

TOWN OF **HIGHLAND BEACH**

2021 Revenue Sufficiency and Rate Study – Water and Wastewater Systems

Final Report / January 20, 2021

 **RAFTELIS**





January 20, 2021

Honorable Mayor and Members of the
Town Commissioners
Town of Highland Beach
3614 South Ocean Boulevard
Highland Beach, FL 33487

Subject: 2021 Revenue Sufficiency and Rate Study – Water and Wastewater Systems

Ladies and Gentlemen:

Raftelis Financial Consultants, Inc. ("Raftelis") is pleased to submit this report for your review and consideration regarding the preparation of a six- (6) year financial forecast (the "Financial Forecast") for the water and wastewater utility enterprise fund (the "System") operations on behalf of the Town of Highland Beach (the "Town"). The primary purpose of the development of the financial forecast was to identify the ability of the System operating revenues (derived essentially from bi-monthly rates for service) to adequately fund the expenditure requirements of the System, including the funding of the identified capital improvements or needs as identified by the Town (the "net revenue requirements") and to propose adjusted rates to fully fund the cost of providing service and to promote a favorable fiscal position for the System to minimize financial risk (the "Financial Forecast"). The study also included an evaluation of the rate structure used to recover the cost of providing service and offers suggestions to more equitably recover the cost of providing service, continues to promote conservation, and follows industry norms. Specifically, the Financial Forecast focuses on the sufficiency of the existing rate revenues to fund the operation and maintenance expenses and the capital improvement plan and provide additional information to the Town with respect to the anticipated sources of available funding (i.e., anticipated indebtedness, increased operating margins from future rate adjustments, etc.) for the capital project and major maintenance expenditures identified for the Fiscal Year 2020 (the current budget year when the study was started and the projected Fiscal Years 2021(the "Test Year") through 2025 (the "Forecast Period").

This attached report includes: i) a summary of the customer and billing statistics and rates for service; ii) a discussion of the significant assumptions used in the development of the Financial Forecast; iii) an analysis of the ability of revenues of the System to meet the estimated operating and capital expenditure requirements; iv) the presentation of the identified financing plan for the identified six- (6) year capital program; and v) proposed rates for service and a comparison of the proposed rates for the first year of the Projection Period. The analysis is based on detailed financial information provided by Town staff, including but not limited to, historical customer billing statistics, financial and operating records, and engineering reports. To the extent we have performed our analyses using data and information obtained from the Town, we have relied upon such information to be accurate, no assurances are intended, and no representation or warranties are made with respect thereto.

Based on the assumptions and analyses reflected in this Report, which should be read in its entirety, we are of the opinion that the current rates for the System will not be sufficient to meet the identified net revenue requirements and will need to be adjusted during the Projection Period through the continuation of the annual price index adjustment. Specifically, we have identified the need to annually increase water and wastewater system revenues as shown below:

Recommended Total Rate Revenue Adjustments – Effective October 1 st of Each Fiscal Year [1]			
Fiscal Year	Water	Wastewater	Consolidated [2]
2021	10.5%	16.5%	6.3%
2022	11.0%	13.0%	11.7%
2023	10.0%	12.0%	10.8%
2024	5.0%	5.0%	5.0%
2025	2.5%	2.5%	2.5%

[1] Amounts shown represent percent increases in rate revenues targeted in each fiscal year to fully fund the net revenue requirements; the actual increases may be different due to changes in rate structure associated with the recovery of costs.

[2] The majority of customers receive both water and wastewater service; increase reflect and reflects the average revenue adjustment for a combined water and wastewater bill.

As can be seen above, Raftelis is recommending annual increases which are higher in the early portion of the Forecast Period and which decline as the recommended increases are phased in over time with the goal of implementing only inflation-related adjustments by the end of the Forecast Period. The primary need for the identified rate adjustments are to offset the projected increase in the cost of operations and maintenance primarily due to inflation, increased cost in purchased wastewater from the City of Delray Beach, maintain sufficient cash flows to fund the capital improvement plan on a balanced approach recognizing both a pay-as-you-go (cash funding) and debt financing to minimize System increases yet fully fund the capital plan, and to phase in the full recovery of the debt service requirements allocable to the System from rates as opposed to General Fund revenues. The following provides a summary of the principal issues affecting the Financial Forecast and identified rate adjustments:

1. The Town is essentially at a “built-out” position and there is limited future growth anticipated for the project period (no new account growth has been assumed during the Forecast Period), which places the need for increased future expenditure funding on the existing customer base of the System.
2. The estimated effects of continued inflation on the cost of operation and maintenance of the System is outpacing System growth, thus reducing revenue margins (amounts available for capital financing after the payment of the cost of operation and maintenance); the estimated increase in the cost of operation and maintenance was estimated to average approximately 3% annually during the Forecast Period, which is comparable to the expenses increases being experienced by other public utilities.

3. The capital improvement plan (the “CIP”) is estimated total approximately \$6.3 million for renewals, replacements, and improvements to existing infrastructure which is necessary to maintain ongoing service for the benefit of the community. This level of spending is representative of amounts in prior studies and it is indicative of need to have an ongoing capital re-investment plan due to the assets continuing to reach their service lives. The need for asset replacement is becoming an increasing issue facing utilities in the Southeast Florida region. Funding for the CIP as identified in the Financial Forecast presented in this report is derived from existing cash reserves, future rate revenues, as well as the issuance of additional debt secured from the revenues of the System.
4. Historically, a significant amount of the capital improvements was financed from debt secured by the full faith and credit of the Town (i.e., a general obligation debt of the General Fund). As an enterprise fund and since the debt is for the benefit of the existing customers (represented the funding of asset replacements and System betterments), at the direction of the Town the debt repayment obligation being made from General Fund revenues is being phased out and being replaced as an obligation of the System. This equitably assigns the cost of debt recovery from those benefitting from the assets financed by the debt – the existing ratepayers of the System.
5. The proposed Fiscal Year 2021 rates for both water and wastewater service were compared with neighboring and peer communities and it is expected that the Town’s rates will remain competitive and that this position will continue during the Forecast Period.
6. Based on the assumptions regarding the expenditure requirements as delineated in this report, which should be read in its entirety, and assuming that the Town implements the proposed rate increases as recommended, the revenues are projected to be sufficient to fully fund the identified net revenue requirements of the System, provides for an attainable finance plan that promotes a positive fiscal credit, and should allow for the ability to secure debt financing to fund a portion of its capital improvement plan, which will promote long-term System rate and service sustainability and affordability.

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Honorable Mayor and Members of the Town Commission

Town of Highland Beach

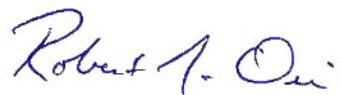
January 20, 2021

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We appreciate the opportunity to be of service to the Town in meeting its financial goals and objectives and would like to thank the Town and its staff for the valuable assistance and cooperation provided in the development of this report.

Very truly yours,

Raftelis Financial Consultant, Inc.



Robert J. Ori

Executive Vice President



Mark Tuma

Consultant

RJO/dlc

Attachments

TOWN OF HIGHLAND BEACH, FLORIDA

2021 REVENUE SUFFICIENCY AND RATE STUDY – WATER AND WASTEWATER SYSTEMS

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TOWN OF HIGHLAND BEACH, FLORIDA

**2021 REVENUE SUFFICIENCY AND RATE STUDY –
WATER AND WASTEWATER SYSTEMS**

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TOWN OF HIGHLAND BEACH, FLORIDA

2021 REVENUE SUFFICIENCY AND RATE STUDY – WATER AND WASTEWATER SYSTEMS

INTRODUCTION

The Town of Highland Beach (the “Town”) water and wastewater utility system (the “System”) is a public enterprise which: i) produces and distributes potable water and ii) provides for the collection and disposal of wastewater within its designated utility service areas. The Town’s System is established as a utility enterprise fund. As such, the System should have revenues equal to the costs of the services provided, and the Town should attempt to establish rates that are always sufficient to cover the cost of operating, maintaining, repairing, and financing the System (referred to as the “revenue requirements”). According to the Governmental Accounting Standards Board:

Enterprise Funds should be used to account for operations that are financed and operated in a manner similar to private business enterprises – where the intent of the governing body is that costs of providing services to the general public on a continuing basis should be financed or recovered primarily through user charges.

General accounting policies and prudent utility management recommend that the System have revenues (financial resources) at least equal to the costs of providing services by the System.

The Town has not formally reviewed rates in approximately five (5) years and recognizes that the cost of doing business has continued to increase due to inflation and increased regulations on the cost of service, coupled with the primary need to have a sufficient capital program to replace aging infrastructure on an ongoing basis. Additionally, the cost of purchased wastewater from the City of Delray Beach also continues to increase for these factors as well associated with the processing and disposal of wastewater. As a result of these pressures and the need to continue to fund the identified capital needs of the, Raftelis was retained to prepare a six- (6) year financial forecast of the System operations. The six- (6) fiscal-year forecast period reflected in this study included the Fiscal Year 2020 (the current budget year when the study was started and the projected Fiscal Years 2021 (the “Test Year”) through 2025 (the “Forecast Period”). Specifically, Raftelis was tasked with analyzing the revenue requirements (expenditure needs) of the respective systems, update the capital expenditure financing analysis to reflect the funding requirements associated with the capital plan, evaluate the ability of the revenues to meet the financial requirements of the respective Systems, and determine the potential need for rate adjustments during the Forecast Period in order to maintain a strong and sustainable financial position.

The remainder of this report provides a discussion of the financial forecast analysis methodology, historical and projected customer statistics and demand requirements, identification of the revenue requirements and estimated sufficiency of the existing rates, and provides a summary of the financial trends and position of the System (the “Report”).

FINANCIAL FORECAST AND RATE ANALYSIS METHODOLOGY

In developing the Financial Forecast, the rate revenue requirements are based on an approach that is commonly used by public utilities throughout the industry. The approach generally supports the budget / cash flow determination needs of the System and included:

1. An evaluation of the service area requirements for the individual water and wastewater systems. This included a review of recent historical customers served and corresponding respective usage and water production / wastewater treatment requirements such that: i) a representative forecast of System needs by specific system from a financial standpoint could be prepared; ii) a projection of rate revenues consistent with the projected service area needs could be developed; and iii) to identify the variable costs associated with meeting the water production and wastewater treatment-related service area demands.
2. A projection of the net revenue requirements from rates, which equates to the expenditure requirements funded from monthly user charges, was analyzed. A summary of the determination of the Net Revenue Requirements is shown below:

+	Cost of Operation and Maintenance
+	Debt Service Payments (Senior and Subordinate)
+	Transfers to Repair and Replacement Fund / Capital Funded from Operations
+/-	Operating and Capital Reserve
+	Working Capital Reserves / Financial Compliance
-	Interest Income
-	<u>Other Operating Revenue / Other Transfers in</u>
=	Net Revenue Requirements (Funded from Rates)
3. Included as a component of Net Revenue Requirements was the development of a funding plan for the System capital improvements. The funding of these improvements recognized the following parameters: i) the use of available (unencumbered) operating reserves or other available cash balances as a first priority (above targeted reserve balances); ii) the use of Impact Fees, to the extent available, to fund expansion-related System capital expenditures; iii) the recognition of a pay-as-you-go (PAYGO) capital funding program (e.g., funded by deposits to a Repair and Replacement Fund [discussed in more detail later in this Report]) to finance capital projects that primarily benefit existing rate payers; and iv) the use of additional debt / loans to fund large capital expenditures (initially financed from ad-valorem tax revenues accounted for in the Town's General Fund but planned to be funded from System net revenues) as discussed with Town staff.
4. Perform a review and projection of the Town's System cash account and fund balances to maintain adequate operating reserves to provide funds for unexpected expenditures (say due to a storm event), to economically attract external funds to finance the capital program, and to minimize the overall financial risk of the System.
5. An evaluation of compliance with internal financial targets and rate covenants associated with any assumed additional debt requirements, if applicable during the Forecast Period.

- The determination of the identified and projected annual rate adjustments required to fund the net revenue requirements and the overall financial needs of the Utility.

EXISTING WATER RATES

The existing water rates became effective on October 1, 2019 pursuant to the adoption of Resolution No. 19-026R by the City Commission on November 5, 2019 (the “Prior Rate Resolution”) associated with a rate evaluation in Fiscal Year 2015 (supported the implementation of a five- (5) year rate phasing plan and the rates placed into effect for the Fiscal Year 2020 represented the last year of such rate phasing plan). The rates were subsequently adjusted by the City Commission on [REDACTED] pursuant to the adoption of Resolution No. [REDACTED] on [REDACTED], 2020 (the “2021 Resolution and collectively with the Prior Rate Resolution, the “Rate Resolution”) by the application of a price index (inflation) adjustment that was made effective October 1, 2020. The existing water rates that are currently in effect for the Fiscal Year 2020 are summarized below and on Table 2:

Bi-monthly Water Rate Schedule		
<u>Bi-monthly Service Charge:</u>		
Residential (Single- and Multi-family) and Commercial Service: [1][2]		
	2020 Rate	2021 Rate
Flat Charge – All Dwelling Units	\$33.59	\$34.60
Residential (Single-family) and Commercial Service (per Account):		
Bi-monthly Usage Charges:		
0 – 19,000 Gallons	\$2.41 per 1,000 Gallons	\$2.48 per 1,000 Gallons
20,000 – 49,000 Gallons	\$4.18 per 1,000 Gallons	\$4.31 per 1,000 Gallons
50,000 Gallons or More	\$5.15 per 1,000 Gallons	\$5.30 per 1,000 Gallons
Multi-family Service (per Unit)		
0 – 13,000 Gallons	\$2.41 per 1,000 Gallons	\$2.48 per 1,000 Gallons
14,000 – 23,000 Gallons	\$4.18 per 1,000 Gallons	\$4.31 per 1,000 Gallons
24,000 Gallons or More	\$5.15 per 1,000 Gallons	\$5.30 per 1,000 Gallons

[1] Amounts shown derived from the Rate Resolution.

[2] Metering of multi-family accounts where a single meter is installed in a water connection serving a multi-family structure, the minimum monthly service charge shall be not less than an amount equal to the number of dwelling units multiplied by the flat bi-monthly rate.

As shown above, the Town has a conservation-promoting water rate structure. This initiative taken by the Town is consistent with the water use policies of the South Florida Water Management District (the “SFWMD”) to encourage water conservation efforts.

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Bi-monthly Wastewater Rate Schedule		
Bi-monthly Service Charge:		
Residential (Single- and Multi-family) and Commercial Service: [1]	2020 Rate	2021 Rate
Flat Charge – per Dwelling Unit	\$44.03	\$45.35

[1] Amounts shown derived from the Rate Resolution; all wastewater charges are currently billed on a “Flat Rate” basis.

HISTORICAL AND PROJECTED SYSTEM SALES AND CUSTOMER USAGE STATISTICS AND DEMANDS

General

The projection of the number of customer accounts and the corresponding metered and billed water use (i.e., customer demands) are referred to as the “customer statistics” and serve as the basis for developing the projected rate revenues for the Forecast Period. The customer statistics consist of two main components, which include: i) the number of individual meters in active service (customers) and the corresponding units served by such meters; and ii) their respective demand (metered or billed use) for water service per consumption block or usage range. An updated projection of the Town’s customer service area demands and growth was developed based on discussions with Town staff, recognition of recent historical trends in customers served, the amount of metered water consumption per account and by customer class, and recognition of current economic conditions. The evaluation of the customer statistics is also necessary to have a proper matching of rate revenues anticipated to be received under existing fee schedules with the projected operating and capital expenditure requirements of the respective systems. This is significant since revenues derived from the application of the rates for monthly service (user charges) currently account for approximately 92% of the total estimated System revenues (exclusive of the use of funds from the General Fund for allocated utility debt repayment). For purposes of this financial analysis and in order to assist the Town in its continuing long-term financing efforts, a financial projection period encompassing the historical Fiscal Year 2019 (which at the time of the initiation of the study was the most recently completed fiscal year), the current Fiscal Year 2020 which is the budget year in effect at time the study was being prepared, and the subsequent five (5) Fiscal Years 2021 (the “Test Year”) through 2025 (the Study focused on the five Fiscal Years ending 2025 and was previously defined as the “Forecast Period”). This length of analysis was recognized in order to identify trends in the cost of providing service, to examine the estimated near term financial effects of funding the Town’s five- (5) year capital improvement program, and initiate the full funding of the System allocated debt service requirements from rate revenues.

Projected Customer and Sales Statistics

During the Fiscal Year 2019 (the most recently completed fiscal year at the beginning of the study), it is estimated that the Town provided water and wastewater service to an average of 461 retail customers representing approximately 4,334 equivalent residential dwelling units (“EDU”). An EDU is generally representative of the average daily capacity or demands of a single-family residential unit and generally represents the lowest level and the most common level of use and is used to evaluate the size and capacity needs of a utility system. Since multi-family (condominiums) and commercial customers may be served by a larger-sized meter than the standard residential customers and generally have different (higher) water usage per account / meter requirements, it is useful to equate such customers on an equivalent basis to the

single-family residential class to provide a more consistent presentation of the total customer base served. The estimated EDUs were based on the data contained in the utility customer billing program; no detailed evaluation of the EDUs allocated to a particular customer was performed in this study since it was not part of our scope of services.

The Town reports that all the water customers also receive wastewater service. The following table provides details concerning the composition of the estimated water customer base during the Fiscal Years 2018 and estimated for Fiscal Year 2019:

Historical Water System Customer Statistics by Class [1]		
	Fiscal Year Ended September 30,	
	2018	2019
Single-family Residential Customers:		
Average Annual Accounts	384	383
Average Annual EDUs	384	420
Annual Consumption (000s Gallons)	142,015	128,997
Average Monthly Use per EDU	30,819	28,067
Multi-family Residential Customers:		
Average Annual Accounts	78	76
Average Annual Units	3,883	3,849
Average Annual EDUs	3,883	3,849
Annual Consumption (000s Gallons)	283,021	233,813
Average Monthly Use per EDU	6,074	5,062
Commercial Customers:		
Average Annual Accounts	5	5
Average Annual EDUs	124	124
Annual Consumption (000s Gallons)	18,614	14,618
Average Monthly Use per EDU	11,751	9,824
Total Water System:		
Average Annual Accounts	467	464
Average Annual EDUs	4,399	4,393
Annual Consumption (000s Gallons)	443,650	377,428
Average Monthly Use per EDU	8,404	7,160
Finished Water Produced (000s Gallons)	408,288	431,368
Non-Revenue Water (Unbilled) as Percent of Production	---%	12.50%

EDU = Equivalent Residential Dwelling Unit

[1] Amounts shown derived from Table 1 at the end of this Report and were based on detailed customer billing data as provided by Town staff.

The following table provides details concerning the composition of the estimated wastewater customer base during the Fiscal Years 2018 and estimated for Fiscal Year 2019:

Historical Wastewater System Customer Statistics by Class [1]		
	Fiscal Year Ended September 30,	
	2018	2019
Single-family Residential Customers:		
Average Annual Accounts	384	383
Average Annual EDUs	384	420
Multi-family Residential Customers:		
Average Annual Accounts	78	76
Average Annual EDUs	3,875	3,836
Commercial Customers:		
Average Annual Accounts	5	5
Average Annual EDUs	124	124
Total Wastewater System:		
Average Annual Accounts	467	464
Average Annual EDUs	4,383	4,380
Total Wastewater Purchased [2]	245,793	245,793
Gallons Treated per EDU	55,793	57,433

ERC = Equivalent Residential Connection

- [1] Amounts shown derived from Table 1 at the end of this Report and were based on detailed customer billing data as provided by Town staff.
[2] Amounts estimated as there was an underbilling of flow.

The development of a forecast of future water sales or usage / billed wastewater flows and treatment and customers is necessary in the evaluation of water and wastewater rate levels. The forecast is essential for the determination of revenues from existing rates, for the escalation of certain water production / purchased wastewater treatment-related expenses, and the identification of potential adjustments to rates for monthly service.

With respect to recent historical growth levels, the Town reports that the System is built-out with limited growth potential (limited number of lots available for redevelopment opportunities and no basis to expand service area boundaries). With respect to projections of customers and water sales, no future customer growth was assumed during the Forecast Period based on recent historical trends and discussions with Town staff. A summary of the Fiscal Year 2019 actual and 2020 estimated results and the customer and demand projections assumed for the Forecast Period for the System are shown by customer class on Table 1 at the end of this Report and are summarized as follows:

Water and Wastewater Systems – Recent and Projected Customer and Demand Statistics [1]								
					Finished Water		Purchased Wastewater	
Fiscal Year Ending September 30,	Average Annual Accounts	Average Annual EDUs [2]	Billed Water Flow (000s of Gallons)	Average Monthly Use per EDU	Finished Water Produced	ADF-MGD	Purchased Wastewater (000s Gallons) [3]	ADF-MGD
2019 (Actual)	464	4,393	377,428	7,160	431,368	1.18	245,463	0.673
2020 (Est.) [4]	464	4,393	375,876	7,130	429,594	1.18	252,014	0.690
2021	464	4,393	375,876	7,130	429,594	1.18	250,598	0.693
2022	464	4,393	375,876	7,130	429,594	1.18	250,598	0.693
2023	464	4,393	375,876	7,130	429,594	1.18	250,598	0.693
2024	464	4,393	375,876	7,130	429,594	1.18	250,598	0.693
2025	464	4,393	375,876	7,130	429,594	1.18	250,598	0.693
Average Annual Growth Rate [5]	<u>0.00%</u>	<u>0.00%</u>	<u>(0.07%)</u>	<u>(0.07%)</u>	<u>(0.07%)</u>		<u>0.034%</u>	

ADF-MGD = Average Daily Flow expressed in million gallons per day

- [1] Amounts shown derived from Table 1 at end of this Report.
- [2] EDUs determined based on: i) number of active accounts served for the single-family residential; ii) number of units served for the multi-family class; and iii) the number of units billed for the commercial class based on detailed customer billing information as provided by the Town.
- [3] All wastewater from the Town's service area is treated on a wholesale contractual basis by the City of Delray Beach. The amounts shown for 2019 and 2020 are estimated since there was a dispute in the amount of sewage flow actually delivered to the City from the Town's wastewater system.
- [4] Estimated Fiscal Year 2020 statistics based on estimated year-to-date rate revenues.
- [5] Reflects average annual projected compounded growth from Fiscal Year 2019 to Fiscal Year 2025.

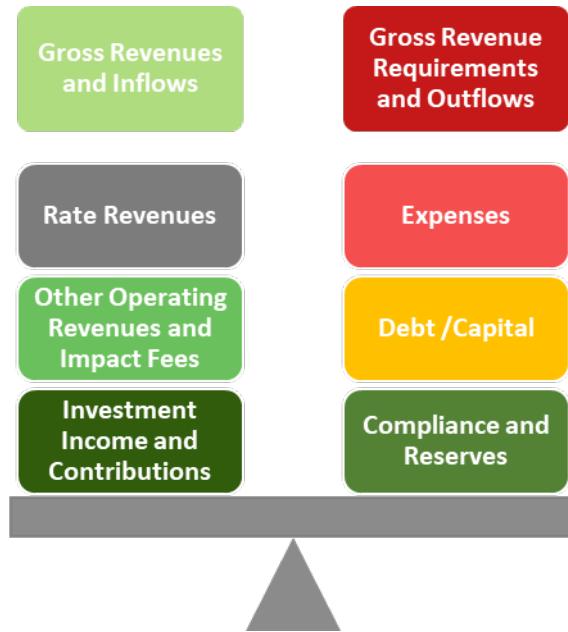
As can be seen above, it is assumed that there will be no increase in customers and corresponding billed flow during the Forecast Period. The projections do not recognize any additional commercial or multi-family connections since there is minimal vacant land for this type of development based on discussions with the Town staff. System billed flow were projected predicated on usage trends experienced by the Town's customers for Fiscal Year 2019 and as estimated for the Fiscal Year 2020, which was based on estimated year-end customer billing and revenue data available at the time of the analyses. These trends were used to forecast future water demands and corresponding rate revenues in support of the financial projections, capital funding plans, and the determination of the System to meet its financial targets and maintain overall creditworthiness. The forecast of accounts and sales served as the basis for the Water System and Wastewater Systems rate revenue projections for the Forecast Period.

FINANCIAL FORECAST AND SUFFICIENCY OF EXISTING RATE REVENUES

General

The foundation of the study and the primary objective of the utility rates are to reasonably recover the cost of providing service, cost of infrastructure investment and compliance with covenants of the outstanding loans and identified or adopted fiscal policies / targets (referred to as the “revenue sufficiency” evaluation). The various components of costs associated with operating and maintaining a utility system, the costs of financing the renewals and replacements of existing facilities and the capital improvements for upgrades and expansions, and compliance with policies and covenants, which would include the maintenance of adequate cash reserves, are generally considered as the revenue requirements of a public utility such as the Town's System. The sum of these costs, after adjusting for other income and other operating revenues

available to the utility, represents the net revenue requirements of a utility system required to be funded from monthly user charges or rates. The evaluation of the sufficiency of the existing rate revenues were identified independently on a water and wastewater system basis. The following figure provides an overview of the derivation of the net revenue requirement derivation:



The net revenue requirements signify a minimum level of expenditures required to be recovered from monthly user fees or rates. The development of the net revenue requirements of the System is a critical component of the study since water utility rates should be designed to fully recover the projected cost of providing service. The estimates of the revenue requirements associated with the System are consistent with methods generally employed by publicly owned utilities that rely on revenue bond financing to fund capital investment needs.

The projected revenue requirements of the System can be organized into four main categories: i) operation and maintenance expenses (does not include capital, depreciation, debt service, or transfers); ii) annual principal and interest payments on existing and future debt / loans / notes allocable to the System (funded from rate revenues); iii) capital improvements to the utility infrastructure funded from System rates; and iv) transfers to other departments / cost centers and for the maintenance of reserves for the System to maintain or meet management objectives / policies regarding financial position and long-term sustainability of the System. The sum of these payments represent the gross revenue requirements of the respective Systems which are to be recovered from the available financial resources of such Systems, including where applicable rate revenues, other operating revenues and investment income, and impact fees (developer contributions), and available cash reserves.

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PRINCIPAL CONSIDERATIONS AND ASSUMPTIONS REGARDING PROJECTED OPERATING RESULTS

In making the projections and estimates summarized in this Report, the principal considerations and assumptions made by Raftelis and the information and assumptions provided to us, or prepared by others, include the following:

1. The actual Fiscal Year 2019 operating results, the adopted Fiscal Year 2020 Budget, the estimated year-end operating results for Fiscal Year 2020, and the adopted Fiscal Year 2021 budget available at the time the analysis was preformed, as provided by the Town served as the baseline for the expenditure projections for the Fiscal Years 2020 and 2021. Such amounts were compared to prior period results and the underlying projections included therein by the Town were considered as being reasonable and have been assumed to reflect anticipated operations and overall System financial needs. The Fiscal Year 2021 Budget (the “Budget”) represented the most recent financial plan / forecast as approved by the Town Commission at the time of the analytical evaluations included in this Report. The Budget recognizes anticipated changes by System management in operations and costs based on known events, trends, and actual historical financial results and based on a comparison with actual Fiscal Year 2019 and estimated Fiscal Year 2020 results, certain adjustments were made to the Budget to reflect more current estimates; these adjustments are included Table 7 at the end of this Report. Such amounts were incorporated into the Fiscal Year 2021 component of the Forecast Period except for certain adjustments and assumptions as noted hereunder and served as the basis for the operating expense forecast.
2. Projected revenues from current rates and charges for the Town’s water and wastewater utility systems have been based on the schedule of rates and charges currently in effect as adopted by the Town Commission pursuant to the Rate Resolution. Such rates and charges were applied to the forecast of water and wastewater customers and sales forecast for the individual systems as previously discussed.
3. The Town currently charges an impact fee to new customer growth or development to recover the pro rata share of the System cost of water and/or wastewater capacity allocable to such customers. Since no growth was assumed for the Forecast Period, no impact fee revenues have been assumed. As discussed later in the report, the Town does have certain impact fee funds on deposit in its impact fee account and it is recommended that the available impact fees be used to pay expansion-related debt service issued on behalf of the System since there was no expansion-related capital expenditures identified for the System during the Forecast Period.
4. Included in the financial projections are other operating revenues associated with fire hydrant maintenance fees, interest income, disposition of fixed assets and administrative reimbursements, and other miscellaneous revenues. For the purposes of this Report, other operating revenues were based on: i) the Fiscal Year 2021 budgeted revenues; ii) a review of historical amounts received from such charges; and iii) discussions with the Town staff. Based on a review of such sources, it was assumed that such revenues would remain constant during the Forecast Period.
5. The development of the projected operation and maintenance (operating) expenses for the Town’s individual water and wastewater systems was based upon: i) a review of recent cost escalation trends in expenses for the System; ii) the Fiscal Year 2020 operating budget and year-to-date

actuals and the Fiscal Year 2021 operating budget, which represents the most recent financial forecast as prepared by the Town; iii) expense cost trends based on actual results for the Historical Period; iii) historical cost indices as published by the Bureau of Labor Statistics, the Florida Public Service Commission (used in regulation of private utilities), and in the Engineering News Record associated with the change in construction costs, iv) the forecast of the Consumer Price Index as prepared by the Congressional Budget Office and published in the *February 2020 Economic and Budget Outlook*; and v) certain other assumptions and considerations as identified within this report.

Projected operating expenses associated with operation of the System have been escalated from Fiscal Year 2021 levels based upon several assumptions and the nature of the expense. The 2021 Budget represented the Town's current annual financial plan for the System at the time of the analysis and based on a comparison of such projections to recent reported amounts (Fiscal Year 2019 audited and Fiscal Year 2020 unaudited results), it was determined that the underlying assumptions used by the Town in the development of such budgets were considered reasonable and reflect reasonable costs for anticipated operations of the System. Such amounts were projected based on a variety of escalation parameters respective of the specific cost to provide service.

A summary of the projected operating expenses for the Water System is summarized below for the Forecast Period:

Summary of Forecasted Water System Operating Expenses (\$000s) [1]						
Description	2020	2021	2022	2023	2024	2025
Allocated Salaries and Benefits	\$575,724	\$601,530	\$729,404	\$753,577	\$778,634	\$804,604
Professional Fees and Other Contractual Services	106,520	187,000	112,962	115,786	118,565	121,292
Communications	4,050	3,700	3,796	3,891	3,984	4,076
Telephone	0	0	0	0	0	0
Insurance	145,000	145,000	148,770	152,489	156,149	159,740
Electricity	300,000	300,000	307,890	315,988	324,298	332,827
Repairs and Maintenance	260,000	218,925	174,200	181,168	524,105	195,951
Administrative Charges	327,870	325,000	333,450	341,786	349,989	358,039
Operating Supplies	237,950	237,950	244,137	250,240	256,246	262,140
Contingency	67,931	72,094	75,565	78,109	80,517	82,867
Total Water Operating Expenses	<u>\$2,025,045</u>	<u>\$2,091,200</u>	<u>\$2,130,174</u>	<u>\$2,193,034</u>	<u>\$2,592,487</u>	<u>\$2,321,536</u>

[1] Amounts shown derived from Table 10 at end of this Report.

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A summary of the projected operating expenses for the Wastewater System is summarized below for the Forecast Period:

Summary of Forecasted Wastewater System Operating Expenses (\$000s) [1]						
Description	2020	2021	2022	2023	2024	2025
Allocated Salaries and Benefits	\$307,991	\$321,475	\$332,368	\$343,651	\$355,339	\$367,445
Professional Fees and Other Contractual Services	79,000	124,000	79,494	81,481	83,437	85,356
Communications	0	0	0	0	0	0
Telephone	0	0	0	0	0	0
Insurance	7,000	9,000	9,360	9,734	10,124	10,529
Electricity	40,000	40,000	41,052	42,132	43,240	44,377
Purchased Wastewater Treatment	959,755	987,449	908,922	936,177	964,266	993,188
Repairs and Maintenance	57,000	80,000	83,200	86,528	89,989	93,589
Administrative Charges	147,000	154,350	158,363	162,322	166,218	170,041
Operating Supplies	0	1,000	1,026	1,052	1,077	1,102
Contingency	40,428	43,809	40,796	42,219	43,518	44,782
Total Wastewater Operating Expenses	\$1,638,175	\$1,761,083	\$1,654,581	\$1,705,296	\$1,757,207	\$1,810,408

[1] Amounts shown derived from Table 10 at end of this Report.

The projected water and wastewater system revenue requirements, as shown on Table 10 at the end of this report, were based upon certain assumptions, considerations, and analyses. The major assumptions, considerations, and analyses that are included in the development of the projected revenue requirements for the study period are as:

- a. Based on discussions with the Town, the escalation of wages and salaries above Fiscal Year 2021 budgeted amounts for the System was increased by approximately 3.0% annually to reflect increases due to inflation and allowances for salary adjustments such as merit increases and cost of living adjustments. Personnel benefits (i.e., contributions toward retirement, health insurance, FICA, Other-Post-Employment-Benefits, etc.) were projected to increase by approximately 5.0% annually due to recent projections of escalating costs of sustaining such benefits (e.g., medical insurance) in addition to discussions with the Town.
- b. Based on discussions with the Town, no additional personnel above the amount of Full Time Equivalent positions as budgeted for the Fiscal Year 2021 for the System were assumed to be required during the remainder of the Forecast Period.
- c. Materials and supplies expenses, other contractual services expenses, repair and maintenance expenses, and certain other operating expenses for the System have been projected to increase in general from historical and current budgetary levels at an annual rate equal to inflation ranging from 2.3% to 4.0% based on the nature of the expenditure. These escalation factors were based on the Consumer Price Index forecast prepared by the Congressional Budget Office as contained in the *Economic and Budget Outlook* dated February 2020, trends experienced by other utilities, a review of recent trends in expenses for the System as reported by the Town, and discussions with the Town.

- d. With respect to the projection of variable costs for water plant operations which included the cost for purchased power and chemicals for water pumping and treatment, such projections were based on the Town's Budget and was escalated for the Forecast Period based on an allowance for inflation, which is consistent with recent historical trends, and the projection of flow requirements as discussed earlier in this Report. For the Forecast Period, the following was assumed for the variable expenses:
- i. Current period System electrical expenses were increased during the Forecast Period by a general or base inflation allowance of 2.63% based on 20-year average change in the Consumer Price Index for All Urban Consumers for Electricity (CUSR0000SEFH01) as published by the Bureau of Labor Statistics as of June 2020 plus an allowance for increased finished water production, if any. Based on these assumptions, the increase in System electric expenses for the Water System was projected to average approximately 2.63% annually after Fiscal Year 2021 for the Forecast Period (no increase in finished water production was assumed).
 - ii. Current period System chemical expenses were increased during the Forecast Period by a general or base inflation allowance of 2.54% based on 20-year average change in the Consumer Price Index for All Urban Consumers for Industrial Chemicals (WPU061) as published by the *Bureau of Labor Statistics* as of May 2020 plus an allowance for System growth. Based on these assumptions, the increase in System chemical expenses was projected to average approximately 2.54% annually after Fiscal Year 2020 for the Forecast Period (no increase in finished water production was assumed).
- e. Pursuant to the Amended and Restated Interlocal Agreement with the City of Delray Beach (the "City" or "Delray Beach") dated May 21, 2004, the City provides all of the wastewater treatment services for the Town's Wastewater System from its South Central Regional Wastewater Treatment Facility (the "Wastewater Service Agreement"). The Wastewater Service Agreement provides, among other things, for the rate to be charged to the Town, including the basis for any increases in costs will be passed along to the Town. The projected wastewater treatment expense is shown on Table 11 at the end of this Report and was based on the rates currently being charged by Delray Beach pursuant to the provisions of the Wastewater Service Agreement, projections of wastewater customers, and recent trends regarding the wastewater treated per EDU.
- f. A contingency allowance equal to three percent (3.0%) for the respective Water and Wastewater Systems total operating expenses was recognized in each fiscal year of the Forecast Period beginning in Fiscal Year 2020. The allowance has been included in order to i) recognize unknown or unplanned expenditures that may occur throughout the fiscal year; and ii) provide an allowance for any potential negative changes in the revenues that may occur due to weather, conservation, and other factors, including customer adjustments due to changes in rate structure. This allowance increases the revenue requirements of the combined Water and Wastewater System by approximately \$112,400 annually and is included as an operating expense for each specific utility with respect to the determination of total revenue requirements. To the extent the contingency allowance is not required to meet the projected operating expenses or provide funds for ongoing System operations, such monies would accrue to the benefit of the System and could be used for other purposes such as providing

increased funds for deposit to the Renewal and Replacement Fund to finance renewals, replacements, and upgrades to the System over time or to reduce potential rate adjustments that may be required in the future.

- g. An allowance for bad debt expense has been made to recognize a certain amount of revenues that will be considered as uncollectible and written off throughout the year. This expenditure item has been included as an operating expense and was projected based on trends incurred by utilities statewide and discussions with Town staff. A bad debt expense ratio estimated at 0.15% of sales revenues was assumed for the Forecast Period and was projected to average \$7,000 per year.
 - h. Although considered a System operating expense for financial reporting purposes, depreciation and amortization expenses have not been recognized as an Operating Expense for the purposes of this report. The analysis does recognize the dedicated funding of a capital fund associated with the accrual of funds for ongoing capital re-investment which is discussed later in this report.
6. The Town currently has four (5) outstanding series of loans issued to finance capital improvements on behalf of the Water System. The debt is recognized as a revenue requirement of the utility system but the majority of the payments are secured for repayment by ad valorem taxes (General Fund revenues); there has been no loans issued by the Town to fund wastewater capital improvements. The following loans were outstanding as of October 1, 2019; they were issued by the Town on behalf of the Water System:

Current Principal Amount of Outstanding Loans Issued on Behalf of System			
Issue	Principal Outstanding [1]	Annual Debt Payment	Year of Final Maturity
Bank of America Promissory Note, 2007 (the "2007 Note")	\$2,387,936	\$296,880	2029
Revolving Fund Loan DW 500200 [2]	1,864,328	198,311	2030
Revolving Fund Loan DW 500201 [2]	495,729	52,136	2030
Revolving Fund Loan DW 502901 [2]	3,096,315	738,424	2024
Revolving Fund Loan DW 500210 [2]	4,367,393	263,472	2038
Total Outstanding Loans Allocated to System (the "Outstanding Loans")	<u>\$12,211,701</u>	<u>\$1,549,223</u>	

[1] Amount outstanding as of October 1, 2019; all loans secured by the Town are for capital improvements allocable to the Water System.

[2] Amounts represent low-interest State Revolving Fund ("SRF") loans administered by the Florida Department of Environmental Protection.

As can be seen above, a significant amount of the annual debt service on the Outstanding Loans will mature as 2030 which will provide a financial benefit to the System and allow for future leveraging (debt issue) capability. The annual debt service payments for each series of notes and loans are level (the same each year).

Historically (including the Fiscal Year 2020), the Town has funded the Outstanding Loans from General Fund revenues consistent with the pledge for repayment. Because these loans are secured

for repayment from the Town's General Fund and to identify the net revenue requirements of the System for our study, we have recognized i) the annual debt service associated with the Outstanding Loans as a component of the Water System revenue requirements since these loans are directly associated with System capital financing activities and are accounted for as a System liability for financial reporting purposes, offset by ii) a transfer (contribution) from the General Fund as a financial resource to pay for the annual loan repayment requirements.

There are no loans that have been issued by the Town to finance any capital improvements for the Wastewater System; it should be noted that any capital improvements associated with the cost of wastewater treatment services purchased from Delray Beach is included as a component of the cost of purchased wastewater and is included as a component of the operating expenses for the System.

7. Based on discussions with the Town and to fully recognize that utility rates should fund the full cost of providing service, the payment of the annual debt service on the Outstanding Loans and any additional loans that may be issued in the future should be from System rate revenues and not from revenues realized within the General Fund. In the development of the financial forecast and to recognize the full cost recovery objective, the forecast assumes a phasing-out of the debt repayment solely from General Fund revenues to being fully funded from System rates (i.e., would be a transfer to the General Fund in support of the pledge of revenues for debt repayment). The change in funding of the annual debt service payment is projected to be fully phased to a utility system funding basis by Fiscal Year 2026 (which is just beyond the Forecast Period). The debt repayment plan included in the financial forecast is summarized below:

Summary of Annual Debt Service Payment Funding – for the Forecast Period [1]					
Fiscal Year	Total Annual Debt Service Payment	Less Amounts Funded from Connection Charges [2]	Total Net Annual Debt Service Payment	Amount Funded from System Rate Revenues	Amount Funded from General Fund Revenues
2020	\$1,549,224	\$0	\$1,549,224	\$119,224	\$1,430,000
2021	1,549,224	0	1,549,224	119,290	1,429,934
2022 [3]	1,549,224	(296,880)	1,846,104	212,898	1,336,326
2023	1,549,224	(296,880)	1,846,104	306,824	1,242,400
2024	1,149,244	(296,880)	1,446,125	400,611	748,633
2025	810,800	(296,880)	1,107,680	513,920	296,880

[1] Derived from Table 10 at the end of this report.

[2] Based on discussions with the Town staff, it was recommended that the use of available Water System Connection Fees be used to fund a portion of the annual Debt Service Payment on the Outstanding Loans; reference Assumption No. 8 below.

[3] During Fiscal Year 2022 and based on the assumed capital plan recognized for the Financial Forecast, additional loans are anticipated to be secured by the Town to fund a portion of the capital improvement plan; reference Assumption No. 9 below.

The change in the funding of the Outstanding Loan to System revenues is a major driver for the need to adjust System rates during the Forecast Period.

8. As mentioned above, the financial forecast assumes the use of water-related connection fees to be applied towards the payment of the Outstanding Loans. Currently, the Town has on deposit \$2.288 million in water connection fees which are available to fund expansion-related projects. Since the CIP is primarily driven by the need to perform renewals and replacements and a portion of the Outstanding Loans were issued to fund the expansion of the water treatment plant, the use of the connection fees to be applied to expansion-related debt was recognized to reduce the cash flow requirements from water rates. The use of connection fees to fund expansion-related debt is a lawful use of the fees collected. For the purposes of preparing the financial forecast, it was assumed that the available water connection fees would be used to pay the annual principal payments associated with the 2007 Note for the remaining term of the note since it was obtained for the purpose of financing the expansion of the Town's water treatment plant. This served to reduce the debt funded from the General Fund by approximately \$297,000 annually beginning in Fiscal Year 2022.
9. Based on the identified capital needs of the System as identified by the Town and as referenced on Table 14 of the report, it is anticipated that during the Forecast Period, that no additional System debt will be required to finance a portion of the capital improvement plan ("CIP"). Based on the directives of the City Council, the General Fund will infuse \$1,000,000 to fund wastewater system capital improvements. This allocation of funds served to reduce the capital funding from System operations which would have needed to be funded by the issuance of additional debt.
10. In order to accrue funds to finance the ongoing capital re-investment requirements for the System, Raftelis is recommending that the Town annually fund an allowance for major capital repairs and ongoing or recurring capital improvements from rates. The funding of these expenditures should be on an annual basis in support of the capital funding process (similar to the recognition of depreciation expense on the financial statements for the System). Specifically, Raftelis recommends the establishment of a capital / repair-related account – the Capital Renewal and Replacement Fund – to allow the System to annually accrue funds to finance future capital improvements due to changes in regulation, service needs and other factors, pay for large recurring plant replacements (i.e., water treatment plant membranes), and fund ongoing annual or recurring utility plant or asset replacements (i.e., vehicles and meters). It is recommended that in order to establish this fund the System should make an initial deposit from available operating reserves to initially provide monies to establish the fund; for the purposes of this Report, it was assumed this deposit would be made during the Fiscal Year 2021 in the amount of \$400,594 or 10.5% or prior System gross revenues. Additionally, a dedicated deposit to a capital-related account reflects industry norms and a positive management practice for the funding of a major portion of the repairs, renewals, replacements, rehabilitations, and betterments to a utility system and is considered as a prudent business practice by the bond rating agencies that evaluate utility credits. Subsequent to the Fiscal Year 2021, the deposit to the Capital Renewal and Replacement Fund was assumed to be equal ten percent (10%) of the prior year gross revenues and increased to 15% beginning in Fiscal Year 2023. Although a policy decision of the Town, the recommended funding level target for capital re-investment is 15% of prior year gross revenues and it is assumed that this funding level may be achieved after the Forecast Period. This deposit was based on the capital improvement needs as developed by the Town and was assumed to be made annually from rate

revenues, regardless of the timing of the expenditure requirement under the premise that the ratepayer should annually fund for the repairs and replacement of the utility assets used to provide service during such year (i.e., a depreciation equivalent). As shown on Table 12 and based on this funding assumption, the annual deposit to the Capital Renewal and Replacement Fund averaged approximately \$499,667 during the Fiscal Years 2021 through 2025 (60% of current year depreciation expense).

With respect to the System, Raftelis is of the opinion that the Capital Renewal and Replacement Fund should be maintained to fund the ongoing capital needs of the respective systems and to limit the amount of future debt that may be issued by the Town on behalf of such system. Specifically the annual capital funding from rates provides a balanced capital funding plan since it: i) promotes pay-as-you-go (“PAYGO”) funding of these projects which are for renewals, repairs, and replacements of existing assets that have reached their service life and which generally benefit the existing ratepayer; ii) increases the Town’s equity in the System; iii) preserves the potential future debt leveraging capability of the System for expansion-related or large capital projects that normally would be funded from additional loans; and iv) promotes the long-term rate stability of the System. For the Forecast Period, the annual deposit to the Capital Renewal and Replacement Fund recognized from rates for capital PAYGO financing is as follows:

Annual Deposits to Capital Renewal and Replacement Fund for Capital Reinvestment (PAYGO) from System Operations [1]						
	Fiscal Year Ending September 30,					
	2020	2021	2022	2023	2024	2025
Initial Deposit from Operating Reserves: [2]	\$164,280	\$0	\$0	\$0	\$0	\$0
Percent of Prior Year Gross Revenues	0%	10%	11%	11%	11%	11%
Water System:						
Renewal and Replacement Deposit	\$0	\$302,855	\$357,506	\$438,451	\$482,401	\$505,330
Wastewater System:						
Renewal and Replacement Deposit	\$0	\$36,501	\$43,088	\$52,844	\$58,141	\$60,905
Total System R&R Fund Deposits	<u>\$164,280</u>	<u>\$339,356</u>	<u>\$400,594</u>	<u>\$491,295</u>	<u>\$540,542</u>	<u>\$566,235</u>

[1] Amounts shown derived from Table 12 and assume the adoption of the identified rate adjustments as presented in this Report.

[2] Amounts shown represents initial deposit from operating reserves to the Repair and Replacement Fund and is set equal to one-year's depreciation expense.

11. Investment income on funds and accounts created by the Town (e.g., utility-related operating reserves, Capital Renewal and Replacement Fund, etc.) has been estimated utilizing average annual interest rates ranging from 1.0% to 1.20% during the Forecast Period. We have also assumed that any interest earnings on any balances in the Connection Fee Funds and the Construction Funds (from future bond or loan proceeds on deposit for the System) will be deposited in the respective funds and not be available for operating expenses consistent with the provisions of the Florida State Statute 163 and case law (regarding impact fees) or pursuant to a loan agreement (note that no balances on these funds were assumed for the Forecast Period). Table 18 provides a summary of the transfers in and out of each fund / account and corresponding ending cash balances for each fund / account maintained by the Town on behalf of the System.

12. The capital improvement program for the respective Water and Wastewater Systems was based on: i) the Fiscal Year 2020 estimated capital expenditures; ii) the Fiscal Year 2021 five- (5) year capital improvement plan budget; iii) information provided by Town Staff regarding the status of current projects and future projects (e.g., costs incurred to date, updated capital costs due to changes in scope of the project, etc.); and iv) the application of an inflationary allowance for all projects planned after Fiscal Year 2021 to account for increased construction costs in the year the expenditure is assumed to occur. The primary purpose for the capital projects by the Town is to provide for the ongoing of renewals, repairs, betterments, and replacements of the existing infrastructure of the System. The following table summarizes the projected capital expenditures (when funds are appropriated for projects and must be available, which may be slightly different from when the cash expenditures actually occur).

Capital Improvement Plan (CIP) – For the Forecast Period [1]						
Description	Fiscal Year Ending September 30,					
	2020	2021	2022	2023	2024	2025
Capital Improvement Plan – Expenditures						
Water System Capital Projects	\$378,000	\$339,405	\$349,078	\$549,420	\$503,535	\$138,103
Wastewater System Capital Projects	125,000	539,963	1,110,703	543,980	167,845	172,629
Total Capital Improvement Plan – Expenditures	<u>\$503,000</u>	<u>\$879,368</u>	<u>\$1,459,781</u>	<u>\$1,093,400</u>	<u>\$671,380</u>	<u>\$310,731</u>
Capital Improvement Plan - Funding						
Water and Wastewater Rates	\$0	\$0	\$0	\$32,639	\$0	\$0
Operating Reserves	295,000	514,250	1,036,656	543,980	167,845	0
Capital Renewal and Replacement Fund	100,000	313,693	423,125	516,781	167,845	310,731
Proposed Debt	0	0	0	0	0	0
Reclass to Operating Expenses	108,000	51,425	0	0	335,690	0
Total Capital Improvement Plan – Funding	<u>\$503,000</u>	<u>\$879,368</u>	<u>\$1,459,781</u>	<u>\$1,093,400</u>	<u>\$671,380</u>	<u>\$310,731</u>

[1] Amounts shown derived from Table 14 at the end of this Report.

Table 14 at the end of this Report provides a detailed listing of the capital projects for the Water and Wastewater Systems for the Forecast Period and includes the anticipated funding sources for each project through the Forecast Period. Included in the capital improvement program is the use of the Capital Renewal and Replacement Fund to finance recurring capital projects (i.e., essentially for the betterment or replacement of assets). The recognition of this revenue requirement is necessary in order to allow the Town a funding mechanism to continue to provide high-quality service (i.e., maintain same level of service) to its customers as the utility system ages. As can be seen above it is anticipated that the capital needs of the System are estimated to be approximately \$4.41 million over the Forecast Period. The Capital Improvement Plan (also referred to as the “CIP”) is projected to be funded from available funds on deposit (operating reserves), revenues anticipated to be generated during the Forecast Period and deposited into the Capital Renewal and Replacement Fund, and the issuance of an Additional Loan as previously discussed assumed to be secured by revenues realized in the Town’s General Fund (consistent

with previous repayment pledge for the other System-related loans secured through the Florida Department of Environmental Protection State Revolving Fund loan program). As a result of the projected limited growth assumed for the System during the Forecast Period, it is recommended that the System move towards a greater PAYGO capital funding strategy, where practical, to promote the long-term sustainability and flexibility in the use of funds for the System and limit the use of debt for large, non-recurring, or expansion-related projects.

NET REVENUE REQUIREMENTS – WATER SYSTEM

The net revenue requirements of the Water System are presented on Table 15 and are shown below and were based upon: i) the customer forecast identified herein; ii) the existing rates for service; iii) the operation and maintenance expense assumptions as previously discussed; and iv) the CIP as identified with Town staff, and the capital funding analysis assumed herein. The purpose of the development of the net revenue requirements is to determine the level of revenue from monthly user rates required to meet the financial obligations of the Water System. Summarized below are the projected net revenue requirements and overall recommended rate adjustments for the Water System:

Projected Water System Net Revenue Requirements – For the Forecast Period						
Description	Fiscal Year Ending September 30,					
	2020	2021	2022	2023	2024	2025
Operation and Maintenance Expenses	\$2,025,045	\$2,091,200	\$2,130,174	\$2,193,034	\$2,592,487	\$2,321,536
Annual Debt Service:						
Existing Debt	\$1,549,224	\$1,549,224	\$1,549,224	\$1,549,224	\$1,180,012	\$810,800
Proposed Debt	0	0	0	0	0	0
Less Connection Charges to Pay Debt Service	0	0	(296,880)	(296,880)	(296,880)	(296,880)
Other Revenue Requirements:						
Capital Funded from Rate Revenues	\$0	\$0	\$0	\$32,639	\$0	\$0
Transfers to the Renewal and Replacement Fund	0	302,855	357,506	438,451	482,401	505,330
Gross Revenue Requirements	\$3,574,269	\$3,943,279	\$3,740,024	\$3,916,467	\$3,958,020	\$3,340,785
Less Other Income and Funds from Other Sources:						
Other Revenue	\$179,720	\$187,070	\$191,083	\$195,042	\$198,938	\$202,761
Unrestricted Interest Income	49,199	48,245	44,435	39,130	37,052	37,679
General Fund Transfers - Debt Service Payment	1,430,000	1,429,934	1,039,445	945,519	451,753	0
Transfers from Operating Reserves	119,224	120,000	0	0	0	0
Net Revenue Requirements	\$1,796,125	\$2,158,030	\$2,465,060	\$2,736,776	\$3,270,277	\$3,100,346
Revenue Under Existing Water Rates:						
Water System Rate Revenue	\$2,087,452	\$2,150,076	\$2,150,076	\$2,150,076	\$2,150,076	\$2,150,076
Prior and Current Year Rate Adjustment	0	0	225,758	487,100	750,817	895,862
Total Applicable Rate Revenue	\$2,087,452	\$2,150,076	\$2,375,833	\$2,637,175	\$2,900,893	\$3,045,937

Table continued on following page.

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Projected Water System Net Revenue Requirements – For the Forecast Period (cont'd.)						
Description	Fiscal Year Ending September 30,					
	2020	2021	2022	2023	2024	2025
Percent Rate Increase	0.00%	10.50%	11.00%	10.00%	5.00%	2.50%
Effective Months of Increase (Assumes Oct. 1 st)	12	6	12	12	12	12
Percent of Current Year Effective	100%	100%	100%	100%	100%	100%
Revenue from Current Year Rate Adjustments	\$0	\$112,879	\$261,342	\$263,718	\$145,045	\$76,148
Total Rate Revenue	\$2,087,452	\$2,262,955	\$2,637,175	\$2,900,893	\$3,045,937	\$3,122,086
Revenue Surplus / (Deficiency):						
Amount	\$291,327	\$104,925	\$172,115	\$164,117	(\$224,340)	\$21,740
Percent of Rate Revenue	13.96%	4.64%	6.53%	5.66%	(7.37%)	0.70%

It should be noted that no adjustment is shown for Fiscal Year 2020 since the fiscal year was nearing completion at the time of the study and any rate adjustment that could be implemented would not generate sufficient revenue during the fiscal year to significantly impact the financial position of the System for such fiscal year.

NET REVENUE REQUIREMENTS – WASTEWATER SYSTEM

The net revenue requirements of the Wastewater System are presented on Table 16 and are shown below and were based upon: i) the customer forecast identified herein; ii) the existing rates for service; iii) the operation and maintenance expense assumptions as previously discussed, including the projections of purchased wastewater treatment service from Delray Beach; iv) the CIP as identified with the Town and the capital funding analysis assumed herein. The purpose of the development of the net revenue requirements is to determine the level of revenue from monthly user rates required to meet the financial obligations of the Wastewater System. Summarized below are the projected net revenue requirements and overall recommended rate adjustments for the Wastewater System:

Projected Wastewater System Net Revenue Requirements – For the Forecast Period						
Description	Fiscal Year Ending September 30,					
	2020	2021	2022	2023	2024	2025
Operation and Maintenance Expenses	\$1,638,175	\$1,761,083	\$1,654,581	\$1,705,296	\$1,757,207	\$1,810,408
Annual Debt Service:						
Existing Debts	\$0	\$0	\$0	\$0	\$0	\$0
Proposed Debts	0	0	0	0	0	0
Other Revenue Requirements:						
Transfers to the Renewal and Replacement Fund	\$0	\$36,501	\$43,088	\$52,844	\$58,141	\$60,905
Gross Revenue Requirements	\$1,638,175	\$1,797,584	\$1,697,669	\$1,758,140	\$1,815,348	\$1,871,313

Table continued on following page.

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Projected Wastewater System Net Revenue Requirements – For the Forecast Period (cont'd.)						
Description	Fiscal Year Ending September 30,					
	2020	2021	2022	2023	2024	2025
Less Other Income and Funds from Other Sources:						
Other Revenue	\$0	\$0	\$0	\$0	\$0	\$0
Unrestricted Interest Income	27,292	26,763	24,649	21,706	20,553	20,901
General Fund Transfers – Debt Service Payment	0	0	0	0	0	0
Transfers from Operating Reserves	0	0	0	0	0	0
Net Revenue Requirements	\$1,610,883	\$1,770,821	\$1,673,020	\$1,736,434	\$1,794,794	\$1,850,412
Revenue Under Existing Wastewater Rates:						
Wastewater System Rate Revenue	\$1,157,108	\$1,191,822	\$1,191,822	\$1,191,822	\$1,191,822	\$1,191,822
Prior and Current Year Rate Adjustment	0	0	196,651	377,152	565,429	653,291
Total Applicable Rate Revenue	\$1,157,108	\$1,191,822	\$1,388,472	\$1,568,974	\$1,757,250	\$1,845,113
Percent Rate Increase	0.00%	16.50%	13.00%	12.00%	5.00%	2.50%
Effective Months of Increase (Assumes Oct. 1 st)	12	6	12	12	12	12
Percent of Current Year Effective	100%	100%	100%	100%	100%	100%
Revenue from Current Year Rate Adjustments	\$0	\$98,325	\$180,501	\$188,277	\$87,863	\$46,128
Total Rate Revenue	\$1,157,108	\$1,290,147	\$1,568,974	\$1,757,250	\$1,845,113	\$1,891,241
Revenue Surplus / (Deficiency):						
Amount	(\$453,774)	(\$480,675)	(\$104,046)	\$20,816	\$50,319	\$40,829
Percent of Rate Revenue	(39.22%)	(37.26%)	(6.63%)	1.18%	2.73%	2.16%

As can be seen above and as shown in more detail on Table 16, the existing wastewater rate revenues are not anticipated to be sufficient to adequately fund the identified Net Revenue Requirements of the Wastewater System during the Forecast Period and provide funds to maintain operating reserves to maintain a strong utility credit. As was previously discussed for the Water System, no adjustment is shown for Fiscal Year 2020 since the fiscal year was nearing completion at the time of the study and any rate adjustment that could be implemented would not generate sufficient revenue during the fiscal year to significantly impact the financial position of the System for such fiscal year.

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NET REVENUE REQUIREMENTS – COMBINED SYSTEM

Since the System customers receive both water and wastewater service, the net revenue requirements for the combined Water and Wastewater System are presented on Table 17 and are shown below:

Projected Combined Water and Wastewater System Net Revenue Requirements – For the Forecast Period						
Description	Fiscal Year Ending September 30,					
	2020	2021	2022	2023	2024	2025
Operation and Maintenance Expenses	\$3,663,219	\$3,852,283	\$3,784,755	\$3,898,330	\$4,349,694	\$4,131,944
Annual Debt Service:						
Existing Debts	\$1,549,224	\$1,549,224	\$1,549,224	\$1,549,224	\$1,180,012	\$810,800
Proposed Debts	0	0	0	0	0	0
Less Connection Charges to Pay Debt Service	0	0	(296,880)	(296,880)	(296,880)	(296,880)
Other Revenue Requirements:						
Capital Funded from Rate Revenues	\$0	\$0	\$0	\$32,639	\$0	\$0
Transfers to the Renewal and Replacement Fund	0	339,356	400,594	491,295	540,542	566,235
Gross Revenue Requirements	\$5,212,443	\$5,740,863	\$5,437,693	\$5,674,608	\$5,773,367	\$5,212,099
Less Other Income and Funds from Other Sources:						
Other Revenue	\$179,720	\$187,070	\$191,083	\$195,042	\$198,938	\$202,761
Unrestricted Interest Income	76,491	75,008	69,084	60,836	57,605	58,580
General Fund Transfers - Debt Service Payment	1,430,000	1,429,934	1,039,445	945,519	451,753	0
Transfers from Operating Reserves	119,224	120,000	0	0	0	0
Net Revenue Requirements	\$3,407,008	\$3,928,851	\$4,138,080	\$4,473,210	\$5,065,071	\$4,950,758
Revenue Under Existing Rates:						
Combined System Rate Revenue	\$3,244,560	\$3,341,897	\$3,341,897	\$3,341,897	\$3,341,897	\$3,341,897
Prior and Current Year Rate Adjustment	0	0	422,409	864,252	1,316,246	1,549,153
Total Applicable Rate Revenue	\$3,244,560	\$3,341,897	\$3,764,306	\$4,206,149	\$4,658,143	\$4,891,050
Percent Rate Increase	0.00%	10.50%	11.00%	10.00%	5.00%	2.50%
Effective Months of Increase	12	6	12	12	12	12
Percent of Current Year Effective	100%	100%	100%	100%	100%	100%
Revenue from Current Year Rate Adjustments	\$0	\$211,204	\$441,843	\$451,994	\$232,907	\$122,276
Total Rate Revenue	\$3,244,560	\$3,553,101	\$4,206,149	\$4,658,143	\$4,891,050	\$5,013,327
Revenue Surplus / (Deficiency):						
Amount	(\$162,448)	(\$375,750)	\$68,069	\$184,933	(\$174,021)	\$62,569
Percent of Rate Revenue	(5.01%)	(10.58%)	1.62%	3.97%	(3.56%)	1.25%

As can be seen above and as shown in more detail on Table 17, the existing rate revenues on a combined basis beginning in Fiscal Year 2020 are not anticipated to be sufficient to adequately fund the identified Net Revenue Requirements of the combined Water and Wastewater System during the Forecast Period. While the System does continue to operate in deficiency after the implementation of the proposed rate

adjustments during the remainder of the Forecast Period, Raftelis is of the opinion that this deficiency is acceptable considering the levels of operating reserves the System currently has and the primary driver is the need to adjust the responsibility for the repayment of the Outstanding and Additional Loans from rates as opposed to General Fund revenues (i.e., if there is an issue, a delay in the debt funding can be effectuated).

The following table summarizes the recommended percent rate adjustments for both water and wastewater service based on the financial forecast presented in this report:

Recommended Total Rate Revenue Adjustments – Each Fiscal Year of Forecast Period [1]				
Fiscal Year	Effective Date	Water	Wastewater	Consolidated [2]
2021	April 1, 2021	10.5%	16.5%	6.3%
2022	October 1, 2021	11.0%	13.0%	11.7%
2023	October 1, 2022	10.0%	12.0%	10.8%
2024	October 1, 2023	5.0%	5.0%	5.0%
2025	October 1, 2024	2.5%	2.5%	2.5%

[1] Amounts shown represent percent increases in rate revenues targeted in each fiscal year to fully fund the net revenue requirements; the actual increases may be different due to changes in rate structure associated with the recovery of costs.

[2] The majority of customers receive both water and wastewater service; increase reflect and reflects the average revenue adjustment for a combined water and wastewater bill.

The primary reasons for the System rate adjustments is associated with:

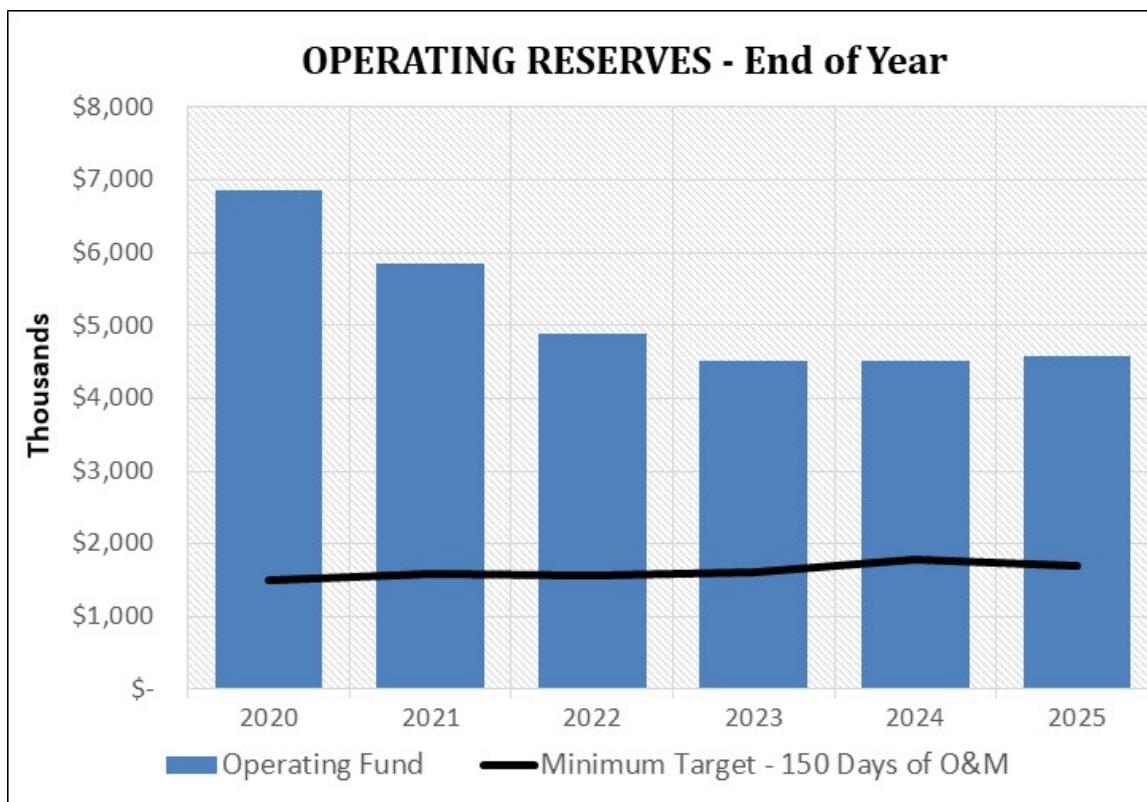
- Continued increases in the cost to operate the System due to continued inflation on cost of operation and maintenance and on the capital costs associated with infrastructure replacement and the need to maintain existing revenue margins to provide for funds for capital re-investment, debt service payments, and to maintain a favorable fiscal position.
- Increases in the cost of purchased wastewater treatment expenses also due to continued inflationary impacts on the cost of service coupled with the repayment of certain billing issues (causing an underpayment per the Town).
- Based on the capital funding plan, the need to have sufficient funds and cash flow to pay the anticipated debt service requirements on Additional Loans assumed to be issued during the Forecast Period.
- Pursuant to Town directives, recognize that the System debt liability be funded from rates as opposed to General Fund revenues to accurately match the cost of service to the rates charged for service.
- Recognition of the need to develop and maintain a capital re-investment plan (recognized as deposits to the Capital Renewal and Replacement Fund), in order to provide for ongoing utility plant replacement, rehabilitation, and improvements and to limit the issuance of future debt for utility plant replacement.

- Limited System customer growth of the System (no increase in revenues or receipt of connection fees) which places a greater emphasis on maintaining current operating margins to fund debt repayment and pay-as-you-go capital funding.

PROJECTED RESERVE FUND TRANSFERS

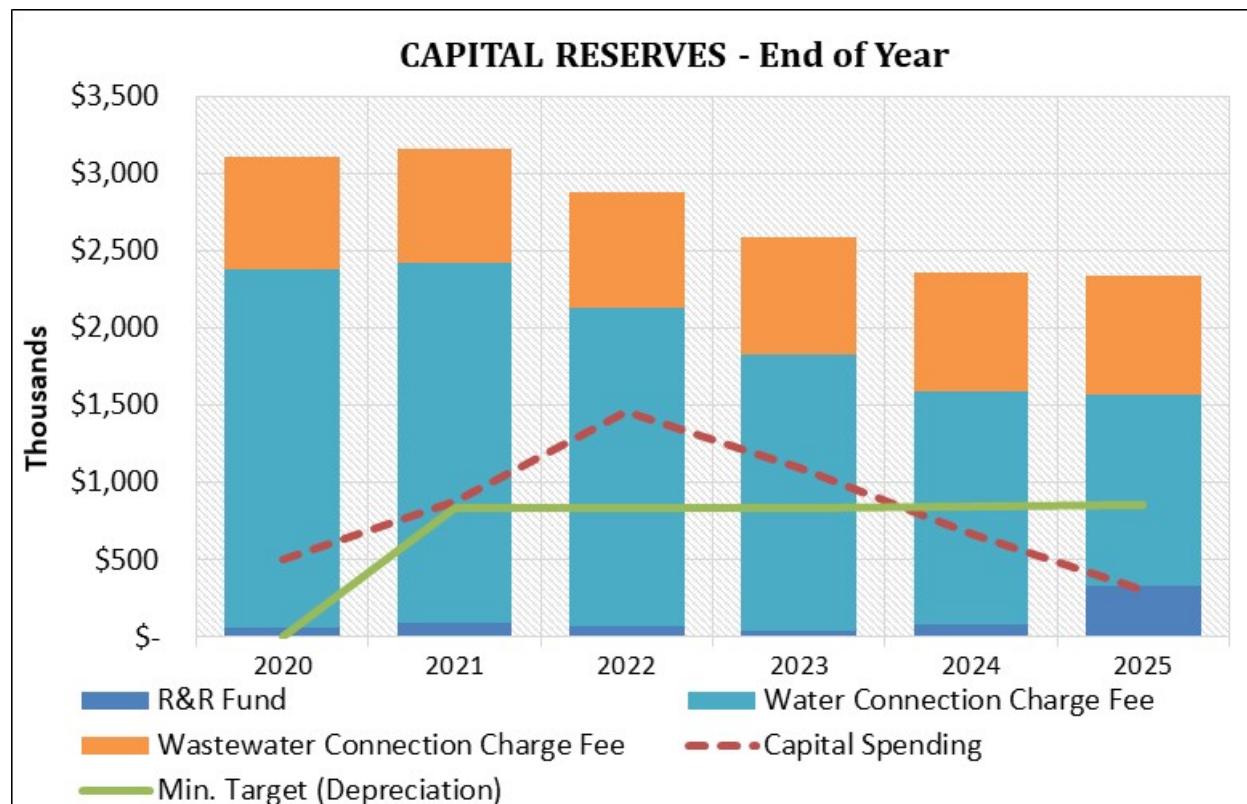
In the development of the System revenue requirements, projected fund transfers to operating and capital funds were assumed to provide: i) sufficient operating reserves to provide a hedge against unknown events (e.g., COVID-19, storm events, etc.), to maintain a strong fiscal position to attract external capital at reduced borrowing costs, and to provide for the stabilization of rates in the event any short-term deficiencies occur in net revenue requirements; and ii) dedicated transfers to provide for the re-investment of capital into the System and to provide funds for any unknown or extraordinary event that may occur (whether regulatory or an asset failure / mortality). We would recommend that the two separate reserves balances be maintained since they are for different purposes with operating reserves providing a funds for annual cash flow considerations (i.e., expenses, fluctuation in rate revenues, etc.) and capital reserves providing for plant investment and long-term utility service (asset replacement, major maintenance, etc.) and to promote ongoing service.

To provide adequate levels of cash reserves for operations the financial forecast assumes an internal reserve target of one hundred fifty (150) days of operating expenses was recognized. The minimum targeted level of operating reserves is generally consistent with recommended policy by the Government Finance Officers Association (“GFOA”) and credit rating agencies and serve to: i) mitigate current and future risks regarding revenue shortfalls and unanticipated expenses; and ii) ensure stable services and rates. The following chart provides a projection of ending cash balances for operating reserves:



Assuming the continued implementation of the identified rates increases to meet the financial plan for the System as presented later in this report, it is expected based on the assumptions recognized in the development of the financial forecast that the System will meet or exceed the minimum operating reserve target.

With respect to the capital-related funds (e.g., Capital Renewal and Replacement Fund) of the System, it is recommended that the utility target a minimum cash reserve equal to the annual depreciation expense. Depreciation expense represents a non-cash expense for purposes of financial reporting and accounting based on the original cost to acquire a capital asset relative to its use in terms of an assumed service life. While depreciation is not intended to be a perfect proxy for the annual repair and maintenance costs for a utility, it is considered a reasonable target for purposes of this analysis since it links to the use of assets that have been constructed to provide potable water service. The purpose to maintain such a capital reserve at this level is to: i) mitigate risks regarding unanticipated capital expenditures or increases in materials, labor, or other costs from on-going or planned capital projects; ii) provide for changes in capital expenditure priorities resulting in the advancement or addition of certain capital projects; iii) promote the availability of funds for capital reinvestment for the existing infrastructure intended to limit outages and inability to provide service from equipment or infrastructure failures or as a result of force majeure incidents due to weather events and other occurrences; and iv) to ensure reliable service and ameliorate the effects to monthly service rates from unanticipated costs. The following chart provides a projection of capital related fund ending cash balances relative to assumed capital reserve targets:



As shown in the above figure, in the early years of the Forecast Period, the majority of the cash reserves allocated to capital primarily consists of utility connection fees which are restricted in their use (expansion-

related expenditures). Over time, the balance shifts to a more balanced structure with connection fee balances declining as expansion-related debt is paid and the Capital Renewal and Replacement Fund accrues funds for future asset reinvestment. Based on the assumptions developed in support of the preparation of the Financial Forecast, the ending balance in the Capital Renewal and Replacement Fund meets the minimum target which Raftelis considers favorable.

PROPOSED RATES FOR SERVICE

General

The Town requested that Raftelis provide alternative rates for consideration by the Commission to promote water conservation, implement a wastewater consumption charge to promote fairness in use, provide rate consistency among customer classes and other factors. Rate design involves the development of bi-monthly rates and charges for each customer classification (e.g., residential, commercial, etc.) that recover the net revenue requirements of the System and meet the financial objectives of the Town and promote fairness among the customer classes. The proposed utility rates, to the extent practical, should meet the following criteria for service provided by publicly owned utilities:

- Utility rates should fully recover the cost of providing service.
- Utility rates should be based on a policy that calls for the lowest possible prices consistent with the requirements of providing quality service on an ongoing and sustainable basis.
- Utility rates should be simple and understandable.
- Utility rates should reasonably recover the cost of providing service to customers, taking into consideration the cost of providing service to the various users of the System.
- Utility rate and cost recovery strategies should recognize the System's current financial needs, when rates were last adjusted, and where possible help develop approaches to avoid "rate shock" in the future.
- Utility rates should be designed to encourage water conservation.
- Utility rates should comply with applicable orders and requirements of local, state, and federal regulatory authorities, if any, that may have jurisdiction.
- Utility rates should provide sufficient revenues to comply with the rate covenants as delineated in the Bond Resolution and other loan agreements or documents as well as promote the financial creditworthiness of the Utility (including revenue stability).
- Other considerations that often have an effect on the design of the user fees include historical rate form and comparability with rates of neighboring utility systems.

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The Town currently classifies its customer base into three categories which include:

1. Single-family residential service which generally relates to individually metered residential service where each account equates to one (1) EDU.
2. Multi-family residential service which relates to master-metered residential service where two (2) or more EDUs are provided service through a single (master) meter (i.e., each account would have a multitude of EDUs based on the property characteristics).
3. Commercial or Non-Residential service which relates to individually metered accounts that have EDUs assigned to the account based on the characteristics of the account (may relate to meter size, customer demands, etc.).

Proposed Fiscal Year 2021 Water System Rates

The Town's current water rates include two separate rate structure (cost recovery) components. These components are: i) a bi-monthly flat rate (minimum) charge that serves as a readiness-to-serve charge that recovers a portion of the revenue requirements considered as being fixed (links to capacity); and ii) a volumetric or flow charge which includes an inverted block rate structure to promote water conservation. The fixed costs represent expenses that are consistent and do not vary based on the water use or the customer demands of the system. Fixed costs generally would include, but are not limited to, debt service and capital facility funding, certain employee salaries and other employee benefits, insurance on utility plant, and other related costs. The variable costs represent expenses that are incurred based on actual water use. Items that would be considered being variable-related would include, but are not limited to, electricity and chemicals, operating supplies, and certain salaries and other employee benefits.

The bi-monthly flat rate (readiness-to-serve) charge is billed based on the number of EDUs assigned to the account based on a review of the detailed customer billing data provided by the Town. As previously mentioned, all customers are billed the same flat rate based on the number of EDUs serving the property – this promotes a consistent application of the readiness-to-serve charge among all customers. An EDU is generally representative of the average daily capacity or demands of a single-family residential unit and generally represents the lowest level and the most common level of use and is used to evaluate the size and capacity needs of a utility system. Since multi-family (condominiums) and commercial customers may be served by a larger-sized meter than the standard residential customers and generally have different (higher) water usage per account / meter requirements, it is useful to equate such customers on an equivalent basis to the single-family residential class to provide a more consistent presentation of the total customer base served. The bi-monthly rate for all customer classes is the same which implies that for each unit of capacity allocation (i.e., EDU), the customer pays the same rate. Approximately 42.5% of the total revenues derived from rates are generated from the application of the water flat rate charge and it is proposed that this cost recovery strategy be maintained as it promotes a favorable level of revenue stability. It is recommended that the application of the bi-monthly flat rate i) be renamed the “Readiness-to-Serve” charge to more accurately describe the purpose of the fee; and ii) remain constant among all customer classes to promote rate consistency.

The water conservation blocks for the billing of water consumption is based on the number of EDUs recognized for each account which also promotes consistency to the capacity allocation. If a customer has more EDUs assigned to the account which results in higher readiness-to-serve charges, it is fair to match

the water use to the capacity allocation and all the consumption blocks should have the same usage characteristics per EDU. Based on this rate design principle, it is proposed that the block structure and pricing for each block be the same – this will result in a rate design adjustment for the Multi-family residential service class. Currently, the block structure for this class of customer is different than the other classes which is not consistent with the allocation of capacity and are recommended to be adjusted to be the same for all customer classes.

In addition to the change in the water tier block structure to promote rate consistency and recognizing the objective of the Town to implement a wastewater flow charge as discussed later in this report, it is further recommended that the water usage tiered structure be modified to more fully provide a conservation pricing signal. In the design of the rates, the City Commission and the Financial Advisory Board (FAB) provided significant input in the rate structure which ultimately resulted in the following proposed rates:

1. The first block should continue to be structured to reflect “essential use” water demands (i.e., indoor use such as bathing, cooking, cleaning, etc.) and the first block was determined to be set at a low usage level of 10,000 gallons per bi-monthly and at a life-line (low cost) rate to provide benefit to low water users and multi-family dwelling units.
2. To increase water conservation incentives yet recognize differences in discretionary and excessive use, it is recommended that a stronger pricing signal be recognized based on our understanding of the conservation objectives of the water management district and a review of rate structures for other jurisdictions. The proposed water use tier adjustments would include i) having a second tier with the same usage range as the first tier which would link to the same capacity allocated to an EDU (collectively the first two tiers being considered as being primarily for essential or indoor water use); ii) having the third tier rate that would be considered as being related to discretionary use that would be priced higher than the essential use blocks; and iii) a fourth and fifth block that would further provide a stronger pricing incentive to promote water conservation which would be targeted to water use that would be considered as being excessive.

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Based on these rate structure modifications as developed by the City Commission and the FAB, which also promotes rate consistency among the customer classes, the following rate blocks and consumption rates were identified for consideration:

Comparison of Existing and Proposed Water Consumption Blocks – Per Unit		
Class and Water Use Block Designation	Existing	Proposed
Residential / Commercial (Expanded per Unit):		
Block 1	0 – 19,000 Gallons	0 – 10,000 Gallons
Block 2	20,000 – 50,000 Gallons	10,001 – 20,000 Gallons
Block 3	51,000 Gallons or More	20,001 – 55,000 Gallons
Block 4		55,001 – 80,000 Gallons
Block 5		80,001 Gallons or More
Master-Metered Residential (Expanded per Unit):		
Block 1	0 – 13,000 Gallons	0 – 10,000 Gallons
Block 2	14,000 – 23,000 Gallons	10,001 – 20,000 Gallons
Block 3	24,000 Gallons or More	20,001 – 55,000 Gallons
Block 4		55,001 – 80,000 Gallons
Block 4		80,001 Gallons or More

As discussed later in this report, the Town is considering a wastewater rate structure which will include a volumetric or flow component. If it is to be the policy of the Town to allow a separate irrigation meter and there may be an instance where a customer may request such a service, we would recommend that an irrigation rate be considered. Since irrigation use would represent discretionary and excessive water use and would be in addition to the domestic water use, it is recommended that the irrigation rate i) be set at one (1) EDU since there are no dwelling units assigned to this service; and ii) the pricing be set at the higher use blocks consistent with the type of service.

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Based on the above referenced rate structure adjustments and the proposed water increase as identified in the development of the Financial Forecast and as developed by the City Commission and the FAB, the following rates are being proposed:

Proposed Bi-monthly Water Rate Schedule	
Bi-monthly Service Charge:	
All Residential and Commercial Classes	Proposed Rates
Readiness-to-Serve Charge – All Units [1]	\$40.00 per Unit
Water Use per Unit:	
Bi-monthly Usage Charges (per Unit):	
0 – 10,000 Gallons	\$2.13 per 1,000 Gallons
10,001 – 20,000 Gallons	\$2.88 per 1,000 Gallons
20,001 – 55,000 Gallons	\$4.47 per 1,000 Gallons
55,001 – 80,000 Gallons	\$6.50 per 1,000 Gallons
80,001 Gallons or More	\$8.50 per 1,000 Gallons
Irrigation Class:	
Readiness-to-Serve Charge – All Accounts [2]	\$40.00 per Account
Water Use per Account:	
Bi-monthly Usage Charges (per Account):	
0 – 55,000 Gallons	\$4.47 per 1,000 Gallons
55,001 – 80,000 Gallons	\$6.50 per 1,000 Gallons
80,001 Gallons or More	\$8.50 per 1,000 Gallons

[1] Rate applicable to all dwelling units assigned to an account as determined by the Town with single family residential being considered as one unit (EDU).

[2] All individually-metered irrigation water meters are recommended to be classified as one EDU.

Based on the estimated billing determinates assumed for the Fiscal Year 2021 and the basis of the application of the rates as shown in the above table, approximately 51.6% of the total revenues derived from rates are generated from the application of the water readiness-to-serve charge, thus maintaining a strong fixed cost recovery strategy to continue to promote a favorable level of revenue stability.

Proposed Fiscal Year 2021 Wastewater System Rates

The Town's current wastewater rates includes only one rate structure (cost recovery) component which is a bi-monthly flat rate (minimum) charge that serves as a readiness-to-serve charge that recovers all of the allocated revenue requirements of the Wastewater System. As was previously discussed for the Water System, the bi-monthly flat rate (readiness-to-serve) charge is billed based on the number of EDUs assigned to the account based on a review of the detailed customer billing data provided by the Town. All customers are billed the same flat rate based on the number of EDUs serving the property which promotes a consistent application of the readiness-to-serve charge among all customers.

The Town requested that Raftelis prepare a rate structure that includes a volumetric or use component. To develop a wastewater usage charge, the following cost recovery attributes were recognized:

1. The rates would maintain a readiness-to-serve charge that is applied to all EDUs or units on the same basis as currently being performed for the Wastewater System.
2. The costs to be recovered in the volumetric charge included the net variable costs associated with purchased wastewater treatment from the City of Delray Beach, since it is billed on a volumetric basis to the Town, and the cost of utilities for pumping. All other costs were assumed to be recovered in the proposed readiness-to-serve charge. Based on the allocation of costs, approximately 60.4% of the net Wastewater System revenue requirements were proposed to be recovered in the flow charge with the remaining 39.6% to be recovered in the readiness-to-serve charge. This cost allocation basis was consistent with the cost recovery strategy of the Water System.
3. The basis to bill for wastewater flow service is through the use of water meter readings. For the single-family and master metered residential customer classes, it was assumed that a bi-monthly wastewater flow cap equal to 20,000 gallons applied to each EDU or unit of billed water service be implemented to recognize that not all of the metered water use is returned to the wastewater system. This is a common rate application structure in the state. The monthly wastewater usage cap was designed to equal the sum of the first two blocks of the water flow charges which was considered more of an indoor use (thus a higher probability of being returned to the wastewater system). No billing cap on commercial service is being recommended which is also consistent with how other utilities bill for wastewater service. It was also assumed that for those customers that are classified as a master-metered residential customer that receive service through multiple meters, that the sum of all the billed water flow would be applied the wastewater flow charge.

It should be noted that with the introduction of a volumetric charge, the bi-monthly readiness-to-serve charge will reduce so customers with low flow could actually experience a wastewater rate reduction and customers with higher “per EDU” flows will experience an increase higher than the Wastewater System average. Based on the cost recovery attributes mentioned above, the following Wastewater System rates are being proposed:

Proposed Bi-monthly Wastewater Rate Schedule	
	Proposed Rates
Bi-monthly Service Charge:	
All Residential and Commercial Classes:	
Readiness-to-Serve Charge – All Units	\$29.55 per Unit
Wastewater Use per Unit:	
All Residential Classes	\$2.41 per 1,000 Gallons [1]
Commercial Class	\$2.41 per 1,000 Gallons (All Metered Water Use)

[1] Rates based on metered water usage at customer premise. Bi-monthly wastewater usage charges shall be based on the water meter readings for all meters serving the applicant's property with a maximum billed bi-monthly flow equal to 20,000 gallons multiplied by the number of units.

Proposed Fiscal Year 2022 – 2025 Rates

The Financial Forecast reflected in this study includes projections of rate adjustments through the Fiscal Year 2025. It is recommended that the rates for service subsequent to the Fiscal Year 2021 be increased uniformly based on the proposed water and wastewater service rates adjustments as previously discussed. The proposed rates for the remainder of the Forecast Period are included on Table 19 at the end of this report.

RATE COMPARISONS

In order to provide additional information to the Town regarding the effects of the recommended change in rates for water and wastewater service, an analysis to illustrate the impact for a typical residential customer (considered as one EDU or unit) was prepared. This is also comparative to the usage characteristics of the Multi-family customer class (while these customers are master metered, on a per unit basis are representative to the single-family customer class and represent the largest class in terms of EDUs served by the Town). The average multi-family residential unit (the majority of the residential units are classified as multi-family) is billed approximately 6,000 gallons per month for water service metered at the customer premise. The typical or average single-family residential customer used approximately 30,000 gallons per month. It should be noted that the Town renders water and wastewater bills to the residential class on a bi-monthly basis; a monthly comparison is presented since most utilities bill at this frequency level in the State. The effect of the proposed rate adjustments for Fiscal Year 2020 for the average multi-family and single-family residential customer would be as follows:

Combined Water and Wastewater Bill Increase Residential Customer Presented on a MONTHLY Basis [1]		
	Multi-family At 6,000 Gallons	Single-family At 15,000 Gallons
Existing 2021 Rates	\$54.87	\$86.33
Proposed Increase – 2021 Rates [2]	<u>62.77</u>	<u>106.28</u>
Increase in Monthly Bill:		
Amount	\$7.90	\$19.95
Percent	<u>14.40%</u>	<u>23.11%</u>

[1] Based on identified rate adjustment as applied on a uniform basis; reference subsequent section in Study regarding proposed rates and rate levels.

[2] Rates assumed to become effective with bills rendered on and after April 1, 2021.

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In addition, a survey of other neighboring utilities levels of monthly user rates charged to residential single-family 3/4" metered customers for water and wastewater service was compiled within Tables 20 through 22 and is summarized below:

Residential Water and Wastewater Service Assuming 6,000 Gallons and 15,000 of MONTHLY Utility Service [1][2]						
	6,000 Gallons of Service			15,000 Gallons of Service		
	Water	Sewer	Total	Water	Sewer	Total
Town of Highland Beach:						
Current Rates – FY 2021	\$32.19	\$22.68	\$54.87	\$63.65	\$22.68	\$86.33
Proposed Rates – FY 2021	33.53	29.24	62.77	67.40	38.88	106.28
Other Neighboring Utilities: (2020 Rates)						
Broward County [3]	\$30.72	\$46.10	\$76.82	\$96.39	\$84.44	\$180.83
City of Boca Raton	19.85	42.70	62.55	30.61	78.88	109.49
City of Boynton Beach	23.23	32.03	55.26	46.93	34.21	81.14
City of Cooper City [3]	32.31	44.79	77.10	70.24	56.87	127.11
City of Coral Springs	26.29	49.32	75.61	65.91	88.74	154.65
City of Dania Beach	41.54	66.28	107.82	102.03	133.42	235.45
City of Delray Beach	19.47	38.39	57.86	32.97	58.74	91.71
City of Lake Worth [3]	45.28	44.10	89.38	121.54	72.54	194.08
City of Tamarac	24.16	47.55	71.71	64.21	76.35	140.56
City of West Palm Beach [3]	44.51	46.34	90.85	87.21	95.19	182.40
Hillsboro Beach	37.88	46.10	83.98	73.91	84.44	158.35
Martin County [3]	31.17	45.03	76.20	56.21	62.87	119.08
Palm Beach County [3]	28.61	35.41	64.02	83.36	54.37	137.73
Seacoast Utility Authority	28.35	36.15	64.50	67.41	39.07	106.48
Town of Jupiter [3]	30.07	22.75	52.82	47.45	22.75	70.20
Town of Lantana	29.74	43.11	72.85	51.94	62.51	114.45
Town of Manalapan [3]	35.47	63.45	98.92	56.53	118.08	174.61
Village of Golf [3]	32.20	28.79	60.99	38.93	39.94	78.87
Village of Palm Springs [3]	30.57	54.23	84.80	66.39	68.61	135.00
Village of Tequesta [3]	38.39	22.75	61.14	72.86	22.75	95.61
Village of Wellington [3]	33.57	31.68	65.25	63.90	50.58	114.48
Other Florida Utilities' Average	<u>\$31.59</u>	<u>\$42.24</u>	<u>\$73.83</u>	<u>\$66.52</u>	<u>\$66.92</u>	<u>\$133.44</u>

- [1] Unless otherwise noted, amounts shown reflect residential rates in effect July 2020 and are exclusive of taxes or franchise fees, if any, and reflect rates charged for inside-the-town service. All rates are as reported by the respective utility. This comparison is intended to show comparable charges for similar service for comparison purposes only and is not intended to be a complete listing of all rates and charges offered by each listed utility.
- [2] Reflects average usage of a typical single-family residential customer and multi-family usage per unit with both water and wastewater service located inside the corporate limits of the Town of Highland Beach.
- [3] Utility is currently involved in a rate study, is planning to conduct a rate study, or plans to implement a rate revision or price index / pass-through adjustment within the next 12 months following the comparison preparation date.

As can be seen above, the average bills produced from the rates that have been adopted by the Town for the Fiscal Year 2021 are comparable or lower than that of other neighboring utilities surveyed and are considered reasonable and comparable. It should be noted that several of the utilities surveyed are anticipating a rate change in the next 12 months (pursuant to a rate evaluation that is underway, an adopted rate-phasing program, or through the application of a price [inflationary] index), which would further improve the competitive position of the System from what is indicated above.

CONCLUSIONS AND RATE RECOMMENDATIONS

Based on assumptions and analyses as presented in this report and shown in more detail in the tables at the end of this report relative to the determination of the Financial Forecast and revenue sufficiency analysis for the System and in the design of the proposed rates for utility service, the following conclusions and recommendations are made:

1. The existing rates are not projected to be sufficient to meet the forecasted financial needs of the System, including: i) the funding of the ongoing operation and maintenance expenses; ii) the capital improvement program primarily for the renewal and replacements of the System utility infrastructure; iii) the issuance of additional debt to fund a portion of the identified capital plan; and iv) the phase-out of the Outstanding and Additional Loan debt service payment from the General Fund.
2. Based upon the assumptions as disclosed herein and the findings of this analysis, which includes the implementation and recognition of the proposed rate adjustments effective October 1st of each fiscal year, the Town's financial operating targets and goals are anticipated to be generally achieved:
 - a. The revenue requirements of the Utility are fully funded.
 - b. The projected capital needs of the Utility are fully funded.
 - c. Targeted ending cash balances are met throughout the Forecast Period.
3. The proposed rates are designed to implement rate structure changes in support of the rate objectives of the Town. It is unknown how customers may react and how that will affect the amount of rate revenues to be received. It is recommended that the Town closely monitor the actual revenues realized from the proposed rates and make corresponding adjustments, if necessary, to assure full cost recovery.
4. Recognizing that the proposed rates as reflected in this study represent an increase in the rates charged for utility service and pursuant to Florida Statutes, Chapter 180.136, the Town will need to notice the proposed increase to each customer of the utility through the utility's billing process. The notice needs to state the date, time, and place of the Town's meeting at which the proposed rates will be considered.
5. For all years after Fiscal Year 2021, the rates are proposed to be adjusted uniformly by the percent increase. The projected rates for water and wastewater service were compared with neighboring

and peer communities. It is expected that the Town's rates will remain competitive recognizing implementation of the identified rate implementation plan.

6. Recognizing that actual results may vary from projections, it is recommended that the Town periodically perform updates to this revenue sufficiency evaluation in order meet the capital, rate and financial objectives and best management practices as discussed in this report.
7. Based on our review of the detailed customer billing information conducted in support of the determination of the existing rate revenues and the proposed rates for utility service, several of the customers appeared to possibly not be classified correctly in the utility billing system. It is recommended that the Town conduct a customer analysis of the rate classifications to assure that the customers are properly recognized and are being billed in accordance with the proposed rate classifications and rates recommendations.

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TOWN OF HIGHLAND BEACH, FLORIDA

2020 REVENUE SUFFICIENCY AND RATE STUDY – WATER AND WASTEWATER SYSTEMS

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Table 1

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Water and Wastewater Customers

Table 1

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Water and Wastewater Customers

Table 2

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Historical and Current Rates - Water and Wastewater System

Line No.	Description	Fiscal Year Ending September 30,			
		2019	2020	2021	
<u>Water Service:</u>					
Residential Metered Services (Bi-Monthly)					
1	Water Flat Charge	\$ 32.80	\$ 33.59	\$ 34.60	
Usage Charge per Unit (per 1,000 gallons)					
2	Block 1 (0-19,000 gallons)	\$ 2.35	\$ 2.41	\$ 2.48	
3	Block 2 (19,001-49,000 gallons)	4.08	4.18	4.31	
4	Block 3 (49,001 gallons and above)	5.03	5.15	5.30	
Multi-Family Services (Bi-Monthly)					
5	Water Flat Charge	\$ 32.80	\$ 33.59	\$ 34.60	
Usage Charge per Unit (per 1,000 gallons)					
6	Block 1 (0-13,000 gallons)	\$ 2.35	\$ 2.41	\$ 2.48	
7	Block 2 (13,001-23,000 gallons)	2.83	2.90	2.99	
8	Block 3 (23,001 gallons and above)	5.03	5.15	5.30	
Commercial Services (Bi-Monthly)					
Base Service Charge:					
9	Water Flat Charge	\$ 32.80	\$ 33.59	\$ 34.60	
Usage Charge per Unit (per 1,000 gallons)					
10	Block 1 (0-19,000 gallons)	\$ 2.35	\$ 2.41	\$ 2.48	
11	Block 2 (19,001-49,000 gallons)	4.08	4.18	4.31	
12	Block 3 (49,001 gallons and above)	5.03	5.15	5.30	
<u>Wastewater Service:</u>					
Residential Metered Services (Bi-Monthly)					
13	Flat Charge	\$ 43.00	\$ 44.03	\$ 45.35	
Multi-Family Services (Bi-Monthly)					
14	Flat Charge	\$ 43.00	\$ 44.03	\$ 45.35	
Commercial Services (Bi-Monthly)					
15	Flat Charge	\$ 43.00	\$ 44.03	\$ 45.35	

Table 3

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Water Rate Revenues Under Existing Rates

Line No.	Description	Historical - Test Year				Projected Fiscal Year Ending September 30,											
		2019				2020				2021				2022			
		Bill Freq	Rates	Stats	Revenues	Bill Freq.	Rates	Stats	Revenues	Bill Freq.	Rates	Stats	Revenues	Bill Freq.	Rates	Stats	Revenues
Residential Services (Bi-Monthly)																	
1	Base Charge	100%	\$ 32.80	420	\$ 82,656	100%	\$ 33.59	420	\$ 84,647	100%	\$ 34.60	420	\$ 87,186	100%	\$ 34.60	420	\$ 87,186
2	Sub-Total			420	\$ 82,656			420	\$ 84,647			420	\$ 87,186			420	\$ 87,186
3	Usage Charges (per 1,000 gallons)																
3	Block 1 (0-19,000 gallons)	23.61%	\$ 2.35	30,456	\$ 71,572	23.61%	\$ 2.41	28,050	\$ 67,601	23.61%	\$ 2.48	28,050	\$ 69,629	23.61%	\$ 2.48	28,050	\$ 69,629
4	Block 2 (19,001-49,000 gallons)	24.32%	4.08	31,378	128,022	24.32%	4.18	28,899	120,799	24.32%	4.31	28,899	124,423	24.32%	4.31	28,899	124,423
5	Block 3 (49,001 gallons and above)	52.07%	5.03	67,163	337,830	52.07%	5.15	61,857	318,565	52.07%	5.30	61,857	328,122	52.07%	5.30	61,857	328,122
6	Sub-Total			128,997	\$ 537,424	\$ 4.17		118,807	\$ 506,965			118,807	\$ 522,174			118,807	\$ 522,174
7	Total Residential Services (Bi-Monthly)				\$ 620,080				2.04	\$ 591,611			\$ 609,360				\$ 609,360
									19.2%								
Multi-Family Services (Bi-Monthly)																	
8	Base Charge	100%	\$ 32.80	3,849	\$ 757,483	100%	\$ 33.59	3,849	\$ 775,727	100%	\$ 34.60	3,849	\$ 798,999	100%	\$ 34.60	3,849	\$ 798,999
9	Sub-Total			3,849	\$ 757,483			3,849	\$ 775,727			3,849	\$ 798,999			3,849	\$ 798,999
10	Usage Charges (per 1,000 gallons)																
10	Block 1 (0-13,000 gallons)	86.01%	\$ 2.35	201,103	\$ 472,591	86.01%	\$ 2.41	208,563	\$ 502,637	86.01%	\$ 2.48	208,563	\$ 517,716	86.01%	\$ 2.48	208,563	\$ 517,716
11	Block 2 (13,001-23,000 gallons)	6.33%	2.83	14,800	41,885	6.33%	2.90	15,349	44,513	6.33%	2.99	15,349	45,849	6.33%	2.99	15,349	45,849
12	Block 3 (23,001 gallons and above)	7.67%	5.03	17,933	90,205	7.67%	5.15	18,599	95,784	7.67%	5.30	18,599	98,657	7.67%	5.30	18,599	98,657
13	Sub-Total			233,813	\$ 604,681	\$ 2.59		242,487	\$ 642,934			242,487	\$ 662,222			242,487	\$ 662,222
14	Total Multi-Family Services (Bi-Monthly)				\$ 1,362,165				\$ 1,418,661				\$ 1,461,221				\$ 1,461,221
									17.0%								
General Service																	
15	Base Charge		\$ 32.80	124	\$ 24,403		\$ 33.59	124	\$ 24,991		\$ 34.60	124	\$ 25,741		\$ 34.60	124	\$ 25,741
16	Sub-Total			124	\$ 24,403			124	\$ 24,991			124	\$ 25,741			124	\$ 25,741
17	Usage Charge per Unit (per 1,000 gallons)																
17	Block 1 (0-19,000 gallons)	55.04%	\$ 2.35	8,046	\$ 18,908	55.04%	\$ 2.41	8,026	\$ 19,343	55.04%	\$ 2.48	8,026	\$ 19,923	55.04%	\$ 2.48	8,026	\$ 19,923
18	Block 2 (19,001-49,000 gallons)	6.50%	4.08	950	3,877	6.50%	4.18	948	3,962	6.50%	4.31	948	4,081	6.50%	4.31	948	4,081
19	Block 3 (49,001 gallons and above)	38.46%	5.03	5,622	28,279	38.46%	5.15	5,608	28,883	38.46%	5.30	5,608	29,750	38.46%	5.30	5,608	29,750
20	Sub-Total			14,618	\$ 51,063			14,582	\$ 52,188			14,582	\$ 53,754			14,582	\$ 53,754
21	Total General Service				\$ 75,466				\$ 77,179				\$ 79,495				\$ 79,495
22	Subtotal before Revenue Adjustment				\$ 2,057,711				\$ 2,087,452				\$ 2,150,076				\$ 2,150,076
23	Revenue Adjustment - Percent				-1.00%				0.00%				0.00%				0.00%
24	Revenue Adjustment - Amount				(20,577)				-				-				-
25	ADJUSTED RETAIL WATER REVENUE				\$ 2,037,134				\$ 2,087,452	#####	2,042,474		\$ 2,150,076				\$ 2,150,076

Table 3

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Water Rate Revenues Under Existing Rates

Line No.	Description	Projected Fiscal Year Ending September 30,													
		2023				2024				2025					
		Bill Freq.	Rates	Stats	Revenues	Bill Freq.	Rates	Stats	Revenues	Bill Freq.	Rates	Stats	Revenues		
Residential Services (Bi-Monthly)															
1	Base Charge	100%	\$ 34.60	420	\$ 87,186	100%	\$ 34.60	420	\$ 87,186	100%	\$ 34.60	420	\$ 87,186		
2	Sub-Total			420	\$ 87,186			420	\$ 87,186			420	\$ 87,186		
3	Usage Charges (per 1,000 gallons)														
3	Block 1 (0-19,000 gallons)	23.61%	\$ 2.48	28,050	\$ 69,629	23.61%	\$ 2.48	28,050	\$ 69,629	23.61%	\$ 2.48	28,050	\$ 69,629		
4	Block 2 (19,001-49,000 gallons)	24.32%	4.31	28,899	124,423	24.32%	4.31	28,899	124,423	24.32%	4.31	28,899	124,423		
5	Block 3 (49,001 gallons and above)	52.07%	5.30	61,857	328,122	52.07%	5.30	61,857	328,122	52.07%	5.30	61,857	328,122		
6	Sub-Total			118,807	\$ 522,174			118,807	\$ 522,174			118,807	\$ 522,174		
7	Total Residential Services (Bi-Monthly)				\$ 609,360				\$ 609,360				\$ 609,360		
Multi-Family Services (Bi-Monthly)															
8	Base Charge	100%	\$ 34.60	3,849	\$ 798,999	100%	\$ 34.60	3,849	\$ 798,999	100%	\$ 34.60	3,849	\$ 798,999		
9	Sub-Total			3,849	\$ 798,999			3,849	\$ 798,999			3,849	\$ 798,999		
10	Usage Charges (per 1,000 gallons)														
10	Block 1 (0-13,000 gallons)	86.01%	\$ 2.48	208,563	\$ 517,716	86.01%	\$ 2.48	208,563	\$ 517,716	86.01%	\$ 2.48	208,563	\$ 517,716		
11	Block 2 (13,001-23,000 gallons)	6.33%	2.99	15,349	45,849	6.33%	2.99	15,349	45,849	6.33%	2.99	15,349	45,849		
12	Block 3 (23,001 gallons and above)	7.67%	5.30	18,599	98,657	7.67%	5.30	18,599	98,657	7.67%	5.30	18,599	98,657		
13	Sub-Total			242,487	\$ 662,222			242,487	\$ 662,222			242,487	\$ 662,222		
14	Total Multi-Family Services (Bi-Monthly)				\$ 1,461,221				\$ 1,461,221				\$ 1,461,221		
General Service															
15	Base Charge		\$ 34.60	124	\$ 25,741			\$ 34.60	124	\$ 25,741			\$ 34.60	124	\$ 25,741
16	Sub-Total			124	\$ 25,741			124	\$ 25,741			124	\$ 25,741		
17	Usage Charge per Unit (per 1,000 gallons)														
17	Block 1 (0-19,000 gallons)	55.04%	\$ 2.48	8,026	\$ 19,923	55.04%	\$ 2.48	8,026	\$ 19,923	55.04%	\$ 2.48	8,026	\$ 19,923		
18	Block 2 (19,001-49,000 gallons)	6.50%	4.31	948	4,081	6.50%	4.31	948	4,081	6.50%	4.31	948	4,081		
19	Block 3 (49,001 gallons and above)	38.46%	5.30	5,608	29,750	38.46%	5.30	5,608	29,750	38.46%	5.30	5,608	29,750		
20	Sub-Total			14,582	\$ 53,754			14,582	\$ 53,754			14,582	\$ 53,754		
21	Total General Service				\$ 79,495				\$ 79,495				\$ 79,495		
22	Subtotal before Revenue Adjustment				\$ 2,150,076				\$ 2,150,076				\$ 2,150,076		
23	Revenue Adjustment - Percent				0.00%				0.00%				0.00%		
24	Revenue Adjustment - Amount				-				-				-		
25	ADJUSTED RETAIL WATER REVENUE				\$ 2,150,076				\$ 2,150,076				\$ 2,150,076		

Town of Highland Beach, Florida

Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Wastewater Rate Revenue Under Existing Rates

Line No.	Description	Historical - Test Year				Projected Fiscal Year Ending September 30,											
		2019				2020				2021				2022			
		Bill Freq	Rates	Stats	Revenues	Bill Freq.	Rates	Stats	Revenues	Bill Freq.	Rates	Stats	Revenues	Bill Freq.	Rates	Stats	Revenues
Residential Metered Services (Bi-Monthly)																	
1	Base Charge	100.00%	\$ 43.00	420	\$ 108,360	100.00%	\$ 44.03	420	\$ 110,956	100.00%	\$ 45.35	420	\$ 114,284	100.00%	\$ 45.35	420	\$ 114,284
2	Sub-Total			420	\$ 108,360			420	\$ 110,956			420	\$ 114,284			420	\$ 114,284
Multi-Family Services (Bi-Monthly)																	
3	Base Charge	100.00%	\$ 43.00	3,836	\$ 989,688	100.00%	\$ 44.03	3,836	\$ 1,013,394	100.00%	\$ 45.35	3,836	\$ 1,043,796	100.00%	\$ 45.35	3,836	\$ 1,043,796
4	Sub-Total			3,836	\$ 989,688			3,836	\$ 1,013,394			3,836	\$ 1,043,796			3,836	\$ 1,043,796
Other Customers Service (Bi-Monthly)																	
5	Base Charge	100.00%	\$ 43.00	124	\$ 31,992	100.00%	\$ 44.03	124	\$ 32,758	100.00%	\$ 45.35	124	\$ 33,741	100.00%	\$ 45.35	124	\$ 33,741
6	Sub-Total			124	\$ 31,992			124	\$ 32,758			124	\$ 33,741			124	\$ 33,741
7	Subtotal before Revenue Adjustment				\$ 1,130,040					\$ 1,157,108				\$ 1,191,822			\$ 1,191,822
8	Revenue Adjustment - Percent				0.00%					0.00%				0.00%			0.00%
9	Revenue Adjustment - Amount				-					-				-			-
10	ADJUSTED RETAIL WASTEWATER REVENUE				<u>\$ 1,130,040</u>					<u>\$ 1,157,108</u>				<u>\$ 1,191,822</u>			<u>\$ 1,191,822</u>

Town of Highland Beach, Florida

Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Wastewater Rate Revenue Under Existing Rates

Line No.	Description	Projected Fiscal Year Ending September 30,											
		2023				2024				2025			
		Bill Freq.	Rates	Stats	Revenues	Bill Freq.	Rates	Stats	Revenues	Bill Freq.	Rates	Stats	Revenues
Residential Metered Services (Bi-Monthly)													
1	Base Charge	100.00%	\$ 45.35	420	\$ 114,284	100.00%	\$ 45.35	420	\$ 114,284	100.00%	\$ 45.35	420	\$ 114,284
2	Sub-Total			420	\$ 114,284			420	\$ 114,284			420	\$ 114,284
Multi-Family Services (Bi-Monthly)													
3	Base Charge	100.00%	\$ 45.35	3,836	\$ 1,043,796	100.00%	\$ 45.35	3,836	\$ 1,043,796	100.00%	\$ 45.35	3,836	\$ 1,043,796
4	Sub-Total			3,836	\$ 1,043,796			3,836	\$ 1,043,796			3,836	\$ 1,043,796
Other Customers Service (Bi-Monthly)													
5	Base Charge	100.00%	\$ 45.35	124	\$ 33,741	100.00%	\$ 45.35	124	\$ 33,741	100.00%	\$ 45.35	124	\$ 33,741
6	Sub-Total			124	\$ 33,741			124	\$ 33,741			124	\$ 33,741
7	Subtotal before Revenue Adjustment				\$ 1,191,822				\$ 1,191,822				\$ 1,191,822
8	Revenue Adjustment - Percent				0.00%				0.00%				0.00%
9	Revenue Adjustment - Amount				-				-				-
10	ADJUSTED RETAIL WASTEWATER REVENUE				<u>\$ 1,191,822</u>				<u>\$ 1,191,822</u>				<u>\$ 1,191,822</u>

Table 5

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Other Operating Revenues

Line No.	Description	Historical			Budget		Adjusted		Budget		Adjusted		Fiscal Year Ending September 30,				
		2017	2018	2019	2020	Adjustments	2020	Escalator	2021	Adjustments	2021	2022	2023	2024	2025		
Other System Revenues																	
Water - Other Revenues																	
1	Fire Hydrant - Maintenance Fee	\$ 30,720	\$ 30,720	\$ -	\$ 30,720	\$ -	\$ 30,720	Constant	\$ 30,720	\$ -	\$ 30,720	\$ 30,720	\$ 30,720	\$ 30,720	\$ 30,720	\$ 30,720	
2	Interest on Investments	15,463	56,479	84,797	60,000	(60,000)	-	Constant	35,000	(35,000)	-	-	-	-	-	-	
3	Disposition of Fixed Assets	-	-	-	-	-	-	Constant	-	-	-	-	-	-	-	-	
4	Administrative Reimbursements	140,000	140,000	140,000	147,000	-	147,000	Calculated	154,350	-	154,350	158,363	162,322	166,218	170,041	-	
5	Insurance Reimbursements	-	-	2,965	-	-	-	Constant	-	-	-	-	-	-	-	-	
6	Other Miscellaneous Revenue	3,561	2,027	289	3,000	(1,000)	2,000	Constant	3,000	(1,000)	2,000	2,000	2,000	2,000	2,000	2,000	
7	Total Water - Other Revenues	\$ 189,744	\$ 229,226	\$ 228,051	\$ 240,720	\$ (61,000)	\$ 179,720		\$ 223,070	\$ (36,000)	\$ 187,070	\$ 191,083	\$ 195,042	\$ 198,938	\$ 202,761		
Wastewater - Other Revenues																	
8	Interest on Investments	\$ 6,443	\$ 24,731	\$ 37,982	\$ 25,000	\$ (25,000)	\$ -	Constant	\$ 15,000	\$ (15,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
9	Insurance Reimbursements	-	-	35	-	-	-	Constant	-	-	-	-	-	-	-	-	
10	Other Miscellaneous Revenue	-	-	-	-	-	-	Constant	-	-	-	-	-	-	-	-	
11	Total Wastewater - Other Revenues	\$ 6,443	\$ 24,731	\$ 38,017	\$ 25,000	\$ (25,000)	\$ -		\$ 15,000	\$ (15,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
12	Total Other System Revenues	\$ 196,187	\$ 253,958	\$ 266,068	\$ 265,720	\$ (86,000)	\$ 179,720		\$ 238,070	\$ (51,000)	\$ 187,070	\$ 191,083	\$ 195,042	\$ 198,938	\$ 202,761		

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Calculation of Projected Impact Fee Revenues

Line No.	Description	Fiscal Year Ending September 30,					
		2020	2021	2022	2023	2024	2025
Water System							
1	Additional Customers (ERUs)	-	-	-	-	-	-
2	Reconnects						
2	Percentage	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%
3	Customers (3/4" Meters)	-	-	-	-	-	-
4	New Connections	-	-	-	-	-	-
Connection Fees							
5	Water	3,000	3,000	3,000	3,000	3,000	3,000
6	Total Connection Fees	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Revenues							
7	Water	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
8	Total Revenues	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Wastewater System							
9	Additional Customers (ERUs)	-	-	-	-	-	-

Table 7

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Operating Budget and Adjustments

Line No.	Description	Actual 2017	Actual 2018	Actual 2019	Budget 2020	Adjusted 2020 Budget	Budget 2021	Adjusted 2021 Budget
OPERATING BUDGET								
Water System Operations								
Personal Services								
1	Regular Salaries and Wages	\$ 647,104	\$ 673,551	\$ 614,441	\$ 484,930	\$ -	\$ 501,900	\$ -
2	Overtime	33,381	41,164	39,812	36,000	-	36,000	-
3	Shift Differential Pay	5,078	5,412	6,039	9,960	(3,000)	6,960	10,000
4	Education Incentive Pay	-	-	8,000	6,000	-	6,000	-
5	FICA Taxes	50,850	50,384	50,125	49,220	-	49,220	50,000
6	Retirement Contributions	116,323	111,638	57,208	53,900	25,000	78,900	60,000
7	OPEB Expense	-	83,250	-	-	-	-	-
8	Health Insurance / Allowance	203,689	214,288	162,333	159,200	-	159,200	175,100
9	Workers Compensation	34,006	29,748	35,000	42,000	-	42,000	45,000
10	Compensated Absences	(8,319)	(5,721)	-	-	-	-	-
	Total Personal Services	\$ 1,082,111	\$ 1,203,714	\$ 972,958	\$ 841,210	\$ 22,000	\$ 863,210	\$ 884,000
							\$ 17,000	\$ 901,000
Operating Expenses								
11	Professional Fees	\$ 30,379	\$ 63,747	\$ 23,337	\$ 75,000	\$ (15,000)	\$ 60,000	\$ 150,000
12	Other Contractual Services	597	7,572	10,390	36,520	10,000	46,520	37,000
13	Travel and Per Diem	331	2,361	1,571	3,745	-	3,745	-
14	Training and Development	3,245	3,230	3,473	2,700	-	2,700	2,700
15	Communications	2,380	1,729	1,714	4,050	-	4,050	3,700
16	Postage and Freight	43	140	88	200	-	200	200
17	Utility Services	249,704	250,237	222,292	360,000	(60,000)	300,000	360,000
18	Insurance and Bonds	101,458	109,789	106,265	130,000	15,000	145,000	135,000
19	Repair and Maintenance - General	358,333	183,539	238,708	150,000	-	150,000	150,000
20	Repair and Maintenance - RO Cartridges	-	-	-	-	-	-	-
21	Repair and Maintenance - Vehicle	2,682	1,227	1,831	3,100	(1,100)	2,000	2,500
22	Renewal and Replacements	13,465	97,209	110,437	172,500	(172,500)	-	172,500
23	Other Current Charges - Licenses and Perm	-	-	4,275	5,450	-	5,450	-
24	Administrative Charges	298,550	298,550	298,550	327,870	-	327,870	325,000
25	Operating Supplies	164,510	182,959	236,161	230,000	-	230,000	230,000
26	Uniforms	4,679	3,771	6,144	7,000	-	7,000	7,000
27	Operating Supplies - Safety	-	7,883	1,213	3,500	-	3,500	3,500
28	Operating Supplies - Gasoline	645	355	862	6,250	(2,000)	4,250	6,250
29	Books, Dues, Education, and Subscriptions	1,025	797	1,024	3,110	(1,500)	1,610	3,110
30	Depreciation	690,773	-	-	-	-	-	-
31	Total Operating Expenses	\$ 1,922,800	\$ 1,215,096	\$ 1,268,334	\$ 1,520,995	\$ (227,100)	\$ 1,293,895	\$ 1,597,655
							\$ (209,500)	\$ 1,388,155
Capital Outlay								
32	Buildings	\$ -	\$ -	\$ 2,160	\$ 108,000	\$ (108,000)	\$ -	\$ 25,000
33	Improvements Other Than Buildings	-	1,050,539	24,925	27,500	(27,500)	-	200,000
34	Machinery and Equipment	-	-	-	300,000	(300,000)	-	80,000
35	Total Capital Outlay	\$ -	\$ 1,050,539	\$ 27,085	\$ 435,500	\$ (435,500)	\$ -	\$ 305,000
							\$ (305,000)	\$ -
Debt Service								
36	Principal - R.O. State Loan	\$ -	\$ -	\$ 635,758	\$ 654,145	\$ (654,145)	\$ -	\$ 673,069
37	Principal - 2005 Refunding Loan	-	-	-	-	-	-	-
38	Principal - R.O. Expansion	-	-	211,765	218,765	(218,765)	-	226,353
39	Principal - A1A Direct Loan	-	-	38,443	39,455	(39,455)	-	40,490
40	Principal - ARRA Loan	-	-	141,726	146,765	(146,765)	-	150,932
41	Interest - R.O. State Loan	-	-	210,273	212,565	(212,565)	-	215,078
42	Interest - DWSRF502901 RO	137,194	120,536	102,666	84,275	(84,275)	-	65,355
43	Interest - R.O. Expansion	98,759	92,529	85,116	78,115	(78,115)	-	70,527
44	Interest - A1A Direct Loan	15,596	14,677	13,693	12,685	(12,685)	-	11,646
45	Interest - ARRA Loan	63,216	59,540	56,585	51,545	(51,545)	-	47,379
46	Interest - Capital Interest	-	-	-	-	-	-	-
47	Other Debt Cost - G O State Loan	-	-	-	-	-	-	-
48	SRF Loan Interest - WIIP 2017	10,820	49,446	53,200	50,910	(50,910)	-	48,395
49	Total Debt Service	\$ 325,586	\$ 336,728	\$ 1,549,224	\$ 1,549,225	\$ (1,549,225)	\$ -	\$ 1,549,224
							\$ (1,549,224)	\$ -
Other Uses								
50	Reserve for Contingency [1]	\$ 1,950	\$ 24,974	\$ 13,198	\$ 72,000	(7,200)	\$ 64,800	\$ 70,000
51	Total Other Uses	\$ 1,950	\$ 24,974	\$ 13,198	\$ 72,000	(7,200)	\$ 64,800	\$ 70,000
52	Total Water System Operations	\$ 3,332,447	\$ 3,831,051	\$ 3,830,798	\$ 4,418,930	\$ (2,197,025)	\$ 2,221,905	\$ 4,405,879
							\$ (2,048,024)	\$ 2,357,855

Table 7

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Operating Budget and Adjustments

Line No.	Description	Actual 2017	Actual 2018	Actual 2019	Budget 2020	Adjustments	Adjusted 2020 Budget	Budget 2021	Adjustments	Adjusted 2021 Budget
Wastewater System Operations										
Operating Expenses										
53	Professional Fees	\$ -	\$ 7,750	\$ 35,829	\$ 105,000	\$ (45,000)	\$ 60,000	\$ 105,000	\$ -	\$ 105,000
54	Other Contractual Services	-	4,149	1,175	19,000	-	19,000	19,000	-	19,000
55	Utility Services	30,559	27,963	32,805	40,000	-	40,000	40,000	-	40,000
56	Sewage Treatment - City of Delray Beach	672,269	690,686	618,182	750,000	209,755	959,755	955,000	32,449	987,449
57	Insurance and Bonds	4,331	5,453	-	7,000	-	7,000	9,000	-	9,000
58	Repair and Maintenance - General	51,509	87,260	103,851	57,000	-	57,000	57,000	23,000	80,000
59	Renewal and Replacements	-	-	96,698	150,000	(150,000)	-	100,000	(100,000)	-
60	Other Current Charges - General	-	-	-	-	-	-	-	-	-
61	Administrative Charges	140,000	140,000	140,000	147,000	-	147,000	154,350	-	154,350
62	Operating Supplies	255	209	564	-	-	-	1,000	-	1,000
63	Depreciation	95,161	-	-	-	-	-	-	-	-
64	Total Operating Expenses	\$ 994,084	\$ 963,469	\$ 1,029,105	\$ 1,275,000	\$ 14,755	\$ 1,289,755	\$ 1,440,350	\$ (44,551)	\$ 1,395,799
Capital Outlay										
65	Buildings	\$ -	\$ 6,083	\$ 11,143	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
66	Improvements Other Than Buildings	-	1,321	22,135	100,000	(100,000)	-	425,000	(425,000)	-
67	Machinery and Equipment	-	-	-	75,000	(75,000)	-	-	-	-
68	Total Capital Outlay	\$ -	\$ 7,404	\$ 33,278	\$ 175,000	\$ (175,000)	\$ -	\$ 425,000	\$ (425,000)	\$ -
Other Uses										
69	Reserve for Contingency	\$ -	\$ -	\$ 17,174	\$ 60,000	(21,307)	\$ 38,693	\$ 60,000	(18,126)	\$ 41,874
70	Total Other Uses	\$ -	\$ -	\$ 17,174	\$ 60,000	\$ (21,307)	\$ 38,693	\$ 60,000	\$ (18,126)	\$ 41,874
71	Total Wastewater System Operations	\$ 994,084	\$ 970,873	\$ 1,079,556	\$ 1,510,000	\$ (181,552)	\$ 1,328,448	\$ 1,925,350	\$ (487,677)	\$ 1,437,673
72	TOTAL OPERATING BUDGET	\$ 4,326,531	\$ 4,801,923	\$ 4,910,355	\$ 5,928,930	\$ (2,378,577)	\$ 3,550,353	\$ 6,331,229	\$ (2,535,701)	\$ 3,795,528

Amounts shown based on 2.0% of total operating expenses.

Table 8

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Expense Escalation Factors

Line No.	Description	Escalation Reference	Projected Fiscal Year Ending September 30,					
			2020	2021	2022	2023	2024	
1	Inflation (CBO CPI Index February 2020)	Inflation	1.0250	1.0260	1.0250	1.0240	1.0230	1.0230
2	Labor Escalator	Labor	1.0000	1.0300	1.0300	1.0300	1.0300	1.0300
3	Contract Labor - Interim Plant Operations	Contract-L	1.0000	1.0300	1.0300	1.0300	1.0300	1.0300
4	Indirect Cost Escalation and OPEB	Indirect	1.0000	1.0500	1.0500	1.0500	1.0500	1.0500
5	Life/Health/Disability Insurance Escalator	Ins-Health	1.0000	1.0500	1.0500	1.0500	1.0500	1.0500
6	Property Insurance Escalator	Ins-Property	1.0000	1.0400	1.0400	1.0400	1.0400	1.0400
7	Fuel and Oil	Fuel	1.0000	1.0239	1.0239	1.0239	1.0239	1.0239
8	Electrical Expense	Electric	1.0000	1.0263	1.0263	1.0263	1.0263	1.0263
9	Chemicals	Chemical	1.0000	1.0254	1.0254	1.0254	1.0254	1.0254
10	Marginal Escalator	Margin	1.0000	1.0100	1.0100	1.0100	1.0100	1.0100
11	Constant	Constant	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
12	Elimination Factor	Eliminate	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
13	Other	Other	1.0000	0.0000	0.0000	0.0000	0.0000	0.0000
14	Repair & Maintenance	Repair	1.0000	1.0400	1.0400	1.0400	1.0400	1.0400
15	Customer Acct. Growth + Inflation (Water)	Cust-W/S	1.0000	1.0260	1.0250	1.0240	1.0230	1.0230
16	Rate Revenue - Water	Water Rev	1.0000	1.0300	1.0000	1.0000	1.0000	1.0000
17	Rate Revenue - Wastewater	Wastewater Rev	1.0000	1.0300	1.0000	1.0000	1.0000	1.0000
18	Flow Growth + Inflation	Flow	1.0000	1.0260	1.0250	1.0240	1.0230	1.0230
19	Capital Escalator - ENR Index (10 Yr Change)	Capital-ENR	1.0000	1.0285	1.0285	1.0285	1.0285	1.0285
20	Capital Escalator - Marginal	Capital-Marginal	1.0000	1.0100	1.0100	1.0100	1.0100	1.0100
21	Capital Escalator - High	Capital-High	1.0000	1.0500	1.0500	1.0500	1.0500	1.0500
22	Bureau of Labor and Statistics - Water and Wastewater Maintenance Index (5 Yr Avg.)	WS Main Index	1.0000	1.0384	1.0384	1.0384	1.0384	1.0384
23	CIP Contingency	CIP Cont.	1.0000	1.1000	1.1000	1.1000	1.1000	1.1000
24	Calculated in Model	Calculated	N/A	N/A	N/A	N/A	N/A	N/A

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Expense Allocation Factors

Line No.	Description	Escalation Reference	Water	Wastewater	Indirect
1	Direct Water Expense	Water	100.00%	0.00%	0.00%
2	Direct Wastewater Expense	Wastewater	0.00%	100.00%	0.00%
3	Indirect Expense	Indirect	0.00%	0.00%	100.00%
4	Total 2019 Rate Revenue	Revenue	64.32%	35.68%	0.00%
5	Total Estimated Treated Flow 2020	Flow	63.03%	36.97%	0.00%
6	Total Fixed Assets - 2019	Assets	97.61%	2.39%	0.00%
7	50% / 50% Split	50/50	50.00%	50.00%	0.00%
8	Total 2019 Rate Revenue		<u>Water</u> \$ 2,037,134 64.32%	<u>Wastewater</u> \$ 1,130,040 35.68%	
9	Total Estimated Treated Flow 2020		<u>Water</u> 429,594 63.03%	<u>Wastewater</u> 252,014 36.97%	
	Total Fixed Assets - 2019		<u>Water</u> \$ 7,746,507 12,073,923 7,929,698	<u>Wastewater</u> \$ 1,725,534 1,204,616 414,410	
10	Buildings		\$ 27,750,128	\$ 3,344,560	
11	Improvements		89.24%	10.76%	
12	Equipment				
13	Gross Plant Assets		(11,027,004)	(2,934,360)	
14	Percent of Total				
15	Less Accumulated Depreciation				
16	Net Plant Assets		\$ 16,723,124	\$ 410,200	
17	Percent of Total		97.61%	2.39%	

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Projection and Allocation of Operating and Maintenance Expenditures to Water and Wastewater Systems

Line No.	Description	Escalation Factor	Fiscal Year Ending September 30,							
			2020	2021	2022	2023	2024	2025		
Total Water System Operations										
Personal Services										
1	Regular Salaries and Wages	Labor	\$ 484,930	\$ 501,900	\$ 516,957	\$ 532,466	\$ 548,440	\$ 564,893		
2	Additional Personnel - Water	Calculated	-	-	107,601	110,788	114,118	117,594		
3	Additional Personnel - Wastewater	Calculated	-	-	-	-	-	-		
4	Overtime	Labor	36,000	36,000	37,080	38,192	39,338	40,518		
5	Shift Differential Pay	Labor	6,960	7,000	7,210	7,426	7,649	7,879		
6	Education Incentive Pay	Labor	6,000	6,000	6,180	6,365	6,556	6,753		
7	FICA Taxes	Labor	49,220	50,000	51,500	53,045	54,636	56,275		
8	Retirement Contributions	Labor	78,900	80,000	82,400	84,872	87,418	90,041		
9	Health Insurance / Allowance	Ins-Health	159,200	175,100	183,855	193,048	202,700	212,835		
10	Workers Compensation	Labor	42,000	45,000	46,350	47,741	49,173	50,648		
11	Compensated Absences	Labor	-	-	-	-	-	-		
Operating Expenses										
12	Professional Fees	Inflation	\$ 60,000	\$ 150,000	\$ 75,000	\$ 76,875	\$ 78,720	\$ 80,531		
13	Other Contractual Services	Inflation	46,520	37,000	37,962	38,911	39,845	40,761		
14	Travel and Per Diem	Inflation	3,745	3,745	3,842	3,938	4,033	4,126		
15	Training and Development	Inflation	2,700	2,700	2,770	2,839	2,908	2,974		
16	Communications	Inflation	4,050	3,700	3,796	3,891	3,984	4,076		
17	Postage and Freight	Inflation	200	200	205	210	215	220		
18	Utility Services	Electric	300,000	300,000	307,890	315,988	324,298	332,827		
19	Insurance and Bonds	Inflation	145,000	145,000	148,770	152,489	156,149	159,740		
20	Repair and Maintenance - General	Repair	150,000	165,000	171,600	178,464	185,603	193,027		
21	Repair and Maintenance - RO Cartridges	Repair	-	-	-	-	-	-		
22	Repair and Maintenance - Vehicle	Repair	2,000	2,500	2,600	2,704	2,812	2,925		
23	Renewal and Replacements	Repair	-	-	-	-	-	-		
24	Other Current Charges - Licenses and Permits	Labor	5,450	5,450	5,614	5,782	5,955	6,134		
25	Administrative Charges	Inflation	327,870	325,000	333,450	341,786	349,989	358,039		
26	Operating Supplies	Inflation	230,000	230,000	235,980	241,880	247,685	253,381		
27	Uniforms	Labor	7,000	7,000	7,210	7,426	7,649	7,879		
28	Operating Supplies - Safety	Inflation	3,500	3,500	3,591	3,681	3,769	3,856		
29	Operating Supplies - Gasoline	Inflation	4,250	4,250	4,361	4,470	4,577	4,682		
30	Books, Dues, Education, and Subscriptions	Labor	1,610	3,110	3,203	3,299	3,398	3,500		
31	Depreciation	Inflation	-	-	-	-	-	-		
Capital Outlay										
32	Buildings	Inflation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
33	Improvements Other Than Buildings	Inflation	-	-	-	-	-	-		
33	Machinery and Equipment	Inflation	-	-	-	-	-	-		
34	Reclass Expenditures from CIP	Calculated	108,000	51,425	-	-	335,690	-		
Other Uses										
35	Reserve for Contingency	Calculated	64,800	68,700	\$ 71,609	\$ 73,757	\$ 75,949	\$ 78,183		
36	Bad Debt Expense	Calculated	3,131	3,394	3,956	4,351	4,569	4,683		
Total Wastewater System Operations										
Operating Expenses										
37	Other Contractual Services	Inflation	\$ 60,000	\$ 105,000	\$ 60,000	\$ 61,500	\$ 62,976	\$ 64,424		
38	Other Contractual Services	Inflation	19,000	19,000	19,494	19,981	20,461	20,932		
39	Utility Services	Electric	40,000	40,000	41,052	42,132	43,240	44,377		
40	Sewage Treatment - City of Delray Beach	Calculated	959,755	987,449	908,922	936,177	964,266	993,188		
41	Insurance and Bonds	Ins-Property	7,000	9,000	9,360	9,734	10,124	10,529		
42	Repair and Maintenance - General	Repair	57,000	80,000	83,200	86,528	89,989	93,589		
43	Renewal and Replacements	Repair	-	-	-	-	-	-		
44	Other Current Charges - General	Inflation	-	-	-	-	-	-		
45	Administrative Charges	Inflation	147,000	154,350	158,363	162,322	166,218	170,041		
46	Operating Supplies	Inflation	-	1,000	1,026	1,052	1,077	1,102		
47	Depreciation	Inflation	-	-	-	-	-	-		
Capital Outlay										
48	Buildings	Calculated	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
49	Improvements Other Than Buildings	Calculated	-	-	-	-	-	-		
50	Machinery and Equipment	Calculated	-	-	-	-	-	-		
51	Reclass Expenditures from CIP	Calculated	-	-	-	-	-	-		
Other Uses										
52	Reserve for Contingency	Calculated	\$ 38,693	\$ 41,874	\$ 38,443	\$ 39,583	\$ 40,751	\$ 41,945		
53	Bad Debt Expense	Calculated	1,736	1,935	2,353	2,636	2,768	2,837		
54	TOTAL BUDGETED O&M		\$ 3,663,219	\$ 3,852,283	\$ 3,784,755	\$ 3,898,330	\$ 4,349,694	\$ 4,131,944		

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Projection and Allocation of Operating and Maintenance Expenditures to Water and Wastewater Systems

Line No.	Description	Allocation Factor	Water Percentage	Water System Allocated Operating Expenditures										
				2020	2021	2022	2023	2024	2025	2025				
Allocated Water System Operating Expenses														
Personal Services														
1	Regular Salaries and Wages	Revenue	64.32%	\$ 311,908	\$ 322,823	\$ 332,508	\$ 342,483	\$ 352,758	\$ 363,340					
2	Additional Personnel - Water	Water	100.00%	-	-	107,601	110,788	114,118	117,594					
3	Additional Personnel - Wastewater	Wastewater	0.00%	-	-	-	-	-	-					
4	Overtime	Revenue	64.32%	23,155	23,155	23,850	24,565	25,302	26,061					
5	Shift Differential Pay	Revenue	64.32%	4,477	4,502	4,637	4,777	4,920	5,068					
6	Education Incentive Pay	Revenue	64.32%	3,859	3,859	3,975	4,094	4,217	4,344					
7	FICA Taxes	Revenue	64.32%	31,658	32,160	33,125	34,119	35,142	36,196					
8	Retirement Contributions	Revenue	64.32%	50,749	51,456	53,000	54,590	56,228	57,914					
9	Health Insurance / Allowance	Revenue	64.32%	102,398	112,625	118,256	124,169	130,377	136,896					
10	Workers Compensation	Revenue	64.32%	27,015	28,944	29,812	30,707	31,628	32,577					
11	Compensated Absences	Revenue	64.32%	-	-	-	-	-	-					
Operating Expenses														
12	Professional Fees	Water	100.00%	\$ 60,000	\$ 150,000	\$ 75,000	\$ 76,875	\$ 78,720	\$ 80,531					
13	Other Contractual Services	Water	100.00%	46,520	37,000	37,962	38,911	39,845	40,761					
14	Travel and Per Diem	Water	100.00%	3,745	3,745	3,842	3,938	4,033	4,126					
15	Training and Development	Water	100.00%	2,700	2,700	2,770	2,839	2,908	2,974					
16	Communications	Water	100.00%	4,050	3,700	3,796	3,891	3,984	4,076					
17	Postage and Freight	Water	100.00%	200	200	205	210	215	220					
18	Utility Services	Water	100.00%	300,000	300,000	307,890	315,988	324,298	332,827					
19	Insurance and Bonds	Water	100.00%	145,000	145,000	148,770	152,489	156,149	159,740					
20	Repair and Maintenance - General	Water	100.00%	150,000	165,000	171,600	178,464	185,603	193,027					
21	Repair and Maintenance - RO Cartridges	Water	100.00%	-	-	-	-	-	-					
22	Repair and Maintenance - Vehicle	Water	100.00%	2,000	2,500	2,600	2,704	2,812	2,925					
23	Renewal and Replacements	Water	100.00%	-	-	-	-	-	-					
24	Other Current Charges - Licenses and Permits	Water	100.00%	5,450	5,450	5,614	5,782	5,955	6,134					
25	Administrative Charges	Water	100.00%	327,870	325,000	333,450	341,786	349,989	358,039					
26	Operating Supplies	Water	100.00%	230,000	230,000	235,980	241,880	247,685	253,381					
27	Uniforms	Water	100.00%	7,000	7,000	7,210	7,426	7,649	7,879					
28	Operating Supplies - Safety	Water	100.00%	3,500	3,500	3,591	3,681	3,769	3,856					
29	Operating Supplies - Gasoline	Water	100.00%	4,250	4,250	4,361	4,470	4,577	4,682					
30	Books, Dues, Education, and Subscriptions	Water	100.00%	1,610	3,110	3,203	3,299	3,398	3,500					
31	Depreciation	Water	100.00%	-	-	-	-	-	-					
Capital Outlay														
32	Buildings	Water	100.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
33	Improvements Other Than Buildings	Water	100.00%	-	-	-	-	-	-					
33	Machinery and Equipment	Water	100.00%	-	-	-	-	-	-					
34	Reclass Expenditures from CIP	Water	100.00%	108,000	51,425	-	-	335,690	-					
Other Uses														
35	Reserve for Contingency	Water	100.00%	\$ 64,800	\$ 68,700	\$ 71,609	\$ 73,757	\$ 75,949	\$ 78,183					
36	Bad Debt Expense	Water	100.00%	3,131	3,394	3,956	4,351	4,569	4,683					
Allocated Water System Operating Expenses														
Operating Expenses														
37	Other Contractual Services	Wastewater	0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
38	Other Contractual Services	Wastewater	0.00%	-	-	-	-	-	-					
39	Utility Services	Wastewater	0.00%	-	-	-	-	-	-					
40	Sewage Treatment - City of Delray Beach	Wastewater	0.00%	-	-	-	-	-	-					
41	Insurance and Bonds	Wastewater	0.00%	-	-	-	-	-	-					
42	Repair and Maintenance - General	Wastewater	0.00%	-	-	-	-	-	-					
43	Renewal and Replacements	Wastewater	0.00%	-	-	-	-	-	-					
44	Other Current Charges - General	Wastewater	0.00%	-	-	-	-	-	-					
45	Administrative Charges	Wastewater	0.00%	-	-	-	-	-	-					
46	Operating Supplies	Wastewater	0.00%	-	-	-	-	-	-					
47	Depreciation	Wastewater	0.00%	-	-	-	-	-	-					
Capital Outlay														
48	Buildings	Wastewater	0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
49	Improvements Other Than Buildings	Wastewater	0.00%	-	-	-	-	-	-					
50	Machinery and Equipment	Wastewater	0.00%	-	-	-	-	-	-					
51	Reclass Expenditures from CIP	Wastewater	0.00%	-	-	-	-	-	-					
Other Uses														
52	Reserve for Contingency	Wastewater	0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
53	Bad Debt Expense	Wastewater	0.00%	-	-	-	-	-	-					
54	TOTAL ALLOCATED WATER SYSTEM BUDGETED O&M			\$ 2,025,045	\$ 2,091,200	\$ 2,130,174	\$ 2,193,034	\$ 2,592,487	\$ 2,321,536					

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Projection and Allocation of Operating and Maintenance Expenditures to Water and Wastewater Systems

Line No.	Description	Allocation Factor	Wastewater Percentage	Wastewater System Allocated Operating Expenditures								
				2020	2021	2022	2023	2024	2025			
Allocated Wastewater System Operating Expenses												
Personal Services												
1	Regular Salaries and Wages	Revenue	35.68%	\$ 173,022	\$ 179,077	\$ 184,449	\$ 189,982	\$ 195,682	\$ 201,552			
2	Additional Personnel - Water	Water	0.00%	-	-	-	-	-	-			
3	Additional Personnel - Wastewater	Wastewater	100.00%	-	-	-	-	-	-			
4	Overtime	Revenue	35.68%	12,845	12,845	13,230	13,627	14,036	14,457			
5	Shift Differential Pay	Revenue	35.68%	2,483	2,498	2,573	2,650	2,729	2,811			
6	Education Incentive Pay	Revenue	35.68%	2,141	2,141	2,205	2,271	2,339	2,409			
7	FICA Taxes	Revenue	35.68%	17,562	17,840	18,375	18,926	19,494	20,079			
8	Retirement Contributions	Revenue	35.68%	28,151	28,544	29,400	30,282	31,191	32,126			
9	Health Insurance / Allowance	Revenue	35.68%	56,802	62,475	65,599	68,879	72,323	75,939			
10	Workers Compensation	Revenue	35.68%	14,985	16,056	16,538	17,034	17,545	18,071			
11	Compensated Absences	Revenue	35.68%	-	-	-	-	-	-			
Operating Expenses												
12	Professional Fees	Water	0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
13	Other Contractual Services	Water	0.00%	-	-	-	-	-	-			
14	Travel and Per Diem	Water	0.00%	-	-	-	-	-	-			
15	Training and Development	Water	0.00%	-	-	-	-	-	-			
16	Communications	Water	0.00%	-	-	-	-	-	-			
17	Postage and Freight	Water	0.00%	-	-	-	-	-	-			
18	Utility Services	Water	0.00%	-	-	-	-	-	-			
19	Insurance and Bonds	Water	0.00%	-	-	-	-	-	-			
20	Repair and Maintenance - General	Water	0.00%	-	-	-	-	-	-			
21	Repair and Maintenance - RO Cartridges	Water	0.00%	-	-	-	-	-	-			
22	Repair and Maintenance - Vehicle	Water	0.00%	-	-	-	-	-	-			
23	Renewal and Replacements	Water	0.00%	-	-	-	-	-	-			
24	Other Current Charges - Licenses and Permits	Water	0.00%	-	-	-	-	-	-			
25	Administrative Charges	Water	0.00%	-	-	-	-	-	-			
26	Operating Supplies	Water	0.00%	-	-	-	-	-	-			
27	Uniforms	Water	0.00%	-	-	-	-	-	-			
28	Operating Supplies - Safety	Water	0.00%	-	-	-	-	-	-			
29	Operating Supplies - Gasoline	Water	0.00%	-	-	-	-	-	-			
30	Books, Dues, Education, and Subscriptions	Water	0.00%	-	-	-	-	-	-			
31	Depreciation	Water	0.00%	-	-	-	-	-	-			
Capital Outlay												
32	Buildings	Eliminate	0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
33	Improvements Other Than Buildings	Eliminate	0.00%	-	-	-	-	-	-			
33	Machinery and Equipment	Eliminate	0.00%	-	-	-	-	-	-			
34	Reclass Expenditures from CIP	Water	0.00%	-	-	-	-	-	-			
Other Uses												
35	Reserve for Contingency	Water	0.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
36	Bad Debt Expense	Water	0.00%	-	-	-	-	-	-			
Allocated Wastewater System Operating Expenses												
Operating Expenses												
37	Other Contractual Services	Wastewater	100.00%	\$ 60,000	\$ 105,000	\$ 60,000	\$ 61,500	\$ 62,976	\$ 64,424			
38	Other Contractual Services	Wastewater	100.00%	19,000	19,000	19,494	19,981	20,461	20,932			
39	Utility Services	Wastewater	100.00%	40,000	40,000	41,052	42,132	43,240	44,377			
40	Sewage Treatment - City of Delray Beach	Wastewater	100.00%	959,755	987,449	908,922	936,177	964,266	993,188			
41	Insurance and Bonds	Wastewater	100.00%	7,000	9,000	9,360	9,734	10,124	10,529			
42	Repair and Maintenance - General	Wastewater	100.00%	57,000	80,000	83,200	86,528	89,989	93,589			
43	Renewal and Replacements	Wastewater	100.00%	-	-	-	-	-	-			
44	Other Current Charges - General	Wastewater	100.00%	-	-	-	-	-	-			
45	Administrative Charges	Wastewater	100.00%	147,000	154,350	158,363	162,322	166,218	170,041			
46	Operating Supplies	Wastewater	100.00%	-	1,000	1,026	1,052	1,077	1,102			
47	Depreciation	Wastewater	100.00%	-	-	-	-	-	-			
Capital Outlay												
48	Buildings	Wastewater	100.00%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
49	Improvements Other Than Buildings	Wastewater	100.00%	-	-	-	-	-	-			
50	Machinery and Equipment	Wastewater	100.00%	-	-	-	-	-	-			
51	Reclass Expenditures from CIP	Wastewater	100.00%	-	-	-	-	-	-			
Other Uses												
52	Reserve for Contingency	Wastewater	100.00%	\$ 38,693	\$ 41,874	\$ 38,443	\$ 39,583	\$ 40,751	\$ 41,945			
53	Bad Debt Expense	Wastewater	100.00%	1,736	1,935	2,353	2,636	2,768	2,837			
54 TOTAL ALLOCATED WASTEWATER SYSTEM BUDGETED O&M				\$ 1,638,175	\$ 1,761,083	\$ 1,654,581	\$ 1,705,296	\$ 1,757,207	\$ 1,810,408			

Table 11

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Calculation of Wastewater Treatment Expenditures

Line No.	Description	Fiscal Year Ending September 30,						
		2019	2020	2021	2022	2023	2024	2025
<u>Wastewater Treatment Cost From City</u>								
1	Implemented Increase			3.00%	3.00%	3.00%	3.00%	3.00%
2	Disposal Charge	\$ 3.3694	\$ 3.3917	\$ 3.4935	\$ 3.5983	\$ 3.7062	\$ 3.8174	\$ 3.9319
3	Total Rate Per 1,000 Gallons	\$ 3.3694	\$ 3.3917	\$ 3.4935	\$ 3.5983	\$ 3.7062	\$ 3.8174	\$ 3.9319
4	Wastewater Treated by Delray Beach (000's)	245,793	252,014	252,598	252,598	252,598	252,598	252,598
5	Average Daily Flow - MGD	0.673	0.690	0.692	0.692	0.692	0.692	0.692
6	Wastewater System Units	4,393	4,393	4,393	4,393	4,393	4,393	4,393
7	Estimated Annual Wastewater Treated Per Unit	55,951	57,367	57,500	57,500	57,500	57,500	57,500
8	Purchased Wastewater Expense	\$ 828,185	\$ 854,755	\$ 882,449	\$ 908,922	\$ 936,177	\$ 964,266	\$ 993,188

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Calculation of Annual Deposit to the Capital Renewal and Replacement Account

Line No.	Description	Fiscal Year Ending September 30,					
		2020	2021	2022	2023	2024	2025
1	Prior Year Used in Calculation	2019	2020	2021	2022	2023	2024
Deposit Calculation							
Prior Fiscal Year Revenues							
2	Water Rate Revenues	\$ 2,014,193	\$ 2,087,452	\$ 2,262,955	\$ 2,637,175	\$ 2,900,893	\$ 3,045,937
3	Wastewater Rate Revenues	\$1,128,148	1,157,108	1,290,147	1,568,974	1,757,250	1,845,113
4	Other Revenues - Water	143,254	149,000	262,078	260,167	255,878	256,543
5	Other Revenues - Wastewater	-	-	-	-	-	-
6	Total Prior Fiscal Year Revenues	\$ 3,285,595	\$ 3,393,560	\$ 3,815,180	\$ 4,466,316	\$ 4,914,021	\$ 5,147,593
Annual Deposit							
7	Percent of Gross Revenues	0.00%	10.00%	10.50%	11.00%	11.00%	11.00%
8	Amount	\$ -	\$ 339,356	\$ 400,594	\$ 491,295	\$ 540,542	\$ 566,235
9	Additional	-	-	-	-	-	-
10	Capital Renewal and Replacement Account Deposit	\$ -	\$ 339,356	\$ 400,594	\$ 491,295	\$ 540,542	\$ 566,235
Allocation							
11	Water Allocation	89.24%					
12	Wastewater Allocation	10.76%					
13	Water Deposit	\$ -	\$ 302,855	\$ 357,506	\$ 438,451	\$ 482,401	\$ 505,330
14	Wastewater Deposit	-	36,501	43,088	52,844	58,141	60,905

Table 13

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Capital Improvement Plan (CIP)

Line No.	Description	2020	Adjustments	Fiscal Year Ending September 30,					2025	Total						
				2020	2021	2022	2023	2024								
WATER SYSTEM																
Water CIP Projects																
1	Replace 2 of 4 WTP Air Handlers	\$ 100,000	-	\$ 100,000	\$ -	\$ -	\$ -	\$ -	-	\$ 100,000						
2	Replace 1 of 2 WTP Chillers	80,000	-	80,000	-	-	-	-	-	80,000						
3	Paint Elevated Tank Outer Bowl & Logo	80,000	-	80,000	-	-	-	-	-	80,000						
4	Paint the WTP Membrane Floors & GST	28,000	-	28,000	-	-	-	-	-	28,000						
5	Replace 2013 Ford F150 Pickup Truck	30,000	-	30,000	-	-	-	-	-	30,000						
6	Replace Inhibitor & CL2 Pumps & Piping	60,000	-	60,000	-	-	-	-	-	60,000						
7	Replace East Chiller at Water Plant	-	-	-	80,000	-	-	-	-	80,000						
8	Replace 3,400 Sodium Hypochlorite Day	-	-	-	100,000	-	-	-	-	100,000						
9	Replace Building and Public Works Carpeting	-	-	-	50,000	-	-	-	-	50,000						
10	Rehabilitation of Both Shallow Injection	-	-	-	100,000	-	-	-	-	100,000						
11	Rehabilitation of Well Number 6	-	-	-	-	80,000	-	-	-	80,000						
12	VFD Replacements	-	-	-	-	250,000	-	-	-	250,000						
13	Replace 2014 Ford Escape SUV	-	-	-	-	-	30,000	-	-	30,000						
14	Well Number 8 Rehabilitation	-	-	-	-	-	80,000	-	-	80,000						
15	Upgrade WTP SCADA System Software	-	-	-	-	-	25,000	-	-	25,000						
16	Replace Membrane Train Turbos	-	-	-	-	-	120,000	-	-	120,000						
17	Replace Water Plant Roof	-	-	-	-	-	250,000	-	-	250,000						
18	Paint the Elevated Storage Tank interior	-	-	-	-	-	-	300,000	-	300,000						
19	Replace Cartridge Filter Vessels	-	-	-	-	-	-	100,000	-	100,000						
20	Replace Water Plant Blowers	-	-	-	-	-	-	50,000	-	50,000						
21	WTP De-Gasifier and Scrubber System	-	-	-	-	-	-	-	30,000	30,000						
22	Replace the West Chiller at the WTP	-	-	-	-	-	-	-	90,000	90,000						
23	Departmental Capital - Operating Budget Reclassification	-	-	-	-	-	-	-	-	-						
24	Total Water CIP Projects	\$ 378,000	\$ -	\$ 378,000	\$ 330,000	\$ 330,000	\$ 505,000	\$ 450,000	\$ 120,000	\$ 2,113,000						
WASTEWATER SYSTEM																
Wastewater CIP Projects																
25	Lift Station #4 Rehabilitation	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ -	-	\$ 100,000						
26	Lift Station # 1 Electrical Panel Replacement	25,000	-	25,000	-	-	-	-	-	25,000						
27	Lift Station #1 Rehabilitation	-	-	-	150,000	-	-	-	-	150,000						
28	Wastewater Collection System Piping Rehabilitation (Phase 1)	-	-	-	350,000	-	150,000	-	-	500,000						
29	Storm Water Tide Flex Check Valves	-	-	-	25,000	-	-	-	-	25,000						
30	Lift Station #2 Rehabilitation	-	-	-	-	100,000	-	-	-	100,000						
31	Wastewater Collection System Piping Rehabilitation (Phase 2)	-	-	-	-	250,000	-	-	-	250,000						
32	Raise Lift Station #3	-	-	-	-	150,000	-	-	-	150,000						
33	Raise Lift Station #2	-	-	-	-	-	150,000	-	-	150,000						
34	Replace Emergency Generator at Lift Station #1 (Master)	-	-	-	-	-	-	150,000	-	150,000						
35	Raise Lift Station #4	-	-	-	-	-	-	-	150,000	150,000						
36	Wastewater Collection System Rehabilitation	-	-	-	-	550,000	200,000	-	-	750,000						
37	Departmental Capital - Operating Budget Reclassification	-	-	-	-	-	-	-	-	-						
38	Total Wastewater CIP Projects	\$ 125,000	\$ -	\$ 125,000	\$ 525,000	\$ 1,050,000	\$ 500,000	\$ 150,000	\$ 150,000	\$ 2,500,000						
39	TOTAL CAPITAL IMPROVEMENT PLAN	\$ 503,000	\$ -	\$ 503,000	\$ 855,000	\$ 1,380,000	\$ 1,005,000	\$ 600,000	\$ 270,000	\$ 4,613,000						

Table 14

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Capital Improvement Plan Adjusted for Inflation and Funding Plan (CIP)

Line No.	Description	Escalation Factor	Funding Source	Fiscal Year Ending September 30,						Total	
				2020	2021	2022	2023	2024	2025		
CIP Inflation Indices - Annual											
1	Low Inflation				0.00%	1.00%	1.00%	1.00%	1.00%	1.00%	
2	Average Inflation				0.00%	2.50%	2.50%	2.50%	2.50%	2.50%	
3	High Inflation				0.00%	5.00%	5.00%	5.00%	5.00%	5.00%	
4	ENR Index				0.00%	2.85%	2.85%	2.85%	2.85%	2.85%	
5	No Inflation				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
CIP Inflation Indices - Cumulative Factor											
6	Low Inflation	Low		1.0000	1.0100	1.0201	1.0303	1.0406	1.0510		
7	Average Inflation	Avg		1.0000	1.0250	1.0506	1.0769	1.1038	1.1314		
8	High Inflation	High		1.0000	1.0500	1.1025	1.1576	1.2155	1.2763		
9	ENR Index	ENR		1.0000	1.0285	1.0578	1.0880	1.1190	1.1509		
10	No Inflation	None		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000		
WATER SYSTEM											
11	Replace 2 of 4 WTP Air Handlers	None	Non-Expansion	R&R	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	
12	Replace 1 of 2 WTP Chillers	None	Non-Expansion	Op. Reserves	80,000	-	-	-	-	-	
13	Paint Elevated Tank Outer Bowl & Logo	None	Non-Expansion	WOpx	80,000	-	-	-	-	-	
14	Paint the WTP Membrane Floors & GST	None	Non-Expansion	WOpx	28,000	-	-	-	-	-	
15	Replace 2013 Ford F150 Pickup Truck	None	Non-Expansion	Op. Reserves	30,000	-	-	-	-	-	
16	Replace Inhibitor & CL2 Pumps & Piping	None	Non-Expansion	Op. Reserves	60,000	-	-	-	-	-	
17	Replace East Chiller at Water Plant	ENR	Non-Expansion	R&R	-	82,280	-	-	-	-	82,280
18	Replace 3,400 Sodium Hypochlorite Day	ENR	Non-Expansion	R&R	-	102,850	-	-	-	-	102,850
19	Replace Building and Public Works Carpeting	ENR	Non-Expansion	WOpx	-	51,425	-	-	-	-	51,425
20	Rehabilitation of Both Shallow Injection	ENR	Non-Expansion	R&R	-	102,850	-	-	-	-	102,850
21	Rehabilitation of Well Number 6	ENR	Non-Expansion	Op. Reserves	-	-	84,625	-	-	-	84,625
22	VFD Replacements	ENR	Non-Expansion	Op. Reserves	-	-	264,453	-	-	-	264,453
23	Replace 2014 Ford Escape SUV	ENR	Non-Expansion	W-Rates	-	-	-	32,639	-	-	32,639
24	Well Number 8 Rehabilitation	ENR	Non-Expansion	R&R	-	-	-	87,037	-	-	87,037
25	Upgrade WTP SCADA System Software	ENR	Non-Expansion	R&R	-	-	-	27,199	-	-	27,199
26	Replace Membrane Train Turbos	ENR	Non-Expansion	R&R	-	-	-	130,555	-	-	130,555
27	Replace Water Plant Roof	ENR	Non-Expansion	R&R	-	-	-	271,990	-	-	271,990
28	Paint the Elevated Storage Tank interior	ENR	Non-Expansion	WOpx	-	-	-	-	335,690	-	335,690
29	Replace Cartridge Filter Vessels	ENR	Non-Expansion	Op. Reserves	-	-	-	-	111,897	-	111,897
30	Replace Water Plant Blowers	ENR	Non-Expansion	Op. Reserves	-	-	-	-	55,948	-	55,948
31	WTP De-Gasifier and Scrubber System	ENR	Non-Expansion	R&R	-	-	-	-	-	34,526	34,526
32	Replace the West Chiller at the WTP	ENR	Non-Expansion	R&R	-	-	-	-	-	103,577	103,577
33	Departmental Capital - Operating Budget Reclassification	ENR	Non-Expansion	Op. Reserves	-	-	-	-	-	-	-
34	Departmental Capital - Operating Budget Reclassification	ENR	Non-Expansion	R&R	-	-	-	-	-	-	-
35	TOTAL WATER SYSTEM				\$ 378,000	\$ 339,405	\$ 349,078	\$ 549,420	\$ 503,535	\$ 138,103	\$ 1,879,541
WASTEWATER SYSTEM											
36	Lift Station #4 Rehabilitation	None	Non-Expansion	Op. Reserves	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	
37	Lift Station # 1 Electrical Panel Replacement	None	Non-Expansion	Op. Reserves	25,000	-	-	-	-	-	
38	Lift Station #1 Rehabilitation	ENR	Non-Expansion	Op. Reserves	-	154,275	-	-	-	-	154,275
39	Wastewater Collection System Piping Rehabilitation (Phase 1)	ENR	Non-Expansion	Op. Reserves	-	359,975	-	163,194	-	-	523,169
40	Storm Water Tide Flex Check Valves	ENR	Non-Expansion	R&R	-	25,713	-	-	-	-	25,713
41	Lift Station #2 Rehabilitation	ENR	Non-Expansion	Op. Reserves	-	-	105,781	-	-	-	105,781
42	Wastewater Collection System Piping Rehabilitation (Phase 2)	ENR	Non-Expansion	R&R	-	-	264,453	-	-	-	264,453
43	Raise Lift Station #3	ENR	Non-Expansion	R&R	-	-	158,672	-	-	-	158,672
44	Raise Lift Station #2	ENR	Non-Expansion	Op. Reserves	-	-	-	163,194	-	-	163,194
45	Replace Emergency Generator at Lift Station #1 (Master)	ENR	Non-Expansion	R&R	-	-	-	-	167,845	-	167,845
46	Raise Lift Station #4	ENR	Non-Expansion	R&R	-	-	-	-	-	172,629	172,629
47	Wastewater Collection System Rehabilitation	ENR	Non-Expansion	Op. Reserves	-	-	581,797	217,592	-	-	799,389
48	Departmental Capital - Operating Budget Reclassification	ENR	Non-Expansion	Op. Reserves	-	-	-	-	-	-	-
49	Departmental Capital - Operating Budget Reclassification	ENR	Non-Expansion	R&R	-	-	-	-	-	-	-

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Capital Improvement Plan Adjusted for Inflation and Funding Plan (CIP)

Line No.	Description	Escalation Factor	Purpose	Funding Source	Fiscal Year Ending September 30,						Total
					2020	2021	2022	2023	2024	2025	
50	TOTAL WASTEWATER SYSTEM				\$ 125,000	\$ 539,963	\$ 1,110,703	\$ 543,980	\$ 167,845	\$ 172,629	\$ 2,535,119
51	TOTAL CAPITAL IMPROVEMENT PLAN				\$ 503,000	\$ 879,368	\$ 1,459,781	\$ 1,093,400	\$ 671,380	\$ 310,731	\$ 4,414,660
CAPITAL IMPROVEMENT FUND - FUNDING SOURCES											
52	Capital Funded From Water Rate Revenues	W-Rates	\$ -	\$ -	\$ -	\$ -	\$ 32,639	\$ -	\$ -	\$ -	\$ 32,639
53	Capital Funded From Wastewater Rate Revenues	WW-Rates	-	-	-	-	-	-	-	-	-
54	Operating Reserves Fund	Op. Reserves	\$ 295,000	\$ 514,250	\$ 1,036,656	\$ 543,980	\$ 167,845	\$ -	\$ -	\$ -	\$ 2,262,731
55	Capital Renewal and Replacement Account	R&R	100,000	313,693	423,125	516,781	167,845	310,731	310,731	1,732,175	
57	Water Impact Fees	W-Impact Fee	-	-	-	-	-	-	-	-	-
58	Wastewater Impact Fees	WW-Impact Fee	-	-	-	-	-	-	-	-	-
61	Proposed Debt 1	Debt1	-	-	-	-	-	-	-	-	-
62	Proposed Debt 2	Debt2	-	-	-	-	-	-	-	-	-
63	Proposed Debt 3	Debt3	-	-	-	-	-	-	-	-	-
64	Proposed Debt 4	Debt4	-	-	-	-	-	-	-	-	-
65	Proposed Debt 5	Debt5	-	-	-	-	-	-	-	-	-
66	Reclass to Operating Expenses - Water	WOpx	108,000	51,425	-	-	-	335,690	-	-	387,115
67	Reclass to Operating Expenses - Wastewater	WWOpX	-	-	-	-	-	-	-	-	-
68	TOTAL CAPITAL IMPROVEMENT FUND - FUNDING SOURCES				\$ 503,000	\$ 879,368	\$ 1,459,781	\$ 1,093,400	\$ 671,380	\$ 310,731	\$ 4,414,660

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Revenue Requirements - Water System

Line No.	Description	Fiscal Year Ending September 30,					
		2020	2021	2022	2023	2024	2025
	Operating and Maintenance Expenses						
1	Total Operating Expenses	\$ 2,025,045	\$ 2,091,200	\$ 2,130,174	\$ 2,193,034	\$ 2,592,487	\$ 2,321,536
2	Total Operating and Maintenance Expenses	\$ 2,025,045	\$ 2,091,200	\$ 2,130,174	\$ 2,193,034	\$ 2,592,487	\$ 2,321,536
	Debt Service						
3	Existing Debt	\$ 1,549,224	\$ 1,549,224	\$ 1,549,224	\$ 1,549,224	\$ 1,180,012	\$ 810,800
4	Proposed Debt	-	-	-	-	-	-
5	Less Connection Charges to Pay Debt Service	-	-	(296,880)	(296,880)	(296,880)	(296,880)
6	Total Debt Service	\$ 1,549,224	\$ 1,549,224	\$ 1,252,344	\$ 1,252,344	\$ 883,131	\$ 513,920
	Other Revenue Requirements						
7	Capital Funded From Rate Revenues	\$ -	\$ -	\$ -	\$ 32,639	\$ -	\$ -
8	Transfers to Operating Reserves	-	-	-	-	-	-
9	Transfers to Capital Renewal and Replacement Account	-	302,855	357,506	438,451	482,401	505,330
10	Total Other Revenue Requirements	\$ -	\$ 302,855	\$ 357,506	\$ 471,090	\$ 482,401	\$ 505,330
11	Gross Revenue Requirements	\$ 3,574,269	\$ 3,943,279	\$ 3,740,024	\$ 3,916,467	\$ 3,958,020	\$ 3,340,785
	Less Income and Funds From Other Sources						
12	Other Revenues	\$ 179,720	\$ 187,070	\$ 191,083	\$ 195,042	\$ 198,938	\$ 202,761
13	Unrestricted Interest Income	49,199	48,245	44,435	39,130	37,052	37,679
14	Transfer - General Fund for Debt Service	1,430,000	1,429,934	1,039,445	945,519	451,753	-
15	Transfers From Operating Reserves	119,224	120,000	-	-	-	-
16	Transfers from Capital Renewal and Replacement Account	-	-	-	-	335,690	-
17	Net Revenue Requirements	\$ 1,796,125	\$ 2,158,030	\$ 2,465,060	\$ 2,736,776	\$ 2,934,587	\$ 3,100,346
	Existing Revenues						
18	Water System	\$ 2,087,452	\$ 2,150,076	\$ 2,150,076	\$ 2,150,076	\$ 2,150,076	\$ 2,150,076
19	Total Existing Revenues	\$ 2,087,452	\$ 2,150,076	\$ 2,150,076	\$ 2,150,076	\$ 2,150,076	\$ 2,150,076
	Revenues From Prior Period Adjustments						
20	Water System	N/A	\$ -	\$ 225,758	\$ 487,100	\$ 750,817	\$ 895,862
21	Total Current Revenues	\$ 2,087,452	\$ 2,150,076	\$ 2,375,833	\$ 2,637,175	\$ 2,900,893	\$ 3,045,937
22	Existing Surplus / (Deficiency)	\$ 291,327	\$ (7,954)	\$ (89,227)	\$ (99,601)	\$ (33,694)	\$ (54,408)
23	Percent of Rate Revenues	13.96%	(0.37%)	(3.76%)	(3.78%)	(1.16%)	(1.79%)
	Rate Adjustments						
24	Water System	0.00%	10.50%	11.00%	10.00%	5.00%	2.50%
25	Months in Effect	12.00	6.00	12.00	12.00	12.00	12.00
	Additional Revenue From Current Year Adjustment						
26	Water System	\$ -	\$ 112,879	\$ 261,342	\$ 263,718	\$ 145,045	\$ 76,148
27	Total Additional Revenue From Current Year Adjustment	\$ -	\$ 112,879	\$ 261,342	\$ 263,718	\$ 145,045	\$ 76,148
28	Total Revenue With Rate Adjustments	\$ 2,087,452	\$ 2,262,955	\$ 2,637,175	\$ 2,900,893	\$ 3,045,937	\$ 3,122,086
29	Net Surplus / (Deficiency) After Rate Adj.	\$ 291,327	\$ 104,925	\$ 172,115	\$ 164,117	\$ 111,350	\$ 21,740
30	As Percent of Total Rate Revenues	13.96%	4.64%	6.53%	5.66%	3.66%	0.70%

Table 16

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Revenue Requirements - Wastewater System

Line No.	Description	Fiscal Year Ending September 30,					
		2020	2021	2022	2023	2024	2025
	Operating and Maintenance Expenses						
1	Total Operating Expenses	\$ 1,638,175	\$ 1,761,083	\$ 1,654,581	\$ 1,705,296	\$ 1,757,207	\$ 1,810,408
2	Total Operating and Maintenance Expenses	\$ 1,638,175	\$ 1,761,083	\$ 1,654,581	\$ 1,705,296	\$ 1,757,207	\$ 1,810,408
	Debt Service						
3	Existing Debt	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4	Proposed Debt	-	-	-	-	-	-
5	Less Connection Charges to Pay Debt Service	-	-	-	-	-	-
6	Total Debt Service	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Other Revenue Requirements						
7	Capital Funded From Rate Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	Transfers to Operating Reserves	-	-	-	-	-	-
9	Transfers to Capital Renewal and Replacement Account	-	36,501	43,088	52,844	58,141	60,905
10	Total Other Revenue Requirements	\$ -	\$ 36,501	\$ 43,088	\$ 52,844	\$ 58,141	\$ 60,905
11	Gross Revenue Requirements	\$ 1,638,175	\$ 1,797,584	\$ 1,697,669	\$ 1,758,140	\$ 1,815,348	\$ 1,871,313
	Less Income and Funds From Other Sources						
12	Other Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
13	Unrestricted Interest Income	27,292	26,763	24,649	21,706	20,553	20,901
14	Transfer - General Fund for Debt Service	-	-	-	-	-	-
15	Transfers from Operating Reserves	-	-	-	-	-	-
16	Transfers from Capital Renewal and Replacement Account	-	-	-	-	-	-
17	Net Revenue Requirements	\$ 1,610,883	\$ 1,770,821	\$ 1,673,020	\$ 1,736,434	\$ 1,794,794	\$ 1,850,412
	Existing Revenues						
18	Wastewater System	\$ 1,157,108	\$ 1,191,822	\$ 1,191,822	\$ 1,191,822	\$ 1,191,822	\$ 1,191,822
19	Total Existing Revenues	\$ 1,157,108	\$ 1,191,822	\$ 1,191,822	\$ 1,191,822	\$ 1,191,822	\$ 1,191,822
	Revenues From Prior Period Adjustments						
20	Wastewater System	N/A	\$ -	\$ 196,651	\$ 377,152	\$ 565,429	\$ 653,291
21	Total Current Revenues	\$ 1,157,108	\$ 1,191,822	\$ 1,388,472	\$ 1,568,974	\$ 1,757,250	\$ 1,845,113
22	Existing Surplus / (Deficiency)	\$ (453,774)	\$ (579,000)	\$ (284,548)	\$ (167,460)	\$ (37,544)	\$ (5,299)
23	Percent of Rate Revenues	(39.22%)	(48.58%)	(20.49%)	(10.67%)	(2.14%)	(0.29%)
	Rate Adjustments						
24	Wastewater System	0.00%	16.50%	13.00%	12.00%	5.00%	2.50%
25	Months in Effect	12.00	6.00	12.00	12.00	12.00	12.00
	Additional Revenue From Current Year Adjustment						
26	Wastewater System	\$ -	\$ 98,325	\$ 180,501	\$ 188,277	\$ 87,863	\$ 46,128
27	Total Additional Revenue From Current Year Adjustment	\$ -	\$ 98,325	\$ 180,501	\$ 188,277	\$ 87,863	\$ 46,128
28	Total Revenue With Rate Adjustments	\$ 1,157,108	\$ 1,290,147	\$ 1,568,974	\$ 1,757,250	\$ 1,845,113	\$ 1,891,241
29	Net Surplus / (Deficiency) After Rate Adj.	\$ (453,774)	\$ (480,675)	\$ (104,046)	\$ 20,816	\$ 50,319	\$ 40,829
30	As Percent of Total Rate Revenues	(39.22%)	(37.26%)	(6.63%)	1.18%	2.73%	2.16%

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Revenue Requirements - Combined Water and Wastewater Systems

Line No.	Description	Fiscal Year Ending September 30,					
		2020	2021	2022	2023	2024	2025
	Operating and Maintenance Expenses						
1	Total Combined Operating Expenses	\$ 3,663,219	\$ 3,852,283	\$ 3,784,755	\$ 3,898,330	\$ 4,349,694	\$ 4,131,944
2	Total Operating and Maintenance Expenses Annual Percent Change	\$ 3,663,219	\$ 3,852,283	\$ 3,784,755	\$ 3,898,330	\$ 4,349,694	\$ 4,131,944
	Debt Service						
3	Existing Debt	\$ 1,549,224	\$ 1,549,224	\$ 1,549,224	\$ 1,549,224	\$ 1,180,012	\$ 810,800
4	Proposed Debt	-	-	-	-	-	-
5	Less Connection Charges to Pay Debt Service	-	-	(296,880)	(296,880)	(296,880)	(296,880)
6	Total Debt Service	\$ 1,549,224	\$ 1,549,224	\$ 1,252,344	\$ 1,252,344	\$ 883,131	\$ 513,920
	Other Revenue Requirements						
7	Capital Funded From Rate Revenues	\$ -	\$ -	\$ -	\$ 32,639	\$ -	\$ -
8	Transfers to Operating Reserves	-	-	-	-	-	-
9	Transfers to Capital Renewal and Replacement Account	-	339,356	400,594	491,295	540,542	566,235
10	Total Other Revenue Requirements	\$ -	\$ 339,356	\$ 400,594	\$ 523,934	\$ 540,542	\$ 566,235
11	Gross Revenue Requirements	\$ 5,212,443	\$ 5,740,863	\$ 5,437,693	\$ 5,674,608	\$ 5,773,367	\$ 5,212,099
	Less Income and Funds From Other Sources						
12	Other Revenues	\$ 179,720	\$ 187,070	\$ 191,083	\$ 195,042	\$ 198,938	\$ 202,761
13	Unrestricted Interest Income	76,491	75,008	69,084	60,836	57,605	58,580
14	Transfer - General Fund for Debt Service	1,430,000	1,429,934	1,039,445	945,519	451,753	-
15	Transfers from Operating Reserves	119,224	120,000	-	-	-	-
16	Transfers from Capital Renewal and Replacement Account	-	-	-	-	335,690	-
17	Net Revenue Requirements	\$ 3,407,008	\$ 3,928,851	\$ 4,138,080	\$ 4,473,210	\$ 4,729,381	\$ 4,950,758
18		3,312,122	4,098,897	4,508,309	5,029,563	5,159,337	5,400,791
19	Existing Revenues		\$ (170,046)	\$ (370,229)	\$ (556,353)	\$ (429,956)	\$ (450,034)
20	Water System	\$ 2,087,452	\$ 2,150,076	\$ 2,150,076	\$ 2,150,076	\$ 2,150,076	\$ 2,150,076
21	Wastewater System	1,157,108	1,191,822	1,191,822	1,191,822	1,191,822	1,191,822
22	Total Existing Revenues	\$ 3,244,560	\$ 3,341,897	\$ 3,341,897	\$ 3,341,897	\$ 3,341,897	\$ 3,341,897
	Revenues From Prior Period Adjustments						
23	Water System	N/A	\$ -	\$ 225,758	\$ 487,100	\$ 750,817	\$ 895,862
24	Wastewater System	N/A	-	196,651	377,152	565,429	653,291
25	Total Current Revenues	\$ 3,244,560	\$ 3,341,897	\$ 3,764,306	\$ 4,206,149	\$ 4,658,143	\$ 4,891,050
26	Existing Surplus / (Deficiency)	\$ (162,448)	\$ (586,954)	\$ (373,774)	\$ (267,061)	\$ (71,238)	\$ (59,707)
27	Percent of Rate Revenues	(5.01%)	(17.56%)	(9.93%)	(6.35%)	(1.53%)	(1.22%)
	Rate Adjustments						
28	Water System	0.00%	10.50%	11.00%	10.00%	5.00%	2.50%
29	Wastewater System	0.00%	16.50%	13.00%	12.00%	5.00%	2.50%
	Additional Revenue From Current Year Adjustment						
30	Water System	\$ -	\$ 112,879	\$ 261,342	\$ 263,718	\$ 145,045	\$ 76,148
31	Wastewater System	-	98,325	180,501	188,277	87,863	46,128
32	Total Additional Revenue From Current Year Adjustment	\$ -	\$ 211,204	\$ 441,843	\$ 451,994	\$ 232,907	\$ 122,276
33	Total Revenue With Rate Adjustments	\$ 3,244,560	\$ 3,553,101	\$ 4,206,149	\$ 4,658,143	\$ 4,891,050	\$ 5,013,327
34	Net Surplus / (Deficiency) After Rate Adj.	\$ (162,448)	\$ (375,750)	\$ 68,069	\$ 184,933	\$ 161,669	\$ 62,569
35	As Percent of Total Rate Revenues	(5.01%)	(10.58%)	1.62%	3.97%	3.31%	1.25%

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Projected Fund Balances and Calculation of Interest Income

Line No.	Description	Interest Earnings Restricted	Fiscal Year Ending September 30,					
			2020	2021	2022	2023	2024	2025
Projected Ending Cash Balances								
1	Operating Reserves Fund		\$ 6,859,529	\$ 5,849,529	\$ 4,880,942	\$ 4,521,895	\$ 4,515,719	\$ 4,578,288
2	Customer Deposits		2,020	2,040	2,060	2,080	2,100	2,130
3	Capital Renewal and Replacement Account		64,280	89,944	67,413	41,927	78,934	334,437
4	Debt Service Sinking Fund		387,306	387,306	313,086	313,086	220,783	128,480
5	Debt Service Reserve		-	-	-	-	-	-
6	Water Plant Connection Charge (Impact Fee) Fund		2,311,083	2,336,503	2,065,883	1,792,012	1,514,852	1,234,372
7	Wastewater Plant Connection Charge (Impact Fee) Fund		730,229	738,259	747,119	756,089	765,159	774,339
8	Construction Fund		-	-	-	-	-	-
9	Total Projected Ending Cash Balances		\$ 10,354,447	\$ 9,403,581	\$ 8,076,502	\$ 7,427,089	\$ 7,097,546	\$ 7,052,045
Operating Reserves Fund								
10	Beginning Year Balance		\$ 6,336,847					
11	Adjustments to Cash - Receivables / Payables		263,633					
12	Cash From General Fund		1,000,000					
13	Adjusted Beginning Year Balance		\$ 7,600,480	\$ 6,859,529	\$ 5,849,529	\$ 4,880,942	\$ 4,521,895	\$ 4,515,719
Transfers In -								
14	Year End Surplus	\$	-	\$	-	\$ 68,069	\$ 184,933	\$ 161,669
15	From Renewal & Replacement Account		-	-	-	-	-	-
16	From Debt Service Reserve Fund		-	-	-	-	-	-
17	From Revenue Requirements		-	-	-	-	-	-
Transfers Out -								
18	Year End Deficiencies	\$	162,448	\$ 375,750	\$ -	\$ -	\$ -	\$ -
19	To Customer Deposits		-	-	-	-	-	-
20	To Debt Service Reserve		-	-	-	-	-	-
21	To Renewal & Replacement Account		164,280	-	-	-	-	-
22	To Fund Operations		119,224	120,000	-	-	-	-
23	Additional Customer Deposit		-	-	-	-	-	-
24	To Fund Capital Improvements		295,000	514,250	1,036,656	543,980	167,845	-
Interest Income Calculation								
25	Average Annual Balance		\$ 7,230,004	\$ 6,354,529	\$ 5,365,235	\$ 4,701,418	\$ 4,518,807	\$ 4,547,003
26	Interest Rate Assumed		1.00%	1.10%	1.20%	1.20%	1.20%	1.20%
27	Interest Income Restricted	<input type="checkbox" value="No"/>	\$ 72,300	\$ 69,900	\$ 64,380	\$ 56,420	\$ 54,230	\$ 54,560
28	End of Year Balance		\$ 6,859,529	\$ 5,849,529	\$ 4,880,942	\$ 4,521,895	\$ 4,515,719	\$ 4,578,288
Minimum Targeted								
29	Days of O&M Expense		150	150	150	150	150	150
30	Amount		1,505,433	1,583,130	1,555,379	1,602,054	1,787,545	1,698,059
	Minimum target Met?		Yes	Yes	Yes	Yes	Yes	Yes
Customer Deposits								
31	Beginning Year Balance		\$ 2,000	\$ 2,020	\$ 2,040	\$ 2,060	\$ 2,080	\$ 2,100
Transfers In -								
32	From Operating Fund	\$	-	\$	-	\$	-	\$
33	Additional From Operating Fund		-	-	-	-	-	-
Transfers Out -								
34	To Renewal & Extension Fund		-	-	-	-	-	-
Interest Income Calculation								
36	Average Annual Balance		\$ 2,000	\$ 2,020	\$ 2,040	\$ 2,060	\$ 2,080	\$ 2,100
37	Interest Rate Assumed		1.00%	1.10%	1.20%	1.20%	1.20%	1.20%
38	Interest Income Restricted	<input type="checkbox" value="Yes"/>	\$ 20	\$ 20	\$ 20	\$ 20	\$ 20	\$ 30
39	End of Year Balance		\$ 2,020	\$ 2,040	\$ 2,060	\$ 2,080	\$ 2,100	\$ 2,130

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Projected Fund Balances and Calculation of Interest Income

Line No.	Description	Interest Earnings Restricted	Fiscal Year Ending September 30,					
			2020	2021	2022	2023	2024	2025
Capital Renewal and Replacement Account								
40	Beginning Year Balance		\$ -	\$ 64,280	\$ 89,944	\$ 67,413	\$ 41,927	\$ 78,934
Transfers In -								
41	From Operating Fund		\$ 164,280	\$ -	\$ -	\$ -	\$ -	\$ -
42	From Reserve Fund		-	-	-	-	-	-
43	From System Revenues		-	339,356	400,594	491,295	540,542	566,235
Transfers Out -								
44	To Operating Fund		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
44	To Fund Major Operating Repairs and Maintenance Expenses - Water		-	-	-	-	335,690	-
45	To Fund Major Operating Repairs and Maintenance Expenses - Wastewater		-	-	-	-	-	-
45	To Capital Improvement Plan		100,000	313,693	423,125	516,781	167,845	310,731
Interest Income Calculation								
49	Average Annual Balance		\$ 32,140	\$ 77,112	\$ 78,678	\$ 54,670	\$ 60,430	\$ 206,685
50	Interest Rate Assumed		1.00%	1.10%	1.20%	1.20%	1.20%	1.20%
51	Interest Income Restricted	No	\$ 321	\$ 848	\$ 944	\$ 656	\$ 725	\$ 2,480
52	End of Year Balance		\$ 64,280	\$ 89,944	\$ 67,413	\$ 41,927	\$ 78,934	\$ 334,437
Debt Service Sinking Fund								
Interest Income Calculation								
53	Average Annual Balance (Quarter of Annual PMT)		\$ 387,306	\$ 387,306	\$ 313,086	\$ 313,086	\$ 220,783	\$ 128,480
54	Interest Rate Assumed		1.00%	1.10%	1.20%	1.20%	1.20%	1.20%
55	Interest Income Restricted	No	\$ 3,870	\$ 4,260	\$ 3,760	\$ 3,760	\$ 2,650	\$ 1,540
Debt Service Reserve								
56	Beginning Year Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers In -								
57	From Operating Fund		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers Out -								
60	To Operating Fund		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interest Income Calculation								
65	Average Annual Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
66	Interest Rate Assumed		1.00%	1.10%	1.20%	1.20%	1.20%	1.20%
67	Interest Income Restricted	No	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
68	End of Year Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Water Plant Connection Charge (Impact Fee) Fund								
69	Beginning Year Balance		\$ 2,288,203	\$ 2,311,083	\$ 2,336,503	\$ 2,065,883	\$ 1,792,012	\$ 1,514,852
Transfers In -								
70	Water Connection Charge Revenue		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers Out -								
73	To Capital Improvement Plan		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
74	To Pay General Fund to Debt Service		-	-	296,880	296,880	296,880	296,880
Interest Income Calculation								
77	Average Annual Balance		\$ 2,288,203	\$ 2,311,083	\$ 2,188,063	\$ 1,917,443	\$ 1,643,572	\$ 1,366,412
78	Interest Rate Assumed		1.00%	1.10%	1.20%	1.20%	1.20%	1.20%
79	Interest Income Restricted	Yes	\$ 22,880	\$ 25,420	\$ 26,260	\$ 23,010	\$ 19,720	\$ 16,400
80	End of Year Balance		\$ 2,311,083	\$ 2,336,503	\$ 2,065,883	\$ 1,792,012	\$ 1,514,852	\$ 1,234,372

Table 18

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Projected Fund Balances and Calculation of Interest Income

Line No.	Description	Interest Earnings Restricted	Fiscal Year Ending September 30,					
			2020	2021	2022	2023	2024	2025
Wastewater Plant Connection Charge (Impact Fee) Fund								
81	Beginning Year Balance		\$ 722,999	\$ 730,229	\$ 738,259	\$ 747,119	\$ 756,089	\$ 765,159
Transfers In -								
82	Wastewater Connection Charge Revenue		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers Out -								
85	To Capital Improvement Plan		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
86	To Pay General Fund to Debt Service		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interest Income Calculation								
89	Average Annual Balance		\$ 722,999	\$ 730,229	\$ 738,259	\$ 747,119	\$ 756,089	\$ 765,159
90	Interest Rate Assumed		1.00%	1.10%	1.20%	1.20%	1.20%	1.20%
91	Interest Income Restricted	Yes	\$ 7,230	\$ 8,030	\$ 8,860	\$ 8,970	\$ 9,070	\$ 9,180
92	End of Year Balance		\$ 730,229	\$ 738,259	\$ 747,119	\$ 756,089	\$ 765,159	\$ 774,339
Construction Fund								
93	Beginning Year Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers In -								
94	Proposed Debt 1		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
95	Proposed Debt 2		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
96	Proposed Debt 3		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
97	Proposed Debt 4		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
98	Proposed Debt 5		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Transfers Out -								
99	Proposed Debt 1 CIP Projects		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
100	Proposed Debt 2 CIP Projects		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
101	Proposed Debt 3 CIP Projects		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
102	Proposed Debt 4 CIP Projects		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
103	Proposed Debt 5 CIP Projects		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interest Income Calculation								
104	Average Annual Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
105	Interest Rate Assumed		1.00%	1.10%	1.20%	1.20%	1.20%	1.20%
106	Interest Income Restricted	Yes	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
107	End of Year Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interest Income								
108	Unrestricted	No	\$ 76,491	\$ 75,008	\$ 69,084	\$ 60,836	\$ 57,605	\$ 58,580
109	Restricted	Yes	\$ 30,130	\$ 33,470	\$ 35,140	\$ 32,000	\$ 28,810	\$ 25,610
110	Total Interest Income		\$ 106,621	\$ 108,478	\$ 104,224	\$ 92,836	\$ 86,415	\$ 84,190
System Allocated Unrestricted Interest Income (Based on Revenue)								
111	Water System	64.32%	\$ 49,199	\$ 48,245	\$ 44,435	\$ 39,130	\$ 37,052	\$ 37,679
112	Wastewater System	35.68%	\$ 27,292	\$ 26,763	\$ 24,649	\$ 21,706	\$ 20,553	\$ 20,901

Table 19

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Summary of Proposed Rates - Water and Wastewater System

Line No.	Description	2021	2022	2023	2024	2025
1	Rate Indexing Factor		11.00%	10.00%	5.00%	2.50%
<u>Water Service:</u>						
Residential Metered Services (Bi-Monthly)						
2	Water Flat Charge	\$ 40.00	\$ 44.40	\$ 48.84	\$ 51.28	\$ 52.56
Usage Charge per Unit (per 1,000 gallons)						
3	Block 1 (0-10,000 gallons)	\$ 2.13	\$ 2.36	\$ 2.60	\$ 2.73	\$ 2.80
4	Block 2 (10,001-20,000 gallons)	2.88	3.20	3.52	3.70	3.79
5	Block 3 (20,001-55,000 gallons)	4.47	4.96	5.46	5.73	5.87
6	Block 4 (55,001-80,000 gallons)	6.50	7.22	7.94	8.34	8.55
7	Block 5 (80,001 gallons and above)	8.50	9.44	10.38	10.90	11.17
Multi-Family Services (Bi-Monthly)						
8	Water Flat Charge	\$ 40.00	\$ 44.40	\$ 48.84	\$ 51.28	\$ 52.56
Usage Charge per Unit (per 1,000 gallons)						
9	Block 1 (0-10,000 gallons)	\$ 2.00	\$ 2.36	\$ 2.60	\$ 2.73	\$ 2.80
10	Block 2 (10,001-20,000 gallons)	2.70	3.20	3.52	3.70	3.79
11	Block 3 (20,001-55,000 gallons)	4.30	4.96	5.46	5.73	5.87
12	Block 4 (55,001-80,000 gallons)	6.50	7.22	7.94	8.34	8.55
13	Block 5 (80,001 gallons and above)	8.50	9.44	10.38	10.90	11.17
Commercial Services (Bi-Monthly)						
Base Service Charge:						
14	Water Flat Charge	\$ 40.00	\$ 44.40	\$ 48.84	\$ 51.28	\$ 52.56
Usage Charge per Unit (per 1,000 gallons)						
15	Block 1 (0-10,000 gallons)	\$ 2.00	\$ 2.36	\$ 2.60	\$ 2.73	\$ 2.80
16	Block 2 (10,001-20,000 gallons)	2.70	3.20	3.52	3.70	3.79
17	Block 3 (20,001-55,000 gallons)	4.30	4.96	5.46	5.73	5.87
18	Block 4 (55,001-80,000 gallons)	6.50	7.22	7.94	8.34	8.55
19	Block 5 (80,001 gallons and above)	8.50	9.44	10.38	10.90	11.17
<u>Wastewater Service:</u>						
20	Rate Indexing Factor		13.00%	12.00%	5.00%	2.50%
Residential Metered Services (Bi-Monthly)						
21	Water Flat Charge	\$ 29.55	\$ 33.39	\$ 37.40	\$ 39.27	\$ 40.25
Usage Charge per Unit (per 1,000 gallons)						
22	Block 1 (0-20,000 gallons)	\$ 2.41	\$ 2.72	\$ 3.05	\$ 3.20	\$ 3.28
Multi-Family Services (Bi-Monthly)						
23	Water Flat Charge	\$ 29.55	\$ 33.39	\$ 37.40	\$ 39.27	\$ 40.25
Usage Charge per Unit (per 1,000 gallons)						
24	Block 1 (0-20,000 gallons)	\$ 2.41	\$ 2.72	\$ 3.05	\$ 3.20	\$ 3.28
Commercial Services (Bi-Monthly)						
Base Service Charge:						
25	Water Flat Charge	\$ 29.55	\$ 33.39	\$ 37.40	\$ 39.27	\$ 40.25
Usage Charge per Unit (per 1,000 gallons)						
26	Block 1	\$ 2.41	\$ 2.72	\$ 3.05	\$ 3.20	\$ 3.28

Table 20

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Comparison of Typical Monthly Residential Bills for Water Service [1]

Line No.	Description	Residential Service for a 5/8" or 3/4" Meter							
		0 Gallons	2,000 Gallons	4,000 Gallons	6,000 Gallons	8,000 Gallons	10,000 Gallons	15,000 Gallons	30,000 Gallons
Town of Highland Beach									
1	Existing Rates - FY2021	\$17.30	\$22.26	\$27.22	\$32.18	\$37.14	\$43.02	\$64.57	\$134.66
2	Proposed - April 1, 2021	20.00	24.26	28.52	33.53	39.29	45.05	67.40	139.53
Other Florida Utilities:									
3	City of Boca Raton	14.69	16.41	18.13	19.85	21.57	23.29	30.61	64.61
4	Broward County	17.13	20.37	24.90	30.72	44.36	58.00	96.39	220.14
5	City of Boynton Beach [2]	12.90	16.34	19.78	23.23	26.67	31.48	46.93	93.28
6	City of Cooper City [2]	12.79	19.15	25.51	32.37	39.73	47.09	70.39	154.89
7	City of Coral Springs [2]	14.44	18.06	21.68	27.24	32.80	41.14	68.23	193.28
8	City of Dania Beach	14.55	22.73	30.91	41.54	54.62	67.70	102.03	224.58
9	City of Delray Beach	15.72	15.72	16.97	19.47	21.97	24.47	32.97	70.47
10	Village of Golf [2]	32.20	32.20	32.20	32.20	32.20	32.20	38.93	71.91
11	Town of Hillsboro Beach	24.00	24.00	30.94	37.88	44.82	52.56	73.91	147.06
12	Town of Jupiter [2]	22.21	24.83	27.45	30.07	33.63	37.19	47.45	94.55
13	City of Lake Worth [2]	21.14	27.96	34.78	45.28	55.78	70.00	121.54	339.84
14	Town of Lantana [2]	21.14	23.78	26.42	29.74	33.74	37.74	51.94	100.34
15	Martin County [2]	18.03	22.65	27.27	31.89	36.51	41.13	57.53	124.98
16	Palm Beach County [2]	16.37	19.41	22.45	29.19	35.93	42.67	85.12	222.87
17	Village of Palm Springs [2]	12.27	18.37	24.47	30.57	38.53	46.49	66.39	135.29
18	Town of Palm Beach	23.66	30.99	38.31	45.65	54.82	64.00	89.40	173.25
19	City of West Palm Beach [2]	23.66	30.99	38.31	45.65	54.82	64.00	89.40	173.25
20	Seacoast Utility Authority	22.08	24.32	26.56	28.80	37.62	46.44	68.49	134.64
21	City of Tamarac	11.77	15.31	19.44	24.16	31.28	38.40	64.21	157.66
22	Village of Tequesta [2]	19.67	25.91	32.15	38.39	44.63	50.87	72.86	161.01
23	Village of Wellington	20.01	24.53	29.05	33.57	40.31	47.05	63.90	146.20
24	Other Florida Utilities' Average	\$18.59	\$22.57	\$27.03	\$32.26	\$38.87	\$45.90	\$68.51	\$152.58

Footnotes:

- [1] Unless otherwise noted, amounts shown reflect residential rates in effect October, 2020 and are exclusive of taxes or franchise fees, if any, and reflect rates charged for inside the city service. All rates are as reported by the respective utility. This comparison is intended to show comparable charges for similar service for comparison purposes only and is not intended to be a complete listing of all rates and charges offered by each listed utility.
- [2] Utility is currently involved in a rate study, is planning to conduct a rate study, or will implement a rate revision within the next twelve months.

Table 21

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Comparison of Typical Monthly Residential Bills for Wastewater Service [1]

Line No.	Description	Residential Service for a 5/8" or 3/4" Meter							
		0 Gallons	2,000 Gallons	4,000 Gallons	6,000 Gallons	8,000 Gallons	10,000 Gallons	15,000 Gallons	30,000 Gallons
Town of Highland Beach									
1	Existing Rates - FY2021	\$22.68	\$22.68	\$22.68	\$22.68	\$22.68	\$22.68	\$22.68	\$22.68
2	Proposed - April 1, 2021	14.78	19.60	24.42	29.24	34.06	38.88	38.88	38.88
Other Florida Utilities:									
3	City of Boca Raton	18.58	26.62	34.66	42.70	50.74	58.78	78.88	139.18
4	Broward County	20.54	29.06	37.58	46.10	54.62	63.14	84.44	84.44
5	City of Boynton Beach [2]	18.95	23.31	27.67	32.03	34.21	34.21	34.21	34.21
6	City of Cooper City [2]	26.67	32.71	38.75	44.79	50.83	56.87	56.87	56.87
7	City of Coral Springs [2]	23.85	32.93	42.01	51.09	60.17	69.25	91.95	160.05
8	City of Dania Beach	21.52	36.44	51.36	66.28	81.20	96.12	133.42	245.32
9	City of Delray Beach	18.04	24.82	31.61	38.39	45.17	51.96	58.74	58.74
10	Village of Golf [2]	28.79	28.79	28.79	28.79	28.79	28.79	39.94	73.39
11	Town of Hillsboro Beach	20.54	29.06	37.58	46.10	54.62	63.14	84.44	84.44
12	Town of Jupiter [2]	22.75	22.75	22.75	22.75	22.75	22.75	22.75	22.75
13	City of Lake Worth [2]	15.66	25.14	34.62	44.10	53.58	63.06	72.54	72.54
14	Town of Lantana [2]	14.01	23.71	33.41	43.11	52.81	62.51	62.51	62.51
15	Martin County [2]	18.70	27.84	36.98	46.12	55.26	64.40	64.40	64.40
16	Palm Beach County [2]	18.21	22.33	26.45	36.13	45.81	55.49	55.49	55.49
17	Village of Palm Springs [2]	11.09	25.47	39.85	54.23	68.61	68.61	68.61	68.61
18	Town of Palm Beach	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	City of West Palm Beach [2]	14.32	25.60	36.89	48.17	59.45	70.74	98.95	135.00
20	Seacoast Utility Authority	32.25	33.73	35.21	36.69	38.17	39.65	39.65	39.65
21	City of Tamarac	18.75	28.35	37.95	47.55	57.15	66.75	76.35	76.35
22	Village of Tequesta [2]	22.75	22.75	22.75	22.75	22.75	22.75	22.75	22.75
23	Village of Wellington	19.08	23.28	27.48	31.68	35.88	40.08	50.58	50.58
24	Other Florida Utilities' Average	\$19.29	\$25.94	\$32.59	\$39.50	\$46.31	\$52.34	\$61.78	\$76.54

Footnotes:

- [1] Unless otherwise noted, amounts shown reflect residential rates in effect October, 2020 and are exclusive of taxes or franchise fees, if any, and reflect rates charged for inside the city service. All rates are as reported by the respective utility. This comparison is intended to show comparable charges for similar service for comparison purposes only and is not intended to be a complete listing of all rates and charges offered by each listed utility.
- [2] Utility is currently involved in a rate study, is planning to conduct a rate study, or will implement a rate revision within the next twelve months.

Table 22

Town of Highland Beach, Florida
Revenue Sufficiency and Rate Study - Water and Wastewater Systems

Comparison of Typical Monthly Residential Bills for Combined Service [1]

Line No.	Description	Residential Service for a 5/8" or 3/4" Meter							
		0 Gallons	2,000 Gallons	4,000 Gallons	6,000 Gallons	8,000 Gallons	10,000 Gallons	15,000 Gallons	30,000 Gallons
Town of Highland Beach									
1	Existing Rates - FY2021	\$39.98	\$44.94	\$49.90	\$54.86	\$59.82	\$65.69	\$87.24	\$157.34
2	Proposed - April 1, 2021	34.78	43.86	52.94	62.77	73.35	83.93	106.28	178.40
Other Florida Utilities:									
3	City of Boca Raton	33.27	43.03	52.79	62.55	72.31	82.07	109.49	203.79
4	City of Boynton Beach [2]	31.85	39.65	47.45	55.26	60.88	65.69	81.14	127.49
5	City of Cooper City [2]	39.46	51.86	64.26	77.16	90.56	103.96	127.26	211.76
6	City of Coral Springs [2]	38.29	50.99	63.69	78.33	92.97	110.39	160.18	353.33
7	City of Dania Beach	36.07	59.17	82.27	107.82	135.82	163.82	235.45	469.90
8	City of Delray Beach	33.76	40.54	48.58	57.86	67.14	76.43	91.71	129.21
9	Village of Golf [2]	41.06	47.16	53.26	59.36	67.32	75.28	106.33	208.68
10	Town of Hillsboro Beach	44.20	60.05	75.89	91.75	109.44	127.14	173.84	257.69
11	Town of Jupiter [2]	44.96	47.58	50.20	52.82	56.38	59.94	70.20	117.30
12	City of Lake Worth [2]	36.80	53.10	69.40	89.38	109.36	133.06	194.08	412.38
13	Town of Lantana [2]	35.15	47.49	59.83	72.85	86.55	100.25	114.45	162.85
14	Martin County [2]	36.73	50.49	64.25	78.01	91.77	105.53	121.93	189.38
15	Palm Beach County [2]	34.58	41.74	48.90	65.32	81.74	98.16	140.61	278.36
16	Village of Palm Springs [2]	34.75	56.46	78.16	99.88	123.43	132.61	158.01	241.86
17	Town of Palm Beach	22.08	24.32	26.56	28.80	37.62	46.44	68.49	134.64
18	City of West Palm Beach [2]	26.09	40.91	56.33	72.33	90.73	109.14	163.16	292.66
19	Seacoast Utility Authority	51.92	59.64	67.36	75.08	82.80	90.52	112.51	200.66
20	City of Tamarac	38.76	52.88	67.00	81.12	97.46	113.80	140.25	222.55
21	Other Florida Utilities' Average	\$36.65	\$48.17	\$59.79	\$72.54	\$86.35	\$99.68	\$131.62	\$234.14

Footnotes:

- [1] Unless otherwise noted, amounts shown reflect residential rates in effect October, 2020 and are exclusive of taxes or franchise fees, if any, and reflect rates charged for inside the city service. All rates are as reported by the respective utility. This comparison is intended to show comparable charges for similar service for comparison purposes only and is not intended to be a complete listing of all rates and charges offered by each listed utility.
- [2] Utility is currently involved in a rate study, is planning to conduct a rate study, or will implement a rate revision within the next twelve months.