City of Rockville

Utility Rate Study

Final Report

December 24, 2014

Prepared by:

BURTON & ASSOCIATES

UTILITY RATES ▪ ASSESSMENTS ▪ FINANCIAL PLANNING

BURTON & ASSOCIATES

December 24, 2014

Mr. Gavin Cohen
CFO/Director of Finance
City of Rockville
111 Maryland Avenue
Rockville, MD 20850

Re: Utility Rate Study

Dear Mr. Cohen,

Burton & Associates is pleased to present this Final Report of the comprehensive Utility Rate Study (Study) that we performed for the Water and Sewer Enterprise Funds of the City of Rockville (City).

We appreciate the fine assistance provided by you and all of the members of City staff who participated in the analysis, as well as the opportunity to be of service to the City.

If you or others at the City have any questions, please do not hesitate to call me at (813) 443-5138 or email me at aburnham@burtonandassociates.com.

Sincerely,

Andrew J. Burnham
Senior Vice President

Enclosure

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EXECUTIVE SUMMARY

E.1 INTRODUCTION

This executive summary presents an overview of the results of the Utility Rate Study (Study) that was conducted for the water and sewer systems (Utility) of the City of Rockville, Maryland (City) by Burton & Associates.

E.1.1 Objectives

The principal objectives or components of the Study are as follows:

Revenue Sufficiency Analysis – Develop a multi-year plan of water and sewer rate revenue increases that will satisfy the annual operating, debt service, and capital costs of the Utility, as well as the establishment and maintenance of adequate reserves.

Rate Structure Modifications – Develop modifications, as appropriate, to ensure that the City's water and sewer rates conform to accepted industry practice and reflect a fair and equitable distribution of system costs while ensuring adequate fixed cost recovery, preserving affordability for low volume and average users, and providing a price incentive for water conservation from higher volume users.

Capital Contribution Charges (Capital Charges) – Calculate updated water and sewer Capital Charges based upon the cost of the Utility's current infrastructure and five-year capital improvement program (CIP).

Assist in the Update of Miscellaneous Service Charges – Assist City staff in identifying the cost of providing various services (reconnections, meter tests, inspections, etc.) to serve as the basis for adjustment to its charges for such services.

Benchmarking Analysis – Prepare performance, rate, and capital charge comparisons for other communities in the region to benchmark operational efficiency and the cost of services in the City to other communities in its area.

E.2 REVENUE SUFFICIENCY ANALYSIS

This analysis evaluated the sufficiency of the revenues provided by the Utility's current rates to meet all of its financial requirements over a ten-year projection period, and determined the level of any rate revenue increases necessary in each year of the projection period to provide sufficient revenues to fund all of the Utility's cost requirements. With City staff, we thoroughly discussed the base data and assumptions of the analysis, and reviewed several alternative scenarios (particularly in regard to alternative time periods to restore the reserves of the Utility) for its Water and Sewer Enterprise Funds, respectively. Through this process, we identified the recommended financial management plans and associated plans of annual water and sewer rate revenue increases presented herein to address the current and projected cost requirements of the Utility. The recommended financial management plans and corresponding plans of water and sewer rate revenue adjustments are based upon the revenue and expense information, beginning balances, and assumptions as described in Section 2 of this report. Appendices A and B include detailed schedules presenting all components of the financial management plans developed for the Water and Sewer Enterprise Funds, respectively.

The recommended multi-year rate revenue adjustment plans for each respective system as well as the corresponding impact to the quarterly cost of service for a typical residential customer (3/4" meter using 15,000 gallons per quarter) are presented in the following tables. It is important to note that FY 2016 revenue increases were achieved within recommended rate structure adjustments identified in Section 3 of this report, which significantly reduces the impact to average/typical residential users.

Fiscal Year	Water System			Sewer System		
Ending	RTS	Volume	Overall	RTS	Volume	Overall
2015	20.00%	8.00%	8.82%	20.00%	6.00%	7.01%
2016	10.00%	3.00%	3.53%	20.00%	12.00%	12.66%
2017	4.50%	3.50%	3.58%	13.25%	12.25%	12.34%
2018	4.50%	3.50%	3.58%	13.25%	12.25%	12.34%
2019	4.50%	3.50%	3.58%	13.25%	12.25%	12.34%
2020	4.50%	3.50%	3.59%	13.25%	12.25%	12.35%
2021	4.50%	3.50%	3.59%	13.25%	12.25%	12.35%
2022	4.50%	2.00%	2.22%	5.00%	1.00%	1.42%
2023	4.50%	2.00%	2.22%	5.00%	1.00%	1.43%
2024	4.50%	2.00%	2.23%	5.00%	1.00%	1.45%

FY 2015 increases were developed and implemented by the City

Typical Quarterly Bill Based Upon a 3/4" Meter and 15,000 Gallons of Water Use

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Sewer	$108.21	$124.02	$139.38	$156.60	$175.89	$197.58	$222.06	$225.30	$228.60	$231.99
Water	$97.71	$86.70	$89.91	$93.18	$96.60	$100.23	$103.89	$106.38	$109.08	$111.78
Total	$205.92	$210.72	$229.29	$249.78	$272.49	$297.81	$325.95	$331.68	$337.68	$343.77
$ Chg. Qtr.	$15.18	$4.80	$18.57	$20.49	$22.71	$25.32	$28.14	$5.73	$6.00	$6.09
% Chg.	8.0%	2.3%	8.8%	8.9%	9.1%	9.3%	9.4%	1.8%	1.8%	1.8%

The financial management plans developed for the Utility as part of this analysis reflect 1) a six-year rate adjustment plan (FY 2016 – FY 2021) that meets the projected annual cost requirements of each respective fund while restoring reserves to recommended levels by the end of the six-year period, and 2) the continued increase in readiness-to-serve charges in order to enhance the fiscal stability and fixed cost recovery of the Utility. Upon completion of the six-year plan to restore reserves, it is projected that the Utility will be able to operate with very modest annual increases to keep pace with assumed cost inflation starting in FY 2022.

It is important to note that we recommend the City adopt only the initial three years (FY 2016 – FY 2018) of the rate adjustment plans identified herein and that the City conducts annual reviews to account for changes in customer growth, demands, regulatory requirements, and the impacts of any efficiency or cost savings initiatives. In doing so, the City could then modify its rate adjustment plans to ensure the sustainability of the Utility while minimizing impacts to customers to the greatest extent possible.

E.3 RATE STRUCTURE MODIFICATIONS

Burton & Associates examined the City's current water and sewer rates and developed recommended rate structure modifications that should be considered to i) fairly and equitably recover the City's current cost of service and revenue requirements, ii) conform to accepted national and local industry practices, iii) enhance fiscal stability and recovery of fixed costs, iv) maintain affordability to low and average volume users, v) provide a price incentive for water conservation, and vi) minimize administrative burden while enhancing the ability to be easily understood.

Notably, the recommended rate structure modifications include:

1) Establish separate water & sewer readiness-to-serve charges that recover 8% of the City's FY 2016 revenue requirements for each respective system.
2) Expand the water inclining block rate structure to include an additional tier and adjust the pricing of each block to enhance affordability for essential domestic use and to further promote conservation for higher discretionary use.
3) Scale readiness-to-serve charges as well as the amount of water within each tier of the inclining block rate structure for larger meters based on maximum flow rates by meter size as published by the American Water Works Association (AWWA).
4) Continue to apply a single usage or metered volume-based rate for sewer service to all customers based upon the portion of the revenue requirement to be recovered in usage-based rates divided by total volume.

The table below presents the quarterly impact to a customer with a 3/4" meter of the recommended rate structure for FY 2016 (which includes the identified revenue increases from the revenue sufficiency analysis). The table highlights the typical usage for this meter size (15,000 gallons) and demonstrates that a customer using this amount of water would see only a 2.3% increase per the rate structure proposed for FY 2016, as compared to a 8.4% increase that would otherwise occur if the City's FY 2016 required increase in revenue was recovered via increases to its existing rate structure. A schedule of the water and sewer rates recommended for FY 2016, additional customer impact tables, as well as revenue distributions by customer type are included in Appendix C of this report.

3/4" Meter Quarterly Water & Sewer Bill Calculations							Across-The-Board Increase		
Quarterly Use (Gal)	% of Bills	Agg. %	Current FY 15	Proposed FY 16	$ Chg	% Chg	FY 2016	$ Chg	% Chg.
6,000	3.7%	15.2%	$ 90.00	$ 101.55	$ 11.55	12.8%	$ 98.39	$ 8.39	9.3%
9,000	5.5%	30.5%	$ 126.24	$ 137.94	$ 11.70	9.3%	$ 137.51	$ 11.27	8.9%
12,000	6.1%	49.4%	$ 162.48	$ 174.33	$ 11.85	7.3%	$ 176.63	$ 14.15	8.7%
15,000	**4.9%**	**65.4%**	**$ 205.92**	**$ 210.72**	**$ 4.80**	**2.3%**	**$ 223.19**	**$ 17.27**	**8.4%**
24,000	1.4%	90.8%	$ 336.24	$ 323.75	$ (12.50)	-3.7%	$ 362.87	$ 26.63	7.9%
30,000	0.6%	96.1%	$ 426.60	$ 411.95	$ (14.66)	-3.4%	$ 459.53	$ 32.93	7.7%
45,000	0.1%	99.1%	$ 652.50	$ 632.45	$ (20.06)	-3.1%	$ 701.18	$ 48.68	7.5%
60,000	0.0%	99.7%	$ 878.40	$ 913.55	$ 35.14	4.0%	$ 942.83	$ 64.43	7.3%
90,000	0.0%	100.0%	$ 1,330.20	$ 1,565.52	$ 235.32	17.7%	$ 1,426.13	$ 95.93	7.2%

It is important to note that the City currently bills multi-unit residential properties as residential customers if the units are individually-metered or as commercial customers if the units are served by a master-meter. In the future, if the Utility is able to identify the accounts in its billing system that represent multi-unit properties and the associated number of dwelling units for each such account, we would recommend it consider establishing a separate multi-unit residential customer class. For this new class of customer, the readiness-to-serve charge could then be applied per dwelling unit for each multi-unit account, and the charge per dwelling unit could be adjusted to reflect the ratio of billed volume per dwelling unit for multi-unit accounts to the average or typical use per single-family residence. This is an accepted industry practice that is considered to be more fair and equitable, but is limited to systems that have the data and billing capability.

E.4 CAPITAL CONTRIBUTION CHARGES

The City currently assesses Capital Contribution Charges (Capital Charges) for the Utility that are designed to recover the unit cost of capacity from new connectors to the system. These charges are used to pay for the infrastructure that provides the capacity to serve growth, thereby minimizing the burden on existing customers to recover the cost of such facilities. The analysis of Capital Charges was intended to determine if the current cost of system capacity necessitates a change in the amount of the City's current charges.

The cost basis for the analysis was the replacement cost new less depreciation of the City's existing water and sewer system components and the portion of the Utility's five-year CIP associated with system expansion, as the existing system plus certain expansion-related projects will be used to serve new connections in the future. The following tables present a comparison of the recommended Capital Charges per this Study as compared to the City's current Capital Charges for a 1" meter (1 ERU) as well as a schedule of proposed Capital Charges by meter size.

Fees per 1" Meter	Water	Sewer	Total
Current	$4,100	$5,900	$10,000
Update/Proposed	$4,100	$7,600	$11,700
$ Change	$0	$1,700	$1,700

PROPOSED CAPITAL CONTRIBUTION CHARGES

Meter Size (Inches)*	AWWA Factor	Proposed Water CC Charge	Proposed Sewer CC Charge	Proposed Total CC Charge
5/8	1	N/A	N/A	N/A
3/4	1.5	N/A	N/A	N/A
1	2.5	**$ 4,100**	**$ 7,600**	**$ 11,700**
1.5	5	**$ 8,200**	**$ 15,300**	**$ 23,500**
2	8	**$ 13,200**	**$ 24,400**	**$ 37,600**
3	16	**$ 26,400**	**$ 48,800**	**$ 75,200**
4	25	**$ 41,200**	**$ 76,300**	**$ 117,500**
6	50	**$ 82,400**	**$ 152,700**	**$ 235,100**
8	80	**$ 131,800**	**$ 244,200**	**$ 376,000**
10	115	**$ 189,500**	**$ 351,100**	**$ 540,600**

* The minimum meter size for new residential and commercial construction is 1-inch.

Similar to the application of readiness-to-serve charges, we also recommend that the City consider applying its Capital Charges based upon the number of dwelling units for multi-unit residential properties that are served by a master meter as opposed to meter size. This is a common practice among water and sewer utilities and generally correlates more closely to the demands placed on utility systems from such accounts.

E.5 MISCELLANEOUS SERVICE CHARGES

The City currently applies miscellaneous service charges in relation to the provision of specific services to individual customers. Inspections, reconnections, and meter tests are examples of the types of services for which the City has miscellaneous service charges. The intent of miscellaneous service charges is to ensure that the recipient of a specific service bears the costs associated with providing that service.

Burton & Associates created a cost-of-service template to be used for each miscellaneous service charge listed in the City's rate policies and schedules as well as any new charges the City may wish to consider. This template provides a consistent methodology for assigning the appropriate time and material costs necessary to provide each service (see

Appendix E for screen captures of the Miscellaneous Fee Developer customized for the City). Upon population of the templates for each service, City staff will identify any adjustments to these types of fees for consideration by the Mayor and Council at a later date as part of a proposed policy and/or fee schedule revision.

E.6 BENCHMARKING ANALYSIS

Burton & Associates conducted a performance benchmarking analysis for the City's water and sewer utility to compare 1) key operational metrics to similar utilities in the area based upon published industry and other researched performance data, and 2) the level of rates and capital charges of neighboring systems. Relative to the benchmarking of operational metrics, the City's water and wastewater utility operations were compared to other utilities using a subset of key performance indicators identified by the AWWA:

- Organizational Development Category
  - Customer Accounts per Employee (Water)
  - Customer Accounts per Employee (Wastewater)
  - MGD Water Delivered per Employee
  - MGD Wastewater Processed per Employee
- Business Operations
  - Debt Ratio (Liabilities/Assets)
  - Debt Service as a % of Revenues *(supplemental to the AWWA indicators)*
- Water & Wastewater Operations and Maintenance Cost Ratios
  - O&M cost per account
  - O&M cost per MG processed
  - O&M cost per mile of pipe

For each of the above indicators, the City's performance was compared to the most recent published survey data compiled by the AWWA in 2012, as well as publicly available data for WSSC and the following five communities in the City's area with comparable utility systems with respect to size, water source, treatment technologies, etc.:

- City of Frederick, MD
- City of Bowie, MD
- Town of Vienna, VA
- Town of Leesburg, VA
- City of Manassas, VA

The table below presents a comparison of general statistics and fiscal metrics for the local utilities included in the analysis. Full detailed performance comparisons are presented on Schedule 2 in Appendix F, and a summary table with descriptions and interpretative commentary for these performance indicators is provided on Schedule 3 of Appendix F.

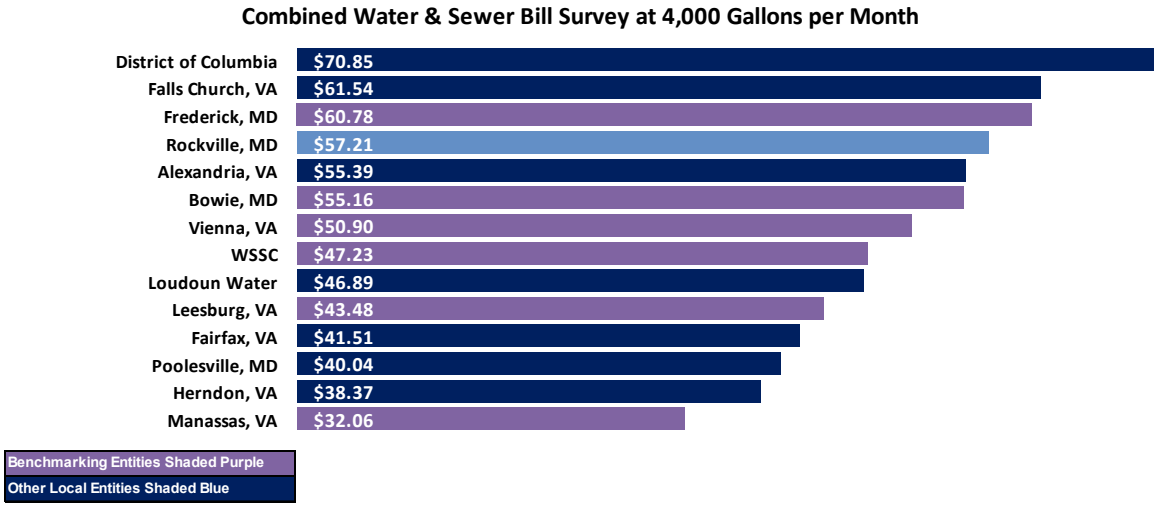
Benchmarking Summary of Selected Area Utilities

Utility	Projected FY 2015 Water & Sewer Bill - 4 TGAL	Annual Gallons of Water Produced	Number of Water Connections	Annual Revenue	Outstanding Debt	Capital Asset Value Less Depreciation
City of Rockville, MD	$ 57.21	1,718,420,000	12,674	$ 19,929,600	$ 62,240,041	$ 115,876,463
City of Frederick, MD	$ 60.78	1,960,415,000	18,620	$ 23,381,829	$ 105,398,217	$ 230,849,726
City of Bowie, MD	$ 55.39	580,000,000	7,908	$ 5,470,031	$ 3,403,564	$ 23,287,962
Town of Vienna, VA	$ 55.16	1,026,806,169	9,358	$ 7,357,985	$ 1,700,733	$ 9,691,569
Town of Leesburg, VA	$ 43.48	1,562,200,000	15,509	$ 15,636,548	$ 66,300,000	$ 181,380,068
City of Manassas, VA	$ 32.06	4,608,000,000[1]	10,918	$ 25,309,479	$ 22,385,000	$ 47,624,033
WSSC	$ 47.23	58,838,000,000	446,453	$ 550,469,000	$ 1,878,296,259	$ 5,775,658,000

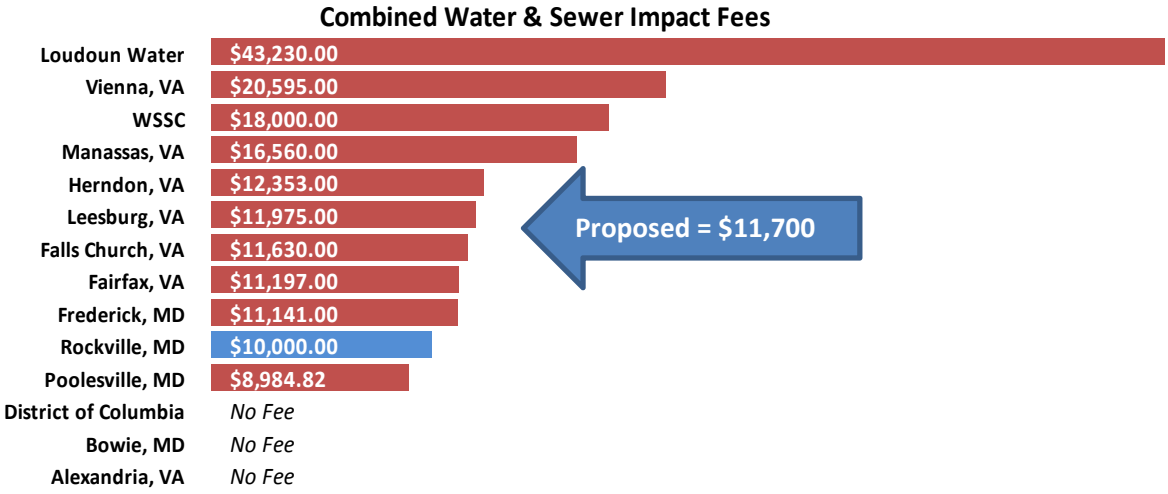
1 - Total includes 2,035,517,000 gallons of wholesale consumption.
2 - Includes industrial customer connections but excludes wholesale consumption.

While there may be some potential for improvements to the City's utility operational efficiencies, as is often the case given continued technological advances, the overall results of this analysis indicate that the City is performing at or above par in the areas evaluated, with the exception of its high debt to equity ratio and debt service comparators. However, after restoring the Utility's reserve levels, the recommended rate adjustment plans identified herein will provide more annual funds for future capital that will reduce future borrowing requirements, and ultimately improve these debt measures.

As part of the benchmarking analysis, we also prepared comparative rate and capital charge surveys, which indicated that the City's rates and fees are generally competitive with those of other communities in its general area. The following graphs provide a comparison of the City's FY 2015 monthly water and sewer costs for a customer with a 5/8" meter (typical residential meter size of most utility systems) using 4,000 gallons per month (typical usage amount for customers with this meter size in the City), as well as a comparison of FY 2015 capital charges (often referred to as "impact fees") for a new residential connection. Additional rate comparisons for customers with 3/4" and 1" meters, respectively, are included in Appendix F of this report.



Bills for communities in Maryland include $5.00 per month Bay Restoration Fund Fee (i.e. "Flush Tax") to fund improvements to wastewater treatment plants in order to primarily reduce nitrogen and phosphorus pollution into the Chesapeake Bay.



SECTION 1. INTRODUCTION

This report presents the results of the Utility Rate Study (Study) that was conducted for the water and sewer utility system (Utility) of the City of Rockville, Maryland (City). The following sections of this report describe in detail the base data, assumptions, results, as well as the conclusions and recommendations of the Study.

1.1 BACKGROUND

In the last few years, the Utility, like many communities throughout the country, has experienced declines in billed volumes and reduced levels of customer growth, which have affected its revenues. In addition, the Utility is experiencing financial challenges due to ongoing increases in operating costs as well as increasing capital improvement requirements to address system expansion, aging infrastructure, and regulatory mandates relative to inflow and infiltration issues. Despite enacting rate adjustments consistent with its last rate study, these financial pressures have caused the Utility to have negative fund balances[1], requiring implicit borrowing from the City's General Fund.

As such, in order to ensure that the rates of the Utility will 1) provide sufficient revenue to meet its current and projected financial requirements, and 2) conform to accepted industry practice and result in a fair and equitable recovery of costs from its customers, the City issued a request for proposals (RFP) to retain a consultant to perform a comprehensive study of its rates and charges for the Utility. Burton & Associates was selected to perform the utility rate study, the results of which are presented herein.

[1] Exclusive of bond proceeds restricted for capital projects, fund balances at the end of FY 2014 were approximately ($13.1 million) for water and ($8.3 million) for sewer.

1.2 OBJECTIVES

The principal objectives or components of the Study are as follows:

Revenue Sufficiency Analysis – Develop a multi-year plan of water and sewer rate revenue increases that will satisfy the annual operating, debt service, and capital costs of the Utility, as well as the establishment and maintenance of adequate reserves.

Rate Structure Modifications – Develop modifications, as appropriate, to ensure that the City's water and sewer rates conform to accepted industry practice and reflect a fair and equitable distribution of system costs while ensuring adequate fixed cost recovery, preserving affordability for low volume and average users, and providing a price incentive for water conservation from higher volume users.

Capital Contribution Charges (Capital Charges) – Calculate updated water and sewer Capital Charges based upon the cost of the Utility's current infrastructure and five-year capital improvement program (CIP).

Assist in the Update of Miscellaneous Service Charges – Assist City staff in identifying the cost of providing various services (reconnections, meter tests, inspections, etc.) to serve as the basis for adjustment to its charges for such services.

Benchmarking Analysis – Prepare performance, rate, and capital charge comparisons for other communities in the region to benchmark operational efficiency and the cost of services in the City to other communities in its area.

SECTION 2. REVENUE SUFFICIENCY ANALYSIS

2.1 DESCRIPTION

This section presents the financial management plans and corresponding plans of water and sewer rate adjustments developed in the Revenue Sufficiency Analysis (RSA) that was conducted as part of the Study for the Utility. The following sub-sections of the report present a description of the source data, assumptions, and results of the RSA. Appendices A and B include detailed supporting schedules for the financial management plans developed for the Water and Sewer Enterprise Funds of the Utility, respectively.

The RSA evaluated the sufficiency of the revenues provided by the Utility's current rates to meet all of its financial requirements over a ten-year projection period of FY 2015 - FY 2024[2], and determined the level of rate revenue increases necessary in each year of the period to provide sufficient revenues to fund the Utility's requirements. With City staff, we thoroughly reviewed the source data, assumptions, and several alternative scenarios (particularly in regard to alternative time periods to restore the reserves of the Utility) for the Water and Sewer Enterprise Funds, respectively. During these work sessions, we examined the impact of various inputs or assumptions upon key financial indicators by use of graphical representations projected on a large viewing screen from our computer rate models. In this way, we developed the recommended financial management plans and associated plans of water and sewer rate adjustments presented herein that will allow the Utility to fund its requirements during the projection period.

[2] The RSA begins with FY 2014 data, however, the majority of this information serves as base data upon which future year projections of rate revenues and fund balances are based. Thus, for purposes of this analysis, FY 2014 is not considered to be part of the ten-year projection period.

In order to initialize the RSA, we obtained the City's historical and budgeted financial information regarding the operation of the Utility. We also obtained the Utility's multi-year CIP, including annual renewal and replacement requirements. We documented the Utility's current debt service obligations and covenants, or promises made to bond holders or other lenders, relative to net income coverage requirements, reserves, etc. We also counseled with City staff regarding other assumptions and policies that would affect the financial performance of the Utility, such as billed volumes and customer growth, debt coverage levels, minimum reserve levels, earnings on invested funds, escalation rates for operating costs, etc.

All of this information was entered into two separate versions (one for each fund) of our proprietary Financial Analysis and Management System (FAMS-XL©) interactive model. The FAMS-XL© model produced a ten-year projection of the sufficiency of the each fund's current revenues to meet its projected financial requirements and determined the level of rate revenue increases necessary in each year of the projection period to provide sufficient revenues to fund all of each fund's respective cost requirements.

FAMS-XL© utilizes all projected available and unrestricted funds in each year of the projection period to pay for capital projects. The model is set up to reflect the rules of cash application as defined and applied by City staff, and it produces a detailed summary of the funding sources to be used for each project in the CIP. To the extent that current revenues and unrestricted reserves are not adequate to fund all capital projects in any year of the projection period, the model identifies a borrowing requirement to fund those projects, or portions thereof that are determined to be eligible for borrowing. In this way the FAMS-XL© model is used to develop a borrowing program that includes the required borrowing amount by year and the resultant annual debt service obligations of the Utility for each year in the projection period.

2.2 SOURCE DATA

The following presents the key source data relied upon in conducting the RSA:

2.2.1 Beginning Fund Balances

The FY 2013 Comprehensive Annual Financial Report and supporting trial balance data provided by City staff as of June 30, 2013, were used to establish the beginning FY 2014 balances for each of the various funds of the Utility. It is important to note that funds reserved or encumbered for specific capital projects were included in the beginning fund balances available for capital projects in FY 2014 and the associated capital costs were included in the capital improvement program (CIP) in FY 2014.

2.2.2 Revenues

The revenues utilized in the RSA reflect an evaluation of multiple years of historical audited results, unaudited FY 2014 results, and the FY 2015 Budget. For purposes of the RSA, revenues were grouped and classified as rate revenue, Capital Contribution Charge (Capital Charge) revenue, interest income, or other minor revenue from miscellaneous service charges.

Rate revenue is comprised of retail revenue, in the form of readiness-to-serve charges and usage fees. Retail rate revenue is based upon unaudited FY 2014 results as provided by City staff in August of 2014, adjusted annually to reflect additional revenue generated from assumed rate increases and customer growth as appropriate.

Projections of all other revenues were based upon the FY 2015 Budget, excluding Capital Charge revenue and interest earnings. Capital Charge revenues were calculated annually based upon the projected number of new connections and current charges, while interest income was calculated annually based upon projected average fund balances and assumed interest rates.

2.2.3 Operating Expenditures

The Utility's operating expenditures include all operating and maintenance expenses, transfers, debt service requirements, and minor capital outlay. The RSA based operating expenditure projections on the individual expense categories and expense amounts within the FY 2015 Budget, adjusted annually based upon assumed cost escalation factors that were reviewed with City staff (with the exception of debt service expenses, which reflect

the specific repayment schedules of each respective bond or loan). The RSA also included normalizing adjustments per discussions with City staff to include expected future cost requirements not reflected in the FY 2015 Budget, such as increases in contract services expenses within the Engineering Department as well as estimated true-ups from the Washington Suburban Sanitary Commission (WSSC) for historical wastewater treatment and disposal expenses through FY 2014.

2.3 ASSUMPTIONS

The following presents the key assumptions utilized in the conduct of the RSA.

2.3.1 Cost Escalation

Annual cost escalation factors for the various types of operating and maintenance expenses were reviewed with City staff and applied in each year of the projection period beginning in FY 2016. The specific escalation factors assumed for the various categories of expenses can be seen on Schedule 6 of Appendices A & B for the Water and Sewer Enterprise Funds, respectively.

2.3.2 Interest Earnings on Invested Funds

Based upon discussions with City staff, the assumed interest earnings rates in the RSA are 0.25% in FY 2015, increasing to 0.50% in FY 2016, and increasing by 0.50% each year thereafter until FY 2019 when the earnings on fund balances are assumed to be 2.00% in each remaining year of the projection period.

2.3.3 Customer Growth

Based upon a review of recent historical trends and discussions with City staff, the RSA reflects 25 new retail water accounts and 25 new retail sewer accounts in each year of the projection period, equating to an annual growth rate of approximately 0.2% per year.

2.3.4 Minimum Reserve Policy

Reserve balances for utility systems are funds set aside for a specific cash flow requirement, financial need, project, task, or legal covenant. These balances are maintained in order to meet short-term cash flow requirements, and at the same time,

minimize the risk associated with meeting the financial obligations and continued operational and capital needs under adverse conditions. The level of reserves maintained by a utility is an important component and consideration of developing a utility system multi-year financial management plan.

Many utilities, rating agencies, and the investment community as a whole place a significant emphasis on having sufficient reserves available for potentially adverse conditions. The rationale related to the maintenance of adequate reserves is twofold. First, it helps to assure a utility that it will have adequate funds available to meet its financial obligations during unusual periods (i.e. when revenues are unusually low and/or expenditures are unusually high). Second, it provides funds that can be used for emergency repairs or replacements to the system that can occur as a result of natural disasters or unanticipated system failures.

As such, it is important for the Utility to establish financial policies that clearly state the basis for establishing targeted reserve balances. Financial policies should articulate how these balances are established, their use, and how to determine the adequacy of the reserve fund balances. It is important to note that once reserve targets are established, they should be reviewed annually during the budgeting process to monitor current levels and assure conformance with stated policies and practices. Decisions can be made to maintain, increase, or spend down the reserve balances, as appropriate, depending upon the impact of such decisions to the upcoming budget period.

Moreover, a utility should review the approach used to establish reserve balances every three to five years. This time frame is appropriate given that debt levels and capital infrastructure activity can vary during this time, which would have an effect on the appropriate level of reserve balances. This type of review allows for the philosophy of establishing reserve targets to be modified to better reflect existing conditions and issues.

The financial management plans presented in this report assume that the Utility will maintain a minimum fund balance or reserve equal to 6 months of annual operations and maintenance (O&M) expenses for the water and sewer systems. This level of reserves is consistent with 1) our industry experience for similar systems, 2) the findings of reserve

studies conducted by the AWWA, and 3) a healthy level of reserves for a municipal utility system per the evaluation criteria published by the municipal utility ratings agencies, such as Fitch and Standard & Poor's.

2.3.5 Price Elasticity

This adjustment is incorporated into the RSA to reflect that, as rates increase, discretionary water consumption (and therefore billed sewer volumes) will likely decline. Therefore, in order to generate sufficient revenue, projected rate increases will have to be adjusted to reflect a smaller revenue base to which they will be applied, causing the projected rate increases to be higher. The price elasticity adjustment reduces water and sewer volume-based revenues by the product of the annual rate increase and the assumed elasticity coefficient. The assumed price elasticity coefficient is 0.20, which means that for every 10% increase in rates, the RSA reflects a 2% decline in volume-based revenues.

2.3.6 Capital Projects Funding

City staff provided the multi-year CIP from FY 2015 through FY 2019, as well as projections for FY 2020 through FY 2024. The costs for all prior year carry-forwards, as well as the Water Main Rehabilitation, Water Tank Improvements, and the Blue Plains Wastewater Treatment projects were assumed to be expended at 100% of the amounts provided by City staff, while all other projects were assumed to be executed at 90% of the amounts provided by City staff. In total, the CIP spending from FY 2015 through FY 2024 is approximately $36.8 for the Water Fund and $30.7 million for the Sewer Fund. A detailed list of projects and costs by year can be seen on Schedule 3 of Appendices A & B for the Water and Sewer Enterprise Funds, respectively.

2.3.7 Debt Service Coverage

Should the Utility be unable to meet its annual debt service requirements, it could be found in technical default. This would result in the Utility facing a downgrade in its credit rating, which would affect the interest rate and terms of any future financing initiatives. As a policy decision, utilities often measure revenue sufficiency and set rates in order to provide a buffer or debt service coverage factor to ensure that debt service payments can be made in the event future projections of revenue and expenses do not

occur as predicted (due to extended drought conditions, unanticipated capital requirements or operating cost increases, natural disasters, etc.). As such, the financial management plan presented herein reflects a target debt service coverage factor or ratio of net income to annual debt service of 1.20 throughout the projection period.

2.4 RESULTS

Based upon the data and assumptions presented herein, the Utility's current rates will not provide sufficient revenue to meet its annual debt service, capital, and operating cost requirements and restore its reserve balances over a multi-year projection period. As such the RSA developed financial management plans for the Utility that reflect 1) a six-year rate adjustment plan (FY 2016 – FY 2021) that meets the projected annual cost requirements of each respective fund while restoring reserves to recommended levels by the end of the six-year period, and 2) the continued increase in readiness-to-serve charges in order to enhance the fiscal stability and fixed cost recovery of the Utility. Upon completion of the six-year plan to restore reserves, it is projected that the Utility will be able to operate with modest increases to keep pace with assumed cost inflation.

The recommended multi-year rate revenue adjustment plans for each respective system as well as the corresponding impact to the quarterly cost of service for a typical residential customer (3/4" meter using 15,000 gallons per quarter) are presented in the following tables. It is important to note that FY 2016 revenue increases were achieved within recommended rate structure adjustments identified in Section 3 of this report, which significantly reduces the impact to average/typical residential users.

Fiscal Year	Water System			Sewer System		
Ending	RTS	Volume	Overall	RTS	Volume	Overall
2015	20.00%	8.00%	8.82%	20.00%	6.00%	7.01%
2016	10.00%	3.00%	3.53%	20.00%	12.00%	12.66%
2017	4.50%	3.50%	3.58%	13.25%	12.25%	12.34%
2018	4.50%	3.50%	3.58%	13.25%	12.25%	12.34%
2019	4.50%	3.50%	3.58%	13.25%	12.25%	12.34%
2020	4.50%	3.50%	3.59%	13.25%	12.25%	12.35%
2021	4.50%	3.50%	3.59%	13.25%	12.25%	12.35%
2022	4.50%	2.00%	2.22%	5.00%	1.00%	1.42%
2023	4.50%	2.00%	2.22%	5.00%	1.00%	1.43%
2024	4.50%	2.00%	2.23%	5.00%	1.00%	1.45%

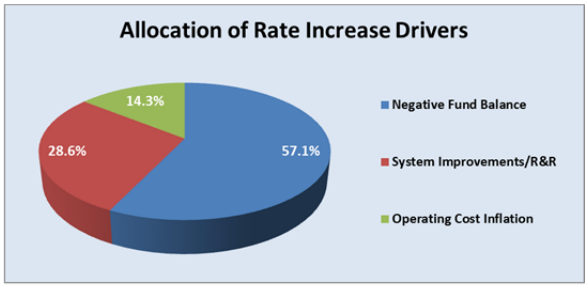
FY 2015 increases were developed and implemented by the City

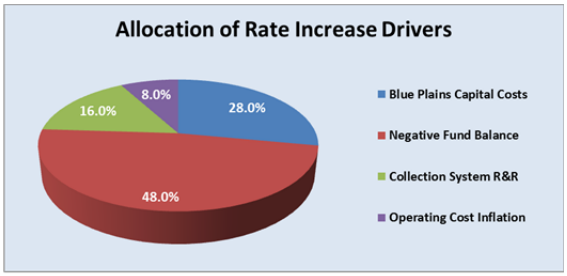
Typical Quarterly Bill Based Upon a 3/4" Meter and 15,000 Gallons of Water Use

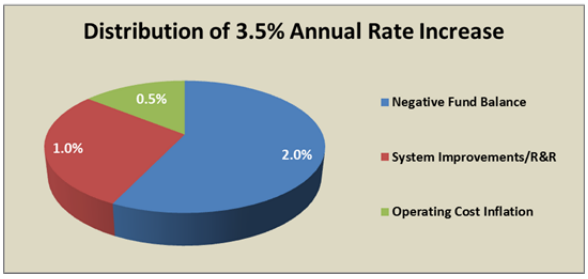
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Sewer	$108.21	$124.02	$139.38	$156.60	$175.89	$197.58	$222.06	$225.30	$228.60	$231.99
Water	$97.71	$86.70	$89.91	$93.18	$96.60	$100.23	$103.89	$106.38	$109.08	$111.78
Total	$205.92	$210.72	$229.29	$249.78	$272.49	$297.81	$325.95	$331.68	$337.68	$343.77
$ Chg. Qtr.	$15.18	$4.80	$18.57	$20.49	$22.71	$25.32	$28.14	$5.73	$6.00	$6.09
% Chg.	8.0%	2.3%	8.8%	8.9%	9.1%	9.3%	9.4%	1.8%	1.8%	1.8%

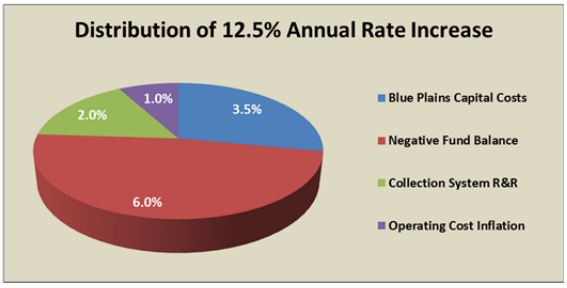
As part of the RSA, we identified the allocation and distribution of the required rate increases, as demonstrated in the following pie charts. The charts identify the drivers of the rate increases and the portion of the rate increase that is attributed to each driver.

Water Rate Increase Allocation **Sewer Rate Increase Allocation**

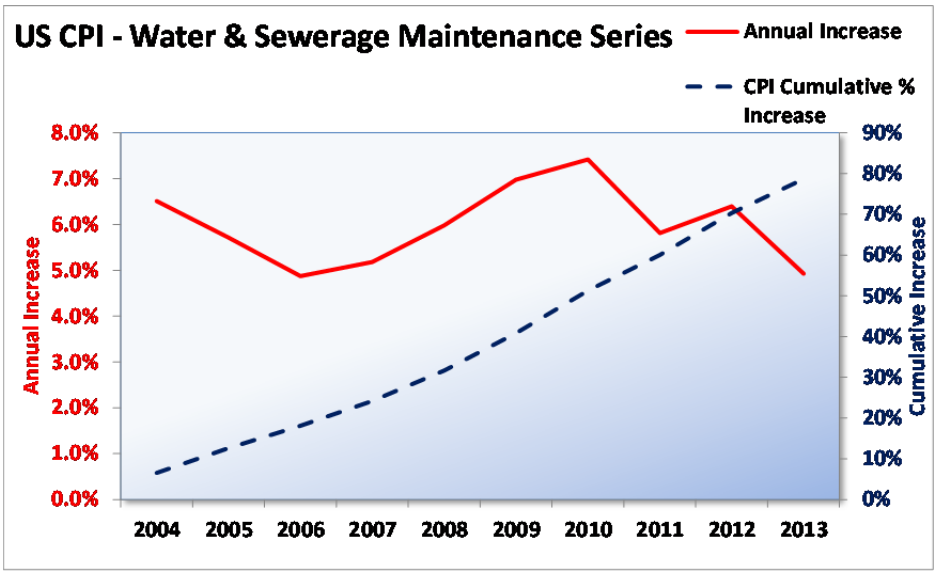








It is important to note that the recommended annual rate adjustments identified herein are consistent with national trends and our industry experience. As demonstrated in the following graph, the U.S. Consumer Price Index (CPI) Water & Sewerage Maintenance Series, which specifically measures the average national change in the cost of water and wastewater service to households, has risen at an average annual rate of approximately 6% during the past ten years. Moreover, many of our clients across the country are presently experiencing rate increase requirements in the range of 3 to 8% per year.



Moreover, at a local level, the recommended annual rate adjustments are also very consistent with the results of the most recent rate study conducted on behalf of the WSSC. The table below compares the increase to the typical residential customer of the City as identified herein with the plan of rate revenue increases identified for the WSSC.

Combined Rate Increases	FY 2015	FY 2016*	FY 2017	FY 2018	FY 2019
City of Rockville (As Presented)	8.0%	2.3%	8.8%	8.9%	9.1%
WSSC (Per 1/9/14 Rate Study)	6.0%	10.4%	8.8%	8.4%	7.2%

***Lower impact to Rockville typical users due to recommended rate structure modifications.**

2.5 CONCLUSIONS & RECOMMENDATIONS

We have reached the following conclusions and recommendations regarding the sufficiency of the current water and sewer rates of the Utility over the projection period:

- Based upon the assumptions and source data described herein, the revenue produced by the City's current rates is not sufficient to address the annual operating, capital, debt, and reserve requirements of the Utility.

- We recommend that the City replace its existing minimum reserve policies with a single reserve policy for the Utility that is equal to 6 months of O&M expenses.

- As such, we recommend that the City commit to a 6-year plan to restore the reserve balances of the Water and Sewer Enterprise Funds to the recommended level identified herein, as this time period was determined to result in the best balance of addressing the Utility's financial sustainability in a reasonable time period while moderating customer impacts to the greatest extent possible.

- We recommend that the City adopt a 3-year plan of rate adjustments for FY 2016 through FY 2018, and that it conduct annual reviews to account for changes in customer growth, demands, regulatory requirements, and the impacts of any efficiency or cost saving initiatives. In doing so, the City could then modify its rate adjustment plans to ensure the sustainability of the Utility while minimizing rates to its customers to the greatest extent possible.

- Additionally, we recommend the City adopt the rate structure modifications for FY 2016 as presented in Section 3 of this report. The recommended rate structure modifications conform to accepted industry practice and provide a fair and equitable distribution of costs to the various customers of the Utility, while improving the fixed cost recovery and financial stability of the Utility.

SECTION 3. RATE STRUCTURE MODIFICATIONS

We have reviewed the City's current water and sewer rate structure, and while we conclude that it is generally fair and equitable, we do recommend modifications to the rate structure to address the following objectives:

i) Fair and equitable recovery of the City's current cost of service and revenue requirements
ii) Conformance to accepted national and local industry practices
iii) Improved fiscal stability and recovery of fixed costs
iv) Maintenance of affordability to low and average volume users
v) Provision of a price incentive for water conservation

The following sub-sections present a description of the basis of the recommended rate structure, supporting rate schedules, as well as the customer impacts of the rate recommendations. The recommended rate structure presented herein is intended for implementation on 7/1/15 (i.e. FY 2016) and includes the recommended FY 2016 water rate revenue increases for readiness-to-serve and usage charges of 10.00% and 3.00%, respectively, and sewer rate revenue increase for readiness-to-serve and usage charges of 20.00% and 12.00%, respectively, identified in the RSA.

3.1 WATER RATES

Readiness-to-Serve Charge – The City's fixed monthly readiness-to-serve charge is currently combined into a single charge of $3.89 for customers having a 5/8" meter and located inside the City. One half of the readiness-to-serve charge is presently being allocated to the Water Fund and the other half to the Sewer Fund. As such, the effective water readiness-to-serve charge for a 5/8" connection inside the City is approximately $1.95. The readiness-to-serve charge increases for customers with larger meter sizes.

Recommendation – Common industry practice for water utilities is a two-part rate structure comprised of both fixed and variable charges. Generally accepted practice

recovers a portion of the costs of the water system in a fixed readiness-to-serve charge, recognizing that utilities have substantial investments in capacity-related costs and other fixed costs that are incurred year-round to maintain a state of readiness to meet peak demands when they occur. Simply put, utilities incur these fixed costs regardless of the level of customer usage.

As part of the Study, we identified that 88.8% of the water system expenses are fixed and that only 11.2% are variable (i.e. would change as customer volume or flow changes).

Rockville, MD Fixed & Variable Water Cost Allocation Summary

Components of FY 2015 Utility Costs	Water Cost Amount	Water Cost % of Total
Personnel Services	$3,387,914	35.9%
Variable Operating Costs	$1,055,664	11.2%
Fixed Operating Costs	$729,737	7.7%
Capital Outlay	$77,288	0.8%
Transfer Out	$1,040,610	11.0%
Debt Service	$3,149,828	33.4%
Total Annual Costs	$9,441,041	100.0%

Variable Operating Costs generally increase or decrease as system demand increases/decreases, and include utilities, operating supplies/ materials and chemicals. All other cost are generally fixed and independent of system demand.

That being said, the amount of system costs recovered in fixed versus variable charges is unique to each community's balance of fiscal stability, philosophy regarding cost recovery, and affordability objectives. In light of declining demands and concerns about fiscal stability, it has been our experience that utilities are trying to increase the portion of their revenues provided by fixed readiness-to-serve charges. Many utilities (including those in the Rockville area) endeavor to recover at least 30% of their annual revenues from fixed charges (see the following table), which is viewed favorably by municipal rating agencies such as Fitch.

Rockville Water System Expense vs. Revenue Allocation

Water System	Fixed	Variable
Expenses	89%	11%
Revenue	5%	95%
Avg. Fixed/Usage Fee Split of Rockville Rate Survey Entities (based on 4,000 gal/month bill)	28%	72%

As the City presently has a comparatively low fixed charge for water and sewer service, establishing more traditional levels of fixed readiness-to-serve charges is difficult from a customer impact and affordability perspective, due to the disproportionate impact to low volume users. Consequently, we recommend that the City establish separate readiness-to-serve charges for each system (water and sewer) and modestly increase its readiness-to-serve charge for both water and sewer services to recover 8% of the FY 2016 revenue requirement of each system (as opposed to 5% currently). Moreover, we recommend that the City consider establishing a long-term goal of increasing the level of cost recovery in fixed readiness-to-serve charges to be at least 30% of its annual revenue requirements, which is more in line with our industry experience and the guidance of municipal ratings agencies. As part of future periodic rate studies, the City should consider recovering more of its revenue requirements from its readiness-to-serve charges.

Generally accepted ratemaking practice would differentiate readiness-to-serve charges by class of customer based upon the actual or potential usage characteristics of each customer class. As such, we recommend that the City continue to scale monthly base charges for all customers with larger meters by meter size as compared to a 5/8" meter based upon the ratio of maximum capacity flow rates by meter size as published by the American Water Works Association (AWWA), as is common industry practice.

It is important to note that the City currently bills multi-unit residential properties as residential customers if the units are individually-metered or as commercial customers if the units are served by a master-meter. In the future, if the Utility is able to identify the accounts in its billing system that represent multi-unit properties and the associated number of dwelling units for each such account, we would recommend it consider establishing a separate multi-unit residential customer class. For this new class of customer, the readiness-to-serve charge could then be applied per dwelling unit for each multi-unit account, and the charge per dwelling unit could be adjusted to reflect the ratio of billed volume per dwelling unit for multi-unit accounts to the average or typical use per single-family residence. This is an accepted industry practice that is considered to be more fair and equitable, but is limited to systems that have the data and billing capability.

Usage or Volume Based Rates – Usage or variable charges recover the remaining portion of system costs not recovered by monthly base charges in proportion to each customer's use of the system. The City currently has a three-tier inclining block water usage rate structure that is applied to all customers as shown in the table below:

Current Water Usage Rate Structure		
Block	Quarterly Gallons:	Rate per 1,000 gal
Tier 1	0 to 12,000	$ 5.45
Tier 2	12,001 to 24,000	$ 7.85
Tier 3	Above 24,000	$ 8.43

We reviewed the City's demographic data, domestic water use characteristics, and typical irrigation requirements to better quantify essential domestic requirements versus outdoor water use (see Figure 3-1). According to U.S. Census estimates for 2008-2012, the County has 2.54 persons per household, and the City's typical indoor domestic use (i.e. cooking. cleaning, showers, etc.) was determined to be approximately 65 gallons per person per day, based on a 2006 water consumption study referenced in the Water Resources Element of the City's Comprehensive Plan. Applying the City's demographic data to the per capita use identified herein results in a typical essential domestic water use of approximately 5,000 gallons per month (15,000 gallons quarterly). Similarly, a larger family of five would be expected to have a typical essential domestic water use of about 10,000 gallons per month (30,000 gallons quarterly).

Figure 3-1 – Water Use Analysis for a Typical Residential Property

Tier 1 - Typical Indoor Usage	Amount	Tier Range
People per Household	2.54	
Typical Indoor Use (Gallons per Capita per Day)	65	
Typical Essential Domestic Use (Tgal/month)	5,022	
First Tier Quarterly Usage Amount (Total)	**15,000**	**Up to 15,000 gal.**

Tier 2 - Larger Family Indoor Usage	Amount	Tier Range
Large Family - People per Household	5.00	
Typical Essential Domestic Use (Tgal/month)	9,885	
Second Tier Quarterly Usage Amount (Total)	**30,000**	**15,001 to 10,000 gal.**

Tier 3 - Typical Residential Irrigation	Amount	Tier Range
Square inches of area in 1/3 acre	**2,090,880**	
% of area that is irrigable	33%	
Number of inches per watering	0.50	
Gallons per cubic inch	0.0043290	
Number of gallons per watering	1,509	
Number of waterings per week	0.8	
Gallons of irrigation per month	5,449	
Third Tier Quarterly Usage Amount	**15,000**	**30,001 to 45,000 gal.**

Fourth Tier Quarterly Usage Amount	**All Add. Use**	**> 45,000 gal.**

Based upon this analysis, we recommend increasing the first and second tiers of the inclining block rate structure to 15,000 and 30,000 gallons per quarter, respectively, to provide for essential domestic use for typical and larger families. We further recommend adding and additional tier (third tier) with a usage range of 30,001 to 45,000 gallons per quarter to accommodate typical irrigation requirements, with the fourth tier capturing all use above 45,000 gallons per quarter. We also recommend that the amount of consumption in each tier be scaled based upon the size of the meter recognizing that customers with larger meters do not have the same usage profile as residential customers.

The price differential between tiers of an inclining block rate structure is typically established for each community based upon their unique balance of public policy objectives (such as affordability), customer impacts, and understanding of the usage intended to be captured within each tier. In order to moderate the impacts of the recommended increase to the readiness-to-serve charge to low volume and typical users while also promoting additional water conservation from higher volume users, we recommend a slight reduction to the first and second tier rate and increases to the rates for higher tiers. See Appendix C, Schedule 1 for a complete usage rate schedule.

3.2 SEWER RATES

Readiness-to-Serve Charge – As indicated previously, the City's effective fixed monthly readiness-to-serve charge for sewer customers inside the City having a 5/8" water meter is approximately $1.95 (one half of the total readiness-to-serve charge of $3.89), and increases for customers with larger water meter sizes.

Recommendation – As with water systems, common industry practice for sewer utilities is a two-part rate structure comprised of both fixed and variable charges. Generally accepted practice recovers a portion of the costs of the sewer system in a fixed readiness-to-serve charge, recognizing that utilities have substantial investments in capacity-related costs and other fixed costs that are incurred year-round to maintain a state of readiness to meet peak demands when they occur.

As part of the Study we identified that 73.7% of the sewer system expenses are fixed and that only 26.3% are variable (i.e. would change as customer volume or flow changes).

Rockville, MD Fixed & Variable Sewer Cost Allocation Summary

Components of FY 2015 Utility Costs	FY 2015 Sewer Cost Amount	% of Total
Personnel Services	$1,523,051	17.8%
Variable Operating Costs	$2,249,137	26.3%
Fixed Operating Costs	$477,037	5.6%
Capital Outlay	$36,065	0.4%
Transfer Out	$888,420	10.4%
Debt Service	$3,390,058	39.6%
Total Annual Costs	$8,563,768	100.0%

Variable Operating Costs generally increase or decrease as system demand increases/decreases, and include utilities, operating supplies/ materials and chemicals. All other cost are generally fixed and independent of system demand.

As with the water system, many utilities (including those in the Rockville area) endeavor to recover at least 30% of their annual sewer revenues from fixed charges (see the following table), which is viewed favorably by municipal rating agencies such as Fitch.

Rockville Sewer System Expense vs. Revenue Allocation

Sewer System	Fixed	Variable
Expenses	74%	26%
Revenue	5%	95%
Avg. Fixed/Usage Fee Split of Rockville Rate Survey Entities (based on 4,000 gal/month bill)	22%	78%

As stated previously, the City presently has a comparatively low fixed charge for water and sewer service, and establishing more traditional levels of fixed readiness-to-serve charges is difficult from a customer impact and affordability perspective, due to the disproportionate impact to low volume users. As such, we recommend that the City establish separate readiness-to-serve charges for each system and modestly increase its readiness-to-serve charge for both water and sewer services to recover 8% of the FY 2016 revenue requirement of each system (as opposed to 5% currently). Moreover, we recommend that the City consider establishing a long-term goal of increasing the level of cost recovery in fixed readiness-to-serve charges to be at least 30% of its annual revenue requirements, which is more in line with our industry experience and the guidance of

municipal ratings agencies. As part of future periodic rate studies, the City should consider recovering more of its revenue requirements from its readiness-to-serve charges.

Generally accepted ratemaking practice would differentiate readiness-to-serve charges by class of customer based upon the actual or potential usage characteristics of each customer class. As such, we recommend that the City continue to scale monthly base charges for all customers with larger meters by meter size as compared to a 5/8" meter based upon the ratio of maximum capacity flow rates by meter size as published by the AWWA, as is common industry practice.

It is important to note that the City currently bills multi-unit residential properties as residential customers if the units are individually-metered or as commercial customers if the units are served by a master-meter. In the future, if the Utility is able to identify the accounts in its billing system that represent multi-unit properties and the associated number of dwelling units for each such account, we would recommend it consider establishing a separate multi-unit residential customer class. For this new class of customer, the readiness-to-serve charge could then be applied per dwelling unit for each multi-unit account, and the charge per dwelling unit could be adjusted to reflect the ratio of billed volume per dwelling unit for multi-unit accounts to the average or typical use per single-family residence. This is an accepted industry practice that is considered to be more fair and equitable, but is limited to systems that have the data and billing capability.

Usage or Volume Based Rates – The City currently charges a single usage rate of $6.63 per 1,000 gallons of metered water usage for all sewer customers.

We recommend the City continue charging a single usage or volumetric rate to all customer classes, and further recommend that the usage rate be adjusted to $7.35 per 1,000 gallons of metered water usage based upon the FY 2016 revenue requirement for the sewer system and rate structure modifications presented herein.

3.3 PRICE ELASTICITY

As water and sewer rates increase, discretionary water (and therefore billed water and sewer volumes) will generally decline. Because changes in use in response to price are a

function of the increase in price and the level of discretionary usage, the recommended modifications to the current rate structure are expected to have an impact on total billed water and sewer volume. However, the recommended rate structure is anticipated to produce an overall system-wide billed volume reduction of only about 1% as the modifications presented herein are minor in nature. That effect has been factored into the calculations of the FY 2016 rates presented in the report.

3.4 SCHEDULE OF RECOMMENDED RATES

It is our recommendation that the adjustments discussed in the prior sub-sections should be made to the current water and sewer rates to better conform to accepted industry practice and ensure a fair and equitable distribution of costs to the Utility's customers. Based upon discussions with City staff, it is our understanding that the City's customer billing system can accommodate these recommended changes in rate structure. Specific recommended water and sewer rates for FY 2016 to FY 2018 are presented on Schedule 1 of Appendix C, based upon the revenue requirements as identified in the RSA and the rate structure modifications presented herein.

3.5 CUSTOMER IMPACT ANALYSIS

In considering implementation of the recommended water and sewer rates presented herein, it is important to examine the impact that those rates will have upon the cost of service to the Utility's various types of customers. Implementation of the recommended rates will impact customers with different usage patterns differently.

The following table presents a summary of the quarterly impact to a customer with a 3/4" meter of the recommended rate structure for FY 2016 (which includes the identified revenue increases from the revenue sufficiency analysis). The table highlights the typical usage for this meter size (15,000 gallons) and demonstrates that a customer using this amount of water would see only a 2.3% increase per the rate structure proposed for FY 2016, as compared to a 8.4% increase that would otherwise occur if the City's FY 2016 required increase in revenue was recovered via increases to its existing rate structure.

3/4" Meter Quarterly Water & Sewer Bill Calculations							Across-The-Board Increase		
Quarterly Use (Gal)	% of Bills	Agg. %	Current FY 15	Proposed FY 16	$ Chg	% Chg	FY 2016	$ Chg	% Chg.
6,000	3.7%	15.2%	$ 90.00	$ 101.55	$ 11.55	12.8%	$ 98.39	$ 8.39	9.3%
9,000	5.5%	30.5%	$ 126.24	$ 137.94	$ 11.70	9.3%	$ 137.51	$ 11.27	8.9%
12,000	6.1%	49.4%	$ 162.48	$ 174.33	$ 11.85	7.3%	$ 176.63	$ 14.15	8.7%
15,000	**4.9%**	**65.4%**	**$ 205.92**	**$ 210.72**	**$ 4.80**	**2.3%**	**$ 223.19**	**$ 17.27**	**8.4%**
24,000	1.4%	90.8%	$ 336.24	$ 323.75	$ (12.50)	-3.7%	$ 362.87	$ 26.63	7.9%
30,000	0.6%	96.1%	$ 426.60	$ 411.95	$ (14.66)	-3.4%	$ 459.53	$ 32.93	7.7%
45,000	0.1%	99.1%	$ 652.50	$ 632.45	$ (20.06)	-3.1%	$ 701.18	$ 48.68	7.5%
60,000	0.0%	99.7%	$ 878.40	$ 913.55	$ 35.14	4.0%	$ 942.83	$ 64.43	7.3%
90,000	0.0%	100.0%	$ 1,330.20	$ 1,565.52	$ 235.32	17.7%	$ 1,426.13	$ 95.93	7.2%

In addition to evaluating the impacts of the recommended rates to quarterly customers with a 3/4" meter (which can be seen in complete detail on Schedule 3 of Appendix C), Schedules 2 and 4 of Appendix C present an analysis of the impact to the quarterly bills of customers with 5/8" and 1" meters, respectively, and Schedule 5 presents the impact to monthly bills of typical customers for various meter sizes. In addition, the resulting revenue distributions by customer type are included on Schedule 6 of Appendix C.

SECTION 4. CAPITAL CONTRIBUTION CHARGES

As part of the Study, Burton & Associates evaluated the City's water and sewer capital contribution charges (Capital Charges) based upon the cost of its current infrastructure and five-year CIP. This section of the report presents the results of the evaluation, including background information, legal requirements, an explanation of the calculation methodology employed, as well as our conclusions and recommendations.

4.1 BACKGROUND

Capital Charges are a one-time charge paid by a new customer for system capacity and infrastructure, and are also often applied to existing customers requiring increased system capacity. Such charges are the mechanism by which new growth can "pay its own way" and minimize the extent to which existing customers must bear the cost of new or expanded facilities which are necessitated by new customers.

In general, these charges are based upon the costs of major backbone infrastructure necessary to provide service to all customers, including water supply facilities, treatment facilities, pumping facilities, storage tanks, as well as water and sewer transmission mains. The City currently assesses Capital Charges for the Utility to defray the cost of providing major supply, treatment, transmission, pumping and storage facilities.

4.2 LEGAL CONSIDERATIONS

Common legal considerations relative to Capital Charges include 1) that the charges bear a reasonable relationship to the benefit received by those who pay it, 2) the charges must not exceed the proportional share of the cost of facilities or services needed to serve new development and must include credits for contributions the development will make toward deferring that cost, and 3) the revenue from such charges must be expended in such a way as to ensure that those paying the charges receive benefit from that payment.

In summary, various court systems and state legislative initiatives have addressed three fundamental areas associated with the development of capital contribution charges.

These areas include: 1) "fair share" allocations dealing with payment of Capital Charges by the affected property owners, 2) "rational nexus" standards, which focus on the expenditure or purpose of the Capital Charges, and 3) "credit" allowances, which recognize offsets in the calculation of Capital Charges.

The "fair share" allocations would require that a Capital Charge should only be used for capital expenditures that are attributable to new growth. Additionally the "fair share" allocation principles recognize that the cost of facilities used by both existing customers and new development must be apportioned between the two user groups, such that the user groups are treated equally and one group does not subsidize the other.

The "rational nexus" standards require that there is a reasonable relationship between the need for capital facilities and the benefits received by new customers for which the Capital Charges will be expended. There are two general conditions that limit where and when Capital Charges can be collected and used. With respect to the first condition, although there is no specific limit as to distance between an applicant paying the charge and the capital expenditure to be constructed by the charge, there should be a general geographical relationship between charge collection and use. The second nexus condition recognizes that the property must receive a benefit from the service for which the Capital Charges are being applied. With respect to the water and sewer Capital Charges, the City's water and sewer facilities are used by and constructed on behalf of all the customers of the City, and they benefit both residential and commercial customers. Therefore, all new growth requesting capacity from the City (water and/or sewer) should be subject to these charges.

The "credit" allowances recognize that if a public agency has received property in the form of cost-free capital or if there is another revenue source that will be used for the capital expenditures necessitated by new growth, a credit should be included within the development of capital contribution charges. Specifically, "credits" should be determined as part of calculating Capital Charges to recognize any grants, contributions by developers, assessments, and other sources that provide funds for the same capital expenditures included in the Capital Charges to avoid a double-recovery of costs.

4.3 GENERAL METHODOLOGY

There are three primary approaches to the calculation of Capital Charges. The first approach is to determine the replacement cost of the system's major functional components as the cost basis for the fee calculation. This approach is most appropriate for a system with considerable excess capacity such that most new connections to the system will be served by that existing excess capacity.

The second approach is to use the portion of the system's multi-year CIP associated with the provision of additional system capacity by functional system component as the cost basis for the fee calculation. This approach is most appropriate where 1) the existing system has virtually no excess capacity to accommodate growth, and 2) the CIP has a significant number of projects that provide additional system capacity for each functional system component to be representative of the cost of capacity for an entire system.

The third approach is to use a combination of the two approaches described above. This approach is most appropriate when 1) there is excess capacity in the current system that will accommodate some growth, and 2) the CIP includes projects that will provide some amount of system expansion, but does not necessarily have a sufficient amount of projects in each functional area to be reflective of a total system.

The third approach was used for the City because some growth can be accommodated by the current capacity of the system, yet the CIP contains a number of projects that will result in some level of expansion to the system. Using the combined approach effectively provides Capital Charges that reflect a weighting of the cost of current excess capacity and the cost of future capacity to be provided in the CIP, both of which will contribute to new connections being able to receive service from the City.

4.4 BASIS OF THE ANALYSIS

The first step in calculating water and sewer Capital Charges was to determine the capacity cost for each system function: water supply/treatment and transmission, as well as sewer conveyance/transmission and treatment. The cost basis for analysis was 1) the

replacement cost new less depreciation (RCNLD) of the City's existing facilities, and 2) the portion of the multi-year CIP providing additional capacity or expanding the system.

4.5 CAPACITY COSTS

The City provided its current water and sewer asset inventory as of FY 2013 that included a description, date in service, original cost, and useful life for each system asset. These assets were classified by system function and a RCNLD was calculated for each asset record using the data provided by the City and the Engineering News Record Construction Cost Index. The City's fixed asset information, including RCNLD for each item, is summarized by function for the water and sewer systems in Appendix D on Schedules 3 and 4, respectively.

In addition to the water and sewer fixed assets, staff provided the multi-year CIP and classified each project by system function as well as identified the percentage of each project that was associated with the provision of additional system capacity. Schedules 5 and 6 in Appendix D identify the multi-year water and sewer CIP utilized in the analysis.

Once the capacity costs were identified for each functional component, two adjustments were then made to those costs. The first adjustment deducted the amount of costs historically and estimated to be received or funded from other sources, such as grants or developer contributions. The second adjustment added the interest costs associated with the portion of the capacity costs that have been or will be funded with debt.

Relative to the second adjustment, a subsequent credit was included in the calculation for the net present value of the debt service that will be recovered in user fees after new customers connect to the Utility to avoid double recovery of debt-funded costs. Upon connection to the water and sewer system, new customers will begin to receive water and sewer service and will pay the rates associated with that service. The Utility's rates for water and sewer service recover the principal and interest payments (debt service) associated with the debt incurred to fund the capital costs of the water and sewer system. Therefore, in order to avoid a double recovery of those capital costs in the Capital Charges and user fees/rates, a credit was calculated based upon the net present value of

the annual debt service (through the term of the debt) that the average connection (connecting at the mid-point in time between now and term of the outstanding debt) will pay after connecting to the Utility.

4.6 CAPACITY & ERU DETERMINATION

The capacities in million gallons per day (MGD) provided by the infrastructure of each system were then identified by and discussed with City staff. These capacities by functional component were converted to equivalent dwelling units (EDUs) for water and sewer based upon the City's defined per EDU level of service (LOS) usage factors of 250 gallons per day (gpd) for water (per a prior Utility Master Plan) and 300 gpd for sewer (WSSC stated service standard). The capacity costs identified for each system were divided by the capacity of the system in EDUs to determine the capacity cost per EDU.

It is important to note that prior to determining the final capital contribution charge per EDU, a reduction was made to the capacity cost per EDU as an allowance for estimation and contingencies as an additional measure of conservatism to enhance the defensibility of the calculated fees presented herein in the event of a future legal challenge. Schedule 1 in Appendix D presents the water and sewer Capital Charge calculation details, including the system costs, borrowing assumptions, debt service credits, and the allowance for estimation and contingencies by system function.

4.7 CHARGE AMOUNTS

The chart below presents a comparison of the recommended water and sewer Capital Charges against the City's current charges for a new connection being served by a 1" meter (the minimum allowable meter size for new construction):

Fees per 1" Meter	Water	Sewer	Total
Current	$4,100	$5,900	$10,000
Update/Proposed	$4,100	$7,600	$11,700
$ Change	$0	$1,700	$1,700

It is important to note that the City has discretion regarding the percentage of cost recovery utilized in the establishment of Capital Charges. Adoption of Capital Charges at full cost recovery would lessen the pressure on user fees or rates by providing more revenue to pay for expansion-related capital costs, thus reducing the debt to be recovered in user fees/rates that would otherwise be necessary to fund those costs.

Based upon the results of this Study, it is our conclusion that the City's current cost of water system capacity is adequately reflected by the level of water Capital Charges currently in place, particularly when considering that the RCNLD developed herein resulted in the exclusion of the costs of many older system assets that were fully depreciated, but still in service. However, the current cost of sewer system capacity is approximately 30% higher than the level of sewer Capital Charges currently in place. As such, it is our recommendation to maintain the City's current water Capital Charges ($4,100 for a 1" meter) and adjust the City's sewer Capital Charges for a 1" meter from $5,900 to $7,600. This adjustment will result in a 17% increase in the combined water and sewer capital contribution charges for a 1" service, as shown in the above chart. We further recommend applying the maximum capacity flow ratios by meter size identified by the AWWA to establish the fees for new single family residential and commercial connections with larger meters, similar to the City's currently fee schedule. Schedule 7 of Appendix D contains a list of current and updated fees by meter size, including the maximum capacity flow ratios published by the AWWA for each meter size.

We recommend that the City review its Capital Charges periodically (i.e. every 2 to 3 years) to ensure that they remain fair and equitable and continue to appropriately reflect its current capacity costs. As the City replaces aging infrastructure that is fully depreciated and/or invests in additional treatment or transmission, it may necessitate further adjustment to its current charges. Additionally, similar to the application of readiness-to-serve charges, we also recommend that the City consider applying its Capital Charges based upon the number of dwelling units for multi-unit residential properties that are served by a master meter as opposed to meter size. This is a common practice among water and sewer utilities and generally correlates more closely to the demands placed on utility systems from such accounts.

SECTION 5. MISCELLANEOUS SERVICE CHARGES

This section of the report presents the analysis of miscellaneous service charges that was conducted as part of the Study.

5.1 DESCRIPTION & APPROACH

The City currently applies miscellaneous service charges in relation to the provision of specific services to individual customers. Inspections, reconnections, and meter tests are examples of the types of services for which the City has various miscellaneous service charges. The intent of miscellaneous service charges is to ensure that the recipient of a specific service bears the costs associated with providing that service.

Miscellaneous service charges are typically calculated by determining the costs, including both the time and materials, necessary to provide the service. Identification of the type of employee(s) involved in providing each service (meter services technician, maintenance worker, permit technician, construction inspector, etc.) and of the materials used (water meter, couplings, forms, vehicles, equipment, etc.) is the first step in developing appropriate fees. The employee(s) cost, including any overhead allocations (i.e. benefits) are then added to the costs of materials, including any overhead allocations (purchasing, warehousing, etc.) to determine the charge for each respective service.

Burton & Associates created a cost-of-service template to be used for each miscellaneous service charge listed in the City's rate policies and schedules as well as any new charges the City may wish to consider. This template provides a consistent methodology for assigning the appropriate time and material costs necessary to provide each service (see Appendix E for screen captures of the Miscellaneous Fee Developer we developed for the City). Upon population of the templates for each service, City staff will identify any adjustments to these types of fees for consideration by the Mayor and Council at a later date as part of a proposed policy and/or fee schedule revision.

SECTION 6. BENCHMARKING ANALYSIS

This section of the report presents the benchmarking analysis that was conducted as part of the Study. Supporting schedules for this analysis are provided in Appendix F.

6.1 DESCRIPTION & METHODOLOGY

Burton & Associates conducted a performance benchmarking analysis for the City's water and sewer utility to compare 1) key operational metrics to similar utilities in the area based upon published industry and other researched performance data, and 2) the level of rates and capital charges of neighboring systems.

Relative to the benchmarking of operational metrics, the City's water and sewer operations were compared to other utilities using a subset of performance benchmarks taken from the AWWA 2005 Benchmarking Performance Indicators for Water and Wastewater Utilities Report. The performance indicators listed below, with the exception of the Debt Service as a Percentage of Annual Revenues, were selected from that report for use in this analysis as they represent key measures of utility operations.

- Organizational Development Category
  - Customer Accounts per Employee (Water)
  - Customer Accounts per Employee (Wastewater)
  - MGD Water Delivered per Employee
  - MGD Wastewater Processed per Employee
- Business Operations
  - Debt Ratio (Liabilities/Assets)
  - Debt Service as a Percentage of Annual Revenues *(supplemental to the AWWA indicators)*
- Water Operations Category
  - Operations and Maintenance Cost Ratios
    - O&M cost per account
    - O&M cost per MG processed
    - O&M cost per mile of pipe
- Wastewater Operations Category
  - Operations and Maintenance Cost Ratios
    - O&M cost per account
    - O&M cost per MG processed
    - O&M cost per mile of pipe

The debt service comparison was added to the AWWA indicators for this Study to provide an additional measure of financial performance. A summary table with descriptions, results, and interpretative commentary for these performance indicators is provided on Schedule 2 in Appendix F.

For each of the identified indicators, the City's performance was first compared to the most recent published survey data compiled by AWWA in the 2012 Benchmarking Performance Indicators for Water and Wastewater Utilities: Survey Data and Analyses Report. When evaluating operational efficiencies and performance, it is typically helpful to compare the various performance indicators to benchmarks within an *industry peer group* (similarly sized regional utilities with combined water/wastewater operations). Therefore, the comparisons in this analysis are presented for the following AWWA participant category for only utilities with both water and wastewater systems:

- AWWA Region III (South Region) with Combined Systems
  - Includes utilities in the following states: AL, AR, DC, DE, FL, GA, KY, LA, MS, NC, SC, TN, TX, VA, WV (Total of 37 participants)

However, utility systems are also significantly impacted by factors such as treatment technologies, regulatory compliance, disposal methods, and other localized issues, which are not similarly reflected in the majority of the utilities in AWWA Region III. Therefore, operational data and performance metrics were also researched and documented for five communities in the City's surrounding area with utility systems that are generally comparable to the City's with respect to system size, water source, treatment technologies, etc. Additionally, the much larger WSSC was included in the benchmarking analysis due to its relationship to the City as a wholesale sewer service provider and because it provides retails service in certain areas within the City. The following utilities were selected and used for this Study:

- City of Frederick, MD
- City of Bowie, MD
- Town of Vienna, VA
- Town of Leesburg, VA
- City of Manassas, VA
- WSSC

Schedule 1 in Appendix F presents a comparison of general statistics and financial performance metrics for each of the local utilities included in the benchmarking analysis.

6.2 PERFORMANCE BENCHMARKING RESULTS

This sub-section of the report summarizes the results of the operational benchmarking analysis, and includes details regarding presentation and interpretation of these results. The results and interpretive discussions for each of the selected performance indicators are presented below, categorized by AWWA's QualServe Business Process Category. Schedule 2 in Appendix F presents the comparative data for the analysis and is organized in quartile rankings for consistency with the AWWA Report. The top and bottom quartile can reflect either the 25th or 75th percentile, depending on the direction of favorable performance for a specific indicator. For example, if a lower number reflects favorable performance, the top quartile value would represent the 25th percentile or the value above which 75 percent of the participant responses fall. The median represents the 50th percentile value, with half of the survey participants below.

Organizational Development

Customer Accounts per Employee (Water and Wastewater) – These indicators measure employee efficiency in terms of the number of active service accounts. The numbers of employees used in evaluating these indicators are based on full-time equivalents. A full-time equivalent (FTE) is the allocation of employee time equal to 2,080 hours per year. For consistency with the AWWA benchmarking results, FTEs for the local utilities used in this analysis were grouped by utility operation (water and wastewater) based upon information obtained from the most current published budget information for each utility. Where applicable, FTE's attributable to reclaimed water supply were excluded from this analysis to ensure uniformity.

As Schedule 2 in Appendix F shows, the City's water operations has approximately 487 water accounts per water operations employee, which is well within the median range for the AWWA South Region participants. While the City's performance for this indicator is

slightly lower than the average account/employee ratio for the five selected area utilities used for this comparison, it is more favorable than the Town of Vienna, the City of Bowie, and WSSC when compared individually.

The City's wastewater operations received a value of 916 accounts per employee and performed very well when compared to the AWWA South Region participants and several of the local utilities surveyed. It should be noted that the City does not maintain wastewater treatment facilities and that the comparatively low ratios of wastewater accounts per employee for the AWWA South Region participants, WSSC, and some of the area utilities reflect additional staff requirements for wastewater treatment/disposal.

MGD Water Delivered/Wastewater Processed per Employee – Measures employee efficiency for the water utility in terms of the volume of potable water delivered to customers and for the wastewater utility in terms of the volume of wastewater processed.

When employee efficiency is evaluated based on water/wastewater volume processed, the City's performance result of 0.18 MGD per employee for water is somewhat consistent with that for WSSC and with the average of the results for the local utilities, and is right at the median of the AWWA South Region survey results. The City's 0.46 MGD per employee for wastewater is markedly better than both the AWWA and area utility results. However, as with the account to employee ratio, this is likely due in part to the City's lower staffing requirement as a result of not maintaining wastewater treatment facilities.

Business Operations

Debt Ratio – This indicator quantifies the Utility's level of indebtedness. Many utilities use this indicator as an internal measure of performance. The debt ratio is an important measure for many businesses, because a high debt burden is indicative of larger annual costs for interest and principal repayments. Generally, the higher the debt ratio, the more dependent the utility is on debt financing for capital improvement funding.

The City relies heavily on debt-related funding sources, particularly for capital projects and cost-sharing obligations for the Blue Plains Wastewater Treatment Facility. As a

result, the City's debt ratio of 61% is higher (and thus less favorable) than those of the AWWA South Region and local utilities, as shown on Schedule 2 in Appendix F.

Debt Service as a Percent of Annual Revenue – Compares the Utility's annual debt service to revenues received. A high percentage of revenue being dedicated to debt service may indicate excessive debt and fiscal strain, is often times not viewed favorably by the municipal rating agencies, and may indicate the inability of an entity to adequately fund its future capital needs.

The City's debt service as a percent of its annual revenue for FY 2013 was approximately 30% as shown on Schedule 2 in Appendix F, and though notably higher than the average of the selected local utilities, was similar to WSSC and the Town of Leesburg when compared individually. As stated previously, the AWWA survey does not include this indicator thus no data was available for comparison.

Water Operations & Maintenance (O&M) Cost Ratios

This indicator includes measures to quantify water utility O&M costs as related to the number of active customers and the volume of potable water processed. Higher O&M costs per customer account may indicate inefficiency or may be the result of aging infrastructure and are generally not desirable. However, this may not always be the case, and higher cost per account may be required to make up for deferred maintenance or to improve customer satisfaction. Additionally some treatment processes and technologies require higher operations and/or maintenance costs. As such, O&M cost comparisons to local utilities is more meaningful than to the South Region utilities, as cost requirements will vary from state to state due to alternative water sources and treatment technologies.

The City's water utility O&M costs for this analysis are taken from the FY 2013 actual expenses and include customer service, water treatment plant, and field operations costs. The data from the 2012 AWWA survey are inflated to 2013 dollars by the US Consumer Price Index (CPI) Water & Sewerage Maintenance Series.

The City's O&M cost per account was $477, and when measured in terms of O&M cost per volume of water processed, the City's cost was $3,517 per MG. These results are

consistent with, and slightly below the average of the indicators for the selected local utilities that are similar in size, source water challenges, and treatment technologies. As may be expected, WSSC's cost/volume indicator is lower (and thus more favorable) reflecting the economies of scale benefits of a much larger utility system. However, as Schedule 2 shows, the City compared favorably with both WSSC and the selected local utilities when measured in terms of water O&M costs per length of distribution system piping, with an indicator value of $34,519 per mile of pipe. While generally comparable in cost to other local systems, the Utility should consider further review of the water utility O&M costs and always look for opportunities to enhance its operational efficiency.

Wastewater Operations & Maintenance (O&M) Cost Ratios

This indicator includes measures to quantify wastewater utility O&M costs as related to the number of active customers and the volume of wastewater processed. As with the water utility, higher wastewater O&M costs per customer account may indicate inefficiency or may be the result of aging infrastructure and are generally not desirable. However, this may not always be the case and higher cost per account may be desired to make up for deferred maintenance or, in the City's case, required to provide for treatment and disposal services provided by another entity. As such, O&M cost comparisons to local utilities is more meaningful than to the South Region utilities, as cost requirements will vary from state to state due to alternative treatment technologies and disposal requirements.

The City's sewer utility O&M costs for this analysis were taken from the FY 2013 actual expenses and include customer service, wastewater collections, and disposal costs. The AWWA 2012 benchmark costs were inflated to 2013 dollars by the US Consumer Price Index (CPI) Water & Sewerage Maintenance Series.

When measured in terms of O&M costs per volume of wastewater processed, the City's cost ratio of $2,180 per MG is well below that of WSSC and the average of the ratios for the selected local utilities. The City also performed quite favorably compared to WSSC and the other local systems with regard to wastewater O&M costs per length of collection system piping, with an indicator value or O&M cost of $34,013 per mile of pipe.

As with the water system, while very comparable in cost to other local systems, the Utility should consider further review of the sewer utility O&M costs and always look for opportunities to enhance its operational efficiency.

Recommended for Follow-up Analysis by City Staff

The AWWA benchmarking study and published results include a performance indicator called Planned Maintenance Ratios (Water & Wastewater), which measures the investment in planned water/wastewater utility maintenance compared to corrective or preventive maintenance. Utilities generally want to increase their percentage of planned maintenance and reduce their percentage of corrective maintenance activities such as pipeline breaks or pump failures.

Collection, review, and analysis of discrete preventive and corrective maintenance data (staff hours/costs) were not performed for this analysis for comparing the City's planned versus corrective/reactive maintenance performance to the AWWA South Region survey results; however, the AWWA survey data is available should the City wish to make these comparisons in the future.

6.3 CONCLUSIONS

Based upon the performance benchmarking analysis conducted using the AWWA 2012 survey data, the City's water and wastewater utility ranked within the median range for several of the indicators evaluated and reported by the AWWA South Region survey participants, and generally compared favorably with the selected local utilities, which suggest that the City's performance is consistent with its industry peers.

While there may be some potential for improvements to the City's utility operational efficiencies, as is often the case given continued technological advances, the overall results of this analysis indicate that the City is performing at or above par in the areas evaluated, with the exception of its high debt to equity ratio and debt service comparators. However, after restoring the Utility's reserve levels, the recommended rate adjustment plans identified herein will provide more annual funds for future capital that will reduce future borrowing requirements, and ultimately improve these debt measures.

Benchmarking Summary of Selected Area Utilities

Utility	Projected FY 2015 Water & Sewer Bill - 4 TGAL	Annual Gallons of Water Produced	Number of Water Connections	Annual Revenue	Outstanding Debt	Capital Asset Value Less Depreciation
City of Rockville, MD	$ 57.21	1,718,420,000	12,674	$ 19,929,600	$ 62,240,041	$ 115,876,463
City of Frederick, MD	$ 60.78	1,960,415,000	18,620	$ 23,381,829	$ 105,398,217	$ 230,849,726
City of Bowie, MD	$ 55.39	580,000,000	7,908	$ 5,470,031	$ 3,403,564	$ 23,287,962
Town of Vienna, VA	$ 55.16	1,026,806,169	9,358	$ 7,357,985	$ 1,700,733	$ 9,691,569
Town of Leesburg, VA	$ 43.48	1,562,200,000	15,509	$ 15,636,548	$ 66,300,000	$ 181,380,068
City of Manassas, VA	$ 32.06	4,608,000,000[1]	10,918	$ 25,309,479	$ 22,385,000	$ 47,624,033
WSSC	$ 47.23	58,838,000,000	446,453	$ 550,469,000	$ 1,878,296,259	$ 5,775,658,000

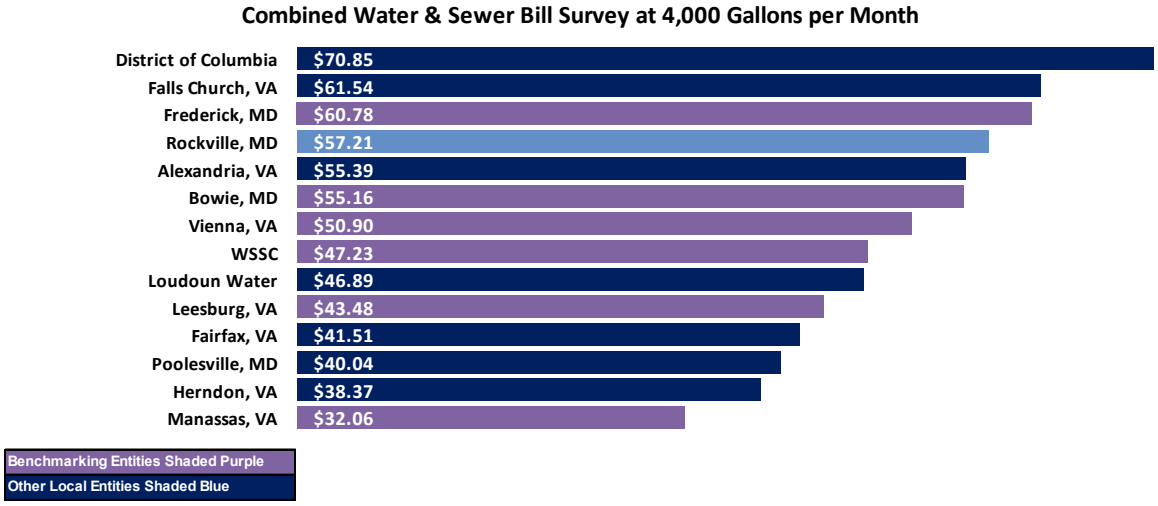
1 - Total includes 2,035,517,000 gallons of wholesale consumption.
2 - Includes industrial customer connections but excludes wholesale consumption.

6.4 RATE AND CAPITAL CHARGE BENCHMARKING

As part of the benchmarking analysis, we also prepared FY 2015 residential rate and capital charge surveys that compare the City's utility rates and Capital Charges to that of neighboring communities. The surveys were performed to provide an understanding of the current market range of typical utility costs and how the City fits within that range.

Water & Sewer Rates

The graph below presents the comparison of the monthly water charges of local and comparable communities for a single-family residential customer with a 5/8" meter based upon 4,000 gallons of water use per month.

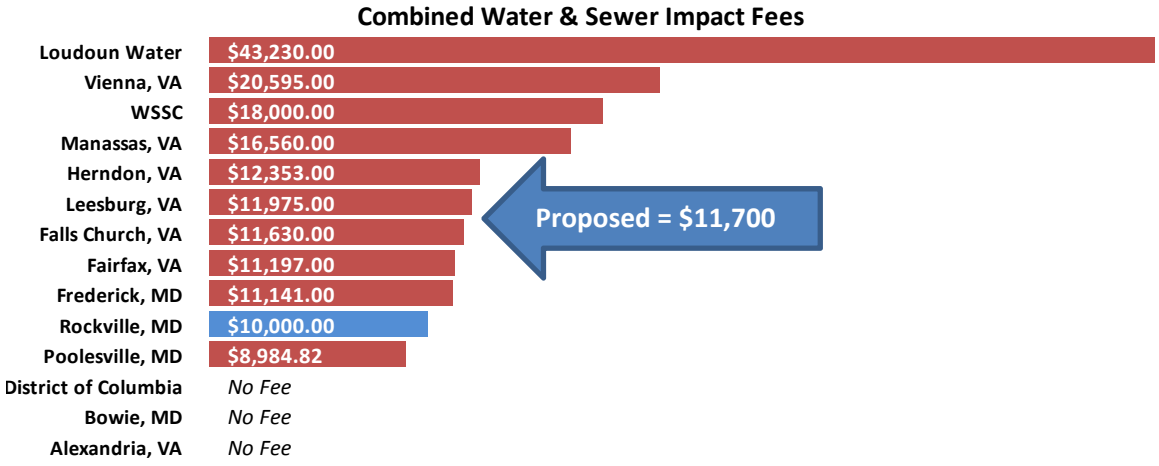


Bills for communities in Maryland include $5.00 per month Bay Restoration Fund Fee (i.e. "Flush Tax") to fund improvements to wastewater treatment plants in order to primarily reduce nitrogen and phosphorus pollution into the Chesapeake Bay.

Similar comparisons are provided for residential customers with 3/4" and 1" meters in Appendix F on Schedules 5 and 6, respectively.

Capital Contribution Charges

Similarly, we performed a survey of local communities to identify the market range of water and sewer impact fees (i.e. capital contribution charges) for a typical residential connection. The graph below presents the results of the survey, and as can be seen, the City's current charges are lower than those of many other utility providers in the area.



APPENDIX A – WATER FUND FINANCIAL FORECAST

Supporting Schedules for the RSA conducted for the Water Fund

Schedule 1 - Assumptions

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Annual Revenue Growth - Water:											
Average Number of Billed Accounts	12,713	12,738	12,763	12,788	12,813	12,838	12,863	12,888	12,913	12,938	12,963
Growth	25	25	25	25	25	25	25	25	25	25	25
Percent Change in Billed Accounts	N/A	0.20%	0.20%	0.20%	0.20%	0.20%	0.19%	0.19%	0.19%	0.19%	0.19%
Percent Change in Billed Use	N/A	0.20%	0.20%	0.20%	0.20%	0.20%	0.19%	0.19%	0.19%	0.19%	0.19%
Projected Growth in Capital Contribution Charge Paying Accounts	N/A	25	25	25	25	25	25	25	25	25	25
Price Elasticity Coefficient:											
Applied to Usage Charge Rate Revenue	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Capital Contribution Charges:											
Per ERU	$ 4,100	$ 4,100	$ 4,100	$ 4,100	$ 4,100	$ 4,100	$ 4,100	$ 4,100	$ 4,100	$ 4,100	$ 4,100
Average Annual Interest Earnings Rate:											
On Fund Balances	0.13%	0.25%	0.50%	1.00%	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Operating Budget Execution Percentage:											
Personnel Services	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Contract Services and Commodities - Fixed	100.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
Contract Services and Commodities - Variable	100.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
Capital Spending	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Operating Fund Reserve Target:											
Number of Months of Annual Operating Expense	3.00	3.00	3.00	4.00	5.00	6.00	6.00	6.00	6.00	6.00	6.00

Schedule 2 – Beginning Balances

GROUPING OF FUNDS IN MODEL		Revenue Fund	Capital Projects Fund	Bond Proceeds	Capital Contribution Charges	Restricted Reserves
CURRENT UNRESTRICTED ASSETS						
1010 - Cash - Vendor Check	$	-	-	-	-	-
1156 - Accounts Receivable - Utility		561,864	-	-	-	-
1157 - Accounts Receivable - Utility Pen		12,109	-	-	-	-
1159 - General Accounts Receivable		57,407	-	-	-	-
1160 - Allowance For Uncollectable - A/R		(7,196)	-	-	-	-
1170 - Unbilled Accounts Receivable		1,497,582	-	-	-	-
1323 - Due From Montgomery County		-	-	-	-	-
1341 - Deferred S A Receivable		-	-	-	-	-
1570 - Unamortized Bond Discount		-	-	-	-	-
Prior Year Capital Funds Carried Over		(4,324,127)	-	4,324,127	-	-
TOTAL ASSETS	$	(2,202,361)	-	4,324,127	-	-

Schedule 2 – Beginning Balances

GROUPING OF FUNDS IN MODEL		Revenue Fund	Capital Projects Fund	Bond Proceeds	Capital Contribution Charges	Restricted Reserves
Less: Interfund payable [1]		(5,465,235)	-	-	-	-
Less: 2010 - Vouchers Payable		(565,348)	-	-	-	-
Less: 2020 - Accounts Payable		(20,692)	-	-	-	-
Less: 2061 - Contracts Payable - Retainage		(137,334)	-	-	-	-
Less: 2082 - Due To Montgomery County		(432)	-	-	-	-
Less: 2084 - State Of MD - Bay Fee		(237,726)	-	-	-	-
Less: 2110 - Unamortized Bond Premium [2]		-	-	-	-	-
Less: 2120 - Matured Interest Payable		(123,625)	-	-	-	-
Less: 2160 - Accrued Wages Payable		(68,819)	-	-	-	-
Less: 2161 - Accrued Vacation		(254,418)	-	-	-	-
Less: 2200 - Customer Deposits		(2,000)	-	-	-	-
Less: 2204 - Water Meter Permit Deposits		(12,050)	-	-	-	-
Less: 2207 - Deposit For Inv On Loan -Wtr Mt		(445)	-	-	-	-
Less: 2221 - Taxes Collected In Advance		-	-	-	-	-
Less: 2222 - Revenues Collected In Advce		-	-	-	-	-
Less: 2224 - Pending Allocation - Interest		-	-	-	-	-
Less: 2225 - Pending Allocation-Utility Rcp		-	-	-	-	-
Less: 2226 - Prepaid Interest		-	-	-	-	-
CALCULATED FUND BALANCE (ASSETS - LIABILITIES)	$	(9,090,484)	-	4,324,127	-	-
Plus/(Less):		-	-	-	-	-
NET UNRESTRICTED FUND BALANCE	$	(9,090,484)	-	4,324,127	-	-

Schedule 2 – Beginning Balances

GROUPING OF FUNDS IN MODEL		Revenue Fund	Capital Projects Fund	Bond Proceeds	Capital Contribution Charges	Restricted Reserves
			Encumbered or Reserved for Projects not in the CIP	Beginning Balance Available for Projects in the CIP		
FUND TITLE		Balance as of 6/30/2013				
Capital Contribution Charges	$	-	-	-		
Capital Projects Fund	$	-	-	-		
Bond Proceeds	$	4,324,127	-	4,324,127		
Revenue Fund	$	(9,090,484)	-	(9,090,484)		
Restricted Reserves	$	-	-	-		
Total Consolidated Fund Balance	**$**	**(4,766,357)**	**-**	**(4,766,357)**		

(1) Interfund amt payable to General Fund within 1 year, per FY 2013 CAFR
(2) Excluded as non-cash expense

Schedule 3 – CIP

PROJECT DESCRIPTION		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Water Projects												
Hydraulic Surge Suppression - Cash	$	-	-	-	-	-	-	-	-	-	-	-
Hydraulic Surge Suppression - Bond	$	-	-	-	-	-	-	-	-	-	-	-
SCADA Improvements - Cash	$	45,000	100,000	-	-	-	-	-	-	-	-	-
SCADA Improvements - Bond	$	-	-	-	-	-	-	-	-	-	-	-
Southlawn Lane Water Main - Cash	$	-	-	-	-	-	-	-	-	-	-	-
Southlawn Lane Water Main - Bond	$	-	-	-	-	-	-	-	-	-	-	-
Water Main Rehabilitation - Cash	$	1,672,342	-	-	-	-	-	-	-	-	-	-
Water Main Rehabilitation - Bond	$	1,672,342	1,310,370	1,997,911	1,949,698	2,008,189	2,718,486	-	-	-	-	-
Water Plant Upgrades - Cash	$	-	-	-	-	-	-	-	-	-	-	-
Water Plant Upgrades - Bond	$	-	-	-	-	-	-	-	-	-	-	-
Water System Facility Improvements - Cash	$	-	-	-	-	-	1,500,000	-	-	-	-	-
Water System Facility Improvements - Bond	$	-	1,390,000	-	-	-	-	-	-	-	-	-
Water Tank Improvements - Cash	$	148,000	-	-	-	-	-	-	-	-	-	-
Water Tank Improvements - Bond	$	-	-	3,100,000	-	-	-	-	-	-	-	-
Prior Year Projects - Unspent Amounts - Cash	$	4,368,648	-	-	-	-	-	-	-	-	-	-
Prior Year Projects - Unspent Amounts - Bonds	$	4,324,127	-	-	-	-	-	-	-	-	-	-
Unspecified Future Projects	$	-	-	-	-	-	-	-	-	-	-	-
SCADA Improvements	$	-	-	-	-	-	-	250,000	-	-	-	-
Water Main Rehabilitation	$	-	-	-	-	-	-	2,431,000	2,301,000	2,412,000	2,795,000	3,198,000
Water System Facility Improvements	$	-	-	-	-	-	-	3,200,000	150,000	4,500,000	180,000	-
Water Tank Improvements	$	-	-	-	-	-	-	-	80,000	400,000	-	-
Total CIP Budget (in FY 2013 dollars)	**$**	**12,230,459**	**2,800,370**	**5,097,911**	**1,949,698**	**2,008,189**	**4,218,486**	**5,881,000**	**2,531,000**	**7,312,000**	**2,975,000**	**3,198,000**
Compounded Annual Cost Escalation		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Annual Capital Spending Execution Percentage (1)		90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Final CIP Funding Level	**$**	**12,211,159**	**2,651,370**	**5,097,911**	**1,949,698**	**2,008,189**	**4,068,486**	**5,536,000**	**2,508,000**	**6,822,000**	**2,957,000**	**3,198,000**

(1) Capital spending execution percentage does not apply to Water Main Rehabilitation, the bond portion of Water Tank Improvements, or Prior Year Unspent Amounts. These projects are projected to be executed at 100%.

Schedule 4 – Cash In

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Rate Revenue Growth Assumptions											
Growth in Water ERUs	N/A	0.20%	0.20%	0.20%	0.20%	0.20%	0.19%	0.19%	0.19%	0.19%	0.19%
Growth in Water Usage	N/A	0.20%	0.20%	0.20%	0.20%	0.20%	0.19%	0.19%	0.19%	0.19%	0.19%
Assumed Rate Revenue Adjustments											
Assumed RTS Rate Adjustment	**N/A**	**20.00%**	**10.00%**	**4.50%**	**4.50%**	**4.50%**	**4.50%**	**4.50%**	**4.50%**	**4.50%**	**4.50%**
Assumed Usage Rate Adjustment	**N/A**	**8.00%**	**3.00%**	**3.50%**	**3.50%**	**3.50%**	**3.50%**	**3.50%**	**2.00%**	**2.00%**	**2.00%**
Water Rate Revenue (1)											
RTS Charges	$ 464,108	892,841	984,052	1,030,349	1,078,819	1,129,566	1,182,695	1,238,318	1,296,553	1,357,521	1,421,350
Usage Charges	10,463,620	10,845,253	11,125,379	11,456,561	11,797,557	12,148,656	12,510,156	12,882,364	13,112,838	13,347,386	13,586,078
Total Water Rate Revenue	**$ 10,927,728**	**11,738,094**	**12,109,431**	**12,486,910**	**12,876,376**	**13,278,222**	**13,692,851**	**14,120,683**	**14,409,391**	**14,704,907**	**15,007,428**
Other Operating Revenue (2)											
Bay Administration Fee	$ 26,442	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
Sales Of Water&Public	28,940	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Utility Penalty Chrgs	87,136	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000
Miscellaneous Revenue	29,662	-	-	-	-	-	-	-	-	-	-
Permits And Fees	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Sale Of Vehicles	-	-	-	-	-	-	-	-	-	-	-
Total Other Operating Revenue	**$ 175,181**	**138,000**	**138,000**	**138,000**	**138,000**	**138,000**	**138,000**	**138,000**	**138,000**	**138,000**	**138,000**
Capital Contribution Charges (3)	**$ 126,600**	**102,500**	**102,500**	**102,500**	**102,500**	**102,500**	**102,500**	**102,500**	**102,500**	**102,500**	**102,500**
Premium On Bonds Sold	**$ 31,344**	**31,500**	**31,500**	**31,500**	**31,500**	**31,500**	**31,500**	**31,500**	**31,500**	**31,500**	**31,500**
Interest Earnings Revenue	**$ 2,703**	**-**	**-**	**-**	**-**	**-**	**37,237**	**87,111**	**103,884**	**108,158**	**110,935**
Transfers In											
Transfer\From Sewer Fund	$ 324,830	331,330	337,957	344,716	351,610	358,642	365,815	373,131	380,594	388,206	395,970
Transfer\From Refuse Fund	143,700	146,580	149,512	152,502	155,552	158,663	161,836	165,073	168,374	171,742	175,177
Total Transfers In	**$ 468,530**	**477,910**	**487,468**	**497,218**	**507,162**	**517,305**	**527,651**	**538,204**	**548,968**	**559,948**	**571,147**
Capital Project Funding Sources											
Bond Proceeds	4,324,127	-	-	-	-	-	-	-	-	-	-
Revenue Fund	-	-	-	-	-	-	-	1,989,133	3,067,382	2,957,000	3,089,722
Debt Proceeds	1,672,342	2,561,370	5,097,911	1,949,698	2,008,189	2,718,486	5,536,000	518,867	3,754,618	-	108,278
Projects Designated To Be Paid With Cash	6,214,690	90,000	-	-	-	1,350,000	-	-	-	-	-
Total Capital Project Funding Sources	**$ 12,211,159**	**2,651,370**	**5,097,911**	**1,949,698**	**2,008,189**	**4,068,486**	**5,536,000**	**2,508,000**	**6,822,000**	**2,957,000**	**3,198,000**
TOTAL CASH INFLOWS	**$ 23,943,245**	**$ 15,139,374**	**$ 17,966,811**	**$ 15,205,826**	**$ 15,663,727**	**$ 18,136,013**	**$ 20,065,739**	**$ 17,525,998**	**$ 22,156,243**	**$ 18,602,013**	**$ 19,159,510**

(1) Estimated water rate revenues in FY 2014 were based on year end numbers as of 8/19/14. Future rate revenue projections are based upon FY 2014 estimated results, adjusted annually to reflect assumed rate increases and customer growth.
(2) Unless otherwise specified, FY 2014 and FY 2015 other operating revenues are per the FY 2014 year end estimates as of 8/19/14 and the FY 2015 Budget, respectively.
(3) Capital Contribution Charge revenues were calculated based upon the current water Capital Contribution Charges and the projected growth in Capital Contribution Charge paying accounts (see Schedule 1 for annual growth projections).

Schedule 5 – Cash Out

	FY 2014 [1]	FY 2015 [1]	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Personnel Services											
Regular Employee Wages	$ 2,204,144	2,454,260	2,515,617	2,591,085	2,681,773	2,789,044	2,914,551	3,060,278	3,228,594	3,422,309	3,644,759
Temporary Employee Wages	3,147	10,330	10,588	10,906	11,288	11,739	12,267	12,881	13,589	14,405	15,341
Overtime	238,628	166,120	170,273	175,381	181,520	188,780	197,275	207,139	218,532	231,644	246,701
Disability-Short-Term	26,878	-	-	-	-	-	-	-	-	-	-
Allowances	7,917	8,430	8,430	8,430	8,430	8,430	8,430	8,430	8,430	8,430	8,430
FICA - City Contribution	148,765	160,710	164,728	169,670	175,608	182,632	190,851	200,393	211,415	224,100	238,666
Def Ben Opt Ret - City Contribution	342,117	262,590	262,590	262,590	262,590	262,590	262,590	262,590	262,590	262,590	262,590
Thrift Opt Ret - City Contribution	45,926	52,030	53,331	54,931	56,853	59,127	61,788	64,878	68,446	72,553	77,268
Group Hosp - City Contribution	201,506	231,790	254,969	280,466	308,512	339,364	373,300	410,630	451,693	496,862	546,549
Post Employment Healthcare (GASB 45)	41,572	43,320	43,320	43,320	43,320	43,320	43,320	43,320	43,320	43,320	43,320
Group Life - City Contribution	5,980	7,070	7,070	7,070	7,070	7,070	7,070	7,070	7,070	7,070	7,070
Group Dental - City Contribution	6,018	7,030	7,171	7,314	7,460	7,609	7,762	7,917	8,075	8,237	8,402
Worker's Compensation Insurance	80,461	80,000	82,000	84,460	87,416	90,913	95,004	99,754	105,240	111,555	118,806
Medicare - City Contribution	34,855	37,700	38,643	39,802	41,195	42,843	44,771	47,009	49,595	52,570	55,987
Additional Personal Cost	-	-	-	-	-	-	-	-	-	-	-
Sub-Total: Personnel Services	**$ 3,387,914**	**3,521,380**	**3,618,728**	**3,735,424**	**3,873,035**	**4,033,462**	**4,218,979**	**4,432,289**	**4,676,589**	**4,955,644**	**5,273,889**
Personnel Services Execution Percentage [2]	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Contract Services											
Fixed Contract Services Expenses											
Consultants	$ 39,305	30,800	311,875	484,332	136,861	140,967	145,196	149,552	154,038	158,660	163,419
Bond Counsel/Fin Advsr Ser	-	33,000	33,990	35,010	36,060	37,142	38,256	39,404	40,586	41,803	43,058
Banking/Investment Services	2,075	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524
Telephone Service	13,824	14,520	14,956	15,404	15,866	16,342	16,833	17,338	17,858	18,394	18,945
Postage	37,294	40,350	41,561	42,807	44,092	45,414	46,777	48,180	49,625	51,114	52,648
Data Processing Services	11,382	14,320	14,750	15,192	15,648	16,117	16,601	17,099	17,612	18,140	18,684
Office Equipment Rental	-	-	-	-	-	-	-	-	-	-	-
Cellular Service	911	1,300	1,339	1,379	1,421	1,463	1,507	1,552	1,599	1,647	1,696
Travel Outside Metro Area	4,468	6,310	6,499	6,694	6,895	7,102	7,315	7,534	7,761	7,993	8,233
Class/Professional Development	12,466	12,470	12,844	13,229	13,626	14,035	14,456	14,890	15,337	15,797	16,271
Dues, Fees & Publications	17,924	20,580	21,197	21,833	22,488	23,163	23,858	24,574	25,311	26,070	26,852
Contracted Servs-Buildings	24,211	14,000	14,420	14,853	15,298	15,757	16,230	16,717	17,218	17,735	18,267
Contracted Servs-Grounds	-	-	-	-	-	-	-	-	-	-	-
Contract Services-Other	35,575	47,890	49,327	50,807	52,331	53,901	55,518	57,183	58,899	60,666	62,486
Alarm System	1,467	1,730	1,782	1,835	1,890	1,947	2,006	2,066	2,128	2,192	2,257
Office Eqp Service/Maintenance	1,140	700	721	743	765	788	811	836	861	887	913
Computer Eq Maintenance	250	250	258	265	273	281	290	299	307	317	326
Communications Equip Maint	3,000	3,540	3,646	3,756	3,868	3,984	4,104	4,227	4,354	4,484	4,619
Other Contracted Eq Repair	2,272	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524
Contract Rprs/Add No Value	78,788	84,000	86,520	89,116	91,789	94,543	97,379	100,300	103,309	106,409	109,601
Contracted Vehicle M & R	2,500	2,400	2,472	2,546	2,623	2,701	2,782	2,866	2,952	3,040	3,131
Vehicle Repairs-Accidents	980	500	515	530	546	563	580	597	615	633	652
Credit Card Charges	62,065	55,000	56,650	58,350	60,100	61,903	63,760	65,673	67,643	69,672	71,763
Uniform Rental	9,787	9,680	9,970	10,270	10,578	10,895	11,222	11,558	11,905	12,262	12,630
Contracted Refuse Service	62,916	73,750	75,963	78,241	80,589	83,006	85,496	88,061	90,703	93,424	96,227
Contracted Lab Services	21,734	28,500	29,355	30,236	31,143	32,077	33,039	34,030	35,051	36,103	37,186
Printing Contracts	-	200	206	212	219	225	232	239	246	253	261

Schedule 5 – Cash Out

	FY 2014 [1]	FY 2015 [1]	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Services											
Fixed Contract Services Expenses											
Heavy Equipment Rental	-	-	-	-	-	-	-	-	-	-	-
Other Equipment Leases	-	770	793	817	841	867	893	919	947	975	1,005
Liability Insurance	34,430	32,000	32,960	33,949	34,967	36,016	37,097	38,210	39,356	40,537	41,753
Property Insurance	4,420	10,000	10,300	10,609	10,927	11,255	11,593	11,941	12,299	12,668	13,048
Variable Contract Services Expenses											
Purchase Of Wssc Water	$ 93,034	41,200	42,436	43,709	45,020	46,371	47,762	49,195	50,671	52,191	53,757
Sub-Total: Contract Services	**$ 578,218**	**589,760**	**887,604**	**1,077,332**	**747,652**	**770,081**	**793,184**	**816,979**	**841,489**	**866,733**	**892,735**
Commodities											
Fixed Commodities Expenses											
SWM Fees	$ 1,694	1,910	1,967	2,026	2,087	2,150	2,214	2,281	2,349	2,420	2,492
Equipment Parts	54,871	74,700	76,941	79,249	81,627	84,076	86,598	89,196	91,872	94,628	97,467
Program Supplies	180,576	165,440	170,403	175,515	180,781	186,204	191,790	197,544	203,470	209,574	215,862
Maintenance Supplies	-	-	-	-	-	-	-	-	-	-	-
Purchased Unfrms/Stf Tshrts	5,197	5,620	5,789	5,962	6,141	6,325	6,515	6,711	6,912	7,119	7,333
Vehicle Preparation Costs	-	-	-	-	-	-	-	-	-	-	-
Contingency-Regular	-	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000
Furniture & Equipment < $5000	2,216	-	-	-	-	-	-	-	-	-	-
CIP Maintenance Cost	-	-	12,000	-	-	-	-	-	-	-	-
Variable Commodities Expenses											
Electricity	$ 591,849	660,950	680,779	701,202	722,238	743,905	766,222	789,209	812,885	837,272	862,390
Heating Fuel	34,407	41,150	42,385	43,656	44,966	46,315	47,704	49,135	50,609	52,128	53,691
Gasoline And Oil	42,377	44,860	46,206	47,592	49,020	50,490	52,005	53,565	55,172	56,827	58,532
Chemicals	293,997	414,650	427,090	439,902	453,099	466,692	480,693	495,114	509,967	525,266	541,024
Sub-Total: Commodities	**$ 1,207,183**	**1,469,280**	**1,523,558**	**1,555,105**	**1,599,958**	**1,646,157**	**1,693,742**	**1,742,754**	**1,793,237**	**1,845,234**	**1,898,791**
Sub-Total: Fixed Contract Services and Commodities	**$ 729,737**	**856,230**	**1,172,268**	**1,356,376**	**1,033,267**	**1,062,465**	**1,092,539**	**1,123,515**	**1,155,421**	**1,188,283**	**1,222,132**
Sub-Total: Variable Contract Services and Commodities	**$ 1,055,664**	**1,202,810**	**1,238,894**	**1,276,061**	**1,314,343**	**1,353,773**	**1,394,386**	**1,436,218**	**1,479,305**	**1,523,684**	**1,569,394**
Fixed Contract Svcs and Commodities Execution Percentage [2]	**100.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**
Variable Contract Svcs and Commodities Execution Percentage	**100.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**
Total: Personnel Services and O&M Funding Level	**$ 5,173,315**	**5,271,564**	**5,668,216**	**5,972,996**	**5,868,504**	**6,087,264**	**6,332,866**	**6,608,063**	**6,916,106**	**7,260,816**	**7,646,686**
Minor Capital Outlay											
Major Repairs	$ 19,590	20,080	20,582	21,096	21,624	22,164	22,718	23,286	23,869	24,465	25,077
Equipment & Tools	747	3,900	3,998	4,097	4,200	4,305	4,412	4,523	4,636	4,752	4,871
Computer Equipment	905	-	-	-	-	-	-	-	-	-	-
Computer Software	449	-	-	-	-	-	-	-	-	-	-
Water Meters	29,060	35,000	35,875	36,772	37,691	38,633	39,599	40,589	41,604	42,644	43,710
Plumbers Meters	26,537	25,000	25,625	26,266	26,922	27,595	28,285	28,992	29,717	30,460	31,222
Vehicle Replacement	-	-	6,156	19,771	21,853	-	-	120,000	110,000	315,000	255,000
Total: Minor Capital Outlay	**$ 77,288**	**83,980**	**92,235**	**108,002**	**112,290**	**92,698**	**95,015**	**217,391**	**209,826**	**417,321**	**359,879**

Schedule 5 – Cash Out

	FY 2014 (1)	FY 2015 (1)	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Debt Service Expenses											
Existing Debt Service											
All Existing Revenue Bonds - Principal	$ 2,267,289	2,280,118	2,298,332	2,121,943	1,795,964	1,618,966	1,485,350	1,489,157	1,488,036	1,280,000	1,280,000
All Existing Revenue Bonds - Interest	882,539	812,235	733,922	652,610	581,239	519,195	462,860	411,453	360,749	310,665	263,840
Series 2015 Bond - P&I	-	-	-	-	-	-	-	-	-	-	-
New Debt Service	52,261	203,804	486,461	750,400	904,065	1,094,663	1,446,818	1,654,959	1,848,185	1,972,854	1,977,930
Total: Debt Service Expenses	**$ 3,202,089**	**3,296,157**	**3,518,715**	**3,524,953**	**3,281,268**	**3,232,824**	**3,395,028**	**3,555,569**	**3,696,970**	**3,563,519**	**3,521,770**
Transfers Out											
Administrative Charges	$ 1,040,610	1,061,420	1,082,648	1,104,301	1,126,387	1,148,915	1,171,893	1,195,331	1,219,238	1,243,623	1,268,495
Total: Transfers Out	**$ 1,040,610**	**1,061,420**	**1,082,648**	**1,104,301**	**1,126,387**	**1,148,915**	**1,171,893**	**1,195,331**	**1,219,238**	**1,243,623**	**1,268,495**
TOTAL CASH OUTFLOWS	**$ 9,493,302**	**9,713,121**	**10,361,815**	**10,710,253**	**10,388,449**	**10,561,701**	**10,994,802**	**11,576,353**	**12,042,139**	**12,485,280**	**12,796,831**

(1) FY 2014 and FY 2015 based upon FY 2014 year end results as of 8/19/14 and FY 2015 Budget, respectively.

(2) FY 2014 Personnel Services Execution Percentage and Fixed and Variable Expense Execution Percentages based on projections using year end estimates for FY 2014 as of 8/19/14 and compared to budget for FY 2014. Execution Percentages for FY 2015 through the end of the projection period based on discussions with staff.

Schedule 6 – Cost Escalation Factors

Annual Cost Escalation Factors:	FY 2014 (1)	FY 2015 (1)	FY 2016 (2)	FY 2017 (2)	FY 2018 (2)	FY 2019 (2)	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Personnel Services											
Regular Employee Wages	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Temporary Employee Wages	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Overtime	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Disability-Short-Term	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Allowances	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
FICA - City Contribution	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Def Ben Opt Ret - City Contribution	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Thrift Opt Ret - City Contribution	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Group Hosp - City Contribution	N/A	N/A	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Post Employment Healthcare (GASB 45)	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Group Life - City Contribution	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Group Dental - City Contribution	N/A	N/A	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Worker's Compensation Insurance	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Medicare - City Contribution	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Additional Personal Cost	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Contract Services											
Consultants	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Bond Counsel/Fin Advsr Ser	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Banking/Investment Services	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Telephone Service	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Postage	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Data Processing Services	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Office Equipment Rental	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Cellular Service	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Travel Outside Metro Area	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Class/Professional Development	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Dues, Fees & Publications	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Contracted Servs-Buildings	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Contracted Servs-Grounds	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Contract Services-Other	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Alarm System	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Office Eqp Service/Maintenance	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Computer Eq Maintenance	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Communications Equip Maint	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Other Contracted Eq Repair	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%

Schedule 6 – Cost Escalation Factors

Annual Cost Escalation Factors:	FY 2014 (1)	FY 2015 (1)	FY 2016 (2)	FY 2017 (2)	FY 2018 (2)	FY 2019 (2)	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Services - continued											
Contract Rprs/Add No Value	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Contracted Vehicle M & R	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Vehicle Repairs-Accidents	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Credit Card Charges	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Purchase Of Wssc Water	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Uniform Rental	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Contracted Refuse Service	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Contracted Lab Services	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Printing Contracts	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Heavy Equipment Rental	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Other Equipment Leases	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Liability Insurance	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Property Insurance	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Commodities											
Electricity	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Heating Fuel	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Gasoline And Oil	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
SWM Fees	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Equipment Parts	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Program Supplies	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Maintenance Supplies	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Chemicals	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Purchased Unfrms/Stf Tshrts	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Vehicle Preparation Costs	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Contingency-Regular	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Furniture & Equipment < $5000	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Administrative Charges	N/A	N/A	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Default Inflation Factor (if expense not listed above)	N/A	N/A	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%

(1) FY 2014 and FY 2015 cost requirements reflect the FY 2014 actual results and FY 2015 Budgets, respectively.
(2) Expected cost escalation through FY 2019 was taken from the 5 year projections provided by staff.

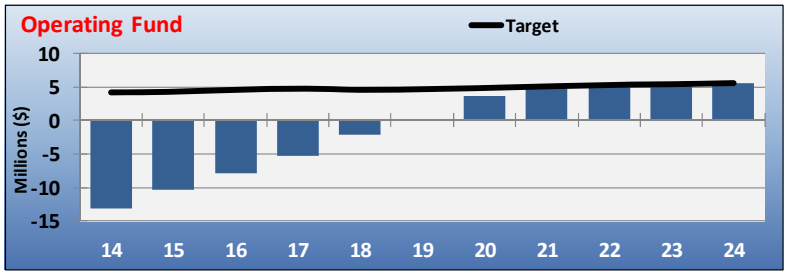
Schedule 7 – Model Control Panel

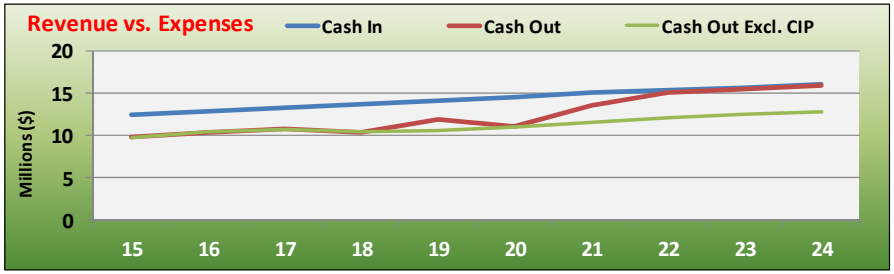
FINANCIAL ANALYSIS AND MANAGEMENT SYSTEM (FAMS) SUMMARY

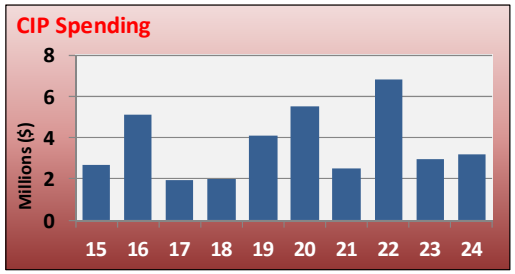
WATER FUND

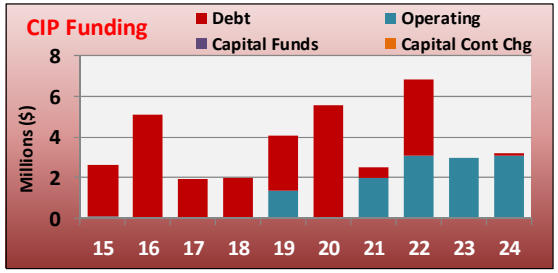
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
RTS Charge Increases	20.00%	10.00%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%
Usage Charge Increases	8.00%	3.00%	3.50%	3.50%	3.50%	3.50%	3.50%	2.00%	2.00%	2.00%
Combined Utility Rate Plan	8.82%	3.53%	3.58%	3.58%	3.58%	3.59%	3.59%	2.22%	2.22%	2.23%
Debt Service Coverage Ratio	2.01	1.88	1.90	2.19	2.28	2.23	2.19	2.10	2.17	2.17
CIP Execution % ▶	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Operating Reserve Mos ▶	6	6	6	6	6	6	6	6	6	6

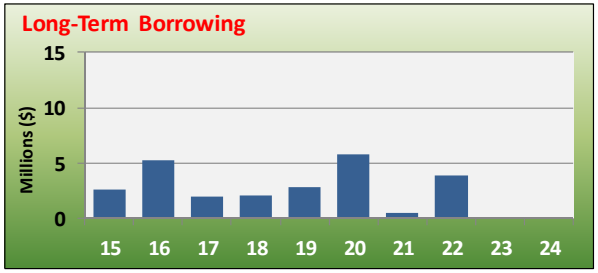
PS FY15 ▶	100.0%
OMV FY15 ▶	85.0%
OMF FY15 ▶	85.0%
Elasticity	0.20











Schedule 8 – Pro Forma

		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	**Rate Revenue Subject to Growth & Rate Adjustments**											
2	RTS and Fixed Charge Rate Revenue	$ 10,927,728	10,927,728	11,738,094	12,109,431	12,486,910	12,876,376	13,278,222	13,692,851	14,120,683	14,409,391	14,704,907
3	Additional Rate Revenue From Partial PY Rate Increase	-	-	-	-	-	-	-	-	-	-	-
4	Additional Revenue From Growth	-	21,489	23,038	23,720	24,411	25,124	25,857	26,613	27,391	27,897	28,414
5	Weather Normalization And Other Adjustments	-	-	-	-	-	-	-	-	-	-	-
6	Subtotal: Base Revenue With Growth	$ 10,927,728	10,949,218	11,761,131	12,133,151	12,511,321	12,901,500	13,304,079	13,719,464	14,148,074	14,437,288	14,733,321
7	Weighted Average Rate Increase	0.00%	8.82%	3.53%	3.58%	3.58%	3.58%	3.59%	3.59%	2.22%	2.22%	2.23%
8	Additional Rate Revenue From Rate Increase	-	965,221	415,455	434,520	448,220	462,362	476,960	492,031	313,979	321,222	328,670
9	Price Elasticity Adjustment	-	(176,346)	(67,155)	(80,761)	(83,165)	(85,640)	(88,188)	(90,812)	(52,662)	(53,604)	(54,563)
10	**Total Rate Revenue**	**$ 10,927,728**	**11,738,094**	**12,109,431**	**12,486,910**	**12,876,376**	**13,278,222**	**13,692,851**	**14,120,683**	**14,409,391**	**14,704,907**	**15,007,428**
11	**Plus: Other Operating Revenue**											
12	Other Operating Revenue	$ 175,181	138,000	138,000	138,000	138,000	138,000	138,000	138,000	138,000	138,000	138,000
13	**Equals: Total Operating Revenue**	**$ 11,102,909**	**11,876,094**	**12,247,431**	**12,624,910**	**13,014,376**	**13,416,222**	**13,830,851**	**14,258,683**	**14,547,391**	**14,842,907**	**15,145,428**
14	**Less: Operating Expenses**											
15	Personal Services	$ (3,387,914)	(3,521,380)	(3,618,728)	(3,735,424)	(3,873,035)	(4,033,462)	(4,218,979)	(4,432,289)	(4,676,589)	(4,955,644)	(5,273,889)
16	O&M Expenses	(1,785,401)	(1,750,184)	(2,049,488)	(2,237,572)	(1,995,469)	(2,053,803)	(2,113,887)	(2,175,773)	(2,239,517)	(2,305,172)	(2,372,797)
17	**Equals: Net Operating Income**	**$ 5,929,594**	**6,604,530**	**6,579,215**	**6,651,914**	**7,145,873**	**7,328,957**	**7,497,985**	**7,650,620**	**7,631,286**	**7,582,090**	**7,498,742**
18	**Plus: Non-Operating Income/(Expense)**											
18	Non-Operating Revenue	$ 31,344	31,500	31,500	31,500	31,500	31,500	31,500	31,500	31,500	31,500	31,500
19	Interest Earned On Fund Balances	2,703	-	-	-	-	-	37,237	87,111	103,884	108,158	110,935
20	Capital Contribution Charges	126,600	102,500	102,500	102,500	102,500	102,500	102,500	102,500	102,500	102,500	102,500
21	Bond Proceeds	-	-	-	-	-	-	-	-	-	-	-
22	Transfers In	468,530	477,910	487,468	497,218	507,162	517,305	527,651	538,204	548,968	559,948	571,147
23	**Equals: Net Income**	**$ 6,558,770**	**7,216,440**	**7,200,683**	**7,283,132**	**7,787,034**	**7,980,262**	**8,196,873**	**8,409,935**	**8,418,138**	**8,384,196**	**8,314,824**
24	**Less: Revenues Excluded From Coverage Test**											
25	Capital Contribution Charges	$ (126,600)	(102,500)	(102,500)	(102,500)	(102,500)	(102,500)	(102,500)	(102,500)	(102,500)	(102,500)	(102,500)
26	Other Capital Funding Sources	-	-	-	-	-	-	-	-	-	-	-
27	Transfers In	(468,530)	(477,910)	(487,468)	(497,218)	(507,162)	(517,305)	(527,651)	(538,204)	(548,968)	(559,948)	(571,147)
28	**Equals: Net Income Available For Debt Service**	**$ 5,963,640**	**6,636,030**	**6,610,715**	**6,683,414**	**7,177,373**	**7,360,457**	**7,566,722**	**7,769,231**	**7,766,669**	**7,721,748**	**7,641,177**

Schedule 8 – Pro Forma

			FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
29	**Senior-Lien Debt Service Coverage Test**												
30	Existing Debt Service		$ 3,149,828	3,092,353	3,032,254	2,774,553	2,377,203	2,138,161	1,948,210	1,900,610	1,848,785	1,590,665	1,543,840
30	New Debt Service		-	-	-	-	-	-	-	-	-	-	-
31	Cumulative New Debt Service		52,261	203,804	486,461	750,400	904,065	1,094,663	1,446,818	1,654,959	1,848,185	1,972,854	1,977,930
32	**Total Senior-Lien Debt Service**		**$ 3,202,089**	**3,296,157**	**3,518,715**	**3,524,953**	**3,281,268**	**3,232,824**	**3,395,028**	**3,555,569**	**3,696,970**	**3,563,519**	**3,521,770**
33	**Calculated Debt Service Coverage (Test I)**	1.20 Req.	**1.86**	**2.01**	**1.88**	**1.90**	**2.19**	**2.28**	**2.23**	**2.19**	**2.10**	**2.17**	**2.17**
34	**Calculated Debt Service Coverage (Test II)**	1.20 Req.	**1.90**	**2.04**	**1.91**	**1.93**	**2.22**	**2.31**	**2.26**	**2.21**	**2.13**	**2.20**	**2.20**
35	**Cash Flow Test**												
36	Net Income Available For Debt Service		$ 5,963,640	6,636,030	6,610,715	6,683,414	7,177,373	7,360,457	7,566,722	7,769,231	7,766,669	7,721,748	7,641,177
37	Transfers In		468,530	477,910	487,468	497,218	507,162	517,305	527,651	538,204	548,968	559,948	571,147
38	Transfers Out		(1,040,610)	(1,061,420)	(1,082,648)	(1,104,301)	(1,126,387)	(1,148,915)	(1,171,893)	(1,195,331)	(1,219,238)	(1,243,623)	(1,268,495)
39	Total Senior-Lien Debt Service		(3,202,089)	(3,296,157)	(3,518,715)	(3,524,953)	(3,281,268)	(3,232,824)	(3,395,028)	(3,555,569)	(3,696,970)	(3,563,519)	(3,521,770)
40	Total SRF Debt Service		-	-	-	-	-	-	-	-	-	-	-
41	Total Short-Term Debt Service		-	-	-	-	-	-	-	-	-	-	-
42	Payment Of Debt Service With Capital Contribution Charges		126,600	102,500	102,500	102,500	102,500	102,500	102,500	102,500	102,500	102,500	102,500
43	Capital Outlay		(77,288)	(83,980)	(92,235)	(108,002)	(112,290)	(92,698)	(95,015)	(217,391)	(209,826)	(417,321)	(359,879)
44	Transfers Out to Renewal & Replacement Fund		-	-	-	-	-	-	-	-	-	-	-
45	**Net Cash Flow**		**$ 2,238,784**	**2,774,883**	**2,507,085**	**2,545,875**	**3,267,089**	**3,505,825**	**3,534,937**	**3,441,645**	**3,292,104**	**3,159,733**	**3,164,679**
46	**Unrestricted Working Capital Reserve Fund Test**												
47	Balance At Beginning Of Fiscal Year		$ (9,090,484)	(13,066,390)	(10,381,507)	(7,874,423)	(5,328,548)	(2,061,459)	94,367	3,629,304	5,081,816	5,306,538	5,509,271
48	Cash Flow Surplus/(Deficit)		2,238,784	2,774,883	2,507,085	2,545,875	3,267,089	3,505,825	3,534,937	3,441,645	3,292,104	3,159,733	3,164,679
49	Cash Flow Deficit Paid with Unrestricted Reserve Fund Balance		-	-	-	-	-	-	-	-	-	-	-
50	Projects Designated To Be Paid With Cash		(6,214,690)	(90,000)	-	-	-	(1,350,000)	-	-	-	-	-
51	Projects Paid with Unrestricted Reserve Fund Balance		-	-	-	-	-	-	-	(1,989,133)	(3,067,382)	(2,957,000)	(3,089,722)
52	**Balance At End Of Fiscal Year**		**$ (13,066,390)**	**(10,381,507)**	**(7,874,423)**	**(5,328,548)**	**(2,061,459)**	**94,367**	**3,629,304**	**5,081,816**	**5,306,538**	**5,509,271**	**5,584,228**
53	Minimum Working Capital Reserve Target		4,187,702	4,283,861	4,593,466	4,748,974	4,574,886	4,660,044	4,863,947	5,081,816	5,306,538	5,412,168	5,584,228
54	**Excess Working Capital Above Target**		**$ (17,254,092)**	**(14,665,368)**	**(12,467,889)**	**(10,077,522)**	**(6,636,344)**	**(4,565,677)**	**(1,234,643)**	**-**	**-**	**97,103**	**-**

Schedule 9 – CIP Funding Summary

CIP Funding Sources:	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Capital Contribution Charges	$ -	-	-	-	-	-	-	-	-	-	-
Capital Projects Fund	-	-	-	-	-	-	-	-	-	-	-
Bond Proceeds	4,324,127	-	-	-	-	-	-	-	-	-	-
Revenue Fund	-	-	-	-	-	-	-	1,989,133	3,067,382	2,957,000	3,089,722
SRF Proceeds	-	-	-	-	-	-	-	-	-	-	-
Debt Proceeds	1,672,342	2,561,370	5,097,911	1,949,698	2,008,189	2,718,486	5,536,000	518,867	3,754,618	-	108,278
Projects Designated To Be Paid With Cash	6,214,690	90,000	-	-	-	1,350,000	-	-	-	-	-
Total CIP Funding Sources	**$ 12,211,159**	**2,651,370**	**5,097,911**	**1,949,698**	**2,008,189**	**4,068,486**	**5,536,000**	**2,508,000**	**6,822,000**	**2,957,000**	**3,198,000**
Total CIP Input	12,211,159	2,651,370	5,097,911	1,949,698	2,008,189	4,068,486	5,536,000	2,508,000	6,822,000	2,957,000	3,198,000
Variance	$ -	-	-	-	-	-	-	-	-	-	-

Schedule 10 – Long-Term Borrowing

			FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Term (Years)			20	20	20	20	20	20	20	20	20	20	20
Interest Rate			3.00%	3.25%	3.50%	3.75%	4.00%	4.25%	4.50%	4.50%	4.50%	4.50%	4.50%
Sources of Funds													
Par Amount			$ 1,742,023	2,668,094	5,310,324	2,030,935	2,091,864	2,831,756	5,766,667	540,486	3,911,060	-	112,790
Uses of Funds													
Proceeds			$ 1,672,342	2,561,370	5,097,911	1,949,698	2,008,189	2,718,486	5,536,000	518,867	3,754,618	-	108,278
Cost of Issuance	4.00%	of Par	69,681	106,724	212,413	81,237	83,675	113,270	230,667	21,619	156,442	-	4,512
Underwriter's Discount	$0.00	per $1,000	-	-	-	-	-	-	-	-	-	-	-
Bond Insurance	-	times total Debt Service	-	-	-	-	-	-	-	-	-	-	-
Capitalized Interest	0	Years Interest	-	-	-	-	-	-	-	-	-	-	-
Debt Service Surety	0.00%	of Debt Service	-	-	-	-	-	-	-	-	-	-	-
Debt Service Reserve	0	Years of Debt Service	-	-	-	-	-	-	-	-	-	-	-
Other Costs			-	-	-	-	-	-	-	-	-	-	-
Total Uses			$ 1,742,023	2,668,094	5,310,324	2,030,935	2,091,864	2,831,756	5,766,667	540,486	3,911,060	-	112,790
1 Year Interest			$ 52,261	86,713	185,861	76,160	83,675	120,350	259,500	24,322	175,998	-	5,076
Annual Debt Service			**$ 117,091**	**183,509**	**373,640**	**146,150**	**153,923**	**213,004**	**443,319**	**41,550**	**300,667**	**-**	**8,671**
Total Debt Service			$ 2,341,826	3,670,171	7,472,802	2,923,007	3,078,460	4,260,084	8,866,382	831,010	6,013,344	-	173,417
Cumulative New Annual Debt Service (1)			**$ 52,261**	**203,804**	**486,461**	**750,400**	**904,065**	**1,094,663**	**1,446,818**	**1,654,959**	**1,848,185**	**1,972,854**	**1,977,930**

(1) Cumulative new annual debt service assumes interest-only payments in first year of debt issuance.

Schedule 11 – Funding Summary by Fund

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
CAPITAL CONTRIBUTION CHARGES											
Balance At Beginning Of Fiscal Year	$ -	-	-	-	-	-	-	-	-	-	-
Additional Annual Revenues	126,600	102,500	102,500	102,500	102,500	102,500	102,500	102,500	102,500	102,500	102,500
Less: Payment Of Debt Service	(126,600)	(102,500)	(102,500)	(102,500)	(102,500)	(102,500)	(102,500)	(102,500)	(102,500)	(102,500)	(102,500)
Subtotal	$ -	-	-	-	-	-	-	-	-	-	-
Less: Restricted Funds	-	-	-	-	-	-	-	-	-	-	-
Total Amount Available For Projects	$ -	-	-	-	-	-	-	-	-	-	-
Amount Paid For Projects	-	-	-	-	-	-	-	-	-	-	-
Subtotal	$ -	-	-	-	-	-	-	-	-	-	-
Add Back: Restricted Funds	-	-	-	-	-	-	-	-	-	-	-
Plus: Interest Earnings	-	-	-	-	-	-	-	-	-	-	-
Less: Interest Allocated To Cash Flow	-	-	-	-	-	-	-	-	-	-	-
Balance At End Of Fiscal Year	$ -	-	-	-	-	-	-	-	-	-	-
BOND PROCEEDS											
Balance At Beginning Of Fiscal Year	$ 4,324,127	-	-	-	-	-	-	-	-	-	-
Additional Annual Revenues	-	-	-	-	-	-	-	-	-	-	-
Less: Payment Of Debt Service	-	-	-	-	-	-	-	-	-	-	-
Subtotal	$ 4,324,127	-	-	-	-	-	-	-	-	-	-
Less: Restricted Funds	-	-	-	-	-	-	-	-	-	-	-
Total Amount Available For Projects	$ 4,324,127	-	-	-	-	-	-	-	-	-	-
Amount Paid For Projects	(4,324,127)	-	-	-	-	-	-	-	-	-	-
Subtotal	$ -	-	-	-	-	-	-	-	-	-	-
Add Back: Restricted Funds	-	-	-	-	-	-	-	-	-	-	-
Plus: Interest Earnings	2,703	-	-	-	-	-	-	-	-	-	-
Less: Interest Allocated To Cash Flow	(2,703)	-	-	-	-	-	-	-	-	-	-
Balance At End Of Fiscal Year	$ -	-	-	-	-	-	-	-	-	-	-
REVENUE FUND											
Balance At Beginning Of Fiscal Year	$ (9,090,484)	(13,066,390)	(10,381,507)	(7,874,423)	(5,328,548)	(2,061,459)	94,367	3,629,304	5,081,816	5,306,538	5,509,271
Additional Annual Revenues	2,238,784	2,774,883	2,507,085	2,545,875	3,267,089	3,505,825	3,534,937	3,441,645	3,292,104	3,159,733	3,164,679
Less: Cash-Funded Capital Projects	(6,214,690)	(90,000)	-	-	-	(1,350,000)	-	-	-	-	-
Less: Payment Of Debt Service	-	-	-	-	-	-	-	-	-	-	-
Subtotal	$ (13,066,390)	(10,381,507)	(7,874,423)	(5,328,548)	(2,061,459)	94,367	3,629,304	7,070,949	8,373,920	8,466,271	8,673,950
Less: Restricted Funds	13,066,390	10,381,507	7,874,423	5,328,548	2,061,459	(94,367)	(3,629,304)	(5,081,816)	(5,306,538)	(5,412,168)	(5,584,228)
Total Amount Available For Projects	$ -	-	-	-	-	-	-	1,989,133	3,067,382	3,054,103	3,089,722
Amount Paid For Projects	-	-	-	-	-	-	-	(1,989,133)	(3,067,382)	(2,957,000)	(3,089,722)
Subtotal	$ -	-	-	-	-	-	-	-	-	97,103	-
Add Back: Restricted Funds	(13,066,390)	(10,381,507)	(7,874,423)	(5,328,548)	(2,061,459)	94,367	3,629,304	5,081,816	5,306,538	5,412,168	5,584,228
Plus: Interest Earnings	-	-	-	-	-	-	37,237	87,111	103,884	108,158	110,935
Less: Interest Allocated To Cash Flow	-	-	-	-	-	-	(37,237)	(87,111)	(103,884)	(108,158)	(110,935)
Balance At End Of Fiscal Year	$ (13,066,390)	(10,381,507)	(7,874,423)	(5,328,548)	(2,061,459)	94,367	3,629,304	5,081,816	5,306,538	5,509,271	5,584,228

APPENDIX B – SEWER FUND FINANCIAL FORECAST

Supporting Schedules for the RSA conducted for the Sewer Fund

Schedule 1 – Assumptions

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Annual Revenue Growth - Sewer:											
Average Number of Billed Accounts	12,713	12,738	12,763	12,788	12,813	12,838	12,863	12,888	12,913	12,938	12,963
Growth	25	25	25	25	25	25	25	25	25	25	25
Percent Change in Billed Accounts	N/A	0.20%	0.20%	0.20%	0.20%	0.20%	0.19%	0.19%	0.19%	0.19%	0.19%
Percent Change in Billed Use	N/A	0.20%	0.20%	0.20%	0.20%	0.20%	0.19%	0.19%	0.19%	0.19%	0.19%
Projected Growth in Capital Contribution Charge Paying Accounts	N/A	25	25	25	25	25	25	25	25	25	25
Price Elasticity Coefficient:											
Applied to Usage Charge Rate Revenue	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Capital Contribution Charges:											
Per ERU	$ 5,900	$ 5,900	$ 5,900	$ 5,900	$ 5,900	$ 5,900	$ 5,900	$ 5,900	$ 5,900	$ 5,900	$ 5,900
Average Annual Interest Earnings Rate:											
On Fund Balances	0.13%	0.25%	0.50%	1.00%	1.50%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Operating Budget Execution Percentage:											
Personal Services	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Contract Services and Commodities - Fixed	100.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
Contract Services and Commodities - Variable	100.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
Capital Spending	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Operating Fund Reserve Target:											
Number of Months of Annual Operating Expense	3.00	3.00	3.00	3.00	4.00	5.00	6.00	6.00	6.00	6.00	6.00

Schedule 2 – Beginning Balances

GROUPING OF FUNDS IN MODEL		Revenue Fund	Capital Projects Fund	Bond Proceeds	Capital Contribution Charges	Restricted Reserves
CURRENT UNRESTRICTED ASSETS						
1010 - Cash - Vendor Check	$	-	-	-	-	-
1156 - Accounts Receivable - Utility		510,247	-	-	-	-
1157 - Accounts Receivable - Utility Pen		9,769	-	-	-	-
1159 - General Accounts Receivable		2,025	-	-	-	-
1160 - Allowance For Uncollectable - A/R		(12,835)	-	-	-	-
1170 - Unbilled Accounts Receivable		1,292,216	-	-	-	-
1341 - Deferred S A Receivable		-	-	-	-	-
1570 - Unamortized Bond Discount		-	-	-	-	-
Prior Year Capital Funds Carried Over		(3,494,273)	-	3,494,273	-	-
TOTAL ASSETS	$	(1,692,851)	-	3,494,273	-	-
Less: Interfund payable [(1)]		(1,174,218)	-	-	-	-
Less: 2010 - Vouchers Payable		(868,601)	-	-	-	-
Less: 2020 - Accounts Payable		(9,998)	-	-	-	-
Less: 2061 - Contracts Payable - Retainage		(65,059)	-	-	-	-
Less: 2110 - Unamortized Bond Premium [(2)]		-	-	-	-	-
Less: 2120 - Matured Interest Payable		(136,877)	-	-	-	-
Less: 2160 - Accrued Wages Payable		(39,783)	-	-	-	-
Less: 2161 - Accrued Vacation		(119,088)	-	-	-	-
CALCULATED FUND BALANCE (ASSETS - LIABILITIES)	$	(4,106,473)	-	3,494,273	-	-
Plus/(Less):		-	-	-	-	-
NET UNRESTRICTED FUND BALANCE	$	(4,106,473)	-	3,494,273	-	-

Schedule 2 – Beginning Balances

GROUPING OF FUNDS IN MODEL		Revenue Fund	Capital Projects Fund	Bond Proceeds	Capital Contribution Charges	Restricted Reserves
FUND TITLE		Balance as of 6/30/2013	Encumbered or Reserved for Projects not in the CIP	Beginning Balance Available for Projects in the CIP		
Capital Contribution Charges	$	-	-	-		
Capital Projects Fund	$	-	-	-		
Bond Proceeds	$	3,494,273	-	3,494,273		
Revenue Fund	$	(4,106,473)	-	(4,106,473)		
Restricted Reserves	$	-	-	-		
Total Consolidated Fund Balance	**$**	**(612,200)**	**-**	**(612,200)**		

(1) Interfund amt payable to General Fund within 1 year, per FY 2013 CAFR
(2) Excluded as non-cash expense

Schedule 3 – CIP

PROJECT DESCRIPTION	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Wastewater Projects											
Blue Plains Wastewater Treatment - Cash	$ 1,462,000	-	-	-	-	-	-	-	-	-	-
Blue Plains Wastewater Treatment - Bond	5,242,000	4,684,000	3,454,000	2,416,000	2,077,000	1,120,000	-	-	-	-	-
SCADA Improvements - Cash	5,000	25,000	-	-	-	-	-	-	-	-	-
SCADA Improvements - Bond	-	-	-	-	-	-	-	-	-	-	-
Sewer Rehabilitation - Cash	1,249,000	-	465,000	304,000	441,000	1,264,000	-	-	-	-	-
Sewer Rehabilitation - Bond	-	2,350,000	-	-	-	-	-	-	-	-	-
Prior Year Projects - Unspent Amounts - Cash	2,271,182	-	-	-	-	-	-	-	-	-	-
Prior Year Projects - Unspent Amounts - Bonds	3,494,273	-	-	-	-	-	-	-	-	-	-
Future Year CIP											
Blue Plains Wastewater Treatment	-	-	-	-	-	-	417,000	1,677,000	1,900,000	2,000,000	2,100,000
Sewer Rehabilitation	-	-	-	-	-	-	1,385,000	980,000	722,000	1,160,000	720,000
Total CIP Budget (in FY 2013 dollars)	**$13,723,455**	**7,059,000**	**3,919,000**	**2,720,000**	**2,518,000**	**2,384,000**	**3,187,000**	**3,637,000**	**3,344,000**	**4,320,000**	**3,540,000**
Compounded Annual Cost Escalation	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Annual Capital Spending Execution Percentage [1]	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Final CIP Funding Level	**$13,598,055**	**6,821,500**	**3,872,500**	**2,689,600**	**2,473,900**	**2,257,600**	**1,663,500**	**2,559,000**	**2,549,800**	**3,044,000**	**2,748,000**

[1] Capital spending execution percentage does not apply to Blue Plains Wastewater Treatment or Prior Year Unspent Amounts. These projects are projected to be executed at 100%.

Schedule 4 – Cash In

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Rate Revenue Growth Assumptions											
Growth in Sewer ERUs	N/A	0.20%	0.20%	0.20%	0.20%	0.20%	0.19%	0.19%	0.19%	0.19%	0.19%
Growth in Sewer Usage	N/A	0.20%	0.20%	0.20%	0.20%	0.20%	0.19%	0.19%	0.19%	0.19%	0.19%
Assumed Rate Revenue Adjustments											
Assumed RTS Rate Adjustment	**N/A**	**20.00%**	**20.00%**	**13.25%**	**13.25%**	**13.25%**	**13.25%**	**13.25%**	**5.00%**	**5.00%**	**5.00%**
Assumed Usage Rate Adjustment	**N/A**	**6.00%**	**12.00%**	**12.25%**	**12.25%**	**12.25%**	**12.25%**	**12.25%**	**1.00%**	**1.00%**	**1.00%**
Sewer Rate Revenue (1)											
RTS Charges	$ 471,720	$ 796,038	$ 957,120	$ 1,086,062	$ 1,232,369	$ 1,398,381	$ 1,586,751	$ 1,800,488	$ 1,894,179	$ 1,992,739	$ 2,096,419
Usage Charges	8,684,194	8,912,933	9,762,027	10,710,346	11,750,743	12,892,154	14,144,383	15,518,184	15,672,361	15,828,011	15,985,147
Total Sewer Rate Revenue	**$ 9,155,914**	**9,708,971**	**10,719,147**	**11,796,408**	**12,983,112**	**14,290,536**	**15,731,134**	**17,318,672**	**17,566,541**	**17,820,750**	**18,081,566**
Other Operating Revenue (2)											
Utility Penalty Charges	$ 68,829	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
Sewer Connect Charges - R	-	-	-	-	-	-	-	-	-	-	-
Front Foot Benefit Assessment	-	-	-	-	-	-	-	-	-	-	-
Special Assessment Penalties	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Revenue	1,824	1,824	1,824	1,824	1,824	1,824	1,824	1,824	1,824	1,824	1,824
Permits and Fees	1,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500
Sale of Vehicles	-	-	-	-	-	-	-	-	-	-	-
Assessment/Capital Contribution Revenue	-	-	-	-	-	-	-	-	-	-	-
Total Other Operating Revenue	**$ 72,153**	**76,324**	**76,324**	**76,324**	**76,324**	**76,324**	**76,324**	**76,324**	**76,324**	**76,324**	**76,324**
Capital Contribution Charge (3)	**$ 184,200**	**147,500**	**147,500**	**147,500**	**147,500**	**147,500**	**147,500**	**147,500**	**147,500**	**147,500**	**147,500**
Premium on Bonds Sold	**62,827**	**53,000**	**53,000**	**53,000**	**53,000**	**53,000**	**53,000**	**53,000**	**53,000**	**53,000**	**53,000**
Interest Earnings Revenue	**2,184**	**-**	**-**	**-**	**-**	**-**	**-**	**62,469**	**147,940**	**230,185**	**316,559**
Transfers In	**$ -**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Capital Project Funding Sources											
Capital Contribution Charge (3)	$ -	-	-	-	-	-	-	-	-	-	-
Bond Proceeds	3,494,273	-	-	-	-	-	-	-	-	-	-
Revenue Fund	-	-	-	-	-	-	-	2,559,000	2,549,800	3,044,000	2,748,000
Debt Proceeds	5,242,000	6,799,000	3,454,000	2,416,000	2,077,000	1,120,000	1,663,500	-	-	-	-
Projects Designated To Be Paid With Cash	4,861,782	22,500	418,500	273,600	396,900	1,137,600	-	-	-	-	-
Total Capital Project Funding Sources	**$ 13,598,055**	**6,821,500**	**3,872,500**	**2,689,600**	**2,473,900**	**2,257,600**	**1,663,500**	**2,559,000**	**2,549,800**	**3,044,000**	**2,748,000**
TOTAL CASH INFLOWS	**$ 23,075,333**	**$ 16,807,295**	**$ 14,868,471**	**$ 14,762,832**	**$ 15,733,836**	**$ 16,824,960**	**$ 17,671,458**	**$ 20,216,965**	**$ 20,541,104**	**$ 21,371,759**	**$ 21,422,949**

(1) Estimated sewer rate revenues in FY 2014 were based on year end numbers as of 8/19/14. Future rate revenue projections are based upon FY 2014 estimated results, adjusted annually to reflect assumed rate increases and customer growth.
(2) Unless otherwise specified, FY 2014 and FY 2015 other operating revenues are per the FY 2014 year end results as of 8/19/14 and the FY 2015 Budget, respectively.
(3) Capital Contribution Charge revenues were calculated based upon the current Sewer Capital Contribution Charges and the projected growth in Capital Contribution Charge paying accounts (see Schedule 1 for annual growth projections).

Schedule 5 – Cash Out

	FY 2014 [1]	FY 2015 [1]	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Personnel Services											
Regular Employee Wages	$ 959,534	1,113,600	1,141,440	1,175,683	1,216,832	1,265,505	1,322,453	1,388,576	1,464,947	1,552,844	1,653,779
Temporary Employee Wages	-	10,330	10,588	10,906	11,288	11,739	12,267	12,881	13,589	14,405	15,341
Overtime	113,310	102,220	104,776	107,919	111,696	116,164	121,391	127,461	134,471	142,539	151,804
Disability - Short-Term	11,420	-	-	-	-	-	-	-	-	-	-
Allowances	5,567	5,890	5,890	5,890	5,890	5,890	5,890	5,890	5,890	5,890	5,890
FICA - City Contribution	65,560	71,790	73,585	75,792	78,445	81,583	85,254	89,517	94,440	100,107	106,614
Def Ben Opt Ret - City Contr	152,674	113,260	113,260	113,260	113,260	113,260	113,260	113,260	113,260	113,260	113,260
Thrift Opt Ret - City Contr	22,105	22,880	23,452	24,156	25,001	26,001	27,171	28,530	30,099	31,905	33,979
Group Hosp - City Contr	114,805	134,220	147,642	162,406	178,647	196,512	216,163	237,779	261,557	287,712	316,484
Group Health - City Contr	3,143	14,310	15,741	17,315	19,047	20,951	23,046	25,351	27,886	30,675	33,742
Post-Employment Healthcare (GASB 45)	18,564	18,650	18,650	18,650	18,650	18,650	18,650	18,650	18,650	18,650	18,650
Group Life - City Contr	2,674	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020	3,020
Group Dental - City Contr	2,958	3,760	3,835	3,912	3,990	4,070	4,151	4,234	4,319	4,405	4,494
Worker's Compensation Insur	35,353	35,000	35,875	36,951	38,245	39,774	41,564	43,642	46,043	48,805	51,978
Medicare - City Contr	15,384	16,900	17,323	17,842	18,467	19,205	20,070	21,073	22,232	23,566	25,098
Additional Personal Cost	-	-	-	-	-	-	-	-	-	-	-
Sub-Total: Personnel Services	**$ 1,523,051**	**1,665,830**	**1,715,076**	**1,773,702**	**1,842,476**	**1,922,324**	**2,014,351**	**2,119,863**	**2,240,403**	**2,377,783**	**2,534,131**
Personnel Services Execution Percentage [2]	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Contract Services											
Fixed Contract Services Expenses											
Consultants	$ 109,935	9,000	150,000	154,500	159,135	163,909	168,826	173,891	179,108	184,481	190,016
Bond Counsel/Fin Advsr Ser	18,140	86,000	88,580	91,237	93,975	96,794	99,698	102,688	105,769	108,942	112,210
Postage	-	-	-	-	-	-	-	-	-	-	-
Data Processing Services	120	240	247	255	262	270	278	287	295	304	313
Office Equipment Rental	-	-	-	-	-	-	-	-	-	-	-
Cellular Service	-	100	103	106	109	113	116	119	123	127	130
Travel Outside Metro Area	76	1,720	1,772	1,825	1,879	1,936	1,994	2,054	2,115	2,179	2,244
Class/Professional Development	10,402	10,160	10,465	10,779	11,102	11,435	11,778	12,132	12,496	12,870	13,256
Dues, Fees & Publications	2,230	3,380	3,481	3,586	3,693	3,804	3,918	4,036	4,157	4,282	4,410
Contract Services-Other	-	1,000	1,030	1,061	1,093	1,126	1,159	1,194	1,230	1,267	1,305
Office Eqp Service/Maintenance	565	50	52	53	55	56	58	60	61	63	65
Computer Eq Maintenance	12,623	9,620	9,909	10,206	10,512	10,827	11,152	11,487	11,831	12,186	12,552
Computer Equip. Maint.	-	3,500	3,605	3,713	3,825	3,939	4,057	4,179	4,305	4,434	4,567
Communications Equip Maint	-	30	31	32	33	34	35	36	37	38	39
Contracted Vehicle M & R	3,654	4,000	4,120	4,244	4,371	4,502	4,637	4,776	4,919	5,067	5,219
Contract Rprs/Add No Value	155,397	166,700	171,701	176,852	182,158	187,622	193,251	199,049	205,020	211,171	217,506
Vehicle Repairs - Accidents	341	850	876	902	929	957	985	1,015	1,045	1,077	1,109
Uniform Rental	5,561	6,770	6,973	7,182	7,398	7,620	7,848	8,084	8,326	8,576	8,833
Contracted Refuse Service	18,750	17,500	18,025	18,566	19,123	19,696	20,287	20,896	21,523	22,168	22,834
Printing Contracts	-	200	206	212	219	225	232	239	246	253	261
Heavy Equipment Rental	-	2,640	2,719	2,801	2,885	2,971	3,060	3,152	3,247	3,344	3,445
Liability Insurance	15,325	15,000	15,450	15,914	16,391	16,883	17,389	17,911	18,448	19,002	19,572
Property Insurance	2,258	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524
Other Equipment Leases	-	730	752	774	798	822	846	872	898	925	952
Variable Contract Services Expenses											
Wssc Capacity Prov Contrcts	$ 2,209,457	3,080,000	3,095,400	3,110,877	3,126,431	3,142,064	3,157,774	3,173,563	3,189,431	3,205,378	3,221,405
Sub-Total: Contract Services	**$ 2,564,834**	**3,424,190**	**3,590,646**	**3,620,980**	**3,651,838**	**3,683,232**	**3,715,177**	**3,747,688**	**3,780,780**	**3,814,467**	**3,848,767**

Schedule 5 – Cash Out

	FY 2014 [1]	FY 2015 [1]	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Commodities											
Fixed Commodities Expenses											
Electricity	$ 7,578	7,400	7,622	7,851	8,086	8,329	8,579	8,836	9,101	9,374	9,655
SWM Fees	399	450	464	477	492	506	522	537	553	570	587
Equipment Parts	11,351	5,350	5,511	5,676	5,846	6,021	6,202	6,388	6,580	6,777	6,981
Program Supplies	97,621	97,010	99,920	102,918	106,005	109,186	112,461	115,835	119,310	122,889	126,576
Maintenance Supplies	-	-	-	-	-	-	-	-	-	-	-
Purchased Unfrms/Stf Tshrts	4,068	6,150	6,335	6,525	6,720	6,922	7,130	7,343	7,564	7,791	8,024
Vehicle Preparation Costs	644	-	-	-	-	-	-	-	-	-	-
Contingency - Regular	-	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000
Furniture & Equipment < $5000	-	-	-	-	-	-	-	-	-	-	-
Variable Commodities Expenses											
Heating Fuel	$ 246	260	268	276	284	293	301	310	320	329	339
Gasoline And Oil	32,336	35,150	36,205	37,291	38,409	39,562	40,748	41,971	43,230	44,527	45,863
Chemicals	7,097	13,220	13,617	14,025	14,446	14,879	15,326	15,785	16,259	16,747	17,249
Sub-Total: Commodities	**$ 161,340**	**209,990**	**214,940**	**220,038**	**225,289**	**230,698**	**236,269**	**242,007**	**247,917**	**254,004**	**260,275**
Sub-Total: Fixed Contract Services and Commodities	**$ 477,037**	**505,550**	**660,097**	**678,549**	**697,556**	**717,133**	**737,297**	**758,065**	**779,457**	**801,491**	**824,186**
Sub-Total: Variable Contract Services and Commodities	**$ 2,249,137**	**3,128,630**	**3,145,489**	**3,162,469**	**3,179,571**	**3,196,797**	**3,214,149**	**3,231,629**	**3,249,239**	**3,266,981**	**3,284,856**
Fixed Contract Svcs and Commodities Execution Percentage [2]	**100.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**	**85.0%**
Variable Contract Svcs and Commodities Execution Percentage	**100.0%**	**90.0%**	**90.0%**	**90.0%**	**90.0%**	**90.0%**	**90.0%**	**90.0%**	**90.0%**	**90.0%**	**90.0%**
Total: Personnel Services and O&M Funding Level	**$ 4,249,225**	**4,911,315**	**5,107,098**	**5,196,691**	**5,297,013**	**5,409,004**	**5,533,787**	**5,672,686**	**5,827,258**	**5,999,333**	**6,191,059**
Minor Capital Outlay											
Equipment & Tools	$ 33,825	15,000	15,375	15,759	16,153	16,557	16,971	17,395	17,830	18,276	18,733
Computer Equipment	-	-	-	-	-	-	-	-	-	-	-
Computer Software	2,240	2,296	2,353	2,412	2,473	2,534	2,598	2,663	2,729	2,797	2,867
Vehicle Replacement	-	14,853	-	-	166,849	148,159	110,000	98,000	148,000	518,000	223,000
Historical WSSC / Blue Plains True-Ups [3]		576,166	1,800,000	-	-	-	-	-	-	-	-
Total: Minor Capital Outlay	**$ 36,065**	**608,315**	**1,817,728**	**18,172**	**185,475**	**167,251**	**129,569**	**118,058**	**168,560**	**539,073**	**244,600**

Schedule 5 – Cash Out

	FY 2014 (1)	FY 2015 (1)	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Debt Service Expenses											
Existing Debt Service											
All Existing Revenue Bonds - Principal	$ 2,262,074	2,252,642	2,248,803	2,243,803	2,236,127	2,233,330	2,230,533	2,068,901	2,062,859	1,935,000	1,800,000
All Existing Revenue Bonds - Interest	1,127,984	1,058,937	987,289	908,431	836,075	753,763	671,398	588,950	512,999	441,279	366,498
Series 2015 Bond - P&I	-	-	-	-	-	-	-	-	-	-	-
New Debt Service	218,417	616,774	899,775	1,078,292	1,226,005	1,319,819	1,431,943	1,455,866	1,455,866	1,455,866	1,455,866
Total: Debt Service Expenses	**$ 3,608,475**	**3,928,353**	**4,135,867**	**4,230,526**	**4,298,207**	**4,306,912**	**4,333,874**	**4,113,717**	**4,031,724**	**3,832,145**	**3,622,364**
Transfers Out											
Contribution To Water Fund	$ 324,830	331,330	337,957	344,716	351,610	358,642	365,815	373,131	380,594	388,206	395,970
Administrative Charges	563,590	574,860	586,357	598,084	610,046	622,247	634,692	647,386	660,333	673,540	687,011
Total: Transfers Out	**$ 888,420**	**906,190**	**924,314**	**942,800**	**961,656**	**980,889**	**1,000,507**	**1,020,517**	**1,040,927**	**1,061,746**	**1,082,981**
TOTAL CASH OUTFLOWS	**$ 8,782,185**	**10,354,173**	**11,985,007**	**10,388,189**	**10,742,350**	**10,864,056**	**10,997,738**	**10,924,977**	**11,068,468**	**11,432,298**	**11,141,004**

(1) FY 2014 and FY 2015 based upon FY 2014 year end results as of 8/19/14 and FY 2015 Budget, respectively.
(2) FY 2014 Personnel Services Execution Percentage and Fixed and Variable Expense Execution Percentages based on projections using year end estimates for FY 2014 as of 8/19/14 and compared to budget for FY 2014. Execution Percentages for FY 2015 through the end of the projection period based on discussions with staff.
(3) Amounts shown in FY 2015 and FY 2016 are the actual WSSC True-Up for 2001 to 2010 and the estimated WSSC True-Up for 2011 to 2014, respectively.

Schedule 6 – Cost Escalation Factors

Annual Cost Escalation Factors:	FY 2014 (1)	FY 2015 (1)	FY 2016 (2)	FY 2017 (2)	FY 2018 (2)	FY 2019 (2)	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Personal Services											
Regular Employee Wages	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Temporary Employee Wages	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Overtime	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Disability - Short-Term	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Allowances	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
FICA - City Contribution	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Def Ben Opt Ret - City Contr	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Thrift Opt Ret - City Contr	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Group Hosp - City Contr	N/A	N/A	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Group Health - City Contr	N/A	N/A	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Post-Employment Healthcare (GASB 45)	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Group Life - City Contr	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Group Dental - City Contr	N/A	N/A	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Worker's Compensation Insur	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Medicare - City Contr	N/A	N/A	2.50%	3.00%	3.50%	4.00%	4.50%	5.00%	5.50%	6.00%	6.50%
Additional Personal Cost	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Contract Services											
Consultants	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Bond Counsel/Fin Advsr Ser	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Postage	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Data Processing Services	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Office Equipment Rental	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Cellular Service	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Travel Outside Metro Area	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Class/Professional Development	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Dues, Fees & Publications	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Contract Services-Other	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Office Eqp Service/Maintenance	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Computer Eq Maintenance	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Computer Equip. Maint.	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Communications Equip Maint	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Contracted Vehicle M & R	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Contract Rprs/Add No Value	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Vehicle Repairs - Accidents	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Wssc Capacity Prov Contrcts	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Uniform Rental	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%

Schedule 6 – Cost Escalation Factors

Annual Cost Escalation Factors:	FY 2014 (1)	FY 2015 (1)	FY 2016 (2)	FY 2017 (2)	FY 2018 (2)	FY 2019 (2)	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Services - continued											
Contracted Refuse Service	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Printing Contracts	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Heavy Equipment Rental	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Liability Insurance	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Property Insurance	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Other Equipment Leases	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Commodities											
Electricity	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Heating Fuel	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Gasoline And Oil	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
SWM Fees	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Equipment Parts	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Personal Services	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Program Supplies	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Maintenance Supplies	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Chemicals	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Purchased Unfrms/Stf Tshrts	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Contingency - Regular	N/A	N/A	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Vehicle Preparation Costs	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Furniture & Equipment < $5000	N/A	N/A	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Capital Outlay											
Equipment & Tools	N/A	N/A	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Computer Equipment	N/A	N/A	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Computer Software	N/A	N/A	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Contribution To Water Fund	N/A	N/A	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Administrative Charges	N/A	N/A	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Default Inflation Factor (if expense not listed above)	N/A	N/A	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%

(1) FY 2014 and FY 2015 cost requirements reflect unaudited actual and budget amounts, respectively.
(2) Expected cost escalation through FY 2019 was taken from the 5 year projections provided by staff.

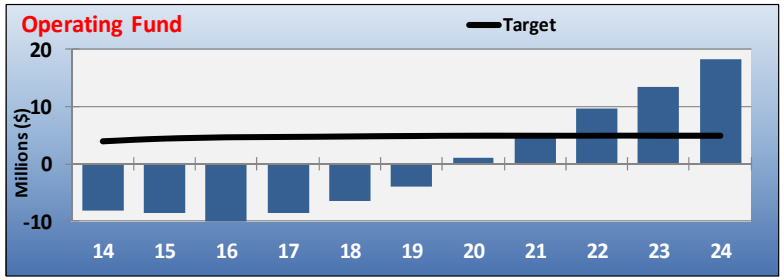
Schedule 7– Model Control Panel

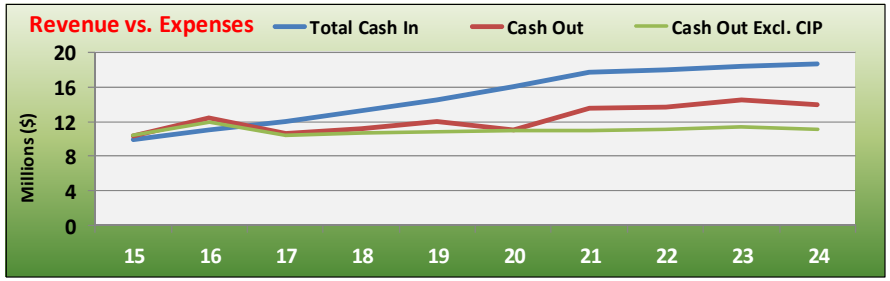
FINANCIAL ANALYSIS AND MANAGEMENT SYSTEM (FAMS) SUMMARY

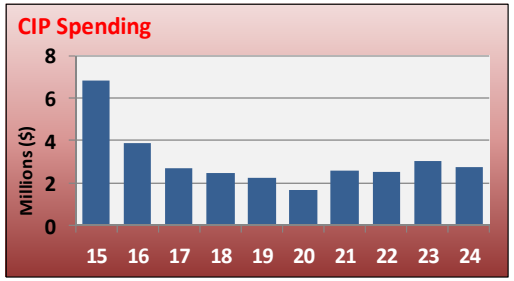
SEWER FUND

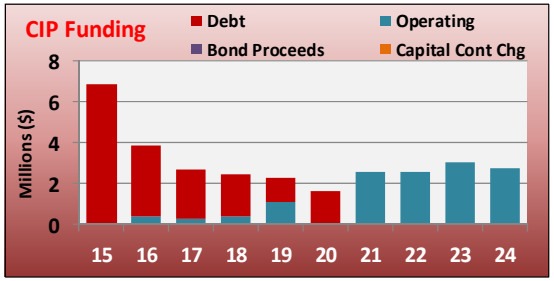
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
RTS Charge Increases	20.00%	20.00%	13.25%	13.25%	13.25%	13.25%	13.25%	5.00%	5.00%	5.00%
Usage Charge Increases	6.00%	12.00%	12.25%	12.25%	12.25%	12.25%	12.25%	1.00%	1.00%	1.00%
Combined Utility Rate Plan	7.01%	12.66%	12.34%	12.34%	12.34%	12.35%	12.35%	1.42%	1.43%	1.45%
Debt Service Coverage Ratio	1.25	1.39	1.59	1.82	2.09	2.38	2.88	2.98	3.18	3.41
CIP Execution % ▶	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Operating Reserve Mos ▶	6	6	6	6	6	6	6	6	6	6

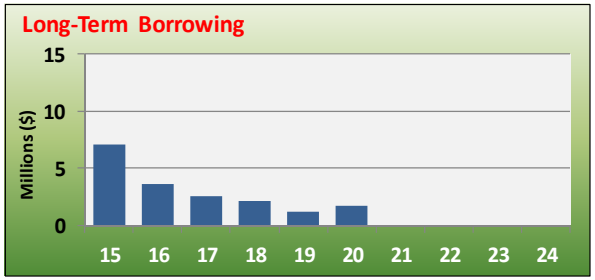
PS FY15 ▶	100.0%
OMV FY15 ▶	90.0%
OMF FY15 ▶	85.0%
Elasticity	0.20











Schedule 8 – Pro Forma

		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
1	**Rate Revenue Subject to Growth & Rate Adjustments**											
2	RTS and Fixed Charge Rate Revenue	$ 9,155,914	9,155,914	9,708,971	10,719,147	11,796,408	12,983,112	14,290,536	15,731,134	17,318,672	17,566,541	17,820,750
3	Additional Rate Revenue From Partial PY Rate Increase	-	-	-	-	-	-	-	-	-	-	-
4	Additional Revenue From Growth	-	18,005	19,055	20,997	23,061	25,332	27,829	30,574	33,595	34,009	34,435
5	Weather Normalization And Other Adjustments	-	-	-	-	-	-	-	-	-	-	-
6	Subtotal: Base Revenue With Growth	$ 9,155,914	9,173,919	9,728,026	10,740,144	11,819,469	13,008,444	14,318,364	15,761,708	17,352,266	17,600,550	17,855,185
7	Weighted Average Rate Increase	0.00%	7.01%	12.66%	12.34%	12.34%	12.34%	12.35%	12.35%	1.42%	1.43%	1.45%
8	Additional Rate Revenue From Rate Increase	-	643,306	1,231,171	1,325,258	1,458,767	1,605,882	1,768,011	1,946,708	245,682	251,919	258,415
9	Price Elasticity Adjustment	-	(108,254)	(240,050)	(268,994)	(295,124)	(323,791)	(355,241)	(389,744)	(31,408)	(31,719)	(32,034)
10	**Total Rate Revenue**	**$ 9,155,914**	**9,708,971**	**10,719,147**	**11,796,408**	**12,983,112**	**14,290,536**	**15,731,134**	**17,318,672**	**17,566,541**	**17,820,750**	**18,081,566**
11	**Plus: Other Operating Revenue**											
12	Other Operating Revenue	$ 72,153	76,324	76,324	76,324	76,324	76,324	76,324	76,324	76,324	76,324	76,324
13	**Equals: Total Operating Revenue**	**$ 9,228,067**	**9,785,295**	**10,795,471**	**11,872,732**	**13,059,436**	**14,366,860**	**15,807,458**	**17,394,996**	**17,642,865**	**17,897,074**	**18,157,890**
14	**Less: Operating Expenses**											
15	Personal Services	$ (1,523,051)	-	-	-	-	-	-	62,469	147,940	230,185	316,559
16	O&M Expenses	(2,726,174)	(3,245,485)	(3,392,022)	(3,422,989)	(3,454,536)	(3,486,680)	(3,519,436)	(3,552,822)	(3,586,854)	(3,621,550)	(3,656,928)
17	**Equals: Net Operating Income**	**$ 4,978,841**	**6,539,810**	**7,403,449**	**8,449,743**	**9,604,900**	**10,880,180**	**12,288,022**	**13,904,643**	**14,203,950**	**14,505,708**	**14,817,521**
18	**Plus: Non-Operating Income/(Expense)**											
18	Non-Operating Revenue	$ 62,827	53,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000	53,000
19	Interest Earned On Fund Balances	2,184	-	-	-	-	-	-	62,469	147,940	230,185	316,559
20	Bond Proceeds	184,200	147,500	147,500	147,500	147,500	147,500	147,500	147,500	147,500	147,500	147,500
21	Equals: Net Income	-	-	-	-	-	-	-	-	-	-	-
22	Transfers In	-	-	-	-	-	-	-	-	-	-	-
23	**Equals: Net Income**	**$ 5,228,053**	**6,740,310**	**7,603,949**	**8,650,243**	**9,805,400**	**11,080,680**	**12,488,522**	**14,167,612**	**14,552,390**	**14,936,393**	**15,334,579**
24	**Less: Revenues Excluded From Coverage Test**											
25	Bond Proceeds	$ (184,200)	(147,500)	(147,500)	(147,500)	(147,500)	(147,500)	(147,500)	(147,500)	(147,500)	(147,500)	(147,500)
26	Other Capital Funding Sources	-	-	-	-	-	-	-	-	-	-	-
27	Transfers In	-	-	-	-	-	-	-	-	-	-	-
28	**Equals: Net Income Available For Debt Service**	**$ 5,043,853**	**6,592,810**	**7,456,449**	**8,502,743**	**9,657,900**	**10,933,180**	**12,341,022**	**14,020,112**	**14,404,890**	**14,788,893**	**15,187,079**

Schedule 8 – Pro Forma

			FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
29	**Senior-Lien Debt Service Coverage Test**												
30	Existing Debt Service		$ 3,390,058	3,311,579	3,236,092	3,152,234	3,072,202	2,987,093	2,901,931	2,657,851	2,575,858	2,376,279	2,166,498
30	New Debt Service		-	-	-	-	-	-	-	-	-	-	-
31	Cumulative New Debt Service		218,417	616,774	899,775	1,078,292	1,226,005	1,319,819	1,431,943	1,455,866	1,455,866	1,455,866	1,455,866
32	**Total Senior-Lien Debt Service**		**$ 3,608,475**	**3,928,353**	**4,135,867**	**4,230,526**	**4,298,207**	**4,306,912**	**4,333,874**	**4,113,717**	**4,031,724**	**3,832,145**	**3,622,364**
33	**Calculated Debt Service Coverage (Test I)**	1.20 Req.	**1.40**	**1.25**	**1.39**	**1.59**	**1.82**	**2.09**	**2.38**	**2.88**	**2.98**	**3.18**	**3.41**
34	**Calculated Debt Service Coverage (Test II)**	1.20 Req.	**1.45**	**1.29**	**1.42**	**1.63**	**1.85**	**2.13**	**2.42**	**2.91**	**3.02**	**3.22**	**3.45**
35	**Cash Flow Test**												
36	Net Income Available For Debt Service		$ 5,043,853	4,926,980	5,741,373	6,729,041	7,815,424	9,010,855	10,326,671	11,837,780	12,016,547	12,180,925	12,336,389
37	Transfers In		-	-	-	-	-	-	-	-	-	-	-
38	Transfers Out		(888,420)	(906,190)	(924,314)	(942,800)	(961,656)	(980,889)	(1,000,507)	(1,020,517)	(1,040,927)	(1,061,746)	(1,082,981)
39	Total Senior-Lien Debt Service		(3,608,475)	(3,928,353)	(4,135,867)	(4,230,526)	(4,298,207)	(4,306,912)	(4,333,874)	(4,113,717)	(4,031,724)	(3,832,145)	(3,622,364)
40	Total SRF Debt Service		-	-	-	-	-	-	-	-	-	-	-
41	Total Short-Term Debt Service		-	-	-	-	-	-	-	-	-	-	-
42	Payment Of Debt Service With Bond Proceeds		184,200	147,500	147,500	147,500	147,500	147,500	147,500	147,500	147,500	147,500	147,500
43	Capital Outlay		(36,065)	(608,315)	(1,817,728)	(18,172)	(185,475)	(167,251)	(129,569)	(118,058)	(168,560)	(539,073)	(244,600)
44	Transfers Out to Renewal & Replacement Fund		-	-	-	-	-	-	-	-	-	-	-
45	**Net Cash Flow**		**$ 695,093**	**(368,378)**	**(989,036)**	**1,685,043**	**2,517,586**	**3,703,303**	**5,010,220**	**6,732,988**	**6,922,836**	**6,895,461**	**7,533,944**
46	**Unrestricted Working Capital Reserve Fund Test**												
47	Balance At Beginning Of Fiscal Year		$ (4,106,473)	(8,273,163)	(8,664,040)	(10,071,576)	(8,660,133)	(6,539,447)	(3,973,744)	1,036,476	5,210,464	9,583,500	13,434,962
48	Cash Flow Surplus/(Deficit)		695,093	(368,378)	(989,036)	1,685,043	2,517,586	3,703,303	5,010,220	6,732,988	6,922,836	6,895,461	7,533,944
49	Cash Flow Deficit Paid with Unrestricted Reserve Fund Balance		-	-	-	-	-	-	-	-	-	-	-
50	Working Capital Fund Balance Check (Must Balance):		(4,861,782)	(22,500)	(418,500)	(273,600)	(396,900)	(1,137,600)	-	-	-	-	-
51	Projects Paid with Unrestricted Reserve Fund Balance		-	-	-	-	-	-	-	(2,559,000)	(2,549,800)	(3,044,000)	(2,748,000)
52	**Balance At End Of Fiscal Year**		**$ (8,273,163)**	**(8,664,040)**	**(10,071,576)**	**(8,660,133)**	**(6,539,447)**	**(3,973,744)**	**1,036,476**	**5,210,464**	**9,583,500**	**13,434,962**	**18,220,906**
53	Minimum Working Capital Reserve Target		1,964,425	2,209,917	2,310,741	2,356,804	3,198,406	4,048,299	4,933,831	4,893,201	4,929,491	4,915,739	4,906,711
54	**Excess Working Capital Above Target**		**$ (10,237,587)**	**(10,873,957)**	**(12,382,318)**	**(11,016,938)**	**(9,737,854)**	**(8,022,043)**	**(3,897,355)**	**317,263**	**4,654,010**	**8,519,223**	**13,314,195**

Schedule 9 – CIP Funding Summary

CIP Funding Sources:	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Capital Contribution Charges	$ -	-	-	-	-	-	-	-	-	-	-
Capital Projects Fund	-	-	-	-	-	-	-	-	-	-	-
Bond Proceeds	3,494,273	-	-	-	-	-	-	-	-	-	-
Revenue Fund	-	-	-	-	-	-	-	2,559,000	2,549,800	3,044,000	2,748,000
SRF Proceeds	-	-	-	-	-	-	-	-	-	-	-
Debt Proceeds	5,242,000	6,799,000	3,454,000	2,416,000	2,077,000	1,120,000	1,663,500	-	-	-	-
Projects Designated To Be Paid With Cash	4,861,782	22,500	418,500	273,600	396,900	1,137,600	-	-	-	-	-
Total CIP Funding Sources	**$ 13,598,055**	**6,821,500**	**3,872,500**	**2,689,600**	**2,473,900**	**2,257,600**	**1,663,500**	**2,559,000**	**2,549,800**	**3,044,000**	**2,748,000**
Total CIP Input	13,598,055	6,821,500	3,872,500	2,689,600	2,473,900	2,257,600	1,663,500	2,559,000	2,549,800	3,044,000	2,748,000
Variance	$ -	-	-	-	-	-	-	-	-	-	-

Schedule 10 – Long-Term Borrowing

			FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Term (Years)			30	30	30	30	30	30	30	30	30	30	30
Interest Rate			4.00%	4.25%	4.50%	4.75%	5.00%	5.25%	5.50%	5.50%	5.50%	5.50%	5.50%
Sources of Funds													
Par Amount			$ 5,460,417	7,082,292	3,597,917	2,516,667	2,163,542	1,166,667	1,732,812	-	-	-	-
Uses of Funds													
Proceeds			$ 5,242,000	6,799,000	3,454,000	2,416,000	2,077,000	1,120,000	1,663,500	-	-	-	-
Cost of Issuance	4.00%	of Par	218,417	283,292	143,917	100,667	86,542	46,667	69,312	-	-	-	-
Underwriter's Discount	$0.00	per $1,000	-	-	-	-	-	-	-	-	-	-	-
Bond Insurance	-	times total Debt Service	-	-	-	-	-	-	-	-	-	-	-
Capitalized Interest	0	Years Interest	-	-	-	-	-	-	-	-	-	-	-
Debt Service Surety	0.00%	of Debt Service	-	-	-	-	-	-	-	-	-	-	-
Debt Service Reserve	0	Years of Debt Service	-	-	-	-	-	-	-	-	-	-	-
Other Costs			-	-	-	-	-	-	-	-	-	-	-
Total Uses			$ 5,460,417	7,082,292	3,597,917	2,516,667	2,163,542	1,166,667	1,732,812	-	-	-	-
1 Year Interest			$ 218,417	300,997	161,906	119,542	108,177	61,250	95,305	-	-	-	-
Annual Debt Service			**$ 315,776**	**422,092**	**220,882**	**159,077**	**140,742**	**78,070**	**119,227**	**-**	**-**	**-**	**-**
Total Debt Service			$ 9,473,294	12,662,766	6,626,450	4,772,314	4,222,245	2,342,093	3,576,804	-	-	-	-
Cumulative New Annual Debt Service (1)			**$ 218,417**	**616,774**	**899,775**	**1,078,292**	**1,226,005**	**1,319,819**	**1,431,943**	**1,455,866**	**1,455,866**	**1,455,866**	**1,455,866**

(1) Cumulative new annual debt service assumes interest-only payments in first year of debt issuance.

Schedule 11 – Funding Summary by Fund

		FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
CAPITAL CONTRIBUTION CHARGES												
Balance At Beginning Of Fiscal Year	$	-	-	-	-	-	-	-	-	-	-	-
Additional Annual Revenues		184,200	147,500	147,500	147,500	147,500	147,500	147,500	147,500	147,500	147,500	147,500
Less: Payment Of Debt Service		(184,200)	(147,500)	(147,500)	(147,500)	(147,500)	(147,500)	(147,500)	(147,500)	(147,500)	(147,500)	(147,500)
Subtotal	$	-	-	-	-	-	-	-	-	-	-	-
Less: Restricted Funds		-	-	-	-	-	-	-	-	-	-	-
Total Amount Available For Projects	$	-	-	-	-	-	-	-	-	-	-	-
Amount Paid For Projects		-	-	-	-	-	-	-	-	-	-	-
Subtotal	$	-	-	-	-	-	-	-	-	-	-	-
Add Back: Restricted Funds		-	-	-	-	-	-	-	-	-	-	-
Plus: Interest Earnings		-	-	-	-	-	-	-	-	-	-	-
Less: Interest Allocated To Cash Flow		-	-	-	-	-	-	-	-	-	-	-
Balance At End Of Fiscal Year	$	-	-	-	-	-	-	-	-	-	-	-
BOND PROCEEDS												
Balance At Beginning Of Fiscal Year	$	3,494,273	-	-	-	-	-	-	-	-	-	-
Additional Annual Revenues		-	-	-	-	-	-	-	-	-	-	-
Less: Payment Of Debt Service		-	-	-	-	-	-	-	-	-	-	-
Subtotal	$	3,494,273	-	-	-	-	-	-	-	-	-	-
Less: Restricted Funds		-	-	-	-	-	-	-	-	-	-	-
Total Amount Available For Projects	$	3,494,273	-	-	-	-	-	-	-	-	-	-
Amount Paid For Projects		(3,494,273)	-	-	-	-	-	-	-	-	-	-
Subtotal	$	-	-	-	-	-	-	-	-	-	-	-
Add Back: Restricted Funds		-	-	-	-	-	-	-	-	-	-	-
Plus: Interest Earnings		2,184	-	-	-	-	-	-	-	-	-	-
Less: Interest Allocated To Cash Flow		(2,184)	-	-	-	-	-	-	-	-	-	-
Balance At End Of Fiscal Year	$	-	-	-	-	-	-	-	-	-	-	-
REVENUE FUND												
Balance At Beginning Of Fiscal Year	$	(4,106,473)	(8,273,163)	(8,664,040)	(10,071,576)	(8,660,133)	(6,539,447)	(3,973,744)	1,036,476	5,210,464	9,583,500	13,434,962
Additional Annual Revenues		695,093	(368,378)	(989,036)	1,685,043	2,517,586	3,703,303	5,010,220	6,732,988	6,922,836	6,895,461	7,533,944
Less: Cash-Funded Capital Projects		(4,861,782)	(22,500)	(418,500)	(273,600)	(396,900)	(1,137,600)	-	-	-	-	-
Less: Payment Of Debt Service		-	-	-	-	-	-	-	-	-	-	-
Subtotal	$	(8,273,163)	(8,664,040)	(10,071,576)	(8,660,133)	(6,539,447)	(3,973,744)	1,036,476	7,769,464	12,133,300	16,478,962	20,968,906
Less: Restricted Funds		8,273,163	8,664,040	10,071,576	8,660,133	6,539,447	3,973,744	(1,036,476)	(4,893,201)	(4,929,491)	(4,915,739)	(4,906,711)
Total Amount Available For Projects	$	-	-	-	-	-	-	-	2,876,263	7,203,810	11,563,223	16,062,195
Amount Paid For Projects		-	-	-	-	-	-	-	(2,559,000)	(2,549,800)	(3,044,000)	(2,748,000)
Subtotal	$	-	-	-	-	-	-	-	317,263	4,654,010	8,519,223	13,314,195
Add Back: Restricted Funds		(8,273,163)	(8,664,040)	(10,071,576)	(8,660,133)	(6,539,447)	(3,973,744)	1,036,476	4,893,201	4,929,491	4,915,739	4,906,711
Plus: Interest Earnings		-	-	-	-	-	-	-	62,469	147,940	230,185	316,559
Less: Interest Allocated To Cash Flow		-	-	-	-	-	-	-	(62,469)	(147,940)	(230,185)	(316,559)
Balance At End Of Fiscal Year	$	(8,273,163)	(8,664,040)	(10,071,576)	(8,660,133)	(6,539,447)	(3,973,744)	1,036,476	5,210,464	9,583,500	13,434,962	18,220,906

APPENDIX C – RATE STRUCTURE MODIFICATIONS

Supporting Schedules

Monthy Ready to Serve Charge

Water RTS by Meter Size	FY 2016	FY 2017	FY 2018
5/8"	$ 3.33	$ 3.48	$ 3.64
3/4"	$ 5.00	$ 5.22	$ 5.45
1"	$ 8.33	$ 8.70	$ 9.09
1 1/2"	$ 16.65	$ 17.40	$ 18.18
2"	$ 26.64	$ 27.84	$ 29.09
3"	$ 53.28	$ 55.68	$ 58.18
4"	$ 83.25	$ 87.00	$ 90.91
6"	$ 166.50	$ 173.99	$ 181.82
8"	$ 266.40	$ 278.39	$ 290.92
10"	$ 382.95	$ 400.18	$ 418.19
Sewer RTS by Meter Size			
5/8"	$ 3.06	$ 3.47	$ 3.92
3/4"	$ 4.59	$ 5.20	$ 5.89
1"	$ 7.65	$ 8.66	$ 9.81
1 1/2"	$ 15.30	$ 17.33	$ 19.62
2"	$ 24.48	$ 27.72	$ 31.40
3"	$ 48.96	$ 55.45	$ 62.79
4"	$ 76.50	$ 86.64	$ 98.12
6"	$ 153.00	$ 173.27	$ 196.23
8"	$ 244.80	$ 277.24	$ 313.97
10"	$ 351.90	$ 398.53	$ 451.33

Water Usage Charges

Meter Size	Tier 1 (monthly use)	Tier 2 (monthly use)	Tier 3 (monthly use)	Tier 4 (monthly use)
5/8"	0 - 5,000	5,001 - 10,000	10,001 - 15,000	15,000 +
3/4"	0 - 7,500	7,501 - 15,000	15,001 - 22,500	22,500 +
1"	0 - 12,500	12,501 - 25,000	25,001 - 37,500	37,500 +
1 1/2"	0 - 25,000	25,001 - 50,000	50,001 - 75,000	75,000 +
2"	0 - 40,000	40,001 - 80,000	80,001 - 120,000	120,000 +
3"	0 - 80,000	80,001 - 160,000	160,001 - 240,000	240,000 +
4"	0 - 125,000	125,001 - 250,000	250,001 - 375,000	375,000 +
6"	0 - 250,000	250,001 - 500,000	500,001 - 750,000	750,000 +
8"	0 - 400,000	400,001 - 800,000	800,001 - 1,200,000	1,200,000 +
10"	0 - 575,000	575,001 - 1,150,000	1,150,001 - 1,725,000	1,725,000 +

Rate Per 1,000 Gallons	FY 2016	FY 2017	FY 2018
Tier 1	$ 4.78	$ 4.95	$ 5.12
Tier 2	$ 7.35	$ 7.61	$ 7.87
Tier 3	$ 11.39	$ 11.79	$ 12.20
Tier 4	$ 15.38	$ 15.92	$ 16.48

Sewer Usage Charges	FY 2016	FY 2017	FY 2018
All Meter Sizes, All Use			
Rate Per 1,000 Gallons	$ 7.35	$ 8.25	$ 9.26

Quarterly Ready to Serve Charge

Water RTS by Meter Size	FY 2016	FY 2017	FY 2018
5/8"	$ 9.99	$ 10.44	$ 10.91
3/4"	$ 15.00	$ 15.66	$ 16.35
1"	$ 24.99	$ 26.10	$ 27.27
1 1/2"	$ 49.95	$ 52.20	$ 54.54
2"	$ 79.92	$ 83.52	$ 87.27
3"	$ 159.84	$ 167.04	$ 174.54
4"	$ 249.75	$ 261.00	$ 272.73
6"	$ 499.50	$ 521.97	$ 545.46
8"	$ 799.20	$ 835.17	$ 872.76
10"	$ 1,148.85	$ 1,200.54	$ 1,254.57
Sewer RTS by Meter Size			
5/8"	$ 9.18	$ 10.40	$ 11.77
3/4"	$ 13.77	$ 15.60	$ 17.67
1"	$ 22.95	$ 25.98	$ 29.43
1 1/2"	$ 45.90	$ 51.99	$ 58.86
2"	$ 73.44	$ 83.16	$ 94.20
3"	$ 146.88	$ 166.35	$ 188.37
4"	$ 229.50	$ 259.92	$ 294.36
6"	$ 459.00	$ 519.81	$ 588.69
8"	$ 734.40	$ 831.72	$ 941.91
10"	$ 1,055.70	$ 1,195.59	$ 1,353.99

Water Usage Charges

Meter Size	Tier 1 (quarterly use)	Tier 2 (quarterly use)	Tier 3 (quarterly use)	Tier 4 (quarterly use)
5/8"	0 - 15,000	15,001 - 30,000	30,001 - 45,000	45,000 +
3/4"	0 - 22,500	22,501 - 45,000	45,001 - 67,500	67,500 +
1"	0 - 37,500	37,501 - 75,000	75,001 - 112,500	112,500 +
1 1/2"	0 - 75,000	75,001 - 150,000	150,001 - 225,000	225,000 +
2"	0 - 120,000	120,001 - 240,000	240,001 - 360,000	360,000 +
3"	0 - 240,000	240,001 - 480,000	480,001 - 720,000	720,000 +
4"	0 - 375,000	375,001 - 750,000	750,001 - 1,125,000	1,125,000 +
6"	0 - 750,000	750,001 - 1,500,000	1,500,001 - 2,250,000	2,250,000 +
8"	0 - 1,200,000	1,200,001 - 2,400,000	2,400,001 - 3,600,000	3,600,000 +
10"	0 - 1,725,000	1,725,001 - 3,450,000	3,450,001 - 5,175,000	5,175,000 +

Rate Per 1,000 Gallons	FY 2016	FY 2017	FY 2018
Tier 1	$ 4.78	$ 4.92	$ 5.09
Tier 2	$ 7.35	$ 7.57	$ 7.83
Tier 3	$ 11.39	$ 11.73	$ 12.14
Tier 4	$ 15.38	$ 15.84	$ 16.39

Sewer Usage Charges	FY 2016	FY 2017	FY 2018
All Meter Sizes, All Use			
Rate Per 1,000 Gallons	$ 7.35	$ 8.23	$ 9.26

Schedule 2 – Quarterly 5/8" Meter Bill Impacts

5/8" Meter Quarterly Water & Sewer Bill Calculations[1]								Across-The-Board Increase		
Quarterly Use (Gal)	# of Bills	% of Bills	Agg. %	Current FY 15	Proposed FY 16	$ Chg	% Chg	FY 2016	$ Chg	% Chg.
-	777	3.7%	3.7%	$ 11.67	$ 19.17	$ 7.50	64.3%	$ 13.42	$ 1.75	15.0%
1,000	374	1.8%	5.5%	$ 23.75	$ 31.30	$ 7.55	31.8%	$ 26.46	$ 2.71	11.4%
2,000	445	2.1%	7.6%	$ 35.83	$ 43.43	$ 7.60	21.2%	$ 39.50	$ 3.67	10.2%
3,000	663	3.2%	10.8%	$ 47.91	$ 55.56	$ 7.65	16.0%	$ 52.54	$ 4.63	9.7%
4,000	836	4.0%	14.7%	$ 59.99	$ 67.69	$ 7.70	12.8%	$ 65.58	$ 5.59	9.3%
5,000	948	4.5%	19.3%	$ 72.07	$ 79.82	$ 7.75	10.8%	$ 78.62	$ 6.55	9.1%
6,000	1,099	5.2%	24.5%	$ 84.15	$ 91.95	$ 7.80	9.3%	$ 91.66	$ 7.51	8.9%
7,000	1,139	5.4%	29.9%	$ 96.23	$ 104.08	$ 7.85	8.2%	$ 104.70	$ 8.47	8.8%
8,000	1,163	5.5%	35.5%	$ 108.31	$ 116.21	$ 7.90	7.3%	$ 117.74	$ 9.43	8.7%
9,000	1,234	5.9%	41.3%	$ 120.39	$ 128.34	$ 7.95	6.6%	$ 131.36	$ 10.97	9.1%
10,000	1,171	5.6%	46.9%	$ 132.47	$ 140.47	$ 8.00	6.0%	$ 144.40	$ 11.93	9.0%
11,000	1,088	5.2%	52.1%	$ 144.55	$ 152.60	$ 8.05	5.6%	$ 157.44	$ 12.89	8.9%
12,000	**1,016**	**4.8%**	**57.0%**	**$ 156.63**	**$ 164.73**	**$ 8.10**	**5.2%**	**$ 170.48**	**$ 13.85**	**8.8%**
13,000	1,030	4.9%	61.9%	$ 171.11	$ 176.86	$ 5.75	3.4%	$ 186.00	$ 14.89	8.7%
14,000	925	4.4%	66.3%	$ 185.59	$ 188.99	$ 3.40	1.8%	$ 201.52	$ 15.93	8.6%
15,000	788	3.8%	70.0%	$ 200.07	$ 201.12	$ 1.05	0.5%	$ 217.04	$ 16.97	8.5%
16,000	779	3.7%	73.7%	$ 214.55	$ 215.82	$ 1.27	0.6%	$ 232.56	$ 18.01	8.4%
17,000	669	3.2%	76.9%	$ 229.03	$ 230.52	$ 1.49	0.7%	$ 248.08	$ 19.05	8.3%
18,000	570	2.7%	79.6%	$ 243.51	$ 245.22	$ 1.71	0.7%	$ 263.60	$ 20.09	8.3%
19,000	514	2.4%	82.1%	$ 257.99	$ 259.92	$ 1.93	0.7%	$ 279.12	$ 21.13	8.2%
20,000	486	2.3%	84.4%	$ 272.47	$ 274.62	$ 2.15	0.8%	$ 294.64	$ 22.17	8.1%
24,000	273	1.3%	91.2%	$ 330.39	$ 333.42	$ 3.03	0.9%	$ 356.72	$ 26.33	8.0%
30,000	107	0.5%	95.9%	$ 420.75	$ 421.62	$ 0.87	0.2%	$ 453.38	$ 32.63	7.8%
40,000	24	0.1%	98.8%	$ 571.35	$ 609.02	$ 37.67	6.6%	$ 614.48	$ 43.13	7.5%
50,000	10	0.0%	99.7%	$ 721.95	$ 816.37	$ 94.42	13.1%	$ 775.58	$ 53.63	7.4%
60,000	3	0.0%	99.8%	$ 872.55	$ 1,043.67	$ 171.12	19.6%	$ 936.68	$ 64.13	7.3%
70,000	2	0.0%	99.9%	$ 1,023.15	$ 1,270.97	$ 247.82	24.2%	$ 1,097.78	$ 74.63	7.3%
80,000	2	0.0%	100.0%	$ 1,173.75	$ 1,498.27	$ 324.52	27.6%	$ 1,258.88	$ 85.13	7.3%
90,000	1	0.0%	100.0%	$ 1,324.35	$ 1,725.57	$ 401.22	30.3%	$ 1,419.98	$ 95.63	7.2%
100,000	-	0.0%	100.0%	$ 1,474.95	$ 1,952.87	$ 477.92	32.4%	$ 1,581.08	$ 106.13	7.2%

1 – Represents 21,012 (40%) of the City's FY 2013 water & sewer bills, approximately 5,250 customer accounts.

Schedule 3 – Quarterly 3/4" Meter Bill Impacts

3/4" Meter Quarterly Water & Sewer Bill Calculations[1]								Across-The-Board Increase		
Quarterly Use (Gal)	# of Bills	% of Bills	Agg. %	Current FY 15	Proposed FY 16	$ Chg	% Chg	FY 2016	$ Chg	% Chg.
-	422	1.9%	1.9%	$ 17.52	$ 28.77	$ 11.25	64.2%	$ 20.15	$ 2.63	15.0%
1,000	216	1.0%	2.9%	$ 29.60	$ 40.90	$ 11.30	38.2%	$ 33.19	$ 3.59	12.1%
2,000	277	1.2%	4.1%	$ 41.68	$ 53.03	$ 11.35	27.2%	$ 46.23	$ 4.55	10.9%
3,000	386	1.7%	5.9%	$ 53.76	$ 65.16	$ 11.40	21.2%	$ 59.27	$ 5.51	10.2%
4,000	540	2.4%	8.3%	$ 65.84	$ 77.29	$ 11.45	17.4%	$ 72.31	$ 6.47	9.8%
5,000	725	3.3%	11.6%	$ 77.92	$ 89.42	$ 11.50	14.8%	$ 85.35	$ 7.43	9.5%
6,000	816	3.7%	15.2%	$ 90.00	$ 101.55	$ 11.55	12.8%	$ 98.39	$ 8.39	9.3%
7,000	1,005	4.5%	19.8%	$ 102.08	$ 113.68	$ 11.60	11.4%	$ 111.43	$ 9.35	9.2%
8,000	1,155	5.2%	25.0%	$ 114.16	$ 125.81	$ 11.65	10.2%	$ 124.47	$ 10.31	9.0%
9,000	1,232	5.5%	30.5%	$ 126.24	$ 137.94	$ 11.70	9.3%	$ 137.51	$ 11.27	8.9%
10,000	1,381	6.2%	36.7%	$ 138.32	$ 150.07	$ 11.75	8.5%	$ 150.55	$ 12.23	8.8%
11,000	1,464	6.6%	43.3%	$ 150.40	$ 162.20	$ 11.80	7.8%	$ 163.59	$ 13.19	8.8%
12,000	1,361	6.1%	49.4%	$ 162.48	$ 174.33	$ 11.85	7.3%	$ 176.63	$ 14.15	8.7%
13,000	1,289	5.8%	55.3%	$ 176.96	$ 186.46	$ 9.50	5.4%	$ 192.15	$ 15.19	8.6%
14,000	1,152	5.2%	60.4%	$ 191.44	$ 198.59	$ 7.15	3.7%	$ 207.67	$ 16.23	8.5%
15,000	**1,099**	**4.9%**	**65.4%**	**$ 205.92**	**$ 210.72**	**$ 4.80**	**2.3%**	**$ 223.19**	**$ 17.27**	**8.4%**
16,000	975	4.4%	69.8%	$ 220.40	$ 222.85	$ 2.45	1.1%	$ 238.71	$ 18.31	8.3%
17,000	884	4.0%	73.8%	$ 234.88	$ 234.98	$ 0.10	0.0%	$ 254.23	$ 19.35	8.2%
18,000	763	3.4%	77.2%	$ 249.36	$ 247.11	$ (2.25)	-0.9%	$ 269.75	$ 20.39	8.2%
19,000	701	3.2%	80.4%	$ 263.84	$ 259.24	$ (4.60)	-1.7%	$ 285.27	$ 21.43	8.1%
20,000	613	2.8%	83.1%	$ 278.32	$ 271.37	$ (6.95)	-2.5%	$ 300.79	$ 22.47	8.1%
24,000	318	1.4%	90.8%	$ 336.24	$ 323.75	$ (12.50)	-3.7%	$ 362.87	$ 26.63	7.9%
30,000	125	0.6%	96.1%	$ 426.60	$ 411.95	$ (14.66)	-3.4%	$ 459.53	$ 32.93	7.7%
40,000	30	0.1%	98.6%	$ 577.20	$ 558.95	$ (18.26)	-3.2%	$ 620.63	$ 43.43	7.5%
50,000	11	0.0%	99.4%	$ 727.80	$ 726.15	$ (1.66)	-0.2%	$ 781.73	$ 53.93	7.4%
60,000	8	0.0%	99.7%	$ 878.40	$ 913.55	$ 35.14	4.0%	$ 942.83	$ 64.43	7.3%
70,000	1	0.0%	99.9%	$ 1,029.00	$ 1,110.92	$ 81.92	8.0%	$ 1,103.93	$ 74.93	7.3%
80,000	1	0.0%	99.9%	$ 1,179.60	$ 1,338.22	$ 158.62	13.4%	$ 1,265.03	$ 85.43	7.2%
90,000	-	0.0%	100.0%	$ 1,330.20	$ 1,565.52	$ 235.32	17.7%	$ 1,426.13	$ 95.93	7.2%
100,000	1	0.0%	100.0%	$ 1,480.80	$ 1,792.82	$ 312.02	21.1%	$ 1,587.23	$ 106.43	7.2%

1 – Represents 22,243 (42%) of the City's FY 2013 water & sewer bills, approximately 5,560 customer accounts.

Schedule 4 – Quarterly 1" Meter Bill Impacts

1" Meter Quarterly Water & Sewer Bill Calculations[1]								Across-The-Board Increase		
Quarterly Use (Gal)	# of Bills	% of Bills	Agg. %	Current FY 15	Proposed FY 16	$ Chg	% Chg	FY 2016	$ Chg	% Chg.
-	114	1.9%	1.9%	$ 29.19	$ 47.94	$ 18.75	64.2%	$ 33.56	$ 4.37	15.0%
1,000	69	1.1%	3.0%	$ 41.27	$ 60.07	$ 18.80	45.6%	$ 46.60	$ 5.33	12.9%
2,000	95	1.6%	4.6%	$ 53.35	$ 72.20	$ 18.85	35.3%	$ 59.64	$ 6.29	11.8%
3,000	122	2.0%	6.6%	$ 65.43	$ 84.33	$ 18.90	28.9%	$ 72.68	$ 7.25	11.1%
4,000	187	3.1%	9.7%	$ 77.51	$ 96.46	$ 18.95	24.4%	$ 85.72	$ 8.21	10.6%
5,000	244	4.0%	13.8%	$ 89.59	$ 108.59	$ 19.00	21.2%	$ 98.76	$ 9.17	10.2%
6,000	268	4.4%	18.2%	$ 101.67	$ 120.72	$ 19.05	18.7%	$ 111.80	$ 10.13	10.0%
7,000	312	5.2%	23.4%	$ 113.75	$ 132.85	$ 19.10	16.8%	$ 124.84	$ 11.09	9.7%
8,000	327	5.4%	28.8%	$ 125.83	$ 144.98	$ 19.15	15.2%	$ 137.88	$ 12.05	9.6%
9,000	396	6.6%	35.4%	$ 137.91	$ 157.11	$ 19.20	13.9%	$ 150.92	$ 13.01	9.4%
10,000	396	6.6%	42.0%	$ 149.99	$ 169.24	$ 19.25	12.8%	$ 163.96	$ 13.97	9.3%
11,000	387	6.4%	48.4%	$ 162.07	$ 181.37	$ 19.30	11.9%	$ 177.00	$ 14.93	9.2%
12,000	315	5.2%	53.6%	$ 174.15	$ 193.50	$ 19.35	11.1%	$ 190.04	$ 15.89	9.1%
13,000	313	5.2%	58.8%	$ 188.63	$ 205.63	$ 17.00	9.0%	$ 205.56	$ 16.93	9.0%
14,000	314	5.2%	64.0%	$ 203.11	$ 217.76	$ 14.65	7.2%	$ 221.08	$ 17.97	8.8%
15,000	**256**	**4.2%**	**68.3%**	**$ 217.59**	**$ 229.89**	**$ 12.30**	**5.7%**	**$ 236.60**	**$ 19.01**	**8.7%**
16,000	222	3.7%	72.0%	$ 232.07	$ 242.02	$ 9.95	4.3%	$ 252.12	$ 20.05	8.6%
17,000	212	3.5%	75.5%	$ 246.55	$ 254.15	$ 7.60	3.1%	$ 267.64	$ 21.09	8.6%
18,000	169	2.8%	78.3%	$ 261.03	$ 266.28	$ 5.25	2.0%	$ 283.16	$ 22.13	8.5%
19,000	165	2.7%	81.0%	$ 275.51	$ 278.41	$ 2.90	1.1%	$ 298.68	$ 23.17	8.4%
20,000	110	1.8%	82.8%	$ 289.99	$ 290.54	$ 0.55	0.2%	$ 314.20	$ 24.21	8.3%
24,000	76	1.3%	89.0%	$ 347.91	$ 339.06	$ (8.85)	-2.5%	$ 376.28	$ 28.37	8.2%
30,000	40	0.7%	93.7%	$ 438.27	$ 411.84	$ (26.43)	-6.0%	$ 472.94	$ 34.67	7.9%
40,000	15	0.2%	97.1%	$ 588.87	$ 539.57	$ (49.31)	-8.4%	$ 634.04	$ 45.17	7.7%
50,000	9	0.1%	98.7%	$ 739.47	$ 686.57	$ (52.91)	-7.2%	$ 795.14	$ 55.67	7.5%
60,000	4	0.1%	99.1%	$ 890.07	$ 833.57	$ (56.50)	-6.3%	$ 956.24	$ 66.17	7.4%
70,000	2	0.0%	99.5%	$ 1,040.67	$ 980.57	$ (60.10)	-5.8%	$ 1,117.34	$ 76.67	7.4%
80,000	1	0.0%	99.7%	$ 1,191.27	$ 1,147.77	$ (43.50)	-3.7%	$ 1,278.44	$ 87.17	7.3%
90,000	1	0.0%	99.9%	$ 1,341.87	$ 1,335.17	$ (6.70)	-0.5%	$ 1,439.54	$ 97.67	7.3%
100,000	1	0.0%	100.0%	$ 1,492.47	$ 1,522.57	$ 30.10	2.0%	$ 1,600.64	$ 108.17	7.2%

1 – Represents 6,077 (12%) of the City's FY 2013 water & sewer bills, approximately 1,520 customer accounts.

Monthly Water & Sewer Calculations - 1" and Larger Meters						Across the Board Increase		
Meter Size	Typical Mtly Usage (Gal)	Current FY 15	Proposed FY 16	$ Chg	% Chg	FY 2016	$ Chg	% Chg
1"	45,000	$663.59	$ 756.08	$ 92.50	13.9%	$ 721.01	$ 57.43	8.7%
1.5"	65,000	$974.51	$ 983.80	$ 9.29	1.0%	$ 1,053.91	$ 79.40	8.1%
2"	55,000	$835.58	$ 756.82	$ (78.76)	-9.4%	$ 905.64	$ 70.06	8.4%
3"	325,000	$4,932.90	$ 5,679.89	$ 746.99	15.1%	$ 5,289.57	$ 356.67	7.2%
4"	530,000	$8,055.21	$ 9,379.15	$ 1,323.94	16.4%	$ 8,630.64	$ 575.43	7.1%
6"	640,000	$9,809.06	$ 9,650.60	$ (158.46)	-1.6%	$ 10,509.71	$ 700.65	7.1%
8"	1,025,000	$15,723.86	$ 15,459.70	$ (264.16)	-1.7%	$ 16,840.43	$ 1,116.57	7.1%

1 – Represents 2,095 (3%) of the City's FY 2013 water & sewer bills, approximately 175 customer accounts.

Schedule 6 – Revenue Comparisons for Monthly and Quarterly Billed Customers by Meter Size

Revenue Comparison for Monthly Billed Customers by Meter Size

	Meter Size	5/8"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	Totals
	Annual Bills	313	216	199	352	378	276	144	157	48	12	2,095
	Monthly Accounts	26	18	17	29	32	23	12	13	4	1	175
	Annual Billed Volume (Tgal)	1,650	540	9,310	23,830	19,650	89,420	76,230	99,630	48,620	22,080	390,960
New Rate Structure	Water RTS Revenue	$ 1,043	$ 1,080	$ 1,658	$ 5,866	$ 10,079	$ 14,718	$ 11,998	$ 26,163	$ 12,798	$ 4,599	90,002
	Water Usage Revenue	$ 16,209	$ 3,032	$ 107,834	$ 249,357	$ 173,896	$ 1,056,082	$ 858,239	$ 905,997	$ 385,966	$ 144,699	3,901,310
	Total Water Revenue	**$ 17,252**	**$ 4,111**	**$ 109,492**	**$ 255,223**	**$ 183,975**	**$ 1,070,800**	**$ 870,237**	**$ 932,160**	**$ 398,764**	**$ 149,299**	**3,991,312**
Across-The-Board R.I.	Water RTS Revenue	$ 670	$ 693	$ 1,064	$ 3,766	$ 6,470	$ 9,448	$ 7,702	$ 16,795	$ 8,216	$ 3,081	57,904
	Water Usage Revenue	$ 11,383	$ 3,210	$ 73,443	$ 194,086	$ 158,261	$ 758,394	$ 649,664	$ 853,458	$ 419,742	$ 189,079	3,310,720
	Total Water Revenue	**$ 12,052**	**$ 3,904**	**$ 74,507**	**$ 197,852**	**$ 164,731**	**$ 767,842**	**$ 657,366**	**$ 870,253**	**$ 427,958**	**$ 192,159**	**3,368,624**
New Rate Structure	Sewer RTS Revenue	$ 665	$ 607	$ 1,433	$ 4,658	$ 8,433	$ 12,355	$ 11,031	$ 24,054	$ 11,767	$ 4,229	79,230
	Sewer Usage Revenue	$ 5,540	$ 3,422	$ 68,067	$ 163,733	$ 143,451	$ 426,072	$ 499,694	$ 697,875	$ 266,605	$ 145,082	2,419,540
	Total Sewer Revenue	**$ 6,205**	**$ 4,028**	**$ 69,500**	**$ 168,390**	**$ 151,884**	**$ 438,427**	**$ 510,725**	**$ 721,929**	**$ 278,372**	**$ 149,310**	**2,498,770**
Across-The-Board R.I.	Sewer RTS Revenue	$ 506	$ 462	$ 1,091	$ 3,548	$ 6,423	$ 9,411	$ 8,402	$ 18,322	$ 8,963	$ 3,361	60,489
	Sewer Usage Revenue	$ 5,659	$ 3,495	$ 69,530	$ 167,250	$ 146,533	$ 435,225	$ 510,429	$ 712,867	$ 272,333	$ 148,198	2,471,518
	Total Sewer Revenue	**$ 6,166**	**$ 3,957**	**$ 70,621**	**$ 170,798**	**$ 152,956**	**$ 444,636**	**$ 518,831**	**$ 731,189**	**$ 281,295**	**$ 151,559**	**2,532,007**
New Rate Structure Revenue from Monthly Bills		**$ 23,457**	**$ 8,140**	**$ 178,992**	**$ 423,614**	**$ 335,858**	**$ 1,509,227**	**$ 1,380,962**	**$ 1,654,089**	**$ 677,136**	**$ 298,609**	**$ 6,490,082**
Across-The-Board R.I. Revenue from Monthly Bills		**$ 18,218**	**$ 7,861**	**$ 145,128**	**$ 368,650**	**$ 317,687**	**$ 1,212,478**	**$ 1,176,197**	**$ 1,601,442**	**$ 709,253**	**$ 343,719**	**$ 5,900,632**

Revenue Comparison for Quarterly Billed Customers by Meter Size

	Meter Size	5/8"	3/4"	1"	1 1/2"	2"	3"	4"	6"	8"	10"	Totals
	Annual Water Bills	21,012	22,243	6,077	390	566	236	128	36	32	0	50,720
	Quarterly Accounts	5,253	5,561	1,519	98	142	59	32	9	8	0	12,681
	Annual Billed Volume (Tgal)	267,200	315,890	95,350	30,520	122,520	95,860	99,460	40,210	48,840	0	1,115,850
New Rate Structure	Water RTS Revenue	$ 209,910	$ 333,311	$ 151,773	$ 19,481	$ 45,235	$ 37,722	$ 31,968	$ 17,982	$ 25,574	$ -	872,956
	Water Usage Revenue	$ 1,475,077	$ 1,638,647	$ 539,332	$ 243,843	$ 1,193,369	$ 817,101	$ 795,445	$ 245,186	$ 233,351	$ -	7,181,351
	Total Water Revenue	**$ 1,684,987**	**$ 1,971,958**	**$ 691,105**	**$ 263,323**	**$ 1,238,604**	**$ 854,823**	**$ 827,413**	**$ 263,168**	**$ 258,925**	**$ -**	**8,054,307**
Across-The-Board R.I.	Water RTS Revenue	$ 134,866	$ 214,150	$ 97,513	$ 12,516	$ 29,063	$ 24,236	$ 20,539	$ 11,553	$ 16,431	$ -	560,868
	Water Usage Revenue	$ 1,712,744	$ 2,038,641	$ 640,547	$ 250,047	$ 1,033,905	$ 816,898	$ 858,137	$ 344,316	$ 420,892	$ -	8,116,128
	Total Water Revenue	**$ 1,847,610**	**$ 2,252,791**	**$ 738,060**	**$ 262,563**	**$ 1,062,968**	**$ 841,135**	**$ 878,676**	**$ 355,870**	**$ 437,323**	**$ -**	**8,676,996**
New Rate Structure	Sewer RTS Revenue	$ 192,881	$ 306,121	$ 139,375	$ 17,901	$ 41,273	$ 34,664	$ 28,458	$ 16,524	$ 23,501	$ -	800,698
	Sewer Usage Revenue	$ 1,959,008	$ 2,299,037	$ 686,536	$ 214,285	$ 826,923	$ 618,162	$ 477,964	$ 280,498	$ 350,669	$ -	7,713,082
	Total Sewer Revenue	**$ 2,151,889**	**$ 2,605,158**	**$ 825,911**	**$ 232,186**	**$ 868,196**	**$ 652,825**	**$ 506,422**	**$ 297,022**	**$ 374,170**	**$ -**	**8,513,780**
Across-The-Board R.I.	Sewer RTS Revenue	$ 147,119	$ 233,492	$ 106,308	$ 13,654	$ 31,481	$ 26,440	$ 21,706	$ 12,604	$ 17,925	$ -	610,728
	Sewer Usage Revenue	$ 1,998,816	$ 2,345,754	$ 700,487	$ 218,639	$ 843,726	$ 630,723	$ 487,676	$ 286,197	$ 357,795	$ -	7,869,814
	Total Sewer Revenue	**$ 2,145,935**	**$ 2,579,247**	**$ 806,794**	**$ 232,293**	**$ 875,207**	**$ 657,163**	**$ 509,382**	**$ 298,801**	**$ 375,720**	**$ -**	**8,480,543**
New Rate Structure Revenue from Monthly Bills		**$ 3,836,876**	**$ 4,577,116**	**$ 1,517,016**	**$ 495,510**	**$ 2,106,800**	**$ 1,507,649**	**$ 1,333,835**	**$ 560,190**	**$ 633,095**	**$ -**	**$ 16,568,087**
Across-The-Board R.I. Revenue from Monthly Bills		**$ 3,993,545**	**$ 4,832,038**	**$ 1,544,855**	**$ 494,856**	**$ 1,938,175**	**$ 1,498,297**	**$ 1,388,058**	**$ 654,671**	**$ 813,043**	**$ -**	**$ 17,157,539**
Total New Rate Structure Revenue		**$ 3,860,333**	**$ 4,585,256**	**$ 1,696,008**	**$ 919,123**	**$ 2,442,659**	**$ 3,016,875**	**$ 2,714,798**	**$ 2,214,278**	**$ 1,310,231**	**$ 298,609**	**$ 23,058,170**
Total Across-The-Board R.I. Revenue		**$ 4,011,762**	**$ 4,839,899**	**$ 1,689,982**	**$ 863,506**	**$ 2,255,862**	**$ 2,710,775**	**$ 2,564,255**	**$ 2,256,113**	**$ 1,522,296**	**$ 343,719**	**$ 23,058,170**

APPENDIX D – CAPITAL CONTRIBUTION CHARGES

Supporting Schedules

						TRANSMISSION	TREATMENT	TOTAL
1	**WATER SYSTEM BUY-IN ANALYSIS:**							
2	Water System Project Costs					$ 46,986,142	13,069,736	$ 60,055,878
3	Less: Portion Funded From Grants	5.0%				(2,349,307)	(653,487)	(3,002,794)
4	Eligible Project Costs, Net of Grant Funding					$ 44,636,835	12,416,249	$ 57,053,084
5	Eligible Project Costs Financed With Debt	90.0%				$ 40,173,152	11,174,624	$ 51,347,776
6	Eligible Project Costs Funded From Other Sources					4,463,684	1,241,625	5,705,308
7	Eligible Project Costs, Net of Grant Funding					$ 44,636,835	12,416,249	$ 57,053,084
8	DEBT FINANCING ANALYSIS:							
9	Sources of Funds:							
10	Estimated Par Amount	3.00%	Int for	20.00	Years	$ 41,847,033	11,640,233	$ 53,487,266
11	Estimated Int Earnings on Const Fund	0.00%	Int for	0	Months	-	-	-
12	Total Sources of Funds					$ 41,847,033	11,640,233	$ 53,487,266
13	Uses of Funds:							
14	Project Cost Proceeds					$ 40,173,152	11,174,624	$ 51,347,776
15	Cost of Issuance	4.00%	of Par Amount			1,673,881	465,609	2,139,490
16	Underwriter's Discount	0.00%	of Par Amount			-	-	-
17	Bond Insurance	0.00%	of Total D.S.			-	-	-
18	Capitalized Interest	0	Years Interest			-	-	-
19	Debt Service Surety	0.00%	of Par Amount			-	-	-
20	Debt Service Reserve	0	Years of D.S.			-	-	-
21	Total Uses of Funds					$ 41,847,033	11,640,233	$ 53,487,266
22	Annual Debt Service					$ 2,812,778	782,407	$ 3,595,184
23	Total P&I Payments over Term of Loan					$ 56,255,558	15,648,130	$ 71,903,688
24	Eligible Project Costs Funded From Other Sources					4,463,684	1,241,625	5,705,308
25	TOTAL WATER SYSTEM BUY-IN COSTS:					$ 60,719,242	16,889,755	$ 77,608,997
26	**WATER SYSTEM CAPITAL CONTRIBUTION CHARGE CALCULATION:**							
27	Capacity (MGD)					10.14	7.12	N/A
28	Capacity in Equivalent Residential Units (EDUs) @	250	Gallons Per Day			40,545	28,471	N/A
29	Cost per EDU					$ 1,498	593	$ 2,091
30	Credit for NPV of Debt Service in Usage Rates					(465)	(184)	(649)
31	Water Capital Contribution Charge per EDU					$ 1,033	409	$ 1,442
32	Less: Allowance for Estimation & Contingency					(31)	(12)	3.0%
33	Net Capital Contribution Charge per EDU					$ 1,002	397	$ 1,399
34	Percentage of Full Cost Recovery							100.0%
35	**CALCULATED CAPITAL CONTRIBUTION CHARGE PER EDU:**					**$ 1,002**	**397**	**$ 1,399**
	Calculated Water Capital Contribution Charge for 1" Meter							**$ 3,497**
36	*Current Water Capital Contribution Charge for 1" Meter*							*$ 4,100*
37	*$ Variance*							*$ (603)*
38	*% Variance*							*-15%*

						TRANSMISSION	TREATMENT	TOTAL
1	**SEWER SYSTEM BUY-IN ANALYSIS:**							
2	Sewer System Project Costs					$ 27,399,041	66,430,333	$ 93,829,374
3	Less: Portion Funded From Grants	5.0%				(1,369,952)	(3,321,517)	(4,691,469)
4	Eligible Project Costs, Net of Grant Funding					$ 26,029,089	63,108,816	$ 89,137,905
5	Eligible Project Costs Financed With Debt	90.0%				$ 23,426,180	56,797,934	$ 80,224,115
6	Eligible Project Costs Funded From Other Sources					2,602,909	6,310,882	8,913,791
7	Eligible Project Costs, Net of Grant Funding					$ 26,029,089	63,108,816	$ 89,137,905
8	DEBT FINANCING ANALYSIS:							
9	Sources of Funds:							
10	Estimated Par Amount	3.00%	Int for	20.00	Years	$ 24,402,271	59,164,515	$ 83,566,787
11	Estimated Int Earnings on Const Fund	0.00%	Int for	0	Months	-	-	-
12	Total Sources of Funds					$ 24,402,271	59,164,515	$ 83,566,787
13	Uses of Funds:							
14	Project Cost Proceeds					$ 23,426,180	56,797,934	$ 80,224,115
15	Cost of Issuance	4.00%	of Par Amount			976,091	2,366,581	3,342,672
16	Underwriter's Discount	0.00%	of Par Amount			-	-	-
17	Bond Insurance	0.00%	of Total D.S.			-	-	-
18	Capitalized Interest	0	Years Interest			-	-	-
19	Debt Service Surety	0.00%	of Par Amount			-	-	-
20	Debt Service Reserve	0	Years of D.S.			-	-	-
21	Total Uses of Funds					$ 24,402,271	59,164,515	$ 83,566,787
22	Annual Debt Service					$ 1,640,216	3,976,785	$ 5,617,001
23	Total P&I Payments over Term of Loan					$ 32,804,318	79,535,695	$ 112,340,014
24	Eligible Project Costs Funded From Other Sources					2,602,909	6,310,882	8,913,791
25	TOTAL SEWER SYSTEM BUY-IN COSTS:					$ 35,407,227	85,846,577	$ 121,253,804
26	**SEWER SYSTEM CAPITAL CONTRIBUTION CHARGE CALCULATION:**							
27	Capacity (MGD)					9.40	9.31	N/A
28	Capacity in Equivalent Residential Units (EDUs) @	300	Gallons Per Day			31,336	31,033	N/A
29	Cost per EDU					$ 1,130	2,766	$ 3,896
30	Credit for NPV of Debt Service in Usage Rates					(216)	(529)	(746)
31	Sewer Capital Contribution Charge per EDU					$ 914	2,237	$ 3,150
32	Less: Allowance for Estimation & Contingency					(27)	(67)	3.0%
33	Net Capital Contribution Charge per EDU					$ 886	2,170	$ 3,055
34	Percentage of Full Cost Recovery							100.0%
35	**CALCULATED CAPITAL CONTRIBUTION CHARGE PER EDU:**					**$ 886**	**2,170**	**$ 3,055**
	Calculated Sewer Capital Contribution Charge for 1" Meter							**$ 7,638**
36	*Current Sewer Capital Contribution Charge for 1" Meter*							*$ 5,900*
37	*$ Variance*							*$ 1,738*
38	*% Variance*							*29%*

WATER SYSTEM FIXED ASSET COSTS & CAPACITIES

	ASSET DESCRIPTION, BY FUNCTION	YEAR IN SERVICE	CAPITALIZED COST	USEFUL LIFE	FY 2014 COST (RCNLD)	PERCENT INCLUDED	PROJECT COSTS INCLUDED	CAPACITY (MGD)
	TRANSMISSION							
1	Transmission line right of way	1958	$ 6,608	0	$ 87,680	100%	$ 87,680	
2	Rollins Ave. pumping station	1959	55,000	0	695,024	100%	695,024	
3	Lot 20,blk 12 west end tank	1964	10,778	0	115,971	100%	115,971	
4	Monument St. water tank site	1965	15,198	0	157,635	100%	157,635	
5	Horizon Hills water	1979	188,224	50	189,381	100%	189,381	
6	Wheel of Fortune/Geico	1982	113,870	50	107,938	100%	107,938	
7	Veirs Mill/Woodburn/Rte 28	1982	59,487	50	56,388	100%	56,388	
8	Fields Rd interconnets	1982	110,366	50	104,617	100%	104,617	
9	Fields Rd interconnets	1983	13,075	50	12,307	100%	12,307	
10	Misc additions	1965	88,494	50	18,358	100%	18,358	
11	Project 63-304S	1966	6,367	50	2,517	100%	2,517	
12	Miscellaneous other connection	1966	372,755	50	147,368	100%	147,368	
13	Misc completed projects	1966	44,701	50	17,672	100%	17,672	
14	Distribution system 10"-3255'	1966	18,553	50	7,335	100%	7,335	
15	Misc water projects	1966	19,288	50	7,626	100%	7,626	
16	Misc completed projects	1967	20,526	50	11,549	100%	11,549	
17	Misc completed projects	1968	153,088	50	106,794	100%	106,794	
18	Misc completed projects	1968	207,004	50	144,405	100%	144,405	
19	Misc completed projects	1969	468,211	50	371,599	100%	371,599	
20	Misc completed projects	1970	74,041	50	64,797	100%	64,797	
21	Misc completed projects	1971	575,673	50	513,414	100%	513,414	
22	Project 69-301W	1973	147,378	50	140,991	100%	140,991	
23	Project 69-313W	1973	50,858	50	48,654	100%	48,654	
24	Project 69-320W	1973	30,014	50	28,713	100%	28,713	
25	Project 72-301W	1973	95,944	50	91,786	100%	91,786	
26	Project 72-304W	1973	59,356	50	56,784	100%	56,784	
27	Project 72-306W	1973	57,059	50	54,586	100%	54,586	
28	Misc completed projects	1974	358,763	50	357,752	100%	357,752	
29	Project 428-33 Design 16" R>P>	1976	7,681	50	7,732	100%	7,732	
30	Project 410-33 Highland Avenue	1976	20,519	50	20,657	100%	20,657	
31	Project 410-33 Highland Avenue	1976	40,329	50	40,600	100%	40,600	
32	Project 418-32 Horizon Hills	1976	115,311	50	116,088	100%	116,088	
33	Project 414-32 Taft Court	1976	58,151	50	58,543	100%	58,543	
34	Project 584-33 Balt Rd to Gudd	1976	68,960	50	69,424	100%	69,424	
35	Water System Analysis	1995	75,000	20	6,903	100%	6,903	
36	Water System Analysis	1995	24,303	20	2,237	100%	2,237	
37	Water main rehabilitation	1997	900,686	20	233,555	100%	233,555	
38	NW Rockville Trans. Main	1999	606,335	50	705,513	100%	705,513	
39	Water Storage Res. Preser.	2000	2,168,170	20	1,053,052	100%	1,053,052	
40	Thomas Farm Water Booster	2002	57,777	20	35,601	100%	35,601	
41	Great Falls Rd	2002	142,000	20	87,498	100%	87,498	
42	Clean Water Main	2003	488,287	20	330,546	100%	330,546	
43	Talbott Tank Repairs	2003	87,940	20	59,531	100%	59,531	
44	Chapman Ave Water Main	2004	308,111	20	218,071	100%	218,071	
45	Water Main Rehabilitation	2005	126,000	20	93,736	100%	93,736	
46	North Horners Lane - Water	2006	619,361	25	547,397	100%	547,397	
47	Water Cathodic Protection	2007	110,137	10	41,769	100%	41,769	
48	Beall Ave Park Road CIP	2008	377,066	20	319,896	100%	319,896	
49	Adclare Road CIP	2008	447,120	20	379,330	100%	379,330	
50	Stonestreet Water Main Upgrade	2009	64,198	20	56,585	100%	56,585	
51	Water pump glen mill road	2010	3,272,755	20	2,995,706	100%	2,995,706	
52	Water distribution study	2010	305,773	10	209,916	100%	209,916	
53	Lewis water main upgrade	2010	1,121,000	20	1,026,104	100%	1,026,104	
54	Air Release Valve	2011	173,378	15	154,021	100%	154,021	
55	Gis Development	2011	50,000	15	44,418	100%	44,418	
56	Water main Rehabilitation	2011	11,051,700	20	10,431,418	100%	10,431,418	
57	Water main rehabilitation	2012	3,537,235	20	3,444,598	100%	3,444,598	
58	Water main rehabilitation	2013	3,787,993	20	3,796,440	100%	3,796,440	

	ASSET DESCRIPTION, BY FUNCTION	YEAR IN SERVICE	CAPITALIZED COST	USEFUL LIFE	FY 2014 COST (RCNLD)	PERCENT INCLUDED	PROJECT COSTS INCLUDED	CAPACITY (MGD)
59	Plate	1999	9,300	20	3,865	100%	3,865	
60	Chevrolet S-10 Truck	2000	23,910	0	38,709	100%	38,709	
61	Chevy Tracker	2002	16,664	0	25,670	100%	25,670	
62	Asphalt Pothole Patcher	2008	28,892	7	5,002	100%	5,002	
63	2008 2C.Y. Elkin Hi Tech LP8 m	2008	14,553	7	2,520	100%	2,520	
64	2009 Chevrolet Silverado Truck	2009	40,524	7	13,607	100%	13,607	
65	310SJ Backhoe Loader	2009	73,474	7	24,671	100%	24,671	
66	Hoot 600 BNR	2009	6,050	7	2,031	100%	2,031	
67	332 D John Deere Skid Steers Lo	2010	32,834	7	16,101	100%	16,101	
68	VMT-1 Trailer with Hydraulic Pu	2010	35,153	7	17,238	100%	17,238	
69	ERV-750 Trailer Mounted Auto	2010	11,150	7	5,468	100%	5,468	
70	TM7 Standard Duty Hydrulic Dri	2010	12,500	7	6,130	100%	6,130	
71	Class 8 Truck frightliner M2 106/	2011	104,344	7	66,210	100%	66,210	
72	TCI-15S 8500Series Trailer/Arro	2012	9,648	7	7,457	100%	7,457	
73	2012 Kraftsman Model HP-12 To	2012	9,655	7	7,462	100%	7,462	
74	2011 Ford Ranger Compact Pick	2012	12,596	7	9,735	100%	9,735	
75	2012 Ford F350 Pick up truck	2013	28,482	7	25,755	100%	25,755	
76	2013 Ford F350 Pick up truck	2013	32,271	7	29,182	100%	29,182	
77	2012 Ford F350 Pick up truck	2013	26,290	7	23,773	100%	23,773	
78	Projects prior to FY 1989	1989	299,312	0	653,202	100%	653,202	
79	Projects prior to FY 1989	1989	3,859,788	26	323,977	100%	323,977	
80	Misc Req Interconnect	1992	79,448	50	89,888	100%	89,888	
81	Ritchie Pkwy Trans Main	1992	859,177	50	972,078	100%	972,078	
82	Hydraulic Surge Suppression - Cash	2014	56,121	10	57,700	100%	57,700	
83	SCADA Improvements - Cash	2014	316,261	10	325,159	100%	325,159	
84	Southlawn Lane Water Main - Cash	2014	182,444	50	187,577	100%	187,577	
85	Water Main Rehabilitation - Cash	2014	2,007,031	20	2,063,498	100%	2,063,498	
86	Water Main Rehabilitation - Bond	2014	2,932,243	20	3,014,742	100%	3,014,742	
87	Prior Year Unspecified Projects-Cash	2014	160,926	50	165,454	100%	165,454	
88	Prior Year Unspecified Projects-Bonds	2014	2,446,958	50	2,515,803	100%	2,515,803	
89	Water Tank Improvements - Cash	2014	1,834,628	20	1,886,245	100%	1,886,245	
	TOTAL TRANSMISSION COSTS & CAPACITIES		$ 49,196,583		$ 42,892,434		**$ 42,892,434**	**10.14**
	TREATMENT							
1	Filter plant site	1958	$ 25,739	0	$ 341,545	100%	$ 341,545	
2	Hunting Hill tank-engineering	1967	7,584	50	4,267	100%	4,267	
3	Hunting Hill tank (8meg)	1969	405,141	50	321,543	100%	321,543	
4	Electrical control panel	1977	91,613	50	93,128	100%	93,128	
5	Filter plant study	1977	9,695	50	9,855	100%	9,855	
6	Plant additions	1975	6,087	50	6,097	100%	6,097	
7	Plant additions	1976	9,835	50	9,901	100%	9,901	
8	Actuator valves (2)	1991	11,986	40	10,611	100%	10,611	
9	Altitude Control Valve-16"	1993	9,286	40	8,527	100%	8,527	
10	Electric Value Actuators 16"-8	1993	17,320	40	15,904	100%	15,904	
11	Filtration Plant Poll Ctrl	1998	2,959,949	20	1,007,135	100%	1,007,135	
12	Water Tank Rehabilitation	1998	21,802	20	7,418	100%	7,418	
13	Water Plant Expansion	1998	249,302	50	288,409	100%	288,409	
14	Water Plant Clarifier Upgrade	2002	719,650	30	665,155	100%	665,155	
15	Water Plant Rehabilitation	2002	3,983,857	40	4,295,881	100%	4,295,881	
16	Water Plant Sandy Landing	2004	242,457	20	171,603	100%	171,603	
17	Water Plant Filter Upgrade	2004	550,067	20	389,319	100%	389,319	
18	Water Plant Filter Upgrade	2005	171,376	15	92,722	100%	92,722	
19	Water Plant Pump Upgrade	2006	2,148,500	20	1,675,469	100%	1,675,469	
20	Water plant generator	2011	669,751	20	632,161	100%	632,161	
21	Water System Facility Improvements -	2014	552,957	50	568,514	100%	568,514	
22	Water System Facility Improvements -	2014	1,740,891	50	1,789,871	100%	1,789,871	
	TOTAL TREATMENT COSTS & CAPACITIES		$ 14,604,845		$ 12,405,036		**$ 12,405,036**	**7.12**
	TOTAL WATER SYSTEM FIXED ASSET COSTS:		**$ 63,801,428**		**$ 55,297,470**	**100.0%**	**$ 55,297,470**	

SEWER SYSTEM FIXED ASSET COSTS & CAPACITIES

	ASSET DESCRIPTION, BY FUNCTION	YEAR IN SERVICE	CAPITALIZED COST	USEFUL LIFE	FY 2014 COST (RCNLD)	PERCENT INCLUDED	PROJECT COSTS INCLUDED	CAPACITY (MGD)
	TRANSMISSION							
1	Construction prior to 1971	1970	$ 4,486,919	50	$ 3,926,730	100%	$ 3,926,730	
2	Construction completed in 1972	1972	775,658	50	713,023	100%	713,023	
3	Construction completed in 1974	1974	220,983	50	220,360	100%	220,360	
4	Construction completed in 1975	1975	584,431	50	585,418	100%	585,418	
5	Horners Ln Sewage Pump Sta	2001	217,667	25	166,131	100%	166,131	
6	Watts Branch Sewer Phase II	2002	2,721,741	50	3,186,477	100%	3,186,477	
7	Cabin John Relief	2003	476,209	20	322,370	100%	322,370	
8	Cabin John Sewer Rehab	2009	1,220,450	20	1,075,711	100%	1,075,711	
9	Sewer main Rehabilitation	2011	1,426,959	15	1,267,643	100%	1,267,643	
10	Horner Lane Pump Station-Reno	2011	217,885	15	193,558	100%	193,558	
11	Sewer main Rehabilitation	2012	2,042,609	20	1,989,114	100%	1,989,114	
12	Horner Lane Pump Station-Reno	2012	7,421	15	6,959	100%	6,959	
13	CABIN JOHN SEWER Z/I RED	2012	1,257,483	20	1,224,550	100%	1,224,550	
14	SEWER REHAB-WATTS BRA	2012	545,448	20	531,163	100%	531,163	
15	Sewer main Rehabilitation	2013	2,023,885	15	1,992,812	100%	1,992,812	
16	Underground Pipehunter Truck J	2008	157,939	7	27,345	100%	27,345	
17	Asphalt Pothole Patcher	2008	28,892	7	5,002	100%	5,002	
18	2009 Chevrolet Silverado Truck	2009	58,150	7	19,525	100%	19,525	
19	Fluser, TV & camer (add on foru	2009	123,780	7	41,562	100%	41,562	
20	JAJ-600SK Easment Machine	2009	10,873	7	3,651	100%	3,651	
21	2009 Chevrolet Silverado Truck	2009	40,524	7	13,607	100%	13,607	
22	2008 2C.Y. Elkin Hi Tech LP8 m	2009	14,553	7	4,887	100%	4,887	
23	332 D John Deere Skid Steers Lo	2010	11,000	7	5,394	100%	5,394	
24	Cues Jet eye Video Camera-Reco	2010	6,905	7	3,386	100%	3,386	
25	10 Horsepower 4" Fairbanks pum	2010	11,998	7	5,883	100%	5,883	
26	10 Horsepower 4" Fairbanks pum	2010	11,998	7	5,883	100%	5,883	
27	Enz 10.150 chain Scrapper/sewer	2010	6,747	7	3,308	100%	3,308	
28	Cues Model Camera OZIII	2012	63,500	7	49,077	100%	49,077	
29	2012 Kraftsman Model HP-12 To	2012	9,655	7	7,462	100%	7,462	
30	Flow meter with triton and sensor	2012	7,310	7	5,650	100%	5,650	
31	DCV-1 Recorder/Pipe TV Inspect	2012	12,559	7	9,706	100%	9,706	
32	TCI-15S 8500Series Trailer/Arro	2012	9,648	7	7,457	100%	7,457	
33	Shorelite Modular Trench Shorin	2013	23,619	5	19,934	100%	19,934	
34	2013Freightliner 1145D 10whel	2013	174,444	7	157,744	100%	157,744	
35	Projects prior to FY 1989	1989	316,353	0	690,392	100%	690,392	
36	Projects prior to FY 1989	1989	4,080,447	26	342,498	100%	342,498	
37	SCADA Improvements - Cash	2014	5,000	10	5,141	100%	5,141	
38	Sewer Rehabilitation - Cash	2014	1,249,000	50	1,284,140	100%	1,284,140	
39	Sewer Rehabilitation - Bond	2014	-	50	-	100%	-	
40	Prior Year Unspecified Projects-Cash	2014	2,271,182	50	2,335,081	100%	2,335,081	
41	Prior Year Unspecified Projects-Bonds	2014	3,494,273	50	3,592,584	100%	3,592,584	
	TOTAL TRANSMISSION COSTS & CAPACITIES		$ 30,426,094		$ 26,048,321		**$ 26,048,321**	**9.40**
	TREATMENT							
1	Downtown Outfall project	1977	98,629	50	$ 100,260	100%	$ 100,260	
2	Regional Outfall WSSC(partial)	1980	652,658	50	649,812	100%	649,812	
3	Reg. Treatment WSSC (partial)	1980	1,500,436	50	1,493,895	100%	1,493,895	
4	Reg. Treatment WSSC (partial)	1981	102,954	50	99,730	100%	99,730	
5	Regional Outfall WSSC(partial)	1981	287,384	50	278,386	100%	278,386	
6	Reg. Treatment WSSC (partial)	1982	8,161	50	7,736	100%	7,736	
7	Reg. Treatment WSSC (partial)	1982	241,777	50	229,182	100%	229,182	
8	Reg Outfalll Facility	1998	71,372	20	24,285	100%	24,285	
9	Rock Creek Wasterwater Facility	2009	772,349	20	680,752	100%	680,752	
10	Blue plains wastewater treatment	2010	21,670,509	20	19,836,034	100%	19,836,034	
11	Blue plains wastewater treatment	2011	2,834,640	20	2,675,544	100%	2,675,544	
12	Blue plains wastewater treatment	2012	404,550	20	393,955	100%	393,955	
13	Blue plains wastewater treatment	2012	6,964,593	20	6,782,196	100%	6,782,196	
14	Blue plains wastewater treatment	2013	8,422,494	20	8,441,276	100%	8,441,276	

Schedule 4 – Sewer System Fixed Assets

	ASSET DESCRIPTION, BY FUNCTION	YEAR IN SERVICE	CAPITALIZED COST	USEFUL LIFE	FY 2014 COST (RCNLD)	PERCENT INCLUDED	PROJECT COSTS INCLUDED	CAPACITY (MGD)
15	Reg Outfalll Facility	1992	1,111,754	50	1,257,844	100%	1,257,844	
16	Reg. Treatment Facility	2002	14,167,699	50	16,586,827	100%	16,586,827	
17	Blue Plains Wastewater Treatment - Cash	2014	1,462,000	20	1,503,133	100%	1,503,133	
18	Blue Plains Wastewater Treatment -	2014	5,242,000	20	5,389,483	100%	5,389,483	
	TOTAL TREATMENT COSTS & CAPACITIES		$ 66,015,957		$ 66,430,333		**$ 66,430,333**	**9.31**
	TOTAL SEWER SYSTEM FIXED ASSET COSTS:		**$ 132,031,914**		**$ 92,478,654**	**100.0%**	**$ 92,478,654**	

Schedule 5 – Water System Capital Improvements Program (CIP)

Water CIP Projects[1]	Add. Treat. Capacity (MGD)	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Total	Expansion/Replacement Component		Functional Allocation			
								Total %	Total $	Treat. %	Trans. %	Treat. $	Trans. $
Water Projects													
Hydraulic Surge Suppression - Cash	4.00	$ -	$ -	$ -	$ -	$ -	$ -	50.00%	$ -	0.0%	100.0%	$ -	$ -
Hydraulic Surge Suppression - Bond	0.00	$ -	$ -	$ -	$ -	$ -	$ -	50.00%	$ -	0.0%	100.0%	$ -	$ -
SCADA Improvements - Cash	0.00	$ 100,000	$ -	$ -	$ -	$ -	$ 100,000	0.00%	$ -	0.0%	100.0%	$ -	$ -
SCADA Improvements - Bond	0.00	$ -	$ -	$ -	$ -	$ -	$ -	0.00%	$ -	0.0%	100.0%	$ -	$ -
Southlawn Lane Water Main - Cash	0.00	$ -	$ -	$ -	$ -	$ -	$ -	65.00%	$ -	0.0%	100.0%	$ -	$ -
Southlawn Lane Water Main - Bond	0.00	$ -	$ -	$ -	$ -	$ -	$ -	65.00%	$ -	0.0%	100.0%	$ -	$ -
Water Main Rehabilitation - Cash	0.00	$ -	$ -	$ -	$ -	$ -	$ -	41.00%	$ -	0.0%	100.0%		
Water Main Rehabilitation - Bond	0.00	$ 1,310,370	$ 1,997,911	$ 1,949,698	$ 2,008,189	$ 2,718,486	$ 9,984,654	41.00%	$ 4,093,708	0.0%	100.0%	$ -	$ 4,093,708
Water Plant Upgrades - Cash	4.00	$ -	$ -	$ -	$ -	$ -	$ -	33.00%	$ -	100.0%	0.0%	$ -	$ -
Water Plant Upgrades - Bond	0.00	$ -	$ -	$ -	$ -	$ -	$ -	33.00%	$ -	100.0%	0.0%	$ -	$ -
Water System Facility Improvements - Cash	0.00	$ -	$ -	$ -	$ -	$ 1,500,000	$ 1,500,000	23.00%	$ 345,000	100.0%	0.0%	$ 345,000	$ -
Water System Facility Improvements - Bond	0.00	$ 1,390,000	$ -	$ -	$ -	$ -	$ 1,390,000	23.00%	$ 319,700	100.0%	0.0%	$ 319,700	$ -
Water Tank Improvements - Cash	0.00	$ -	$ -	$ -	$ -	$ -	$ -	0.00%	$ -	0.0%	100.0%		
Water Tank Improvements - Bond	0.00	$ -	$ 3,100,000	$ -	$ -	$ -	$ 3,100,000	0.00%	$ -	0.0%	100.0%	$ -	$ -
Unspecified Future Projects													
Cash	0.00	$ -	$ -	$ -	$ -	$ -	$ -	0.00%	$ -	0.0%	0.0%	$ -	$ -
Bonds	0.00	$ -	$ -	$ -	$ -	$ -	$ -	0.00%	$ -	0.0%	0.0%	$ -	$ -
Total Water Projects	**8.00**	**$ 2,800,370**	**$ 5,097,911**	**$ 1,949,698**	**$ 2,008,189**	**$ 4,218,486**	**$ 16,074,654**		**$ 4,758,408**			**$ 664,700**	**$ 4,093,708**

(1) FY 2014 Project Costs are incorporated into fixed asset costs for this analysis.

Schedule 6 – Sewer System Capital Improvements Program (CIP)

Sewer CIP Projects[1]	Add. Treat. Capacity (MGD)	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Total	Expansion/Replacement Component		Functional Allocation			
								Total %	Total $	Trans. %	Treat. %	Trans. $	Treat. $
Wastewater Projects													
Blue Plains Wastewater Treatment - Cash	0.00	$ -	$ -	$ -	$ -	$ -	$ -	0.00%	$ -	0.0%	100.0%	$ -	$ -
Blue Plains Wastewater Treatment - Bond	0.00	$ 4,684,000	$ 3,454,000	$ 2,416,000	$ 2,077,000	$ 1,120,000	$ 13,751,000	0.00%	$ -	0.0%	100.0%	$ -	$ -
SCADA Improvements - Cash	0.00	$ 25,000	$ -	$ -	$ -	$ -	$ 25,000	0.00%	$ -	100.0%	0.0%	$ -	$ -
SCADA Improvements - Bond	0.00	$ -	$ -	$ -	$ -	$ -	$ -	0.00%	$ -	100.0%	0.0%	$ -	$ -
Sewer Rehabilitation - Cash	0.00	$ -	$ 465,000	$ 304,000	$ 441,000	$ 1,264,000	$ 2,474,000	28.00%	$ 692,720	100.0%	0.0%	$ 692,720	$ -
Sewer Rehabilitation - Bond	0.00	$ 2,350,000	$ -	$ -	$ -	$ -	$ 2,350,000	28.00%	$ 658,000	100.0%	0.0%	$ 658,000	$ -
Unspecified Future Projects													
Cash	0.00	$ -	$ -	$ -	$ -	$ -	$ -	0.00%	$ -	0.0%	0.0%	$ -	$ -
Bonds	0.00	$ -	$ -	$ -	$ -	$ -	$ -	0.00%	$ -	0.0%	0.0%	$ -	$ -
WSSC	0.00	$ -	$ -	$ -	$ -	$ -	$ -	0.00%	$ -	0.0%	0.0%	$ -	$ -
Total Sewer Projects	**0.00**	**$ 7,059,000**	**$ 3,919,000**	**$ 2,720,000**	**$ 2,518,000**	**$ 2,384,000**	**$ 18,600,000**		**$ 1,350,720**			**$ 1,350,720**	**$ -**

(1) FY 2014 Project Costs are incorporated into fixed asset costs for this analysis.

Schedule 7 – Proposed Capital Contribution Charges

Meter Size (Inches)*	AWWA Factor	Proposed Water CC Charge	Proposed Sewer CC Charge	Proposed Total CC Charge
5/8	1	N/A	N/A	N/A
3/4	1.5	N/A	N/A	N/A
1	2.5	**$ 4,100**	**$ 7,600**	**$ 11,700**
1.5	5	**$ 8,200**	**$ 15,300**	**$ 23,500**
2	8	**$ 13,200**	**$ 24,400**	**$ 37,600**
3	16	**$ 26,400**	**$ 48,800**	**$ 75,200**
4	25	**$ 41,200**	**$ 76,300**	**$ 117,500**
6	50	**$ 82,400**	**$ 152,700**	**$ 235,100**
8	80	**$ 131,800**	**$ 244,200**	**$ 376,000**
10	115	**$ 189,500**	**$ 351,100**	**$ 540,600**

* The minimum meter size for new residential and commercial construction is 1-inch.

APPENDIX E – MISCELLANEOUS SERVICE CHARGES

Supporting Schedules

Schedule 1 – Miscellaneous Fee Developer Main Menu Screen

BURTON & ASSOCIATES MISCELLANEOUS SERVICE CHARGE DEVELOPER

City of Rockville, MD

--- User input in areas shaded light green ---

Basic Instructions ▶ | Data Tables ▶

		Fee/Charge Title	Current Charge	Full Cost Recovery Charge	Current Percent of Cost Recovery	Desired Percent of Cost Recovery	Proposed Charge	Percent Change
		Example Water Meter Installation Fee:			(calculated)			
1	Go To ▶	Water Meter w/ Transceiver (Vault) - 1" meter to 1" line - EXAMPLE	$678.59	$760.76	89%	100%	$761.00	12.14%
		Meter/Service Installation and Testing Fees:						
2	Go To ▶	Residential Water Meter w/ Transceiver (Vault) - 1" meter to 1" supply line	$678.59	$0.00		100%		
3	Go To ▶	Residential Water Meter w/ Transceiver (Vault) - 1" meter to 1.5" supply line	$781.89	$0.00		100%		
4	Go To ▶	Residential Water Meter w/ Transceiver (Vault) - 1.5" meter to 2" supply line	$3,058.40	$0.00		100%		
5	Go To ▶	Commercial Water Meter w/ Transceiver 2" meter (with vault)	$3,087.92	$0.00		100%		
6	Go To ▶	Commercial Water Meter w/ Transceiver 3" meter	$2,306.00	$0.00		100%		
7	Go To ▶	Commercial Water Meter w/ Transceiver 4" meter	$3,659.00	$0.00		100%		
8	Go To ▶	Commercial Water Meter w/ Transceiver 6" meter	$6,531.00	$0.00		100%		
9	Go To ▶	Fire Line Service w/ Transceiver and Bypass - 4" meter	$2,328.00	$0.00		100%		
10	Go To ▶	Fire Line Service w/ Transceiver and Bypass - 6" meter	$9,633.00	$0.00		100%		
11	Go To ▶	Fire Line Service w/ Transceiver and Bypass - 8" meter	$14,439.00	$0.00		100%		
12	Go To ▶	Remote Water Meter w/ Transceiver (Inside sub-meter) - 1" meter	$348.75	$0.00		100%		
13	Go To ▶	Remote Water Meter w/ Transceiver (Inside sub-meter) - 1.5" meter	$654.31	$0.00		100%		
14	Go To ▶	Remote Water Meter w/ Transceiver (Inside sub-meter) - 2" meter	$1,648.31	$0.00		100%		
15	Go To ▶	Meter Testing Fee (if meter is functioning correctly)	$50.00	$0.00		100%		
16	Go To ▶			$0.00		100%		
		Permitting/Inspection Fees:						
31	Go To ▶	General Permit - Minimum Fee	$55.00	$0.00		100%		
32	Go To ▶	Plumbing Fixtures Permit/Inspection - First fixture	$55.00	$0.00		100%		
33	Go To ▶	Plumbing Fixtures Permit/Inspection - Each additional fixture	$12.00	$0.00		100%		
34	Go To ▶	Water/Sewer Replacement on Private Property	$55.00	$0.00		100%		
35	Go To ▶	Water/Sewer Abandonment (fee per water or sewer cap on private property)	$55.00	$0.00		100%		
36	Go To ▶	Tap Inspection (for water, sewer or fire tap)	$95.00	$0.00		100%		
37	Go To ▶	Water System Capacity Analysis Fee	$3,000.00	$0.00		100%		
38	Go To ▶	Sewer System Capacity Analysis Fee	$1,500.00	$0.00		100%		
39	Go To ▶			$0.00		100%		

Schedule 1 – Miscellaneous Fee Developer Main Menu Screen

BURTON & ASSOCIATES MISCELLANEOUS SERVICE CHARGE DEVELOPER

City of Rockville, MD

Basic Instructions ▶ | Data Tables ▶

--- User input in areas shaded light green ---

		Fee/Charge Title	Current Charge	Full Cost Recovery Charge	Current Percent of Cost Recovery	Desired Percent of Cost Recovery	Proposed Charge	Percent Change
		Administrative / Miscellaneous Fees:						
51	Go To ▶	Water Disconnect/Reconnect Charge	$50.00	$0.00		100%		
52	Go To ▶	Water Disconnect/Reconnect Charge - after hours	$130.00	$0.00		100%		
53	Go To ▶	Meter Re-read or Check for Leak (no charge for re-read if reading incorrect)	$20.00	$0.00		100%		
54	Go To ▶	Returned Check Fee	$35.00	$0.00		100%		
55	Go To ▶			$0.00		100%		
		Potential New Charges:						
76	Go To ▶	General Service Visit		$0.00		100%		
77	Go To ▶	Door Hanger - Late Payment Notice		$0.00		100%		
78	Go To ▶	Utility Line Locate Fee		$0.00		100%		
79	Go To ▶	Fire Flow Test (customer requested)		$0.00		100%		
80	Go To ▶	Service Installation Under/Within Roadway		$0.00		100%		
81	Go To ▶			$0.00				

BURTON & ASSOCIATES MISCELLANEOUS SERVICE CHARGE DEVELOPER

City of Rockville, MD

Return To Menu ►

-- User input in areas shaded light green --

INDIRECT/OVER HEAD COSTS

Average Indirect Labor %	35.00%
Over Head to be applied to Equipment Rate (%)	5.00%
Over Head to be applied to Vehicle Rate (%)	5.00%
Over Head to be applied to Material Unit Cost (%)	5.00%

STAFF POSITIONS

Title	Min Rate	Max Rate	Avg Rate
Administrative Assistant I	$ 20.00	$ 32.00	**$ 26.00**
Maint. Communications Operator	$ 18.00	$ 29.00	**$ 23.50**
Meter Services Technician	$ 16.50	$ 26.50	**$ 21.50**
Inventory Services Clerk	$ 19.00	$ 31.00	**$ 25.00**
Laborer	$ 15.00	$ 21.50	**$ 18.25**
Maintenance Worker	$ 16.50	$ 23.50	**$ 20.00**
Operations Maint. Crew Supervior	$ 23.00	$ 37.50	**$ 30.25**
Construction Inspector I	$ 23.00	$ 37.50	**$ 30.25**
Construction Inspector II	$ 24.00	$ 39.00	**$ 31.50**
Engineering Technician I	$ 23.00	$ 37.50	**$ 30.25**
Engineering Technician II	$ 24.00	$ 39.00	**$ 31.50**
Civil Engineer I	$ 27.00	$ 43.50	**$ 35.25**
Permit Technician	$ 20.00	$ 32.00	**$ 26.00**

EQUIPMENT

Description	Cost Unit	Rate
Rubber Tire Backhoe	**per Hour**	$ 25.00
Dump Truck	**per Hour**	$ 35.00
Vac Truck	**per Hour**	$ 40.00
Office Computer	**per Hour**	$ 5.00
		$ -
		$ -
		$ -
		$ -
		$ -
		$ -

VEHICLES

Description	Cost Unit:	Mile	Rate
Utility Truck	**per Mile**		$ 1.25
Valve Truck	**per Mile**		$ 1.75
Half-Ton Pick-Up	**per Mile**		$ 1.00
Small Pick-Up/SUV	**per Mile**		$ 0.75
			$ -
			$ -
			$ -
			$ -
			$ -
			$ -

MATERIALS

Description	Cost Unit	Cost
Meter Vault	ea	$ 200.00
Meter - 1" Touchread Turbo	ea	$ 200.00
Meter - 1" Remote	ea	$ 150.00
Meter - 1.5" Touchread Turbo	ea	$ 500.00
Meter - 1.5" Remote	ea	$ 400.00
Meter - 2" Remote	ea	$ 800.00
Meter - 2" Compound	ea	$ 1,000.00
Meter - 3" Compound	ea	$ 1,500.00
Meter - 4" Compound	ea	$ 2,500.00
Meter - 6" Compound	ea	$ 4,500.00
Saddle, Galvanized, 4" x 2"	ea	$ 50.00
Saddle, Galvanized, 6" x 2"	ea	$ 75.00
Valve, Curb Stop, Brass, 1"	ea	$ 50.00
Valve, Curb Stop, Brass, 1-1/2"	ea	$ 75.00
Valve, Curb Stop, Brass, 2"	ea	$ 100.00
Nipple, Brass, 1" x 3"	ea	$ 4.00
Nipple, Brass, 2" x 4"	ea	$ 8.00
Coupling, Mtr, Brass, 3/4"	ea	$ 3.00
Coupling, Mtr, Brass, 1"	ea	$ 5.00
Coupling, Mtr, Brass, 1-1/2"	ea	$ 10.00
Coupling, Mtr, Brass, 2"	ea	$ 15.00
Corporation, Brass, 1"	ea	$ 20.00
Corporation, Brass, 1-1/2"	ea	$ 40.00
Corporation, Brass, 2"	ea	$ 80.00
Bushing, Brass, 1" x 3/4"	ea	$ 1.50
Bushing, Brass, 2" x 1"	ea	$ 3.00
Bushing, Brass, 2" x 1-1/2"	ea	$ 5.00
Bushing, Brass, 2-1/2" x 2"	ea	$ 8.00
Poly Tubing, M.I.P., 1"	ea	$ 8.00
Poly Tubing, M.I.P., 2"	ea	$ 25.00
Tee, PVC Sewer, Two-Way Clean Out, 6"	ea	$ 50.00
Coupling, Fernco, Clay/PVC, 6"	ea	$ 5.00
PE Pipe, 1"	LF	$ 0.50
PE Pipe, 2"	LF	$ 1.50
Asphalt Hotpatch, 25 ft²	ea	$ 125.00
	ea	$ -
	ea	$ -
	ea	$ -
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CITY OF ROCKVILLE, MD

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Determination of Specific Service Costs
--- User input in areas shaded light green ---

Type of Fee:	Water Meter w/ Transceiver (Vault) - 1" meter to 1" line - EXAMPLE	Current Fee:	$678.59

A	B	C	D	E	F	G	H	I
Labor Costs: *Staff Position*	*Task*	*Average Direct Labor Rate per Hour*	*Average Indirect Labor %* 35.00%	*Total Hourly Labor Rate*	*Time per Task per Occurrence (Minutes)*	*Number of Occurrences*	*Labor Costs per Occurrence*	*Total Labor Costs*
Administrative Assistant I	Prepare work order	$26.00	$9.10	$35.10	15	1	$8.78	$8.78
Inventory Services Clerk	Gather tools/materials	$25.00	$8.75	$33.75	10	1	$5.63	$5.63
Laborer	Travel to/from site and perform installation	$18.25	$6.39	$24.64	90	1	$36.96	$36.96
Maintenance Worker	Travel to/from site and perform installation	$20.00	$7.00	$27.00	90	1	$40.50	$40.50
Operations Maint. Crew Supervior	Travel to/from site and supervise/inspect installation	$30.25	$10.59	$40.84	60	1	$40.84	$40.84
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
Total Labor Costs								$132.71

Equipment/Computer Costs: *Type of Computer/Equip.*	*Task*	*Average Equipment/ Computer Usage Rate*	*Over Head to be Applied to Rate (%)* 5.00%	*Total Hourly Rate*	*Time per Task per Occurrence (Minutes)*	*Number of Occurrences*	*Equipment/ Computer Costs per Occurrence*	*Total Equipment/ Computer Costs*
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
Total Equipment/Computer Costs								$0.00

Vehicle Costs: *Type of Vehicle*	*Task*	*Average Vehicle Usage Rate (per Mile)*	*Over Head to be Applied to Rate (%)* 5.00%	*Total Vehicle Rate (per Mile)*	*Distance per Task per Occurrence (Miles)*	*Number of Occurrences*	*Vehicle Costs per Occurrence*	*Total Vehicle Costs*
Utility Truck	Engineering techs travel to/from site	$1.25	$0.06	$1.31	20	1	$26.20	$26.20
Small Pick-Up/SUV	Crew leader travel to/from site	$0.75	$0.04	$0.79	20	2	$15.80	$31.60
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
Total Vehicle Costs								$57.80

Materials Costs: *Type of Material*	*Task*	*Average Cost per Unit*	*Over Head to be Applied Average Cost per Unit* 5.00%	*Total Cost per Unit*	*Average Number of Units per Occurrence (No. of Units)*	*Number of Occurrences*	*Materials Costs per Occurrence*	*Total Materials Costs*
Meter - 1" Touchread Turbo	Cost of meter	$200.00	$10.00	$210.00	1	1	$210.00	$210.00
Meter Vault	Cost of other material(s)	$200.00	$10.00	$210.00	1	1	$210.00	$210.00
PE Pipe, 1"	Cost of other material(s)	$0.50	$0.03	$0.53	20	1	$10.60	$10.60
Valve, Curb Stop, Brass, 1"	Cost of other material(s)	$50.00	$2.50	$52.50	1	1	$52.50	$52.50
Coupling, Mtr, Brass, 1"	Cost of other material(s)	$5.00	$0.25	$5.25	1	1	$5.25	$5.25
Saddle, Galvanized, 6" x 2"	Cost of other material(s)	$75.00	$3.75	$78.75	1	1	$78.75	$78.75
Bushing, Brass, 2" x 1"	Cost of other material(s)	$3.00	$0.15	$3.15	1	1	$3.15	$3.15
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
			$0.00	$0.00			$0.00	$0.00
Total Materials Costs								$570.25

Total Cost	$760.76

APPENDIX F – BENCHMARKING ANALYSIS

Supporting Schedules

Schedule 1 – Area Utilities Benchmarking Summary

Utility	Projected FY 2015 Water & Sewer Bill - 4 TGAL	Annual Gallons of Water Produced	Number of Water Connections	Number of Sewer Connections	Gallons / Connection / Month	Annual Revenue	Outstanding Debt	Capital Asset Value Less Depreciation
City of Rockville, MD	$ 57.21	1,718,420,000	12,674	12,644	11,299	$ 19,929,600	$ 62,240,041	$ 115,876,463
City of Frederick, MD	$ 60.78	1,960,415,000	18,620	15,114	8,774	$ 23,381,829	$ 105,398,217	$ 230,849,726
City of Bowie, MD	$ 55.39	580,000,000	7,908	7,908	6,112	$ 5,470,031	$ 3,403,564	$ 23,287,962
Town of Vienna, VA	$ 55.16	1,026,806,169	9,358	9,358	9,144	$ 7,357,985	$ 1,700,733	$ 9,691,569
Town of Leesburg, VA	$ 43.48	1,562,200,000	15,509	15,391	8,394	$ 15,636,548	$ 66,300,000	$ 181,380,068
City of Manassas, VA	$ 32.06	4,608,000,000[1]	10,918	10,918	19,635[2]	$ 25,309,479	$ 22,385,000	$ 47,624,033
WSSC	$ 47.23	58,838,000,000	446,453	423,110	10,982	$ 550,469,000	$ 1,878,296,259	$ 5,775,658,000

1 - Total includes 2,035,517,000 gallons of wholesale consumption.
2 - Includes industrial customer connections but excludes wholesale consumption.

Schedule 2 – Performance Indicators Summary

Performance Indicator	City of Rockville, MD[1]	Town of Leesburg, VA	Town of Vienna, VA	City of Manassas, VA	City of Frederick, MD	City of Bowie, MD	Average of Select Utility Systems	Rockville vs. Area Utility Average	WSSC	Rockville vs. WSSC	AWWA 2012 Benchmarks for Utilities w/ Combined Operations – AWWA S. Region (37 Utilities) (Median Range): Top Quartile	Median	Bottom Quartile	Rockville vs. AWWA S. Region Survey Median	Direction of Favorable Performance[2]
Organizational Development															
Water Customer Accounts per Employee[3]	487	403	814	357	400	615	518	↓	540	↓	671	501	362	↓	↑
Wastewater Customer Accounts per Employee[3]	916	374	1040	1524	522	443	781	↑	586	↑	777	599	412	↑	↑
MGD Water Delivered[4] per Employee[3]	0.18	0.11	0.24	0.41	0.12	0.12	0.20	↓	0.19	↓	0.26	0.18	0.12	↑	↑
MGD Wastewater Processed[4] per Employee[3]	0.46	0.11	0.31	0.35	0.21	0.10	0.22	↑	0.25	↑	0.31	0.19	0.13	↑	↑
Business Operations															
Debt Ratio (Liabilities/Assets)	61.1%	35.5%	40.2%	35.3%	43.8%	16.7%	34.3%	↑	36.2%	↑	21.0%	34.0%	49.0%	↑	↓
Debt Service as a Percent of Annual Revenues	30.4%	25.1%	1.1%	22.5%	0.0%	6.7%	11.1%	↑	25.5%	↑	N/A	N/A	N/A	N/A	↓
Water Operations															
Operations & Maintenance Cost Ratios[5]:															
O&M cost per account	$477	$523	$451	$619	$404	$223	$444	↑	$346	↑	$270	$377	$527	↑	↓
O&M cost per MG processed	$3,517	$5,197	$4,113	$1,466	$3,841	$3,035	$3,530	↓	$2,627	↑	$2,111	$2,747	$3,457	↑	↓
O&M cost per mile of pipe	$34,519	$37,240	$32,240	$44,457	$28,741	$19,558	$32,447	↑	$28,139	↑	$11,668	$16,012	$28,940	↑	↓
Wastewater Operations															
Operations & Maintenance Cost Ratios[5]:															
O&M cost per account	$396	$566	$325	$444	$327	$342	$401	↓	$496	↓	$298	$391	$480	↑	↓
O&M cost per MG processed	$2,180	$5,398	$2,965	$5,264	$2,207	$3,982	$3,963	↓	$3,242	↓	$2,466	$3,316	$3,861	↓	↓
O&M cost per mile of pipe	$34,013	$50,636	$32,043	$92,644	$30,737	$31,855	$47,583	↓	$38,999	↓	$15,088	$22,298	$28,518	↑	↓

1 - "N/A" indicates that sufficient data for the Utility's operations was not available to include these performance indicators as part of this study. City staff may wish to perform these performance benchmark evaluations at a later date using the AWWA Benchmarking Study as a guide.

2 - ↑ Indicates higher values are generally desirable. ↓ Indicates lower values are generally desirable.

3 - The numbers of the City's water and wastewater employees, and those for the selected comparable utilities represent full-time equivalents (FTE = 2080 hours per year).

4 - MGD Water Delivered and Wastewater Processed represent the average daily volumes for the fiscal year.

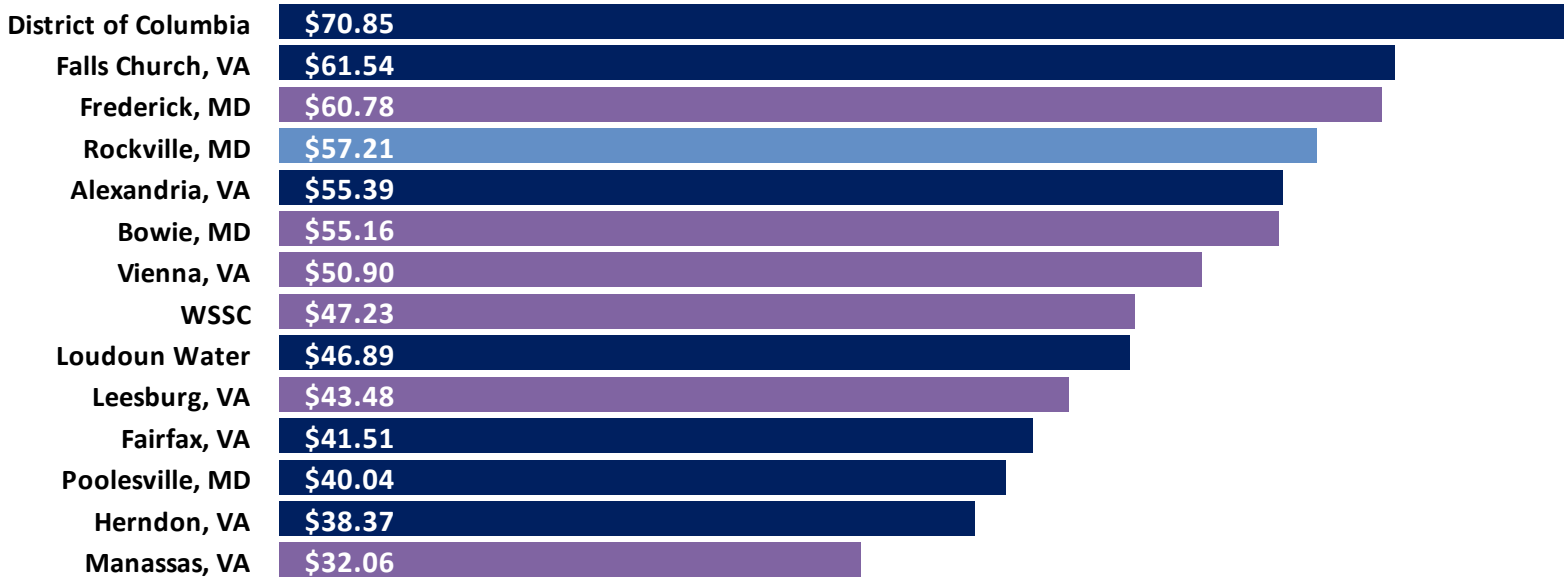
5 - AWWA 2012 Benchmark costs are inflated to 2013 by the US Consumer Price Index (CPI) Water & Sewerage Maintenance Series.

Schedule 3 - AWWA Benchmarking Performance Descriptions and Interpretations

Category	Performance Measure	Description	Interpretation
Organizational Development	Customer Accounts Per Employee, MGD Water Delivered Per Employee, and MGD Wastewater Processed Per Employee	MGD Water Delivered Per Employee, and MGD Wastewater Processed Per Employee are measures of employee efficiency. They account for contributions completed through contracts.	These indicators measure employee efficiency. By expressing them in terms of both accounts and millions of gallons per day of water delivered or wastewater processed, the effects of customer class are diminished. Contracts for operations and maintenance can have significant effects if not captured. Utilities will need to account for operations and maintenance contract employees effectively. Generally, higher values are desirable.
Business Operations	Debt Ratio (Liabilities/Assets)	Quantifies the utility's level of indebtedness.	Many utilities use this indicator as an internal measure of performance. Debt equity ratio is an important measure for many businesses, because a high debt burden brings larger costs for interest and capital repayments. Generally, the higher the calculated debt ratio, the more dependent the utility is on debt financing.
	Debt Service as a Percent of Annual Revenues	Compares the utility's annual debt service to revenues received.	Increasing debt service reduces expenditure flexibility by adding to the City's obligations. Debt service increases may indicate excessive debt and fiscal strain, which may be considered a potential problem by rating agencies and may indicate the inability of an entity to repay its ongoing obligations and meet future capital needs.
Water Operations	Operations and Maintenance Cost Ratios	Quantifies all Water utility costs related to operations and maintenance (O&M) as related to volume processed and the number of active customers.	Higher O&M costs per customer account may indicate inefficient procedures or may be the result of aging infrastructure. However, this may not always be the case. Higher costs per account may be the desired outcome to improve customer satisfaction or to make up for deferred maintenance practices. Comparing the value of this indicator with other utilities can provide information regarding the status of current accepted practices. Generally, higher values are not desirable.
Wastewater Operations	Operations and Maintenance Cost Ratios	Quantifies all WW utility costs related to operations and maintenance (O&M) as related to volume processed and the number of active customers.	Higher O&M costs per customer account may indicate inefficient procedures or may be the result of aging infrastructure. However, this may not always be the case. Higher costs per account may be the desired outcome to improve customer satisfaction or to make up for deferred maintenance practices. Comparing the value of this indicator with other utilities can provide information regarding the status of current accepted practices. Generally, lower values are desirable.

Schedule 4 – FY 2015 Water & Sewer Rate Survey – 5/8" Meter

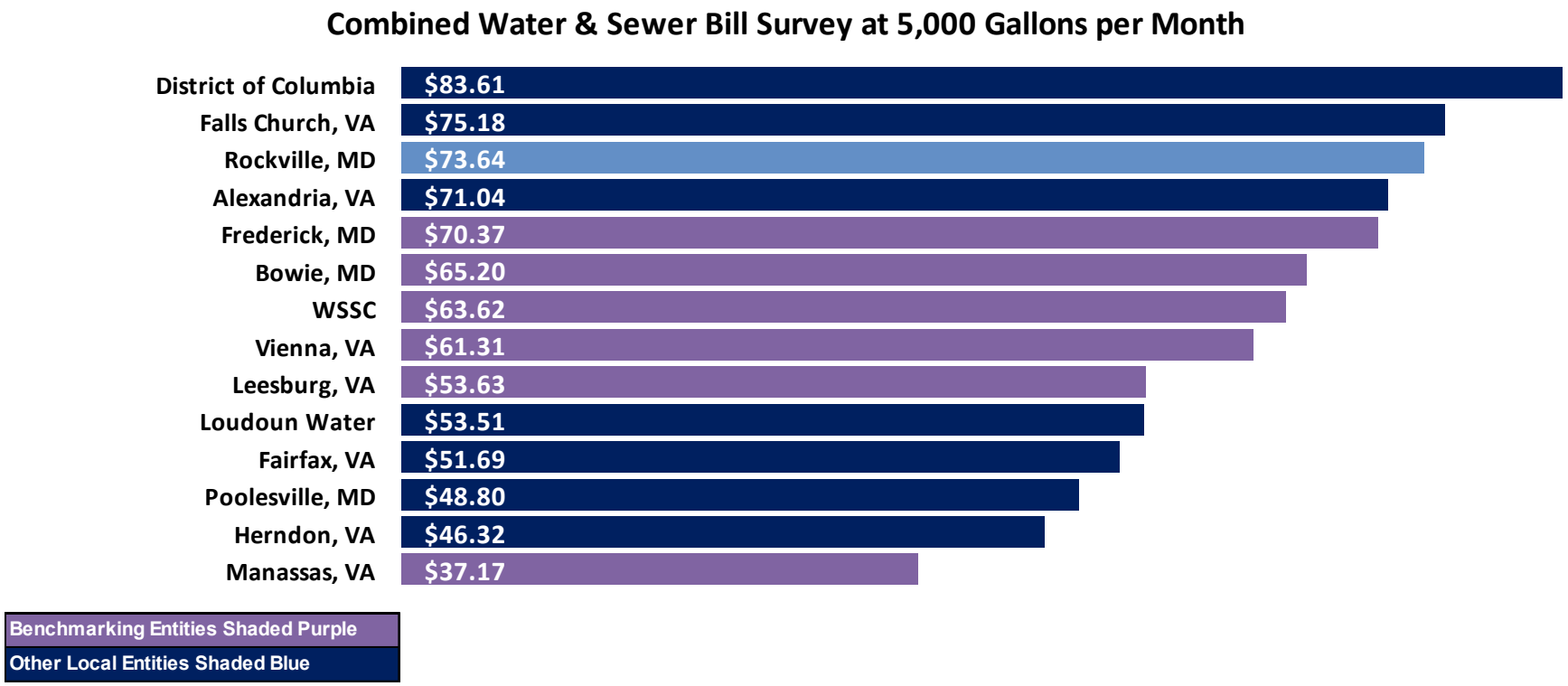
Combined Water & Sewer Bill Survey at 4,000 Gallons per Month



Benchmarking Entities Shaded Purple
Other Local Entities Shaded Blue

Bills for communities in Maryland include $5.00 per month Bay Restoration Fund Fee (i.e. "Flush Tax") to fund improvements to wastewater treatment plants in order to primarily reduce nitrogen and phosphorus pollution into the Chesapeake Bay.

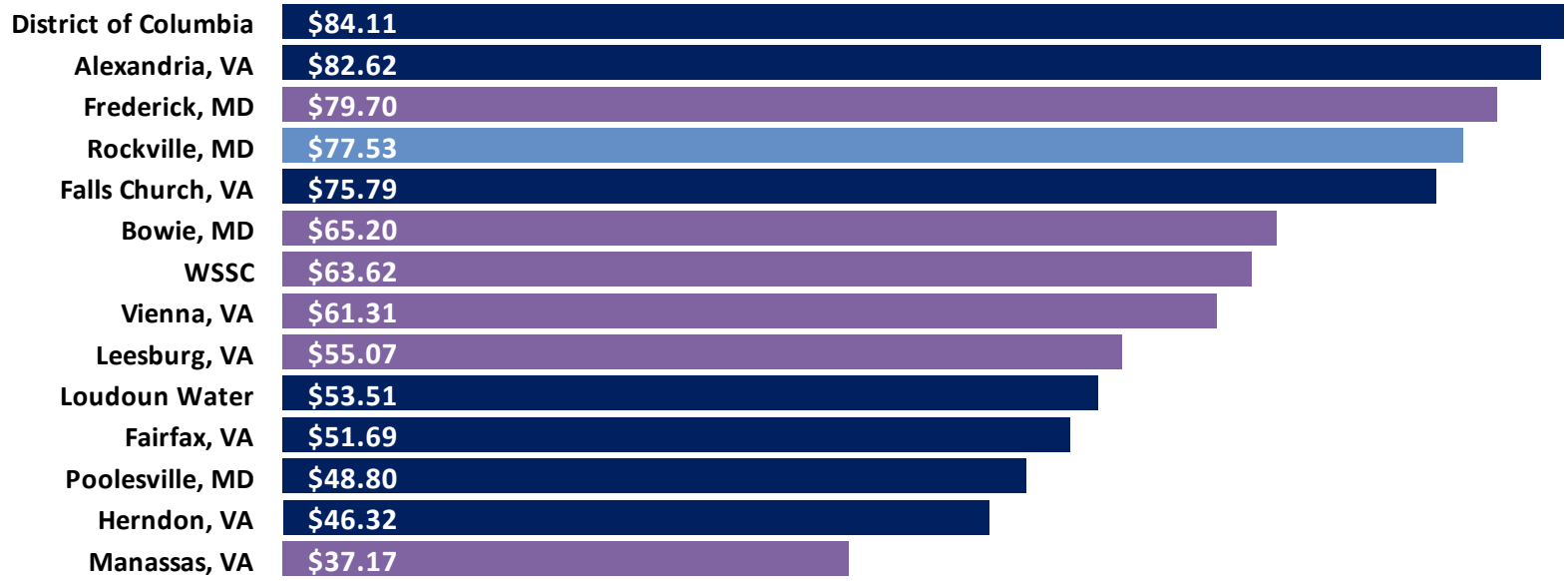
Schedule 5 – FY 2015 Water & Sewer Rate Survey – 3/4" Meter



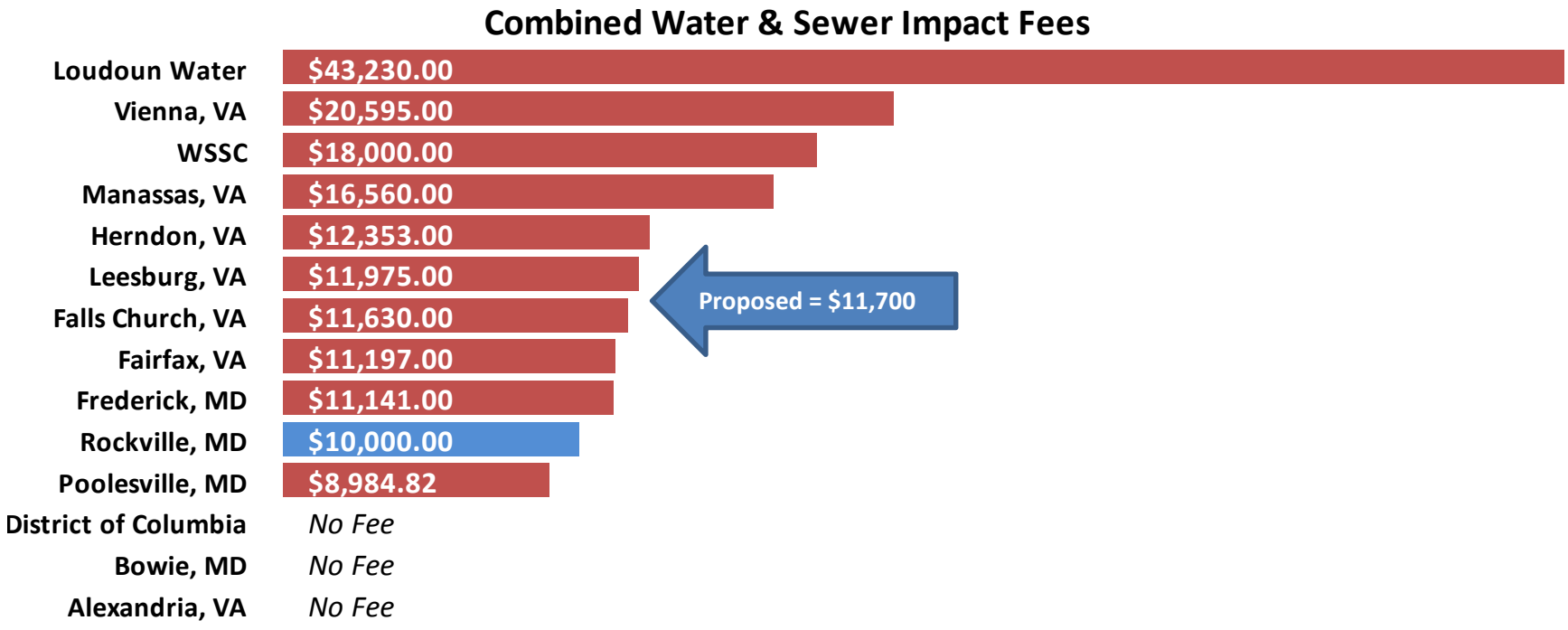
Bills for communities in Maryland include $5.00 per month Bay Restoration Fund Fee (i.e. "Flush Tax") to fund improvements to wastewater treatment plants in order to primarily reduce nitrogen and phosphorus pollution into the Chesapeake Bay.

Schedule 6 – FY 2015 Water & Sewer Rate Survey – 1" Meter

Combined Water & Sewer Bill Survey at 5,000 Gallons per Month



Benchmarking Entities Shaded Purple
Other Local Entities Shaded Blue

Bills for communities in Maryland include $5.00 per month Bay Restoration Fund Fee (i.e. "Flush Tax") to fund improvements to wastewater treatment plants in order to primarily reduce nitrogen and phosphorus pollution into the Chesapeake Bay.

Schedule 7 – FY 2015 Water & Sewer Capital Charge/Impact Fee Survey