Item No. 3b

AGENDA ITEM MEMORADUM

Finance
Department

Tony Bryan, Finance Director
Department Director

COMMISSION MEETING DATE (*) - 7:00 PM
☒ June 19, 2012

*Subject to Change

☐ Presentation ☐ Reports ☐ Consent ☐ Ordinance
☐ Resolution ☐ Quasi-Judicial ☒ Old Business ☐ New Business

☐ **FY2012 DESIGNATED HIGH PRIORITY ITEM - PRIORITY TOPIC**

SUBJECT TITLE: SEWER RATE STUDY

EXPLANATION: In response to input from several commercial property owners and residents regarding the impact of the January 2011 sewer rate increase, which was based on the City of Pompano Beach's rate methodology (using the number of units vs. our former methodology of utilizing meter size), the Town retained Burton & Associates to do a rate sufficiency analysis and a rate design analysis. Those analyses and their recommendations for modifying the rates are contained in the attached draft report (**Exhibit 1**).

Sewer Fund Financial Management Plan Portion of the Study

Burton's first step was to project the financial needs of the Sewer Fund over the next ten years. Town staff provided Burton with a copy of the King Engineering's 2011 Sewer Evaluation Report.

In addition, we projected lateral repairs will cost $150,000, although at this time that is a very preliminary estimate. To improve that estimate, TeleVac has televised all of the laterals and King is analyzing the tapes for the area south of Commercial Boulevard. TeleVac is televising the area north of Commercial and those video tapes will be provided to King for analysis in the near future. Burton included the $150,000 estimate in their ten year expense projections.

The Commission asked Burton to advise them regarding how much of a reserve should be maintained in the Sewer Fund, separate and apart from the amount of fund balance that it used for capital repairs. Burton is recommending that six months of operating and maintenance costs be maintained as an operating reserve and they included that assumption in their ten year model. Town staff provided them with the Sewer fund balance and it is included in their model.

Burton's modeling projects that the Town can forego sewer rate increases through 2017. Annual 2% increases will be required in 2018 through 2022 to cover anticipated costs and maintain an adequate operating reserve. The alternative is to defer rate increases and have larger rate increases later. Burton's model is very interactive and they will demonstrate during their presentation the effect on future rates if the Town delays annual rate adjustments.

Rate Methodology Portion of the Study

Under the rate structure being proposed:

1. Single family residential properties would experience a reduction in the fixed component of the rate (from the current $14.89 per month to $12.71 per month and an increase in the volumetric rate (from $3.46 per thousand gallons per month to $5.70).

   Single family homes using between 5,000 and 7,000 gallons per month will see increases in the monthly bill ranging from 28% to 35%.

2. Multi-family units would see their fixed monthly rate per unit drop from $14.26 to $6.01, in recognition of the data analysis which shows they place considerably less demand on the sewer system than do single-family homes. They would be charged the same volume rate ($5.70 per thousand gallons) that single-family homes are charged.

   Approximately half of the monthly billings for duplexes reflect usage of less than 7,000 gallons. These customers will see reductions ranging from -62% to -4%. Duplexes that use 8,000 gallons per month will see increases in their bills.

   Burton provided an impact summary for a 24 unit multi-family dwelling. Approximately 50% of the monthly billings were for less than 65,000 gallons, at which point, this customer will see a -14.5% reduction in their monthly bills.

3. The biggest change would occur in rates for commercial properties. The difference in demand on the system from one commercial property to another is significant. In order to deal with this difference, Burton is recommending the Town assign a certain number of units to commercial properties according to the American Water Works Association's (**AWWA**) meter equivalency factor guidelines based on meter size (with larger meters representing a greater number of equivalent residential units). The Base Facility Charge will be apportioned to commercial

properties by multiplying the single family residential base facility charge ($11.40) by the number of equivalent units.

Burton is also recommending that the Town reduce the proportion of the overall revenues recovered through the fixed component and increase the volumetric rate (from $3.46 per thousand gallons to $5.70), charges to individual commercial customers will be more aligned with actual usage. The data shows the largest impact of this change will be on large restaurants that consume a great deal of water. They were the least impacted by the rate increase adopted in January 2011. We have asked Burton to analyze the impact of the proposed rate change on the commercial properties that are the greatest water consumers so that information will be available before the Commission adopts any rate changes.

Alternative Scenario

As indicated above, the recommended rate structure is based on keeping overall sewer revenues the same through 2017 and increasing by 2% annually thereafter. We have asked Burton to prepare an alternative scenario based on a reduction of 5% starting in 2013. The results of his analysis, including required future increases, rates, and customer impact reports will be provided at the Commission meeting.

EXPECTED OUTCOME: Commission direction on sewer rate structure.

EXHIBIT 1. June 19 Draft Technical Memorandum from Burton Associates

Reviewed by Town Attorney
☐ Yes ☒ No

Town Manager Initials _____

File: T:\0 Agenda\6-19-12 Special Commission\6-19-12 AM Burton Sewer Rate Study R_bb.doc

FINAL DRAFT TECHNICAL MEMORANDUM

Burton & Associates
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St. Augustine, FL 32095

Telephone: (904) 247-0787
Facsimile: (904) 241-7708

DATE: June 19, 2012
TO: Connie Hoffmann, Town Manager – Town of Lauderdale-By-The-Sea
FROM: Michael Burton, President – Burton & Associates
RE: **RESULTS OF THE FY 2012 WASTEWATER RATE STUDY**

INTRODUCTION: The Town of Lauderdale-By-The-Sea (the Town) provides wastewater service to the residents and businesses in the southern half of the Town. The Town contracts for wastewater treatment services with the City of Pompano Beach under the terms of an interlocal wastewater service agreement. Water is provided to the Town's residents and businesses by the City of Fort Lauderdale and the Town contracts with the City of Fort Lauderdale for utility billing and customer service for the Town's wastewater customers.

The Town recently retained Burton & Associates to conduct a Wastewater Rate Study (the Study) to 1) develop a multi-year financial management plan and associated plan of annual rate adjustments that would provide sufficient revenues to meet the wastewater utility's current and projected cost requirements, and 2) evaluate the current wastewater rate structure, recommend changes as appropriate and develop proposed wastewater rates using the proposed rate structure that will recover the revenue requirements identified in the financial plan developed under item 1. This Final Draft Technical Memorandum presents the results of the Study.

OBJECTIVE

The Town retained Burton & Associates to perform a Wastewater Rate Study (Study) as part of the financial management of its Wastewater Proprietary Fund (Utility). The objectives of this Study were to:

1. Evaluate the sufficiency of the Utility's current revenues to meet its current and projected cost requirements, and

2. Determine appropriate changes to the wastewater rate structure and develop rates under a recommended rate structure to recover the revenue requirements identified in the financial plan.

As the intent of a Proprietary Fund is to completely recover the cost of providing services through user fees or charges, to the extent that the current wastewater revenues are not sufficient to meet the Utility's current and future cost requirements, rate revenue

adjustments were to be identified in order to satisfy the operating and capital requirements of the Utility over a multi-year projection period. Also, in order to ensure that the wastewater rates recovered the required revenue in a manner that is fair and equitable and in conformance with accepted rate making practice, adjustments to the current rate structure were to be identified and rates computed under the recommended rate structure. The impact of the recommended rates upon customers' monthly wastewater bills under the adjusted rate structure were also to be demonstrated.

BASE DATA

The analysis was performed using the most current historical and projected information available for the Utility. The following sources of the data for the Utility were relied upon in the conduct of the rate study:

1. Beginning Operating Fund Balance for Fiscal Year Ended September 30, 2011 provided by Town staff.
2. FY 2011 wastewater billings (usage and billed amount) by account for the Utility per the City of Fort Lauderdale
3. FY 2012 Budget for revenue and expenditures
4. FY 2012 year-to-date actual revenue and expenditure data through 5/31/2012
5. FY 2013 preliminary budget for revenue and expenditures
6. Additional future operating and capital improvement requirements as identified by Town staff for FY 2012 through FY 2017 based upon King Engineering's analysis of capital needs, adjusted for bid prices where applicable.

KEY ISSUES

The Town operates and maintains the wastewater collection system and contracts with the City of Pompano Beach for wastewater treatment services. A comprehensive wastewater rate study has not been completed for many years; however, in the winter of 2011 the Town adopted Pompano Beach's rates with the Pompano Beach 25% surcharge in order to provide sufficient revenue for the system and to equalize rates among Town residents. This Study was commissioned to ensure that the proper amount of revenues are recovered in the wastewater rates in order to recover all of the Utility's costs and that those wastewater rates fairly and equitably distribute the burden of those costs to customer classes based upon the demands placed upon the system by each customer class.

ANALYSIS

This section describes the analyses conducted during the Study. The study was conducted in two work elements. Work Element I consisted of a revenue sufficiency analysis during which a ten year projection of revenues and expenses and a ten year financial plan were developed for the Utility. Work Element II consisted of a diagnostic evaluation of the current rate structure, determination of recommended adjustments to the rate structure and development of rates under the recommended rate structure. A more detailed description of the analysis conducted in these work elements is described below.

Work Element I – Revenue Sufficiency Analysis

In this work element, a ten year projection was developed of the ability of the Utility's wastewater rates to provide sufficient revenues to meet all of its operations and maintenance (O&M), renewal and replacement and capital projects requirements. We used our Financial Analysis and Management System (FAMS-XL©) model (Model) to facilitate this analysis. The Model was loaded with the Utility's financial and operating data and an initial analysis was developed. Escalation factors were estimated for each cost element in order to project costs over the forecast period. A capital improvement program was loaded into the model with the amount and timing of specific capital projects provided by Town staff. We then met in an interactive work session with Town staff to review the preliminary results and made appropriate adjustments based upon input from Town staff. The revenue requirements for FY 2013 in the results of this analysis were then used to develop specific wastewater rates in Work Element II.

Work Element II – Rate Design

In this work element, we conducted a diagnostic evaluation of the current wastewater rate structure. We recommended adjustments to the rate structure and developed wastewater rates under that rate structure that will recover the revenue requirements for FY 2013 which was identified in Work Element I. We used the Town's FY 2011 billing data, which was provided by the City of Fort Lauderdale, as the basis for development of the proposed wastewater rates. Tables were also developed which demonstrated for each customer class and for customers with various levels of wastewater usage, the monthly wastewater bill with the current rates and the monthly wastewater bill with the proposed rates so that it will be clear as to the impact that the proposed rates will have upon each customer class. We then conducted an interactive work session with Town staff to review the preliminary results and made appropriate adjustments to provide for fair and equitable distribution of costs in accordance with accepted rate making practice based upon the demands placed on the system by the Town's customers.

Technical Memorandum

We then prepared this Final Draft Technical memorandum of the results of the Study. We will meet with the Town Commission to present the preliminary results of the Study and to review this Final Draft Technical Memorandum. Upon receipt of input from the Town Commission and Town staff, we will make any necessary adjustments and prepare a Final Technical Memorandum of the results of the Study.

RESULTS

This section presents the results of the Study. The results are presented for Work Element I – Revenue Sufficiency Analysis and for Work Element II – Rate Design in the two following sections.

Work Element I – Revenue Sufficiency Analysis

The results of this work element consist of a ten year financial plan for the Utility. This plan identifies annual rate adjustments to ensure that 1) the wastewater rates generate sufficient revenue to cover all of the utilities operations and maintenance (O&M) costs and capital costs in each year of the projection period, and 2) that adequate working capital reserves (equal to six months of O&M expenses) are maintained throughout the projection period. This level of reserves is recommended to ensure that the Utility has sufficient resources for liquidity, unforeseen system failures and natural disasters such as hurricanes. The first five years of the projection period are considered to be the planning period (projections will be more accurate during the first five years) and the second five years are a projection period (projections are more likely to vary from actual outcomes the further into the future the projections are made).

The results of this work element show that no annual rate revenue adjustments will be necessary through FY 2017. However, beginning in FY 2018 2.0% annual rate revenue adjustments will be required in order to provide sufficient revenue in the remaining years of the projection period to cover all of the cost requirements of the wastewater system without the need for borrowing to fund the capital improvement program. A summary of the results of the Revenue Sufficiency Analysis is presented in the Control Panel of the FAMS-XL© model on the following page. Schedules of O&M costs and the Capital Improvements Program that are included in this analysis are presented on the pages following the Control Panel.

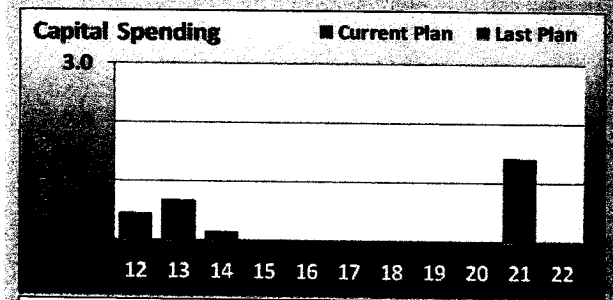
Lauderdale-By-The-Sea
Wastewater System Financial Plan Summary

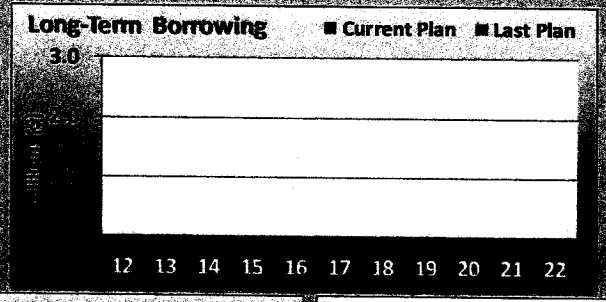
FINANCIAL ANALYSIS AND MANAGEMENT SYSTEM (FAMS) SUMMARY

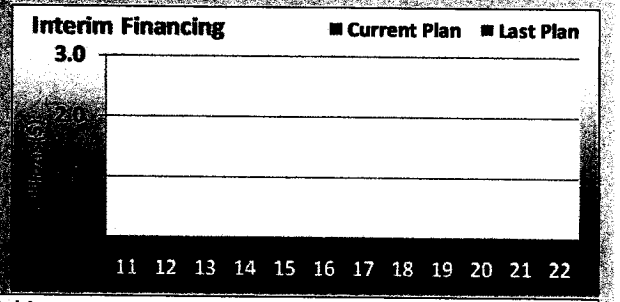
SAVE CALC

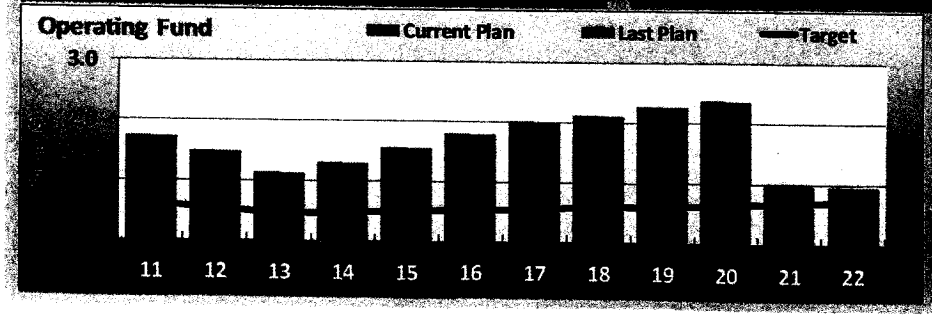
	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Cumulative Change
Override ▶							2.00%	2.00%	2.00%	2.00%	2.00%	
Sewer Rate Increases	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.00%	2.00%	2.00%	2.00%	2.00%	0.00%	10.25%
Last Plan													
Rate Covenant													
Last Plan													
SRF Coverage													
Last Plan													
CIP Execution % ▶	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%		
Operating Reserve % ▶	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%		

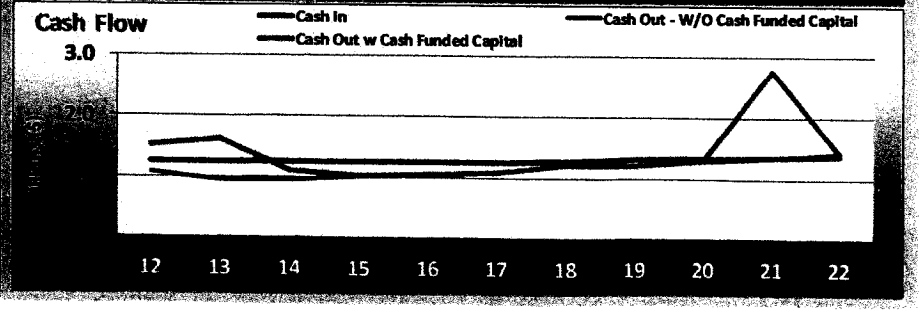
PS FY13 ▶	100%
OMV FY13 ▶	100%
OMF FY13 ▶	100%
Elasticity	0.10











OPERATIONS AND MAINTENANCE EXPENSES

		FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
1	Salaries	$69,654	$71,395	$73,180	$75,010	$76,885	$78,807	$80,777	$82,796	$84,866	$86,988	$89,163
2	FICA	3,872	4,000	4,100	4,203	4,308	4,415	4,526	4,639	4,755	4,874	4,995
3	Retirement	4,880	5,100	5,228	5,359	5,493	5,630	5,771	5,915	6,063	6,214	6,370
4	Group Insurance	6,500	7,000	7,500	8,250	9,075	9,983	10,981	12,079	13,287	14,615	16,077
5	Professional Services	94,000	8,400	14,800	22,600	29,300	9,600	24,800	10,200	30,500	31,263	32,044
6	Wastewater Trans & Treat Fees	731,000	688,071	669,355	709,517	752,088	797,213	845,046	895,748	949,493	1,006,463	1,066,851
7	Contractual Services	12,000	12,500	13,000	13,325	13,658	14,000	14,350	14,708	15,076	15,453	15,839
8	Utilities	16,500	17,500	18,000	19,080	20,225	21,438	22,725	24,088	25,533	27,065	28,689
9	Auto Insurance	7,753	8,000	8,250	8,456	8,668	8,884	9,106	9,334	9,567	9,807	10,052
10	Workers Comp Insurance	2,158	2,300	2,500	2,563	2,627	2,692	2,760	2,829	2,899	2,972	3,046
11	Sewer Line Maintenance	43,030	27,000	27,800	57,300	29,500	30,400	77,500	33,000	33,000	33,825	34,671
12	Lateral TVing	65,000	0	10,000	10,250	10,506	10,769	11,038	11,314	11,597	11,887	12,184
13	Pump Station Maintenance	10,000	10,000	18,300	5,000	5,000	5,000	5,000	5,000	5,000	5,125	5,253
14	Contingency	0	50,000	50,000	51,250	52,531	53,845	55,191	56,570	57,985	59,434	60,920
15	Emergency Repairs	10,000	25,000	25,000	25,625	26,266	26,922	27,595	28,285	28,992	29,717	30,460
16	Capital Outlay	0	5,000	5,000	5,125	5,253	5,384	5,519	5,657	5,798	5,943	6,092
17	Total	$1,076,347	$941,266	$952,013	$1,022,911	$1,051,381	$1,084,982	$1,202,683	$1,202,163	$1,284,412	$1,351,645	$1,422,706

CAPITAL IMPROVEMENT PROGRAM

Project No.	Project Description	Year											
		FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	TOTAL
1	Grouting	$95,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$95,000
2	Cured In Place Liners	357,000	0	0	0	0	0	0	0	0	0	0	357,000
3	Sectional Liners	0	116,000	0	0	0	0	0	0	0	0	0	116,000
4	T Liners	0	341,000	0	0	0	0	0	0	0	0	0	341,000
5	Sewer Cleanouts	0	200,000	0	0	0	0	0	0	0	0	0	200,000
6	Laterals Rehab	0	0	150,000	0	0	0	0	0	0	0	0	150,000
7	Point Repairs	0	29,000	0	0	0	0	0	0	0	0	0	29,000
8	LS#24 Generator Replacement	0	0	0	0	0	0	0	0	0	52,000	0	52,000
9	LS#24 Full Upgrade	0	0	0	0	0	0	0	0	0	783,000	0	783,000
10	LS#24 Flow Meter Replacement	0	0	0	0	0	0	0	0	0	15,700	0	15,700
11	LS#25 Full Upgrade	0	0	0	0	0	0	0	0	0	268,000	0	268,000
	Total	$452,000	$686,000	$150,000	$0	$0	$0	$0	$0	$0	$1,118,700	$0	2,406,700

Work Element II – Rate Design

During the diagnostic evaluation of the current rate structure we noted the following areas where we recommend adjustments:

Customer costs:

Discussion

Customer costs are the costs of meter reading, billing and collections and customer service. These costs are incurred equally for all accounts regardless of class, meter size, units behind a master meter or usage.

Recommendation

Therefore, we recommend inclusion of customer costs in an Admin Fee component of the fixed monthly charge apportioned equally to each account.

Readiness-to-Serve Costs (Base Facility Charge):

Discussion

Fixed costs of the system must be incurred regardless of usage. Therefore, it is appropriate to recover some portion of the fixed costs in a fixed monthly Base Facility Charge. This charge represents the recovery of costs to serve the potential demands of customers and is therefore appropriate to be apportioned to customers based upon some measure of the potential demand by customer class. Factors that are typically used to apportion costs included in this charge are meter size (with larger meters representing higher potential demands) or residential units served behind multi-family master meters. All single family customers are treated the same regardless of meter size because the usage of single family customers does not vary significantly by meter size.

Under the current rate structure approximately 50% of wastewater revenue is recovered in the monthly base facility charge. This is rather high compared to industry practice wherein utilities typically collect from 15% to 30% of the revenue requirement in the base facility charge.

In the current rate structure, the costs included in this charge are apportioned to customer classes as follows:

Single Family Residential:

Equal per account.

Multi-Family Master Metered:

Equal per unit served by the master meter (slightly less per unit than for the single family class).

Master Metered Commercial:

Equal per unit serviced by the master meter. The number of units assigned to each customer is based upon a table that was adopted from Pompano Beach that assigns a different number of units for each customer based upon business type.

Recommendation

We recommend the following adjustments to the wastewater rate structure:

Percentage of Revenue Requirement in the Base Facility Charge:

We recommend that the percentage of the revenue recovered through the base facility charge be reduced to 20%. This will be more in line with industry practice and will place more of the revenue burden in the usage charge so that high volume users will pay their fair share of the costs of service in their usage rate.

Single Family Residential:

- Include an Administrative Cost Component to recover customer costs - Spread equally to each account
- No change to the Base Facility Charge structure – Each account pays the same base facility charge

Multi-Family Master Metered:

Adjust as follows – Because the demand of a multi-family unit is less than the demand of a single family customer, we recommend that Readiness-to-Serve costs in the Base Facility Charge be apportioned to Multi-family Master Metered customers based upon a unit equivalency factor[1] applied to each unit that represents the average usage per unit, adjusted to peak-month levels, compared to the average usage per unit for single family customers. This factor was determined to be .41, which means that the potential demand of a multi-family unit, on average, is 41% of that of a single family customer. This adjustment will result in the Base Facility Charge per unit for this class being 41% of the Base Facility Charge for a single family customer. The average usage basis for this determination is presented below:

Average Monthly Use per Unit		
Customer Class	Avg Use	% of SF
Single Family	7.70	100%
Multi Family	3.18	41%

Master Metered Commercial:

Adjust as follows – Because the current units for accounts in this class were adopted from the Pompano Beach rates and the basis is not able to be

[1] A unit equivalency factor is a factor that expresses average peak period demand of a multi-family unit as a fractional multiple of the average peak period demand of a single family customer.

determined and because some of the unit designations by property use appear to not be reflective of demands, we recommend an alternative approach to the rate structure for this class.

The challenge in determining the appropriate apportionment of Base Facility Charge costs for this class is that unlike the residential single family and multi-family classes, usage from account to account in this class varies considerably and there is not a perfect apportionment factor for spreading of these Base Facility Charge costs within this class. However, meter size is typically used as the apportionment basis, with larger meter sizes representing a higher potential demand and the recommended rates presented herein use meter size (with American Water Works Association meter equivalency factor[2] guidelines by meter size) as the basis for the Base Facility Charge for this class.

Usage Costs:

Discussion

All costs not recovered in the fixed monthly charge are recovered in a usage charge per 1,000 gallons of water billed. Billed water is used because it is the only measure of actual usage available, with the assumption that the water billed is returned as sewerage for treatment. The exception is that for residential customers some water usage may be for irrigation and is not returned as sewerage for treatment. Therefore, it is common to cap sewer billing for the residential class at a level where in most cases usage above the cap is used for irrigation and is not returned as sewerage for treatment. The current rates cap sewer billings for residential units at 10,000 gallons per month.

Recommendation

The average usage for the single family class is approximately 7,700 gallons per month. Given the variability of indoor usage for this class and the closeness of the average usage to the current sewer billing cap, we recommend that the current sewer billing cap of 10,000 per month per unit be kept in place for residential customers. We recommend that the Town continue to bill commercial customers for sewer for all water usage.

The results of this work element are the recommended rates presented in the table on the following page. The current rates are also shown for a comparison. Detailed schedules of the impact of these rates upon the monthly bills of customers by class are presented in the Appendix.

[2] A meter equivalency factor is a factor that expresses the maximum demand that can be delivered through a specific sized meter as a multiple of the maximum demand that can be delivered through a 5/8 x 3/4" meter, which is the typical meter size for a single family customer

Existing and Recommend Wastewater Rates:

Existing Rates			
Charge Type	Single Family Residential	Multi Family Residential	Commercial
Base Facility Charge (by ERU)	$ 14.89	$ 14.26	$ 16.33
Usage Charge (per 1,000 gallons)	$ 3.46	$ 3.46	$ 3.46

Proposed Rates			
Charge Type	Single Family Residential	Multi Family Residential	Commercial
Cust Service/Admin Charge (by bill)	$ 1.31	$ 1.31	$ 1.31
Base Facility Charge (by ERU)	$ 11.40	$ 4.70	$ 11.40
Usage Charge (per 1,000 gallons)	$ 5.70	$ 5.70	$ 5.70

RATE SURVEY

We have included a survey of rates in other communities in the area which is presented on the following page. For each entity in the survey it shows the monthly bill of a single family customer with 6,000 gallons per month of water usage.

Single-Family Residential Rate Comparison

Note: To be provided prior to the Commission meeting on June 19, 2012 and to be included in the final Technical Memorandum.

CONCLUSIONS & RECOMMENDATIONS

Based upon the analysis presented herein, we have reached the following conclusions and recommendations regarding the Town's wastewater system:

Conclusions:

1. The Utility's current rates are sufficient to meet its projected costs over the forecast period of FY 2013 through FY 2017. However, rate revenue increases will be required in the projection period of FY 2018 through FY 2022 to fund the projected requirements without borrowing to fund the capital improvement program.
2. The current rate structure should be adjusted to achieve a fairer and more equitable distribution of the costs to customer classes and to customers within each class.

Recommendations:

1. Adopt the plan of no rate adjustments for FY 2013 through FY 2017. Review the analysis periodically to determine if the projected 2.0% annual inflationary level adjustments presented herein for FY 2018 through FY 2022 continue to be required.
2. Adopt the schedule of rates presented herein to be effective on October 1, 2012, which reflect adjustments to the rate structure as recommended herein but do not include additional revenue above that being generated by the current rates (revenue neutral).
3. Perform an annual review/update of the revenue sufficiency analysis to ensure that as events actually occur, the plan can be adjusted as necessary to continue to provide sufficient revenues to meet the Utility's needs.

If you have any question or would like to discuss this Final Draft Technical Memorandum, please do not hesitate to call me at (904) 247-0787.

Sincerely,

Michael E. Burton
President

APPENDIX

The following pages of this appendix present tables for each customer class which present the impact that the proposed rates will have upon the monthly wastewater bill compared to the monthly wastewater bill with the current rates. **The range of average use for each table is represented within the light blue lined box on each table.** A description of the elements of the customer impact tables follows:

Column	Description
First	The usage of a bill
Second	The number of bills issued for that class at the usage in the first column
Third	The percentage of bills issued for that class at the usage in the first column
Fourth	The aggregate or cumulative percentage of bills issued for that class for all levels of usage up through the usage in the first column
Fifth	The monthly bill for that class with the current rates at the usage in the first column
Sixth	The monthly bill for that class with the proposed rates at the usage in the first column
Seventh	The dollar change in the bill for that class from the current rates to the proposed rates at the of usage in the first column
Eighth	The percentage change in the bill for that class from the current rates to the proposed rates at the usage in the first column

Single Family Monthly Sewer Bill Calculations						
(Gallons)	% of Bills	Agg. %	Current (FY 11)	Proposed (FY 12)	$ Chg	% Chg
-	4.8%	4.8%	$ 14.89	$ 12.71	$ (2.18)	-14.6%
1,000	7.0%	11.8%	$ 18.35	$ 18.41	$ 0.06	0.3%
2,000	11.0%	22.8%	$ 21.81	$ 24.11	$ 2.30	10.5%
3,000	10.0%	32.8%	$ 25.27	$ 29.81	$ 4.54	18.0%
4,000	6.4%	39.3%	$ 28.73	$ 35.51	$ 6.78	23.6%
5,000	8.3%	47.6%	$ 32.19	$ 41.21	$ 9.02	28.0%
6,000	8.2%	55.8%	$ 35.65	$ 46.91	$ 11.26	31.6%
7,000	7.1%	62.9%	$ 39.11	$ 52.61	$ 13.50	34.5%
8,000	4.8%	67.7%	$ 42.57	$ 58.31	$ 15.74	37.0%
9,000	5.0%	72.7%	$ 46.03	$ 64.01	$ 17.98	39.1%
10,000	4.4%	77.1%	$ 49.49	$ 69.71	$ 20.22	40.9%
11,000	3.5%	80.6%	$ 49.49	$ 69.71	$ 20.22	40.9%
12,000	2.4%	83.0%	$ 49.49	$ 69.71	$ 20.22	40.9%
13,000	2.3%	85.3%	$ 49.49	$ 69.71	$ 20.22	40.9%
14,000	2.6%	87.9%	$ 49.49	$ 69.71	$ 20.22	40.9%
15,000	1.3%	89.2%	$ 49.49	$ 69.71	$ 20.22	40.9%
16,000	0.8%	90.0%	$ 49.49	$ 69.71	$ 20.22	40.9%
17,000	1.4%	91.4%	$ 49.49	$ 69.71	$ 20.22	40.9%
18,000	0.9%	92.3%	$ 49.49	$ 69.71	$ 20.22	40.9%
19,000	0.6%	92.9%	$ 49.49	$ 69.71	$ 20.22	40.9%
20,000	0.6%	93.5%	$ 49.49	$ 69.71	$ 20.22	40.9%

Duplex

Multi-Family Sewer Bill Comparison				Meter Size		Units
Gallons	# of Bills	% of Bills	Agg. % of Bills	Current	Proposed	$ Chg.	% Chg.
-	66	5.5%	5.5%	$ 28.52	$ 10.71	$ (17.81)	-62.4%
1,000	36	3.0%	8.6%	$ 31.98	$ 16.41	$ (15.57)	-48.7%
2,000	79	6.6%	15.2%	$ 35.44	$ 22.11	$ (13.33)	-37.6%
3,000	83	7.0%	22.2%	$ 38.90	$ 27.81	$ (11.09)	-28.5%
4,000	86	7.2%	29.4%	$ 42.36	$ 33.51	$ (8.85)	-20.9%
5,000	86	7.2%	36.6%	$ 45.82	$ 39.21	$ (6.61)	-14.4%
6,000	72	6.0%	42.7%	$ 49.28	$ 44.91	$ (4.37)	-8.9%
7,000	74	6.2%	48.9%	$ 52.74	$ 50.61	$ (2.13)	-4.0%
8,000	65	5.5%	54.3%	$ 56.20	$ 56.31	$ 0.11	0.2%
9,000	74	6.2%	60.5%	$ 59.66	$ 62.01	$ 2.35	3.9%
10,000	63	5.3%	65.8%	$ 63.12	$ 67.71	$ 4.59	7.3%
15,000	26	2.2%	81.9%	$ 80.42	$ 96.21	$ 15.79	19.6%
20,000	18	1.5%	91.9%	$ 97.72	$ 124.71	$ 26.99	27.6%
25,000	7	0.6%	95.6%	$ 115.02	$ 153.21	$ 38.19	33.2%
30,000	4	0.3%	98.6%	$ 132.32	$ 181.71	$ 49.39	37.3%
35,000	1	0.1%	99.2%	$ 149.62	$ 210.21	$ 60.59	40.5%
40,000	1	0.1%	99.7%	$ 166.92	$ 238.71	$ 71.79	43.0%
45,000	0	0.0%	99.9%	$ 184.22	$ 267.21	$ 82.99	45.0%
50,000	0	0.0%	99.9%	$ 201.52	$ 295.71	$ 94.19	46.7%
51,000	0	0.0%	99.9%	$ 204.98	$ 301.41	$ 96.43	47.0%
52,000	1	0.1%	100.0%	$ 208.44	$ 307.11	$ 98.67	47.3%
53,000	0	0.0%	100.0%	$ 211.90	$ 312.81	$ 100.91	47.6%
54,000	0	0.0%	100.0%	$ 215.36	$ 318.51	$ 103.15	47.9%
55,000	0	0.0%	100.0%	$ 218.82	$ 324.21	$ 105.39	48.2%

Multi-Family Sewer Bill Comparison				Meter Size		4	Units	
Gallons	# of Bills	% of Bills	Agg. % of Bills	Current	Proposed		$ Chg.	% Chg.
35,000	0	0.0%	0.0%	$ 463.34	$ 313.66		$ (149.68)	-32.3%
40,000	0	0.0%	0.0%	$ 480.64	$ 342.16		$ (138.48)	-28.8%
45,000	0	0.0%	5.6%	$ 497.94	$ 370.66		$ (127.28)	-25.6%
50,000	0	0.0%	22.2%	$ 515.24	$ 399.16		$ (116.08)	-22.5%
55,000	0	0.0%	27.8%	$ 532.54	$ 427.66		$ (104.88)	-19.7%
56,000	1	2.8%	30.6%	$ 536.00	$ 433.36		$ (102.64)	-19.1%
57,000	0	0.0%	30.6%	$ 539.46	$ 439.06		$ (100.40)	-18.6%
58,000	0	0.0%	30.6%	$ 542.92	$ 444.76		$ (98.16)	-18.1%
59,000	0	0.0%	30.6%	$ 546.38	$ 450.46		$ (95.92)	-17.6%
60,000	2	5.6%	36.1%	$ 549.84	$ 456.16		$ (93.68)	-17.0%
61,000	0	0.0%	36.1%	$ 553.30	$ 461.86		$ (91.44)	-16.5%
62,000	0	0.0%	36.1%	$ 556.76	$ 467.56		$ (89.20)	-16.0%
63,000	1	2.8%	38.9%	$ 560.22	$ 473.26		$ (86.96)	-15.5%
64,000	2	5.6%	44.4%	$ 563.68	$ 478.96		$ (84.72)	-15.0%
65,000	2	5.6%	50.0%	$ 567.14	$ 484.66		$ (82.48)	-14.5%
66,000	2	5.6%	55.6%	$ 570.60	$ 490.36		$ (80.24)	-14.1%
67,000	2	5.6%	61.1%	$ 574.06	$ 496.06		$ (78.00)	-13.6%
68,000	0	0.0%	61.1%	$ 577.52	$ 501.76		$ (75.76)	-13.1%
69,000	0	0.0%	61.1%	$ 580.98	$ 507.46		$ (73.52)	-12.7%
70,000	0	0.0%	61.1%	$ 584.44	$ 513.16		$ (71.28)	-12.2%
71,000	0	0.0%	61.1%	$ 587.90	$ 518.86		$ (69.04)	-11.7%
72,000	1	2.8%	63.9%	$ 591.36	$ 524.56		$ (66.80)	-11.3%
73,000	1	2.8%	66.7%	$ 594.82	$ 530.26		$ (64.56)	-10.9%
74,000	2	5.6%	72.2%	$ 598.28	$ 535.96		$ (62.32)	-10.4%
75,000	0	0.0%	72.2%	$ 601.74	$ 541.66		$ (60.08)	-10.0%
85,000	0	0.0%	91.7%	$ 636.34	$ 598.66		$ (37.68)	-5.9%
90,000	0	0.0%	97.2%	$ 653.64	$ 627.16		$ (26.48)	-4.1%
95,000	0	0.0%	97.2%	$ 670.94	$ 655.66		$ (15.28)	-2.3%
100,000	1	2.8%	100.0%	$ 688.24	$ 684.16		$ (4.08)	-0.6%

Commercial – 2" Meter, 1 Unit - Restaurant Customer Impact

Commercial Sewer Bill Comparison	Meter Size			Units
Gallons	Current	Proposed	$ Chg.	% Chg.
155000	$ 552.63	$ 1,059.98	$ 507.35	91.8%
200000	$ 708.33	$ 1,367.34	$ 659.01	93.0%

Commercial Sewer Bill Comparison:	1.5	Meter Size	11	Units

Gallons	# of Bills	% of Bills	Agg. % of Bills	Current	Proposed	$ Chg.	% Chg.
14,000	1	1.7%	1.7%	$ 228.07	$ 172.31	$ (55.76)	-24.4%
15,000	0	0.0%	1.7%	$ 231.53	$ 178.01	$ (53.52)	-23.1%
16,000	0	0.0%	1.7%	$ 234.99	$ 183.71	$ (51.28)	-21.8%
18,000	1	1.7%	3.3%	$ 241.91	$ 195.11	$ (46.80)	-19.3%
20,000	0	0.0%	6.7%	$ 248.83	$ 206.51	$ (42.32)	-17.0%
22,000	0	0.0%	8.3%	$ 255.75	$ 217.91	$ (37.84)	-14.8%
24,000	1	1.7%	11.7%	$ 262.67	$ 229.31	$ (33.36)	-12.7%
26,000	0	0.0%	18.3%	$ 269.59	$ 240.71	$ (28.88)	-10.7%
28,000	1	1.7%	21.7%	$ 276.51	$ 252.11	$ (24.40)	-8.8%
30,000	0	0.0%	25.0%	$ 283.43	$ 263.51	$ (19.92)	-7.0%
32,000	3	5.0%	33.3%	$ 290.35	$ 274.91	$ (15.44)	-5.3%
34,000	0	0.0%	45.0%	$ 297.27	$ 286.31	$ (10.96)	-3.7%
36,000	2	3.3%	50.0%	$ 304.19	$ 297.71	$ (6.48)	-2.1%
38,000	1	1.7%	55.0%	$ 311.11	$ 309.11	$ (2.00)	-0.6%
40,000	2	3.3%	61.7%	$ 318.03	$ 320.51	$ 2.48	0.8%
42,000	0	0.0%	61.7%	$ 324.95	$ 331.91	$ 6.96	2.1%
44,000	2	3.3%	66.7%	$ 331.87	$ 343.31	$ 11.44	3.4%
46,000	1	1.7%	70.0%	$ 338.79	$ 354.71	$ 15.92	4.7%
48,000	1	1.7%	73.3%	$ 345.71	$ 366.11	$ 20.40	5.9%
50,000	0	0.0%	75.0%	$ 352.63	$ 377.51	$ 24.88	7.1%
52,000	0	0.0%	75.0%	$ 359.55	$ 388.91	$ 29.36	8.2%
54,000	0	0.0%	75.0%	$ 366.47	$ 400.31	$ 33.84	9.2%
56,000	2	3.3%	78.3%	$ 373.39	$ 411.71	$ 38.32	10.3%
58,000	1	1.7%	80.0%	$ 380.31	$ 423.11	$ 42.80	11.3%
60,000	0	0.0%	80.0%	$ 387.23	$ 434.51	$ 47.28	12.2%
70,000	0	0.0%	81.7%	$ 421.83	$ 491.51	$ 69.68	16.5%
80,000	0	0.0%	88.3%	$ 456.43	$ 548.51	$ 92.08	20.2%
85,000	1	1.7%	95.0%	$ 473.73	$ 577.01	$ 103.28	21.8%
100,000	0	0.0%	96.7%	$ 525.63	$ 662.51	$ 136.88	26.0%
109,000	1	1.7%	100.0%	$ 556.77	$ 713.81	$ 157.04	28.2%