

ADDENDUM TO THE FINAL REPORT
DATED JANUARY 2012

TOWN OF EDISTO BEACH
WATER AND SEWER RATE STUDY

MARCH 2017

AEC Project No. 16-012

Prepared For:

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ENGINEERING CONSULTANTS, INC.

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1.0 INTRODUCTION

The Town of Edisto Beach (Town) retained the services of American Engineering Consultants, Inc. (AEC) to update the rate study that was previously conducted in 2011 and 2012. An update was needed in order to evaluate the water rate increases that would be necessary to cover current expenditures and a proposed drinking water system improvement project that includes a Reverse Osmosis System.

2.0 CURRENT WATER AND SEWER RATES

After the Final Report for the Water and Sewer Rate Study was released in 2012, the Town chose to continue using their existing volumetric rate method for calculating a customer's water and sewer charges. The rates are structured for semi-annual billing. The 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. Only one 5% rate increase has occurred since the Final Report was released.

3.0 FINANCIAL ANALYSIS

The Town of Edisto Beach provided American Engineering Consultants, Inc. with all Comprehensive Annual Financial Reports (CAFRs) developed since the Final Report was released (FY 2013 – FY 2015). AEC also obtained a copy of the Town's current operating budget, records on operational and maintenance expenses for the water system for the last three (3) recently completed fiscal years, and an updated Capital Improvements Projects list. These items were used to evaluate the impacts of any current and projected debt, as well as to determine projected revenue requirements.

4.0 RATE ANALYSIS

An updated comprehensive rate analysis was performed. The analysis evaluated the revenue that is required to offset inflation and additional debt. Several scenarios were performed at the Town's request to compare the rate increases needed for various borrowing amounts. Ultimately, the Town selected a scenario that included borrowing \$7.2 Million for construction of a Reverse Osmosis (RO) System plus \$320,000 in associated closing costs, for a total borrowing amount of \$7,520,000. In this scenario,

the RO related costs for construction and operation and maintenance of the RO system are being paid for by water revenues only. The estimated annual operation and maintenance cost for the RO system was provided by the Town. At the Town's direction, there was no sewer component to this evaluation. However, sewer rates will still need to be adjusted to keep up with inflation and any additional sewer capital projects the Town wishes to pursue. The analysis included maintaining the current level (FY 2015) of cash reserves. In addition, the annual interest rate used for loan repayment was 4.5%, as requested by the Town's Financial Advisor, for a 30-year term. The debt coverage requirement used in the analysis was 125%. It was assumed that the loan money would be available to the Town during FY 2018 and that payments would not begin until FY 2020. This scenario assumed there would be no growth in the customer base for the 10-year period evaluated. Additional assumptions included straight-line serial issued revenue bonds, depreciation over 40 years for new assets, and a typical rate of 3% for inflation on operations and maintenance. The current level of funding for other annual water capital projects is maintained throughout the analysis and adjusted for inflation in future years.

The revenue requirements and financial projections for the above described scenario are included in Table 1. These projections are the basis for the rate increases shown in Table 2. The rate increases are needed in order to generate the additional revenue required to offset inflation and additional debt. The analysis shows that a series of increases will be necessary over a six-year period. By FY 2024, the projected increase is equal to only the projected inflation. It should be noted, however, that annually and prior to setting water and sewer rates for future years, the projected rates should be evaluated to determine any negative or positive influences that may change the actual rate required.

Table 1: Rate Revenue Scenario Financial Projections - \$7,520,000 From Bond Market (30 year term) with Capital Improvements & RO O&M
 Town of Edisto Beach, SC
 Summary of Water Revenue Requirements

		0%	5%	15.0%	15.0%	15.0%	15.0%	5.0%	5.0%	3.0%	3.0%
Water Rate Increase Needed		0%	5%	15.0%	15.0%	15.0%	15.0%	5.0%	5.0%	3.0%	3.0%
Sewer Rate Increase Needed		0%	5%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
O&M Inflation Rate		3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
	Audit FY 2015	Current Year FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Revenues											
Water Revenues Only	\$ 862,289.40	\$ 905,403.87	\$ 1,041,214.45	\$ 1,197,396.62	\$ 1,377,006.11	\$ 1,583,557.03	\$ 1,662,734.88	\$ 1,745,871.62	\$ 1,798,247.77	\$ 1,852,195.20	
All other Revenues (Sewer, Fees, etc)	\$ 574,859.60	\$ 603,602.58	\$ 621,710.66	\$ 640,361.98	\$ 659,572.84	\$ 679,360.02	\$ 699,740.82	\$ 720,733.05	\$ 742,355.04	\$ 764,625.69	
Total Revenues	\$ 1,437,149.00	\$ 1,509,006.45	\$ 1,662,925.11	\$ 1,837,758.60	\$ 2,036,578.95	\$ 2,262,917.05	\$ 2,362,475.70	\$ 2,466,604.67	\$ 2,540,602.81	\$ 2,616,820.89	
Expenses											
O&M Water & Sewer	\$ 907,797.00	\$ 935,030.91	\$ 963,081.84	\$ 991,974.29	\$ 1,021,733.52	\$ 1,052,385.53	\$ 1,083,957.09	\$ 1,116,475.81	\$ 1,149,970.08	\$ 1,184,469.18	\$ 1,220,003.26
RO Plant O&M	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 255,098.82	\$ 262,751.79	\$ 270,634.34	\$ 278,753.37	\$ 287,115.97	\$ 295,729.45
Depreciation - Existing	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00
Depreciation - New	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 188,000.00	\$ 188,000.00	\$ 188,000.00	\$ 188,000.00	\$ 188,000.00	\$ 188,000.00
Total Expenses	\$ 1,112,031.00	\$ 1,139,264.91	\$ 1,167,315.84	\$ 1,196,208.29	\$ 1,225,967.52	\$ 1,699,718.35	\$ 1,738,942.88	\$ 1,779,344.15	\$ 1,820,957.45	\$ 1,863,819.15	\$ 1,907,966.71
Operating Income	\$ 325,118.00	\$ 297,884.09	\$ 341,690.61	\$ 466,716.82	\$ 611,791.07	\$ 336,860.60	\$ 523,974.17	\$ 583,131.55	\$ 645,647.22	\$ 676,783.66	\$ 708,854.18
Non-Operating Revenues (Expenses)											
Interest Income	\$ 5,756.00	\$ 5,756.00	\$ 5,756.00	\$ 5,756.00	\$ 5,756.00	\$ 5,756.00	\$ 5,756.00	\$ 5,756.00	\$ 5,756.00	\$ 5,756.00	\$ 5,756.00
Interest Expense Existing	\$ (59,703.00)	\$ (52,919.00)	\$ (52,450.00)	\$ (51,780.00)	\$ (50,940.00)	\$ (50,100.00)	\$ (47,177.00)	\$ (47,177.00)	\$ (47,177.00)	\$ (47,177.00)	\$ (47,177.00)
Interest Expense - New Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (338,400.00)	\$ (332,853.10)	\$ (327,056.59)	\$ (320,999.24)	\$ (314,669.31)	\$ (308,054.53)
Total Non-Operating Revenues (Expenses)	\$ (53,947.00)	\$ (47,163.00)	\$ (46,694.00)	\$ (46,024.00)	\$ (45,184.00)	\$ (382,744.00)	\$ (374,274.10)	\$ (368,477.59)	\$ (362,420.24)	\$ (356,090.31)	\$ (349,475.53)
Income (Loss) Before Contributions & Transfers	\$ 271,171.00	\$ 250,721.09	\$ 294,996.61	\$ 420,692.82	\$ 566,607.07	\$ (45,883.40)	\$ 149,700.07	\$ 214,653.96	\$ 283,226.98	\$ 320,693.35	\$ 359,378.65
Additional Revenue Needed for RO O&M & Interest on Debt				\$ -	\$ -	\$ 593,498.82	\$ 595,604.89	\$ 597,690.93	\$ 599,752.61	\$ 601,785.28	\$ 603,783.98
Excess Water Revenue Available to cover RO			\$ -	\$ 108,648.46	\$ 233,594.20	\$ 377,281.79	\$ 542,522.53	\$ 574,193.67	\$ 607,448.36	\$ 607,448.36	\$ 607,448.36
Cash Flow Projections											
ADD:											
Depreciation - Existing	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00	\$ 204,234.00
Depreciation - New	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 188,000.00	\$ 188,000.00	\$ 188,000.00	\$ 188,000.00	\$ 188,000.00	\$ 188,000.00
Proceeds from New Debt	\$ -	\$ -	\$ -	\$ 7,520,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Proceeds from Bond Reissuance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Funds Available	\$ 475,405.00	\$ 454,955.09	\$ 499,230.61	\$ 8,144,926.82	\$ 770,841.07	\$ 346,350.60	\$ 541,934.07	\$ 606,887.96	\$ 675,460.98	\$ 712,927.35	\$ 751,612.65
Equipment Purchases	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Acquisition/Construction Fixed Assets	\$ (208,408.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Capital Improvement Projects	\$ -	\$ (350,800.00)	\$ (294,000.00)	\$ (3,960,000.00)	\$ (3,960,000.00)	\$ (370,800.00)	\$ (381,924.00)	\$ (393,381.72)	\$ (405,183.17)	\$ (417,338.67)	\$ (429,858.83)
Other Reductions from Revenue	\$ (243,840.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Bond Issuance Cost - Per Town's FA	\$ -	\$ -	\$ -	\$ (320,000.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Debt Principal - Existing	\$ (35,000.00)	\$ (35,000.00)	\$ (40,000.00)	\$ (40,000.00)	\$ (40,000.00)	\$ (40,000.00)	\$ (42,000.00)	\$ (42,000.00)	\$ (42,000.00)	\$ (42,000.00)	\$ (42,000.00)
Debt Service Cash Reserve	\$ -	\$ -	\$ -	\$ (752,000.00)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Debt Principal - New Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (123,264.40)	\$ (128,811.30)	\$ (134,607.81)	\$ (140,665.16)	\$ (146,995.09)	\$ (153,609.87)
Transfers Out	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cash Increase (Decrease)	\$ (11,843.00)	\$ 69,155.09	\$ 165,230.61	\$ 3,072,926.82	\$ (3,229,158.93)	\$ (187,713.81)	\$ (10,801.23)	\$ 36,898.43	\$ 87,612.64	\$ 106,593.59	\$ 126,143.96
Beginning Cash - July 1	\$ 3,268,127.00	\$ 3,256,284.00	\$ 3,325,439.09	\$ 3,490,669.70	\$ 6,563,596.52	\$ 3,334,437.59	\$ 3,146,723.79	\$ 3,135,922.55	\$ 3,172,820.98	\$ 3,260,433.63	\$ 3,367,027.22
Ending Cash - June 30	\$ 3,256,284.00	\$ 3,325,439.09	\$ 3,490,669.70	\$ 6,563,596.52	\$ 3,334,437.59	\$ 3,146,723.79	\$ 3,135,922.55	\$ 3,172,820.98	\$ 3,260,433.63	\$ 3,367,027.22	\$ 3,493,171.17
Bond Covenant Requirements											
Debt Service - Existing	\$ 88,356.00	\$ 87,919.00	\$ 92,450.00	\$ 91,780.00	\$ 90,940.00	\$ 90,100.00	\$ 89,177.00	\$ 89,177.00	\$ 89,177.00	\$ 89,177.00	\$ 89,177.00
Debt Service - Proposed	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 461,664.40	\$ 461,664.40	\$ 461,664.40	\$ 461,664.40	\$ 461,664.40	\$ 461,664.40
Total Debt Service (Annual)	\$ 88,356.00	\$ 87,919.00	\$ 92,450.00	\$ 91,780.00	\$ 90,940.00	\$ 551,764.40	\$ 550,841.40	\$ 550,841.40	\$ 550,841.40	\$ 550,841.40	\$ 550,841.40
Debt Service Coverage	5.99	5.71	5.91	7.31	8.97	1.32	1.66	1.77	1.88	1.94	2.00
Accumulated Depreciation	\$ 2,309,124.00	\$ 2,513,358.00	\$ 2,717,592.00	\$ 3,109,826.00	\$ 3,502,060.00	\$ 3,894,294.00	\$ 4,286,528.00	\$ 4,678,762.00	\$ 5,070,996.00	\$ 5,275,230.00	\$ 5,479,464.00

**Table 2: Town of Edisto Beach Recommended Semi-Annual Rates
 (Scenario: RO O&M & \$7.52 M Revenue Bond)**

Residential Water - RO O&M Plus \$7.52M Revenue Bond								
<i>Proposed Rate Increase</i>	0%	15%	15%	15%	15%	5%	5%	3%
	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Flat Rate per 6 Months (includes up to 24,000 gallons)	\$142.47	\$163.84	\$188.42	\$216.68	\$249.18	\$261.64	\$274.72	\$282.96
Rate per Thousand Gallons 24,000 - 48,000 gallons	\$1.59	\$1.83	\$2.10	\$2.42	\$2.78	\$2.92	\$3.07	\$3.16
Rate per Thousand Gallons 48,000 - 72,000	\$1.77	\$2.04	\$2.34	\$2.69	\$3.10	\$3.25	\$3.41	\$3.52
Rate per Thousand Gallons > 72,000 gallons	\$1.98	\$2.28	\$2.62	\$3.01	\$3.46	\$3.64	\$3.82	\$3.93

Business / Docks / Irrigation Water - RO O&M Plus \$7.52M Revenue Bond								
<i>Proposed Rate Increase</i>	0%	15%	15%	15%	15%	5%	5%	3%
	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Flat Rate per 6 Months (includes up to 24,000 gallons)	\$142.47	\$163.84	\$188.42	\$216.68	\$249.18	\$261.64	\$274.72	\$282.96
Rate per Thousand Gallons 24,000 - 48,000 gallons	\$3.16	\$3.63	\$4.18	\$4.81	\$5.53	\$5.80	\$6.09	\$6.28
Rate per Thousand Gallons 48,000 - 72,000	\$3.55	\$4.08	\$4.69	\$5.40	\$6.21	\$6.52	\$6.85	\$7.05
Rate per Thousand Gallons > 72,000 gallons	\$3.96	\$4.55	\$5.24	\$6.02	\$6.93	\$7.27	\$7.64	\$7.87

Outside Town Limits Water - RO O&M Plus \$7.52M Revenue Bond								
<i>Proposed Rate Increase</i>	<i>0%</i>	<i>15%</i>	<i>15%</i>	<i>15%</i>	<i>15%</i>	<i>5%</i>	<i>5%</i>	<i>3%</i>
	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Flat Rate per 6 Months (includes up to 24,000 gallons)	\$284.96	\$327.70	\$376.86	\$433.39	\$498.40	\$523.32	\$549.48	\$565.97
Rate per Thousand Gallons 24,000 - 48,000 gallons	\$5.41	\$6.22	\$7.15	\$8.23	\$9.46	\$9.94	\$10.43	\$10.74
Rate per Thousand Gallons 48,000 - 72,000	\$6.08	\$6.99	\$8.04	\$9.25	\$10.63	\$11.17	\$11.72	\$12.08
Rate per Thousand Gallons > 72,000 gallons	\$6.76	\$7.77	\$8.94	\$10.28	\$11.82	\$12.41	\$13.04	\$13.43

State Park Water - RO O&M Plus \$7.52M Revenue Bond								
<i>Proposed Rate Increase</i>	<i>0%</i>	<i>15%</i>	<i>15%</i>	<i>15%</i>	<i>15%</i>	<i>5%</i>	<i>5%</i>	<i>3%</i>
	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24
Flat Rate per 6 Months (includes up to 24,000 gallons)	\$585.84	\$673.72	\$774.77	\$890.99	\$1,024.64	\$1,075.87	\$1,129.66	\$1,163.55
Rate per Thousand Gallons 24,000 - 48,000 gallons	\$4.76	\$5.47	\$6.30	\$7.24	\$8.33	\$8.74	\$9.18	\$9.45
Rate per Thousand Gallons 48,000 - 72,000	\$5.32	\$6.12	\$7.04	\$8.09	\$9.30	\$9.77	\$10.26	\$10.57
Rate per Thousand Gallons > 72,000 gallons	\$5.92	\$6.81	\$7.83	\$9.00	\$10.35	\$10.87	\$11.42	\$11.76

5.0 CONCLUSION

The Town wishes to pursue construction of water system improvements, including a Reverse Osmosis System. In order to offset the costs that will be incurred for construction and the additional operation and maintenance expenses for the system, the Town will need a series of rate increases. The rate revenue scenario outlined in this Addendum indicates that annual increases above inflation will be needed for the next six fiscal years, but should be evaluated annually in order to determine if adjustments are needed due to any unanticipated negative or positive revenue influences.