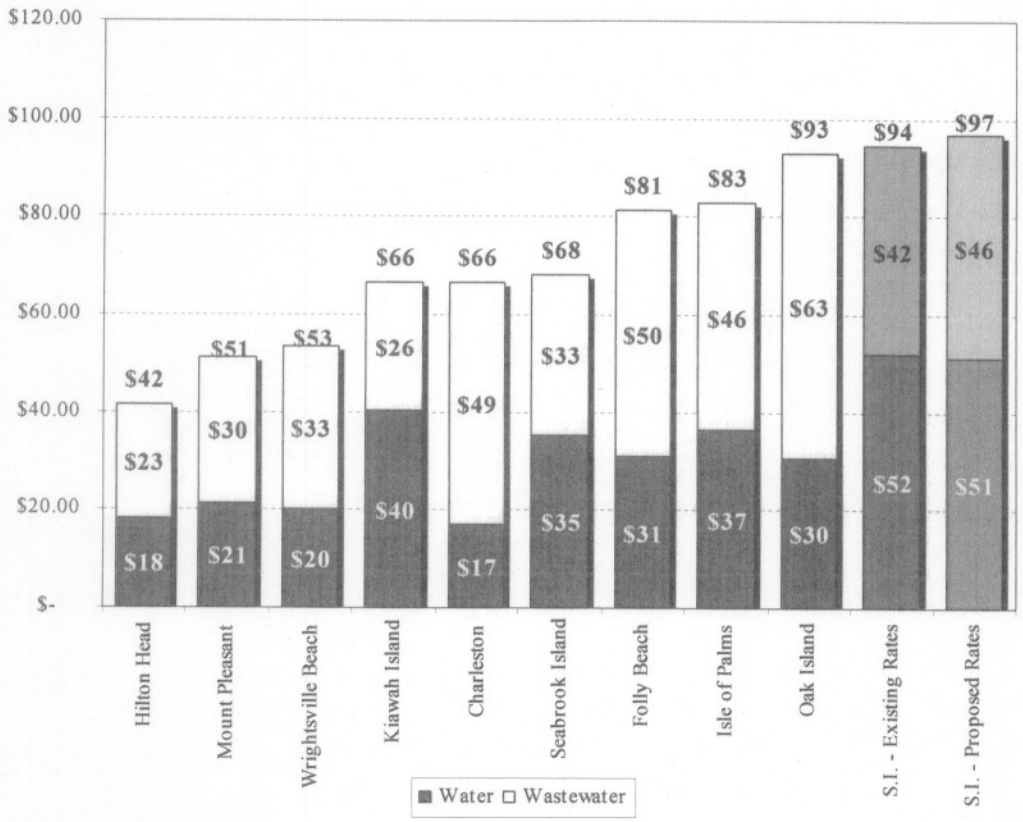
The elimination of the minimum usage allowance results in moderate increases in monthly utility water bills for customers with monthly water usage below the current 2,000 gallon minimum allowance. The increases are more severe for the wastewater bills due to the

increase in base charge in addition to the volumetric charge. Since the rate block cut-offs are based on the average winter and summer usage patterns of residential customers, the majority of indoor water and wastewater use will be assessed the tier 1 rates for monthly demand below 4,000 gallons. Residential customers who fall within an average level of usage (between 5,000 and 8,000 gallons) will experience a slight decrease in water bills and a slight increase in sewer bills resulting in a very minimal impact to the customer's combined bill. Residential customers with discretionary levels of monthly water usage (above 8,000 gallons) will experience the most substantial customer impacts as these customers will be assessed the block 3 rates for their higher usage levels. Although the low and high water use customer will experience an initial adverse rate impact from the rate structure changes, the recommended rate structure is more equitable to all customers and more consistent with industry rate-setting practices.

**Bill Comparison with Other Local and Similar Utilities**

Chart 5 provides a comparison of current and proposed monthly bills for utility customers in Sullivan's Island with similar residential utility customers in nine other coastal communities in the Carolinas. The monthly utility (water and wastewater) bills are based on monthly water usage of 6,000 gallons. These nine cities serve as benchmark communities because of the population, geographic, and demographic characteristics they share with the Town. Although the Town's combined bill is among the highest, it is interesting to note the proposed rates result in a lower bill for the average customer than the Town's existing utility rates.

**Chart 5: Monthly Residential Combined Bills**




Comparing water and wastewater rates with other representative communities can provide insights into a utility's pricing policies related to water and wastewater service. Care should be taken, however, in drawing conclusions from such a comparison. High rates may not mean the utilities are operated and managed poorly. Many factors affect the level of costs and the pricing structure employed to recover those costs. Some of the most prevalent factors include geographic location, demand, customer constituency, level of treatment, level of grant funding, age of system, level of general fund subsidization, and rate-setting methodology. In this case, Sullivan's Island is a small island community with minimal opportunity for additional growth. Operational and capital expenses are recovered through a much smaller customer base than most of the benchmark communities, resulting in higher rates. The Town purchases water from CPW; therefore, the Town is subject to rate increases from CPW that are beyond their control and passed on to the customer.